INTERNATIONAL LEGAL PRINCIPLES APPLICABLE TO CLIMATE CHANGE

By

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Declaration

I Tracey Kanhanga do hereby declare that this research is my own unaided work. Any use of prior research by other individuals has been dully referenced. This dissertation is submitted in partial fulfilment of the requirements for the degree of Masters of Law at the University of Johannesburg. It has not been submitted for any degree or examination in this year or any other university.

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Dedication

I dedicate this dissertation to my father you certainly left your footprints on the sands of time. Knowing that there is something you left behind. Am sure on your last breath you didn't have any regrets for you left us with gratitude and so many things to remember you by. You where here you lived, you loved, you did, you done all we are created to do, that is to love. You meant so much to us, the hearts you touched are the proof that you lived. You gave your all did your best brought me some happiness am sad I couldn't return the favour. Rest in peace Tungamirai Zifesho. I love you and I miss you infinity.

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Chapter One

1. Introduction

1.1 What is climate change and what is its connection to international law?

Climate change is change in the world's temperatures, precipitation and wind that differ significantly from previous conditions and are seen to induce or bring about a change in the ecosystem and socio-economic activities.[1] The UNFCCC defines climate change as "change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods".[2]

The international concerns are that increased concentrations of greenhouse gas emissions such as carbon dioxide are changing climate in a way that is detrimental to our social and economic well being. Human activities have increased greenhouse gas emissions drastically since the industrial revolution by 31%.[3] The impact this would have on the environment would include a rise in sea levels, causing loss of coastlines worldwide of which small island states are more at risk. Inhabitants of these coastline areas would in turn be vulnerable to floods and would eventually be forced to migrate creating yet another problem in international law what has come to be termed climate change refugees. The risk of flooding due to climate change is not limited to coastline areas alone incidents of flooding have been experienced on main lands in several states. According to UNEP half of the world's population, i.e. 3billion, live in coastal areas.[4] The catastrophic effects of climate change tend to have ripple effects. While climate change originated as an environmental problem it now impact on everyday aspects of human life with implications on international economy, public health, social issues such as migration and loss of livelihood and ultimately threatening peace and security. [5] Climate change would impact heavily on the environment

[1] http://www.environmental.gov.za/climatechange24/06/2011.
[2] United Nations Framework Convention on Climate Change Article 1(2).
[3] http://en.wikipedia.org/wik/climate change 24/06/2011.
[4] http://www.prd.org/publication/policybriefs/Ripple Effect Population and coastal regions 24/06/2011 Reference Bureau by Liz Creel.
[5] http://www.prb.org/publication/PolicyBrief/Ripple Effects and coastal Regions 24/06/2011 Liz Creel. See also Atapattu "*Climate Change, Differentiated Responsibilities and State Responsibility: Devising Novel Legal Strategies for Damage Caused by Climate Change"* in Richardson, Le Bouthillier, McLeod-Kilmurray and Wood (eds) *Climate Law and Developing Countries Legal and Policy Challenges for the World Economy (2009)* 37.

as a whole. Therefore states have an international obligation to minimize the activities that cause climate change. We have a common concern for humanity therefore states have a legal interest and duty to protect the world from the harsh realities of climate change.

1.2 What is a principle in international law? Principle creation and its role in international law

A principle in general terms is a law or rule that has to be, or usually, is followed. Often it attracts consequences/sanctions if not followed. The term "principle" is indeed imbued with different shades of meanings by international scholars and also by tribunals.[6] Article 38(1) (c) of the ICJ statute declares that the court is mandated to use general principles of law, as recognised by civilised nations as a source of international law and allows international law to draw from municipal law where no customary law or treaty law is available. Brownlie states that principles "are primarily abstractions from a mass of rules and have been so long and generally accepted as to be no longer directly connected with state practice. In a few cases the principle concerned, though useful, is unlikely to appear in ordinary state practice". Brownlie cites as examples in this regard, international principles such as equality of states and good faith.[7] Sands refers to two types of principles, the general ones, deducted from municipal practice, such as good faith and equity, and such principles as have been formed explicitly in the area of international environmental law.[8] In his view such principles embody legal standards, but are more general than commitments and do not specify particular action, unlike rules.[9] This view is coherent with that of the Mixed Claims Commission's in the *Gentin* case, where a principle is defined as "an expression of a general truth, which guide our actions, serves as a theoretical basis for the various acts of our lives, and the application of which to reality produce a given consequence".[10] In light of the above my opinion of what principles are is that they are guide posts, measuring rods of what we ought to do and should not do. In that regard Dworkin suggests that a principle "is a standard that is to be observed, not because it will advance or secure an economic, political or social situation deemed desirable, but because it is a requirement of justice and

[6] Dworkin *Taking Rights Seriously* (1977) 21.See also Article 38(1) ICJ Statute.
[7] Brownlie *Principles of Public International law 7th edition* (2008) 19.
[8] Sands Principles of International law 2nd edition (2003) 233. See also Verheyen *Climate Change Damage and International Law: Prevention Duties and State Responsibility (2005)* 68.
[9] Sands n8 233.
[10] Sands n8 233 cited *Gentin case (Italy v Venezuela) 1903. See* also Verheyen n8 68.

fairness or some other dimension of morality".[11] In this regard both rules and principles are standards "that point to a particular decision about legal obligations in certain circumstances, but they differ in the character of the direction they give".[12] If the requirements of a rule are not fulfilled, the consequences must be accepted, but legal principles "do not set out legal consequences that follow automatically when the conditions provided are met".[13] Dworkin gives an example that "we say that our law respects the principle that no man may profit from his wrong, but we do not mean that the law never permits a man to profit from wrongs he commits. In fact, people often profit, perfectly, legally, from their legal wrongs".[14] Rather, a principle "states a reason that argues in one direction, but does not necessitate a particular decision".[15] All that is meant, when we say that a particular principle is a principle of our law, is that the principle is one which officials must take into account. Thus, while some difference in theory exists, the legal significance of principles as general legal rules, which might not contain a direct obligation upon a state to act, but must be taken into account by them when behaving toward other states, is not disputed. In the climate change regime principles are intended to guide parties in their action to achieve the objectives of the convention and to implement its provisions.

The fact that legal principles like rules can have international legal consequences, has caused scholarly attention to focus on their content. The negotiation of the 1992 United Nations Climate Change Convention (UNFCCC) reflected differing views on the need to adopt a section on "principles".[16] In the end, general principles were included in two different parts of the convention, namely Article 3 and the preamble, which also allows principles not explicitly, specified therein to guide parties, thus recognizing implicitly that other principles of international law (including those referenced in the preamble) may be relevant.

Article 3 of the UNFCCC has the objective to "guide" the parties in achieving the UNFCCC objectives. The principles of the UNFCCC are important interpretive tools for primary duties to prevent climate change damage even outside the climate change regime due to the

[11] Dworkin *n6* 22.
[12] Ibid 24.
[13] Ibid 25.
[14] Ibid.
[15] Ibid 26.
[16] Sands n8 233.

universal membership of the UNFCCC and they could also be important in the framework of state responsibility claims e.g. through the principle of common but differentiated responsibility.[17]

1.3 Sources of law

The material sources of international law may be defined as the actual materials from which an international lawyer determines the rules applicable to a given situation.[18] As Shaw notes, there is no single body able to create laws internationally binding upon everyone, nor a proper system of courts with compulsory jurisdiction to interpret and extend the law. One is therefore faced with the problem of discovering where the law is to be found and how one can tell whether a particular proposition amounts to a legal rule. This perplexity is reinforced because of the anarchic nature of world affairs and the clash of competing sovereignties. Nevertheless international law does exist and is ascertainable.[19] Article 38(1) of the ICJ statute is widely recognised as the most authoritative statement as to the sources of international law.[20] The court is mandated to apply the following:

(a) International treaties/convention, whether general or particular, establishing rules expressly recognised by contesting states;
(b) International customs, as evidenced of general practice accepted by law;
(c) The general principles recognized by civilized nations;
(d) Subject to provisions of Article 59 judicial decisions and the teaching of most highly qualified publicist of various countries, as subsidiary means for determination of the rule of law.

Article 38 is not exhaustive on the sources of law modern state practice is making use of, especially when it comes to dealing with environmental law. Strydom notes that "For instance beyond the listed sources of hard law, which contain legally binding obligations, a significant part of environmental law has grown out of soft law principles which are not *per-se* binding but which have laid a foundation for future binding obligations".[21] This is because the principles have gained the status of customary international law over time or because

[17] Verheyen n8 67.
[18] Starke 6th edition *An Introduction to International Law .The Material sources of International Law (1967)* 30.
[19] Shaw 4th edition *International Law (1997)* 54-55.
[20] Article 38(1) of the ICJ Statute. See also Starke n18 31 and Shaw n19 55.
[21] Strydom *The Legal Principles Relating to Climate Change* 3.

they were codified into legally binding international conventions. Examples of soft law instruments are the *Stockholm Declaration of the United Nations Conference on the Human Environment (1972)* and the *Rio Declaration on Environment and Development (1992).* So by and large the combination of sources of international law and specific environmental law sources, binding as well as non binding, has given rise to a large body of legal obligations which directly or indirectly determine the rights and obligations of states with regards to the protection of the environment.[22]

1.3.1 Rule creation

Since we have established what a principle is in international law, a question may arise on how these principles come into being, who creates them and who enforces them? The international arena is composed of sovereign states controlling their individuals and natural resources. All this entails that no state can sit in judgement on another (*par in perem non habet iudicium*).[23] As this is the case seemingly it would be difficult for one state to draft rules for the rest of the world. As a solution to this problem states have found it convenient to create international organisations and entrust them with a certain degree of legal autonomy necessary for carrying out specific tasks to achieve common goals. One such body is the UNFCCC COP which is a body mandated by states parties to enforce legal principles applicable to climate change as provided for in the UNFCCC.

The climate change regime is grounded in two treaties and is comprised of rules generated from different kinds of sources which define how the institutions established under it, should function. Thus it is important to understand the nature and implications of the different kinds of sources and their 'hierarchy' or relationship to each other. The two main methods of rule creation are treaties or conventions and customs.[24] Other sources include general principles of civilized nations,[25] and judicial decisions and teachings of eminent

[22] Ibid.

[23] Principle of state sovereignty allows states within limits established by international law to conduct or authorize such activities which may have adverse effects on their own environment. Every state has a sovereign right to exploit its resources, but in pursuit your endeavours within your state, activities within your state are not to affect your neighbours. Also take note of principles 21/2 of the *Stockholm Declaration* and *Rio Declaration* respectively.

[24] Article 38 (1) ICJ Statute. See also Starke n17 52. For a detailed explanation on legal sources see Yamin and Depledge *The International Climate Change Regime A Guide to Rules Institutions and Procedures (2004) Chapter 1.*

[25] Article 38 ICJ Statute.

jurists. Binding decisions of international organisations also generate rules governing states. Also emerging legal concepts such as *jus cogens*[26] *and erga omnes*[27] obligations may come to impose additional constraints on state conduct. The sources relevant to this study are briefly discussed below.

1.3.2 Customs

State practice is an important factor relevant to determine the nature, legal implications and status of any principles even those applicable to climate change hence a look at customary law. The UNFCCC preamble, for example, contains some principles now regarded as binding. Whilst some of the principles set out in Article 3 are considered to be emerging concepts whose legal status and implications remain to be developed,[28] hence there is a need to look at customs as a form of rule creation. Also a look at customary law will add substance to this dissertation when the issues between the relationships of climate change legal regime with general international law (state responsibility) are discussed in chapter 3.

Customary law is developed out of state practice and opinio juris. International customary law is therefore binding on all states and not just to those states that are parties to a certain treaty. The only exception to be bound by certain customary rules is when a state has made a consistent objection to the rule in question. Although treaty law is far more prevalent than it was centuries ago, a large part of international law is made up of rules of customary law. In other words customary international law is state practice generally accepted as law by states. Such practice governs the way in which states make treaty law. They also provide substantive legal norms which are of general application, such as rules of state responsibility also covering particular areas such as the law of the sea. In order to establish a rule of customary international law two elements have to be proved:

(a) A consistent practice or conduct adopted by states.

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[26] *Verheyen n8 266 defines jus cogens* as norms of international law from which no derogation is permitted (cf Article 53 *Vienna Convention on the Law of Treaties,* also called peremptory norms)examples are the prohibition of the use of force, genocide.

[27] Ibid erga omnes means an obligation owed to the international community as a whole. The preservation of the climate system is a common concern of mankind and therefore scholars suggest that climate protection duties are erga omnes in nature.

[28] Yamin and Depledge n24 67.

(b) A conviction on the part of states that such conduct is motivated by a sense of legal obligation (opinio juris). Practice must be extensive and virtually uniform.

The concept of what can be deemed as a consistent practice or conduct adopted by states coupled with opinio juris is complex but for current purposes it suffices to make use of the statute of the ICJ. The essence of custom according to Article 38(1) (b) is that it should constitute "evidence of a general practice accepted as law". In this regard it is possible to identify two basic elements in the makeup of a customary rule. These are the material fact, namely the actual behaviour of states (what states actually do) and the psychological or subjective belief that such behaviour is law (opinio juris).[29]

1.3.2.1 The material fact

In this case the state's actual practice is what is important, and a number of factors are considered concerning this subject. These are, the duration, consistency, repetition and the generality of state practice in question.[30] As far as duration is concerned in international law, there is no rigid time element and it will depend upon circumstances of each case and the nature of the practice in question. In certain fields such as air and space law, the rules have developed faster and yet in other areas of law the opposite is true. One can actually note that duration is not of paramount importance to state practice issues.

As regards to continuity and repetition, the basic rule was laid down in the *Asylum case.*[31] The court held that the customary rule must be in accordance with a constant and uniform usage practised by states in question. In the *Anglo -Norwegian Fishers case,*[32] the court held that uniformity of state practice was essential before any customary rule can be recognized.

1.3.2.2 Opinion juris

Once state practice has been established, it follows then to determine the existence of opinion juris. The recurrence of the usage or practice tends to develop an expectation that in similar future situations, the same conduct or abstention from it will be repeated. When this expectation evolves further into a general acknowledgement by states that the conduct or abstention is a matter both of legal right and legal obligation, customary law is then

[29] Shaw n19 58.
[30] Ibid 59.
[31] 17 International Law Reports 280, 284-286.
[32] 18 International Law Reports 100-102.

born.[33] This conviction, this *opinio juris* is a convenient if not variable test that a usage or practice has crystallised into a customary rule. In the *Nicaragua case,* the court emphasised that as was observed in the *North Sea Continental Shelf case*, for a new customary rule to be formulated, not only must the acts concerned "amount to settled practice"[34], but must be accompanied by *opinio juris sive necessitatis*. Either the state taking such action or states in a position to react to it, must have behaved in such a manner that their conduct is "evidence of a belief that this practice is rendered obligatory by the existence of a rule of law requiring it. The need of such a belief, i.e. the existence of a subjective element, is implicit in the very notion of *opinio juris sive neccessitatis"*.[35]

It becomes clear that customary law is established by virtue of a pattern of claims, meaning uniform established practices accepted and followed by all states, absence of objection to the practice by other states interested in the matter and acquiescence by states.[36] The absence of objections indicates an acceptance of a customary practice as legitimate. Acquiescence of a customary rule can amount to consent to a customary rule, and the absence of protest indicates agreement.

However where a state opposes the existence of a certain practice from its inception it will not be bound by it.[37] This was further clarified in the *Anglo-Norwegian case*,[38] where the decision of the court may appear to suggest that where a state objects to an established customary rule and other states acquiesce, then that state is not to be treated as bound by the original rule.

Under customary international law, as we shall further explore in Chapter 3, there is a crucial rule in environmental law i.e. the 'no harm rule', which states that an activity within the territory of a state should not cause harm to the territory of another state. This rule has been liberally construed by courts and its application has been broadened to encompass major environmental issues. The rule emerged firstly as a customary rule and now has gained treaty status and it is also incorporated in Principle 21 of the *Stockholm Declaration*

[33] Ibid 37.
[34] 76 International Law Reports 349, 442-443.
[35] North Sea Continental Shelf case 41 International Law Reports 29, 73-74 para77.
[36] Acquiescence is the failure to act or failure to participate in a practice or even the absence of protest to a customary rule.
[37] Shaw n19 71.
[38] 18 International Law Reports 100-102.

as a guideline. This principle also plays a role in the climate change regime as shall be further examined in this study.

The UNFCCC does not contain any express provisions explaining the relationship between the principles within its ambit and custom8ary international law rules. The absence of such a provision has lead several small island states to make declarations clarifying their understanding of the relationship between existing rules of international law including customary law and the regime established by the convention.[39]

1.3.3 Treaties

In contrast with the process of creating law through customs, treaties or international conventions are more modern and more deliberate methods. Meaning that not only is custom the original primary source of international law, but now international law makes use of treaties as a sources of law, the validity and modalities of which themselves derive from custom.[40] Treaties are also known as conventions, accords, pacts, protocols, agreements or acts, and all these refer to the same transaction. These are creations of written agreements whereby states participating, bind themselves legally to an act in a particular way to set up particular relationships between themselves. These treaties create rights and obligations for parties and are governed by international law.[41] Although usage of terms is not entirely consistent in the climate policy literature, the rules contained in the conventions and the protocols are called "commitments" whereas the term obligation tends to refer to legal norms that apply to states as a result of non treaty based rules. [42] The *Vienna Convention on the* Law *of Treaties 1969,* Article 2(1), defines a treaty for the purpose of the convention as "an international agreement concluded between states in a written form and governed by international law whether embodied in a single instrument or in two or more related instruments and whatever its particular designation".

[39]Declaration made by Fiji, Kiribati, Nauru, Papua, New Guinea and Tuvalu, available from the FCCC website; are to the effects that signature/ratification of the convention, in no way constitutes renunciation of any rights under international law concerning state responsibility for the adverse effects of climate change, and that no provision in the convention can be interpreted as derogating from the principles of general international law.

[40] Shaw n19 73.
[41] Ibid 76.
[42]For a detailed analysis see Yamin and Depledge n24 chapter 18.

Treaties come in various forms and it is possible to divide treaties into "law making" treaties which are intended to have universal or general relevance and treaty contracts which apply between two or a small number of states. The one important to this study is the former. Law making treaties are those agreements whereby states elaborate their perception of international law upon any given topic or established rules which are to guide them in the future in their international conduct.[43] Starke further elaborates on what law making treaties are and he observes that "law making" treaties are treaties which lay down rules of universal or general application. He observes that the provisions of a law making treaty are directly a source of international law.[44] However a law making treaty as Starke further suggests is a treaty which cannot in the nature of things be one containing rules of international law always and be of universal application. He divides law making treaties into two groups. The first one is the one enunciating rules of universal international law e.g. the *United Nations Charter*. The second one lays down general or fairly general rules.[45] He further goes on to note that even to the extent that a "law making" treaty is universal or general, it may be a "framework Convention" like in our case the UNFCCC, imposing duties upon state parties to adopt national policies and corresponding measures on the mitigation of climate change by taking various steps, see Article 4 (2) (a) of the UNFCCC. Besides, some multilateral treaties are to a large extent either confirmatory or a codification of customary rules.[46] The UNFCCC is of such a kind and is open to ratification by all states and regional economic integration organizations. States become parties by depositing instruments of ratification, acceptance, approval or accession with the depository (Article 22). Treaties such as these only come into force when a specified number of ratifications by states have been met. As for the Kyoto Protocol it was to come into force when 55 states have ratified it. The protocol entered into force on the 16 of February 2005 in accordance with Article 23. Currently there are 193 party states (1 regional economic integration organisation and 192 states) to the Kyoto Protocol and UNFCCC.[47]

From the above one can classify THE UNFCCC as a law making treaty. However the usage of the term "law making" applied to treaties may certainly make one question whether the

[43] Shaw n19 75.
[44] Starke n18 41
[45] Ibid 42.
[46] Starke n18 41.
[47] http://unfccc.int/kyoto_protocol/items/2830.php, visited on 09/02/2012.

UNFCCC or the Kyoto Protocol imposes any legal obligations on parties? So as to be termed a law making treaty. The title of Article 4 of the UNFCCC uses the word "commitments" instead of "obligations" to describe the duties imposed on parties. It might signify that the duties imposed upon states are not strict obligations in legal terms.[48] However, at the same time the auxiliary verb "shall" is used in each paragraph, which usually means that the provision entails legally binding obligations.[49] This situation is similar in the KP. The protocol sets binding targets for industrialised countries for reducing greenhouse gas emissions. Even though the word used for describing the said targets is "commitments", those obligations are precisely articulated and generally said to be legally binding.[50] In these circumstances, it is possible to say that provisions of Article 4 of the UNFCCC or the KP are legally binding upon states. It is true that some of these conventions and instruments such as the UNFCCC and KP need to be ratified or accepted by states in order to come into force.

Treaties derive their binding force from a fundamental principle underpinning the law of treaties, namely *pacta sunt servanda,* which requires states to perform obligations they have undertaken on the basis of good faith.[51] Good faith simply means entering into a treaty agreement not just for formalities sake; a treaty should be entered into with a view of finding a solution, reaching certain objectives is the sole motivation for entering into a treaty agreement in good faith.

Treaties create binding rules only for those states or parties that become parties to them.[52] This is the general rule and was illustrated in the *North Sea Continental shelf case.*[53] In this case Germany had not ratified the relevant convention in question and was therefore held to be under no obligation to heed to its terms. However it is important to note that there is an exception to the rule in this case. Thus where a treaty provision reflects an international customary law rule then even non party states are bound by the rule. Not because it is a treaty provision but because it reaffirms a rule of international customary law. It is now established that even where a treaty rule comes into being covering the same ground as a

[48] *The legal Principles Relating to Climate Change Preliminary Issues on the Methodology and Scope of the Work. Prepared by the Japan Branch Committee on Climate Change* (July 2009*)*, herein after referred to as the Japan's Report on Climate Change 25-26.
[49] Ibid.
[50] Ibid.
[51] Nuclear test case 57 International Law Reports 398, 421. See also Yamin and Depledge n24 14.
[52] *North Sea Continental shelf case* 41 International Law Reports 29, 54.
[53] 41 International Law Reports 29, 54 para 26.

customary rule, the latter will not be simply absorbed within the former but will maintain its separate existence. This was elaborated on in the *Nicaragua* case the court did not accept the US argument that the rule of customary international law concerning the issue of self defence had been subsumed and supervened by Article 51 of the *United Nations Charter*. Rather it was emphasised that even if a treaty norm and a customary norm relevant to the present dispute were to have exactly the same content, this would not be a reason for the court to hold that the incorporation of the customary norm into treaty law must deprive the customary norm of its applicability as distinct from the treaty norm. The court concluded that it is therefore clear that international customary law continues to exist and to apply separately from international treaty law, even where the two categories of law have an identical content.[54]

As noted above this relationship between treaty law and customary law is to be noted in this study in the discussion on the "no harm rule" which has its roots in customary law but has subsequently developed into treaty law. This dual existence of customary law and treaty law allows treaty law to establish a regime of its own separate from customary law, if need be customary law rules extend to non parties to the UNFCCC and Kyoto Protocol in a bid to govern the climate change regime.

1.3.4 General principles of law

An incident may arise where a court in considering a case before it, realizes there is no law covering exactly the subject at hand. In this case neither customary law nor treaty law nor even case law can apply. In such a scenario the judge or arbitrator will proceed to deduce a rule that will be relevant, by analogy, from already existing rules or directly from the general principles that guide the legal systems, whether they are referred to as emanating from justice, equity or consideration of public policy.[55] Such a situation is most likely to develop in the climate change regime because of the relatively under-development of the system in relation to the needs with which it is faced. This is the reason why the clause on general principles of law recognized by civilized nations was inserted in Article 38 of the ICJ statute as a source of law. This is to cover gaps that might develop in international law and solve the problem of what is known in legal terms as *non liquet.*

[54] 76 International Law Reports 349, 368.
[55] Shaw n19 77-78.

1.3.5 Judicial decisions

According to Article 38 of the ICJ judicial decisions are to be used as a subsidiary means for the determination of rules of law rather than an actual source of law.[56] It will be wrong to conclude that decisions of the ICJ create binding rules of international law. Article 59 of the ICJ statute notes that: previous decisions of the court have no binding force, except between parties and in respect of a case in question. Thus it has been suggested T that the doctrine of *stare decisis* (doctrine of precedent) as known in common law has no place in international law.[57] In common law this doctrine entails that the ruling of a higher court must be followed by a lower court.

However international courts use their prior decisions for guidance, e.g. for the purpose of illustrating or distinguishing the application of a particular rule, and as a general practice that follows a line or a series of prior decisions and opinions which are consistently of a similar trend. Moreover, one still finds that states and text book writers quote judgements of international courts as authoritative decisions. At the end of the day it is perhaps not entirely correct to say that international law knows no doctrine of precedent.

Decisions of courts also include international arbitrations many of whose decisions have been extremely significant in the development of international environmental law. Such decisions include the *Trial Smelter Case (1941)*[58] whose decision was used in principle 21 of the *Stockholm Declaration (1972)* and the Panel 4 decisions in case of *Kuwait v Iran*[59] which have been helpful in determining what can be regarded as awardable damages in environmental law. These cases might very well in the future play an important role in the climate change regime in redress and liability matters.

1.3.6 Other sources [60]

International organisations endowed with legal authority to enact rules relevant to climate change will also be an important source of international law for states that are members of

[56] Article 38 0f the ICJ Statute when read together with Article 59.
[57] Starke n18 45.
[58] 9 International Law Reports 315-333.
[59] On 30 June 2005, the panel of commissioners appointed by the governing council of the United Nations Compensation Commission was set up to review the claims of environmental damage and depletion of natural resources resulting Iraq's invasion of Kuwait (the F4 Panel).
[60] Yamin and Depledge n24 18.See also Verheyen n8 266.

such organisations. Rules deemed *Jus cogens* and the relevant but legally distinct concept of obligations owed *erga omnes* are also relevant. Although it should be noted that these concepts do not appear concrete enough at the present moment to define everyday rights and obligations of states in relation to climate change. They are included in this dissertation because of their potential future impact on constraining states conduct. *Jus cogens* rules also known as peremptory norms of international law are of a fundamental normative character such that states are not permitted to alter them through adoption of treaty law or customary practice.[61] As yet there is no agreed category of rules having a *jus cogen* nature but rules prohibiting crimes against humanity, war crimes, genocide, apartheid and torture are candidates for that category

Erga omnes refers to obligations owed to the international community as a whole. Massive pollution of the atmosphere or pollution of the sea has been put forward as international crimes and therefore, potentially, their prohibition is an obligation owed *erga omnes.*[62] This concept is also closely linked to the issue of *locus standi* which bears upon how rules affecting the interest of the international community 'as a whole' come to be upheld, including whether a state is entitled to bring an action on behalf of the international community to enforce obligations owed to the whole community, without the need to show injury. This issue is of paramount importance in the climate change regime. For states not directly affected by the wrongdoing of another may wish to protect the climate system which has been deemed to be a common concern of humankind. Following the view that the protection of the climate system is an *erga omnes* obligation, all states are able to invoke state responsibility for breaches of obligations directed at preserving the climate system regardless of injury (see Article 2 and 4(2) of the UNFCCC).

[61] Article 53 1969 Vienna convention. See also *AL Aldasan v United Kingdom* (2002) 34 E.H.R.R 11. Para O-166 to O-119 the minority judgment.
[62] Yamin and Depledge n24 18.

Chapter Two

2. Main principles applicable to climate change

2.1 Introduction

The UNFCCC which came into force on 21 March 1994 is the 'parent' convention of the Kyoto Protocol (KP) and it provided the basis for a new international climate change regime, at the same time stipulating several principles in Article 3. The definition of 'principle' is not provided for in the UNFCCC but as we have noted before, principles are rules, norms and laws which states ought to follow. Article 3 of the UNFCCC states that: "In their actions to achieve the objective of the convention and to implement its provisions, the parties shall be guided, inter alia, by the following principles",[63]principles such as the CBDR, the precautionary principle, sustainable development principle etc. Hence commentators often characterise them as 'guiding principles' although their exact implication is not necessarily clear from the provisions of the UNFCCC. On the other hand, the Kyoto Protocol was designed to strengthen and operationalize the UNFCCC. The Kyoto Protocol (KP) was adopted in 1997 and came into force on 16 February 2005 and it is now ratified by 193 parties. Under the KP, developed countries commit to reduce their greenhouse gas emissions by an average of 5.2% below 1990 levels by 2012. They are also obligated to enhance energy efficiency, protect and enhance carbon sinks and reservoirs of green house gases and to implement policies and measures to minimize the adverse effects of climate change (KP Articles 3 and 4). Once a state has signed any one of these treaties in customary international law, it is under the principle of good faith obligated to refrain from acts calculated to frustrate the objectives of the treaty.[64] The focus of this study will be on principles and key concepts embodied in the current climate change regime.

2.2 The principle of common but differentiated responsibility (CBDR)

The principle of common but differentiated responsibility provides that while all states are responsible for preventing further damage to the atmosphere this responsibility is directly proportionate to their contribution to the cause and the means at their disposal to deal with it. Depledge and Yamin state that the principle in essence refers to the fact that certain

[63] Article 3 UNFCCC.

[64] *Vienna Convention on the Laws of Treaties* Article 18. For a detailed commentary on Article 18 of the VCLT see Corten and Klein (eds) *The Convention on the Law of the Treaties A commentary volume 1* (2011) 369-403.

problems affect, and are felt by all nations in common, if not to the same degree, and that the resulting responsibilities ought to be differentiated because not all states contribute equally to the problem.[65] The first time CBDR was formally applied, though implicitly, was in the preamble of the *Vienna Convention on the Protection of the Ozone Layer* in 1985. The convention refers to the need to take into account the circumstances and particular requirements of developing countries

2.2.1 Origins of the CBDR principle

The notion of CBDR has developed from the principle of equity in international law.[66] It is generally recognized that the formal equality of the states does not always mean that all states have the same duties, and that the special needs of developing countries must be taken into account in the development, application and interpretation of rules of international environmental law. Some states have better means to effectively protect the global environment. Principle 7 of the *Rio Declaration* states the principle as follows:

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

This reading of principle 7 of the Rio Declaration is almost the same as that of Article 3(1) of the UNFCCC. The Rio Declaration acknowledges the CBDR principle when it notes that states contribute differently to global environment degradation. At the same time the UNFCCC looks at sustainable development on the basis of CBDR. In both provisions the developed countries are to take the lead role in either protecting the environment or combat climate change.

[65] Yamin and Depledge n24 69. See also Atapattu in Richardson n5 40.
[66] Atapattu in Richardson n5 40.

2.2.2 The CBDR principle in the UNFCCC

The concept of CBDR set out in Article 3(1) of the UNFCCC states that the parties should protect the climate system for the benefit of present and future generations on the basis of equity (inter and intra-generational equity) and in accordance with their common but differentiated responsibilities and calls on developed country parties to accordingly take the lead in combating climate change and the adverse effects thereof. The leadership role for industrialized countries is reiterated both in the preamble of the UNFCCC (paragraph 3 and 18) and Article 4(2) (b). Paragraph 3 of the preamble explicitly states as follows:

> "Noting that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social development needs"

The principle obliges industrialized countries to take specific mitigation action (Article 4(2) of the UNFCCC). The Kyoto protocol, which embodies substantive obligations in relation to climate change, contains no obligation for the developing country parties apart from some general obligations that embellish commitments (vague commitments) contained in the UNFCCC.[67] Thus it is clear that the parties to the UNFCCC and Kyoto Protocol have recognized the need to categorize states within the broad class of developing countries according to whether they are particularly vulnerable to climate change or whether they will bear a disproportionate burden as a result of climate change.

2.2.3 The Elements of the CBDR principle

The principle of the CBDR includes two elements. The 1st element concerns the "common responsibility" of states for the protection of the environment, or parts of it at national, regional and global levels. The 2nd concerns the need to take account of differing circumstances particularly in relation to each state's contribution to the creation of a particular environmental problem and its ability to prevent, reduce and control the threat. From these two elements, it would therefore be worthwhile to examine what should be common and what should be differentiated in the context of climate change.

[67] Atapattu in Richardson n5 41.

2.2.3.1 Common Responsibility

This describes the shared obligation of two or more states towards the protection of a particular environmental resource taking into account its relevant characteristic and nature, physical location and historical usage associated with it.[68] Natural resources can be the property of a single state, or a "shared natural resource", or subject to a common legal interest, *res nullus*(property of no state, no man's lands e.g. seas and oceans or even space).

Common responsibility is likely to apply where the resource is not the property of, or under the exclusive jurisdiction of a single state. Recent state practices support the emergence of another legal principle in climate change, namely the *common concern of humankind* which assigns some kind of legal status to the atmosphere. It attempts to ensure that all states have a legal interest and duty to protect the atmosphere. This principle is also stated in the UNFCCC which acknowledges that "change in the earth's climate and its adverse effects are the common concern of humankind".[69]

2.2.3.2 The basis of differentiation in the climate change legal regime

In order to ascertain how the concept of CBDR functions in actual context it is necessary to examine what kind of differentiation is introduced into a given normative framework through the concept of CBDR. That is what I have termed "different treatment of the unequals". It is a well established principle of international law that unequal treatment towards persons of unequal status doesn't necessarily amount to impermissible discrimination.[70] Different treatment of the unequal is when you treat states of different social, economic and developmental status differently so as to achieve equity. From a legal point of view, it is necessary to explore the adequate basis of differentiation introduced in the climate change regime.

There are divergent views on the grounds of differentiation applicable to the concept of CBDR. Several premises for differentiation in the context of global environmental protection

[68] Sands n8 286.
[69] Preamble of the UNFCCC paragraph 1.
[70] *Center for Minority Rights Development(Kenya)and Minority Rights Group International on behalf of Endorois Welfare Council v Kenya* Communication No.276/2003 para 196.

could be identified. They include the following four theories which help define the basis of the CBDR principle.

2.2.3.3 Theories about the CBDR principle[71]

Contribution Theory: Industrialized countries are generating the largest share of historical and current global emission of greenhouse gases and should bear the cost of the clean up.

Entitlement Theory: Developing countries are entitled to fewer and less stringent commitments and financial technical assistance, in light of the history of colonialism and exploitation as well as the necessity of development.[72]

Capacity Theory: Developed countries having the resources and capabilities to take responsive measures should lead environmental protection.

Promotion Theory: Differentiation tailoring commitments for different situations for each country is necessary to promote participation in environmental treaties.

While a differential system is often necessary to redress past imbalances, at some point it becomes necessary to discard differentiation when states have either achieved a certain economic status or have become high polluters.[73] It would therefore be appropriate to establish a system to evaluate and possibly adapt the differentiation so that a certain differential treatment may not be maintained permanently even after its rationale is lost. In other words, differentiation should be temporarily utilized mainly to level the playing fields.

Some scholars advocate that historical contributions should not be a factor influencing different treatment.[74] At the other end, some scholars state that the first three premises exist in order to sustain the CBDR principle in the climate change regime. In this context developing states generally tend to emphasise 'contribution', such as historical emissions, while developed states often stress 'capacities', including the development stage of GDP per

[71] Japan's Report on Climate Change n48 6.
[72] Under the 1992 UNFCCC, the principle of CBDR requires specific commitments only for developed countries parties and other developing states and allows differentials in reporting requirements Article 4(1)(a)-(j), 4 (2), Article 12.
[73] Atapattu in Richardson n5 44. See also Japan Report on Climate Change 7.
[74] Japan's Report on Climate Change n48 7.

capita. In any case, the importance and the relationship of these theories should be examined. For at the root of the divergence between them lies a struggle to influence the values underpinning the specific burden-sharing arrangements for global environment protection.

In conclusion, whatever theories of the CBDR principle states wish to give prominence to, it still remains the same that the principle involves a common responsibility for states to protect the environment at national, regional and even global level, and the need to take into account their different circumstances, particularly each state's contribution to the evolution of a particular problem and its ability to prevent, reduce, or minimize the threat. The principle also reflects the core elements of equity, placing an increased responsibility to wealthier states and those responsible for causing specific environmental problems.

2.3 The precautionary principle

Reducing uncertainties related to climate change is undoubtedly necessary. There is no uniform understanding of the meaning of the precautionary principle amongst states. At the most general level it means that states agree to act carefully and with foresight when taking decisions which concern activities that may have an adverse impact on the environment.[75] A more persuasive interpretation provides that the principle requires that any activities and substances which may be harmful to the environment be regulated, and possibly prohibited, even if no conclusive or overwhelming scientific evidence is available as to the harm or likely harm they may cause to the environment.[76] This principle requires action that replaces "react and correct" with "forecast and prevent".[77] The concept of "react and correct" where activities within states are not restricted or prohibited until proven dangerous would not function in the climate change regime because once the actual damage due to change in climate has occurred, it is impossible or it takes unreasonable cost to remedy the damage afterwards hence it will be too late to prevent or even correct the harm.

[75] Sands n8 272.
[76] Ibid.
[77] Climate change fact sheet number 8/14 published by South Pacific Regional Environmental programme 1.

2.3.1Aim of the precautionary principle

The principle's aim is to provide guidance in the development and application of international environment law where there is scientific uncertainty. At one level it provides the basis for early international legal action to address highly threatening environmental issues such as ozone depletion and climate change. On another level as some industrial groups have suggested it has the potential of over regulating and limiting human activities.[78]Recent research appears to indicate that there is little empirical evidence documenting real life cases where regulatory action was taken on the basis of a precautionary approach that later turned out to be unnecessary.[79] The core of the principle requires that states should not advance scientific uncertainty as a reason not to take action to prevent environmental damage and disasters, particularly if the harm may be serious and irreversible.[80] The incorporation of the precautionary principle in Principle 15 of the *Rio Declaration* is now viewed to be part of general customary international law. [81] The principle provides that:

> "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".

Applying the precautionary approach may certainly involve a complex balancing act between cost and risk, between the overall economic and social advantages of the activity and its potential harm and between the degree of risk of significant harm and the availability of means to prevent the harm from occurring, etc. [82]

In the *Nuclear Weapons case* (ICJ Advisory Opinion, 1996) and the *Pulp Mills case* (Argentina v Uruguay, ICJ case no 135, 20 April 2010) the ICJ has affirmed the customary law status of the principle of prevention. To act preventively, states may be required to adopt a precautionary approach to the assessment of risk of future harm which could necessitate

[78] Yamin and Depledge n24 71-72
[79] Ibid.
[80] Ibid.
[81] Verheyen n8 75.
[82] Strydom n21 *6.*

the taking of anticipatory action.[83] In essence the obligation of a state to take preventative action is one of due diligence against which the conduct of the state in question must be examined.[84] At the national level this will involve an enquiry about the appropriateness and effectiveness of the state's legal, governance and administrative systems to achieve the necessary objectives. On the other hand, at an international level, it is an enquiry into whether a state complied with its duty to cooperate with other states in good faith.[85]

2.3.2 Precautionary principle in the UNFCCC

Article 3(3) of the UNFCCC is almost a carbon copy of principle 15 of the *Rio Declaration* except that the reference to cost-effective measures is phrased separately. The reference to precaution in the UNFCCC was a controversial matter and the text as finally adopted established limits on the application of the precautionary principle by requiring a threat of "serious or irreversible damage" and by linking the commitments to an encouragement to take measures which are cost-effective.

The aim of the precautionary principle in the UNFCCC is to minimize environmental degradation and aims at prevention of damage even in the absence of "full scientific certainty". Article 3(3) notes that: "The parties should take precautionary measures to anticipate, prevent or minimize the cause of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of scientific certainty should not be used as an excuse for postponing such measures …" It is important to note that the precautionary principle not only applies to prevention of climate change but also to the mitigation of its adverse effects. [86]

However Article 3(3) does not provide a clear answer to the link between the precautionary principle and climate change. For example for the principle to be applied firstly there is a level of harm that should be proved. In my opinion for the principle to apply, serious or irreversible damage is the threshold to be recognized. Secondly if the principle applies, should the burden of proof be shifted? What actions are countries obliged to take.

[83] Ibid.
[84] Ibid.
[85] Ibid.
[86] Verheyen n8 74.

2.3.3 Burden of proof

Case law indicates that the application of the precautionary principle places the burden of proof that certain activities do not or will not cause damage on the state willing to enter into an environmental sensitive activity.[87] In the Mox Plant Case (2001), for example, Ireland argued in its application for provisional measures that the precautionary principle places the burden on the United Kingdom to demonstrate that no harm would arise from discharges and other consequences of the operation of the Mox plant. In this case the UK carried the burden of demonstrating that no harm would arise from discharges and other operations of the Mox plant. As judge Wolfrum noted, a state interested in undertaking or continuing a particular activity has to prove that it will not result in any harm, rather than the other state likely to be affected having to prove that it will result in harm.[88] In other words shifting the burden of proof would require the person who wishes to carry out an activity to prove that it will not cause harm to the environment. This interpretation would require polluters, and polluting states, to establish that their activities and the discharges of certain substances would not adversely or significantly affect the environment before they are granted the right to release the potentially polluting substances or carry out the proposed activity.[89] Whether this approach will apply in the same way in the climate change regime remains to be seen for there is not yet a precedent involving the principle either in dispute settlement procedure or in compliance procedure under the UNFCCC.

2.4 The sustainable development principle

Sustainable development is a widely accepted international legal concept as evidenced by its widespread normative use in a wide range of international instruments.[90] The term sustainable development is generally considered to be defined as "development that meets the need of the present without compromising the ability of the future generation to meet their needs".[91] In its advisory opinion in *the Legality of the Threat or Use of Nuclear Weapons* case the ICJ recognised that the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including

[87] An environmental sensitive activity is an activity that may cause harm to the environment.
[88] Mox case at (Itlos case no 10, Mox plant case Ireland v U.K. Available at http://www.itlos.org).See also Atapatta in Richardson n5 51.
[89] Sands n8 273.
[90] Instruments such as Kyoto protocol Article 2(1), 4, 12(2) and also the *Rio Declaration* principle 4, 5, 12.
[91] Sands n8 252.

generations unborn.[92] States have the responsibility to uphold the sustainable development principle. In the case of *Gabcikovo vs. Nagymaros,* the majority opinion defined sustainable development as an attempt to reconcile the need for economic development with the protection of the environment. The ICJ stated as follows:

> "Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risk for mankind- for present and future generations- of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when states contemplate new activities, but also when continuing with activities done in the past. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development".[93]

In this regard one can observe that environmental concerns are not directed to frustrate efforts to achieve social and economic development, but that development should proceed in a way that is environmentally sustainable. In the same case they also referred to sustainable development as a concept in international law, declining to bestow on it the status of a principle in international law in contrast to judge Weeramantry in his separate opinion.[94] Although a genuine debate exists as to the status of this doctrine in international law, most commentators have identified the evolving elements of sustainable development.

2.4.1 Elements of the sustainable development principle

There are four recurring elements:

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[92] Resolution 49/75K adopted by the General Assembly at its 90th plenary meeting on 15 December 1994.The UN GA requested an opinion on the following question "Is the threat or use of nuclear weapons in any circumstance permitted under international law?" Advisory Opinion ICJ Reports 1996.

[93] *Gabcokovo Nayymaros* case 116 International Law Reports 1, 87 para140. See also Jacobson "*Through the looking Glass: Sustainable Development and Other Emerging Concepts of International Environmental Law in Gabcikovo Nagyamoros and Trial Smelter Arbitration* In Bratspies and Miller (eds) (2006) *Transboundary Harm In International Law Lessons from the Trial Smelter Arbitration* 144.

[94] *Gabcikovo-Nagymaros* case 116 International Law Reports 1, 121-128, his separate opinion expands significantly the definition of sustainable development. He defines it as reconciliation of the two fundamental human rights, the right to development and the right to environmental protection in order to sustain human life.

1) The need to preserve natural resources for the benefit of future generations (the principle of inter- generational equity).

2) Exploiting natural resources in a manner which is 'sustainable' (the principle of sustainable use).

3) The "equitable" use of natural resources which implies a balancing act between a state's use of natural resources and needs of others in an equitable manner (intra generational equity).

4) Integration of environmental consideration into economic, social and developmental plans programmes and projects and those developmental needs that are taken into account in applying environmental objectives.[95] These four elements are closely related and often used in combination (and frequently interchangeably).[96]

2.4.2 Sustainable development principle in the UNFCCC and Kyoto Protocol

The UNFCCC is the first and so far the only international instrument to refer to the parties' right to sustainable development in clear unambiguous terms[97]. The concept can be identified as an objective under Article 2 of the UNFCCC. Further the UNFCCC proclaims clearly that the parties have a right to, and should, promote sustainable development (Article 3(4)). Whilst Article 3(5) states that:

> "The parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all parties, particularly developing country parties, thus enabling them better to address the problem of climate change…"

In this context the wording of the UNFCCC emphasises that development should proceed with both economic and ecological sustainability and purport to ensure the general interest of the environment protection.

While it is not the main aim of the dissertation to discuss the legal history behind the promulgation of Article 3(4), it is worth mentioning that developed states were against the

[95] Yamin and Deplege n24 72. See also Sands n7 253. See also Atapattu in Richardson n5 *45.*
[96] Sands n8 254.
[97] The right to development that is sustainable is also mention in principle 3 of the *Rio Declaration* 1992.

right to development supported by developing states since the mid 1970s as part of the effort to establish a new international economic order because this would have meant entitlement to financial assistance from developed states.[98] The wording of Article 3(4) which made sustainable development a right to promote was a major compromise drafted to meet these concerns. Both UNCED treaties include language to the effect that the overriding priorities of developing states are the achievements of economic growth and the eradication of poverty,[99] an objective given more concrete expression by making the effective implementation by developing countries of their commitments dependent upon the effective implementation by developed countries of their financial obligations.[100]

Article 3(4) also provides that:

> "…Policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each party and should be integrated with national development programmes, taking into account that economic development is essential for adopting measures to address climate change".

This would imply that states are obligated to enact effective environmental legislation, standards and management objectives that would show the environment and developmental context to which they apply, bearing in mind that what is considered as normal by some states may be inappropriate and unwarranted economic and social cost to other states, in particular developing states.[101] The concept of sustainable development requires all parties to consider overall societal and environmental effects of measures

[98] Yamin and Depledge n24 73. See also Sands n8 265-6.
[99] 1992 UNFCCC Preamble paragraph 22, "Recognizing that all countries especially developing countries need access to resources required to achieve sustainable social and economic development and that, in order for developing countries to progress towards that goal, their energy consumption will need to grow taking into account the possibilities for achieving greater energy efficiency and for controlling greenhouse gas emissions in general, including through the application of new technology on terms which make such an application economically and socially beneficial". See also the Biodiversity Convention Article 20(4).
[100] UN FCCC Article 4(7). See also the Biodiversity Convention Article 20 (4).
[101] This reasoning is set out in the UNFCCC preamble paragraph 10. "Recognizing that States should enact effective environmental legislation, that environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply and that standards applied by same countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries"

addressing climate change and to balance the risk and interest of current and future generations.

The Kyoto Protocol also frequently refers to the concept of sustainable development mainly in Article 2(1) on the policy measures, in Article 4, Article 10 on implementation of commitments and Article 12 (2) on the clean development mechanisms (CDM). In the context of sustainable development, the CDM is the most important to the Kyoto Protocol instrument. Its importance is highlighted when states engage in greenhouse gas emission reduction projects. This will reduce greenhouse gas emission while at the same time contributing to sustainable development.

2.5 The principle of equity in environmental law

Equity has two meanings in the context of environmental protection. It means equitable utilization of natural resources and equitable cost–sharing and managing environmental issues, particularly in dealing with damage and its risk.[102] The principle of equitable utilization should be conceived as a fundamental legal principle in the field of international environmental law. The *Convention on Biodiversity* (CBD) also stipulates in Article 1 that: "…the fair and equitable sharing of benefits arising out of the utilization of generic resources…" is one of its objectives. On the other hand, the equitable cost-sharing in managing environmental issues appears explicitly in the UNFCCC Article 3(1).

2.5.1 The equity principle in the UNFCCC

The UNFCCC incorporates the concept of equity in Article 3(1) as one of the principles by which parties shall be guided in their actions to achieve the objectives of the convention and to implement its provisions. Article 3 of the UNFCCC contains the principle of sustainable development, the CBDR principle and the concept of equity. Article 3 serves as one of the basis of sharing and allocating duties to protect the climate system amongst states. There is a misunderstanding amongst states about whether the equity concepts includes intra generational equity as well as inter generational equity.[103] These have been regarded as new concepts of equity and have been advocated in international environmental law.[104] International environmental law often makes reference to equity as an important aspect of

[102] Japan's Report on Climate Change n48 16.
[103] Discussed in this study on Sustainable Development.
[104] Japan's Report on Climate Change n48 17.

the concept of sustainable development. Principle 1 of the *Stockholm Declaration* of 1972 notes that man bears a solemn responsibility to protect and improve the environment, for present and future generations. Principle 4 of *Rio Declaration* associates intra generational equity with the right to development.[105] This was confirmed in the *Lake Lanoux Arbitration*.[106]

The CBDR principle takes into account the need and capabilities of different countries and their historic contribution to particular problems, and the allocation of shared resources. Equity has also been relied upon in relation to the participation of states in environmental organisations, financial contributions and the equitable distribution of the benefits of development.[107] The equitable cost-sharing in managing environmental issues appear explicitly in UNFCCC Article 3(1). In fact UNFCCC is all about equity, how to allocate future responsibility for environmental protection between states which are at different levels of economic development, which have contributed in different degrees to particular problems, and which have different environmental and developmental needs and priorities.[108]

Under the climate change convention, all the parties undertake to be guided on the 'basis of equity' in their actions to achieve the objectives of the convention, and Annex 1 parties agree to take into account the need for 'equitable and appropriate contribution' by each of them to the global effort regarding the achievement of the convention commitments.[109]

In future, equity is likely to play a major role in environmental issues even in the climate change arena. As is clear from the ICJ ruling in *Gabcikovo Nayymaros*,[110] the case dealt with the issue of shared natural resources between states. Czechoslovakia had violated international law by unilaterally assuming control of the Danube dam for its own benefit. Hungary, which shared the dam with Czechoslovakia, was deprived of its right to equitable and reasonable share of this resource. The general obligation of states to ensure that an activity within their jurisdiction and control respects the environment of another state or of areas beyond their national jurisdiction is now part of the corpus of law relating to the

[105] Principle 4 *Rio Declaration* states that right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.
[106] Lac Lanoux Arbitration Spain v France 24 International Law Reports 101-142.
[107] Sands n8 263.
[108] Sands n8 262.
[109] UNFCCC Article 3(1) and Article 4(2)(a).
[110] 116 International Law Reports 1-128.

environment".[111] Czechoslovakia was obligated to respect the environmental right of Hungary to the dam by not embarking on the project of variant C without the consent of Hungary. In this case equity played a role in relation to the allocation of a shared natural resource.

2.6 The principle of good faith.

Perhaps the most important concept, underpinning many international legal rules is that of good faith.[112] This principle in general entails that states have an obligation to fulfil in trust and confidence their obligations resulting from general international law as well as treaties.[113] The ICJ in the *Nuclear Test case*[114] noted that:

> "One of the basic principles governing the creation and performance of legal obligations, whatever their source is the principle of good faith. Trust and confidence are inherent in international co-operation, in particular in an age when this co-operation in many fields is becoming increasingly essential. Just as the rule of *Pacta sunt sarvanda* (that entails international law agreements are binding) in the law of treaties it is all based on good faith, so also is the binding character of international obligations assumed by unilateral obligations".

This dictum of the court seems to imply that good faith also applies to unilateral acts (unilateral acts denotes an independent, one sided legal transaction that creates international rights and obligations). Indeed, the principle covers the entire structure of international relations. However the court made a point that good faith as a concept is not in itself a source of obligation where none would have existed.[115] Shaw further states that the principle is a background principle informing and shaping the observance of existing

[111] Jacobson in Bratspies and Miller n93 140-141.
[112] *Draft Articles on Prevention of Transboundary Harm of Hazardous Activities* with commentary (2001) p155 comment on Article 4. See also Shaw n18 81.
[113] See UN charter Article 2(2) and the *Declaration on Principles Concerning Friendly Relations and Co-operation among States* adopted by GA Resolution 2625(xxv) 1970.
[114] 57 International Law Reports 398 on judgments.
[115] Nicaragua vs. Honduras 84 International Law Reports 219.

rules of international law and in addition constraining the manner in which those rules may legitimately be exercised.[116]

2.6.1 The principle of good faith in the UNFCCC

In the UNFCCC the concept/principle of good faith is implicit. The convention does not explicitly stipulate the concept as a guiding principle except within the context of the dispute settlement procedure (UNFCCC Article 14(6)).

Today the concept of good faith, through judicial pronouncement and state practice has acquired concrete legal content and can be considered as a positive legal principle.[117]In relation to climate change the concept of good faith may have its role in the implementation phase of the climate change regime. For the principle has been recognized as an essential element in the implementation of international obligations by states in to order to maintain a legal regime of any kind. The international court of justice in its 1980 advisory opinion stated that:

> "The very fact of Egypt's membership to the world health organisation entails certain mutual obligations of co-operation and good faith incumbent upon Egypt and upon the organisation. Moreover the paramount consideration both for the organisation and the host state in every case must be their clear obligation to co-operate in good faith and promote the objectives and purpose of the organisation as expressed in the constitution".[118]

Thus, a further study of the principle of good faith is warranted since it may provide legal guidance as to how to implement the climate change legal regime. The principle as the court had suggested in its advisory opinion to Egypt may provide the ground for an obligation to promote and maintain a regime of climate change in good faith. Parties to the UNFCCC and Kyoto Protocol have an obligation to comply with specific provisions under the conventions in good faith.

[116] Shaw n19 82.
[117] Japan's Report on climate change n48 19.
[118] Interpretation of agreement of March 25 1951, between WHO and Egypt, Advisory Opinion; ICJ Report 1980 73 para 43, 96 para 49.

2.7 The relationship between the climate change legal regime and other environmental law principles

2.7.1 Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration

A short summary of these principles will do justice to this study. Principle 21/2 which determines that states have sovereignty over their natural resources and the responsibility not to cause transboundary environmental damage is the primary rule which was established in the Trail Smelter case.[119] Principle 21 lies at the core of international environmental law and "contains two fundamental objectives : that states have sovereign rights over their natural resources and that states must not cause damage to the environment of other states or areas beyond natural jurisdictions".[120] Though paragraph 9 of the UNFCCC preamble reaffirms the principle of sovereignty of states in international law, this affirmation doesn't override or undermine the obligation to avoid damage to the environment set out in Principle 21. This is because the principle of sovereignty affirmed in paragraph 9 allows states to conduct or authorize activities as they choose within their territories including activities which may have an adverse effect on their own environment, provided they observe limits established by international law.[121]

2.7.2 The principle of good neighbourliness

Principle 21/2 is closely related to the principle of good neighbourliness**,** another principle of environmental law. It is enunciated in Article 74 of the UN Charter, in which UN members agreed that "their policies in their metropolitan areas must be based on general principles of good neighbourliness", and must take into account "the interest and well being of the rest of the world, in social, economic and commercial matters".

The principle of good neighbourliness also underlines the dicta in the *Corfu channel case,* in which the ICJ stated that the principle of sovereignty embodies the obligation of every state

[119] The case notes that "no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties of persons therein, when the case is of serious consequences and the injury is established by clear evidence". See Drumbl "*Trail Smelter and International Law Commission's Work on State Responsibility for Internationally Wrongful Acts and State Liability*." in Bratspies and Miller (eds) *Transboundary Harm in International Law Lessons from the Trial Smelter Arbitration (2006) 86.*

[120] Yamin and Depledge n24 68-69. See also Sands n8 236.

[121] Yamin and Depledge n24 68-69.

not to allow its territory to be used for acts contrary to the rights of other states.[122] In this regard there is a duty of due diligence efforts to warn others of known hazards that may affect the environment of other states beyond your national jurisdiction. A state has no right of exercising its sovereignty to the extent of ignoring the rights of other states.[123] Consequently this principle is now established customary international law and the cornerstone of international environmental law.[124]

The principle is also closely linked to the precautionary principle for it requires preventive measures to be taken by states when necessary to avoid activities which take place in its territory or under its control or jurisdiction and which may cause significant damage to the environment of another state or to areas beyond its jurisdiction.[125]

2.7.3The principle of co-operation

The principle is essential in designing and implementing effective policies in the climate change regime. States in general are to co-operate in good faith.

The requirements of the obligation to co-operate are at the heart of principle 24 of the *Stockholm Declaration* which provides for the obligation to co-operate in matters concerning the protection of the environment. The obligation to co-operate is affirmed in virtually in all international environmental agreements of bilateral and regional application as well as global instruments.[126] The obligation may be in general terms, relating to the implementation of the treaty objectives[127] or relating to specific commitments under a treaty.[128] Article 4 (1) of the UNFCCC provides various kinds of obligations for states to cooperate with one another in paragraph (c)-(e) and (g)-(i).

It is necessary to explore what kind of consequences will follow if one state breaches the principles discussed above. This then brings us to the next important issue of state responsibility and state liability in the climate change regime.

[122] 16 International Law Reports 155.
[123] *Lac Lanoux Arbitration Spain v France 24 International Law Reports 101.*
[124] Strydom n21 *5.*
[125] Strydom n21 6.
[126] Sands n8 250.
[127] See the 1992 *Biodiversity Convention* Article 6.
[128] 1992 UNFCCC Article 41.

Chapter Three

3. State responsibility in international law in relation to climate change

In any legal system there must be legal liability for failure to observe obligations imposed by its rules. Such liability is known in international law as responsibility. The ILC adopted the Draft articles on responsibility of states for wrongful acts (DASR) in 2001. These draft articles do not constitute international law per se; their emphasis is on secondary rules of state responsibility, that is to say, the general conditions under international law for the state to be considered responsible for wrongful actions or omissions, and the legal consequences that flow from there-. The articles do not attempt to define the content of international obligations, the breach of which gives rise to responsibility. Rather this is the function of primary rules, whose codification would involve restating most of substantive international law, customary and conventional.[129]

In establishing responsibility of states under international law, an internationally wrongful act must give rise to the responsibility of that state. This is codified in Article 1 of the ILC DASR.[130] The principle of state responsibility states that there is an internationally wrongful act of a state when conduct consisting of an act or omission-

(a)Is attributable to the state under international law; and

(b) Constitutes a breach of an international obligation of the state.[131]

Thus in order to establish for example, the responsibility of South Africa, one has to establish firstly that South Africa has breached one of its international obligations, and secondly, such act or omission resulting in the violation is attributable to South Africa under international law. In addition, the link of causation between the alleged damage and the act/omission attributable to South Africa must be established too.[132] In general the system within the DASR may be summarised in two stages. An international wrongful act constitutes a breach of an international obligation and the breach entails consequences in

[129] Harris *Cases and Material on International Law 6th edition (2004)* 504.
[130] DASR Article 1. See also Atapattu in Richardson n5 48.
[131] Article 2 of the DASR. Also the non compliance with Article 3 of the Kyoto protocol may (in theory) trigger the compliance mechanism of the developed states by the conference of the parties (COP).
[132] Ibid. See also Drumbl in Bratspies and Miller n119 85.

that, the state in breach incurs responsibility to make good the harm suffered by another state.[133]

Conduct attributable to the state as noted above, consists of an action or omission. Cases in which international responsibility of a state has been involved on the basis of the omission of a state are at least as numerous as those based on a state's actions.[134]Moreover it may be difficult to isolate an omission from the surrounding circumstances which are relevant to the determination of responsibility. For example in the *Corfu Channel case,* the ICJ held that it was a sufficient basis for Albanian responsibility that it knew, or must have known, of the presence of mines in its territorial waters and did nothing to warn other states of their presence.[135] Likewise in environmental matters, if a state has knowledge of an imminent danger on its territory it has an obligation to warn/notify other states of its existence.[136]

In the *Diplomatic and Consular Staff case* the court concluded that the responsibility of Iran was as a result of the "inaction"/omission of its authorities which "failed to take appropriate steps, in circumstances where such steps were evidently called for". [137] In the environmental context a state dealing in dangerous environmental conduct should take appropriate steps to mitigate damage to the environment of another state or to areas beyond its jurisdiction. As professor Strydom note that

> "In essence the obligation of a state to take preventative action is one of due diligence against which the conduct of a state in question must be examined. At a national level this will involve an enquiry about the appropriateness and effectiveness of the state's legal, governance and administrative system to achieve the necessary objectives, while at the international level it is a question about the state's compliance with the obligation to co-operate with other states in good faith". [138]

[133]Verheyen n8 234.
[134] Harris n129 507.
[135] 16 International Law Reports 155, 157; ICJ Report 1949 4 para 22-25.
[136] See Article 16(2) of the Convention on Nuclear Safety 1994.
[137] 61 International Law Reports 530, 557-558 para 63,67; ICJ Report 1980 3 para 63,67.
[138] Strydom n21 6.

3.1 International obligations in the climate change regime

An act or omission is attributable to a state when conduct constitutes a breach of an international obligation of that state. As noted in chapter one of this study under customary law rules, a golden rule in environmental law stipulates that activities within the territory of a state should not cause harm to the territory of another (the no harm rule). This rule is crucial to state responsibility issues. The rule has been subsequently incorporated in the *Stockholm Declaration* as Principle 21. The principle has also broadened its application to the protection of shared resources which makes the principle relevant to climate change issues. In the climate change context since the climate is a shared resource, principle 21 would recognise states sovereign rights over their natural resources and at the same time impose a duty upon states to ensure that activities such as greenhouse gas emissions within their jurisdictions are produced within limits so that they would not cause damage to the environment of another state. Greenhouse gas emissions create a high risk of climate change. Minimizing the risk requires stabilizing greenhouse gas concentrations at a sustainable level so as not to negatively affect your neighbouring states.[139] The no harm rule is an international customary rule meaning it has binding legal effects on all states subject to exceptions. [140] Also this rule is premised upon the principle of good neighbourliness.

As it stands there are two international instruments governing the climate change regime the UNFCCC, though not so effective in its enforcement provisions and the Kyoto protocol which reinforces the commitments in the UNFCCC.

Each has proposed obligations for states to mitigate climate change by limiting greenhouse gas emission. Article 2 of the UNFCCC aims at the"… stabilizing of greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such levels should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change…"The objectives were noble but the UNFCCC does not set mandatory limits on greenhouse gas emissions for

[139] Verheyen n8 162.
[140] The exception is that a state shows consistent objection to be bound by the rule. For more detail see chapter 1 of this study in customary rule.

states, nor does it contain enforcement provisions. Article 4 contains commitments, in which all parties to the convention taking into account their CBDR are to implement and develop certain measures such as developing periodically updated national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol. These national inventories are to be made available to COP (Article 4 (1) (a). The developed country parties and other parties included in Annex 1 are to adopt national policies and take corresponding measures on the mitigation of climate change (Article 4 (2). Countries listed in Annex 1 would also aim to return individually or jointly to their 1990 level of anthropogenic emissions of carbon dioxide and greenhouse gases. However it is left to individual states to decide what programmes they consider best to reach this goal. Moreover within the UNFCCC no sanctions are attached for failure to meet one's objectives.

In contrast, the Kyoto Protocol sets out concrete legally binding targets for industrialised countries listed in Annex 1. Article 3 (1) obligates these states to make sure that their greenhouse gases listed in Annex A are reduced by at least 5% below their 1990 levels during their first commitment period 2008-2012. Annex B lists the individual reduction obligations for all Annex 1 countries, for example Europe must reduce greenhouse gas concentration by 8% and Canada and Japan by 6% respectively.

The Kyoto protocol and the UNFCCC are applicable to party states. However considering the functionality of the "no harm rule" which has developed into a general obligation to prevent harm and its binding effects on all states, states not party to the UFCCC and Kyoto protocol may incur international responsibility if their damage extends beyond their national borders.[141]

The important question will be what happens to a state party that breaches its obligation in terms of the UNFCCC. The answer lies with the enforcement and compliance mechanism of the convention which is entrusted to a conference of the parties (COP). This conference acts like a peer review of the member states. It must keep under regular review measures taken to give effect to the convention and it is mandated to make and adopt all decisions

[141] Atapatta in Richardson n5 48.

necessary for the effective implementation of the convention.[142] The COP mandate includes the periodical examination of state obligations in the light of developments in scientific and technological knowledge; the exchange of information on measures adopted by the parties; the development and refinement of comparable methodologies; assessment of environmental, economic and social effects of measures taken pursuant to the convention; the consideration and adoption of state reports; and recommendations on the implementation of the convention.[143]

In summary the following seem to be legal obligations states incur under the climate change regime:

(a) All states have the obligation to use their territory in a way that is not detrimental to the territory of another state- the no harm rule. The rule is part of customary international law therefore applicable to all states subject to exceptions though.

(b)Parties to the UNFCCC are obliged to stabilize their emissions at a level below dangerous anthropogenic interference with the climate system. The industrialised signatory states to the Kyoto Protocol are required to reduce their emissions according to Annex B. If they fail on their obligations they will be held to compliance by the COP.

3.2 Breach of an international obligation. A Look at the ILC DASR effects on the climate change regime.

According to Article 12 DASR, and consistent with customary law on this issue, [144] a state breaches its international obligation when an act of the state does not conform to its international obligations, bearing in mind that the act must be attributable to the state. In the context of climate change the conduct attributable to a state must consist in allowing of unregulated greenhouse gas emissions.[145] Naturally the international obligation must be in force for the state at the time of the breach (Article 13). For example the USA and Australia cannot be held responsible for not conforming to Kyoto Protocol reduction targets because they are not party to the protocol. However they can be found responsible when the "no

[142] See the UNFCCC Article 7.
[143] Strydom n21 17.
[144] Verheyen n8 235.
[145] Tol and Verheyen *State Responsibility and Compensation for Climate Change Damages A Legal and Economic Assessment (2004) p1111.*

harm rule" principle is applied and when the primary obligation is used to establish state responsibility for climate change damage.[146]

As a general rule of state responsibility only acts or omissions of a state organ are attributable to the state.[147] In the context of damage caused by environmental pollution, or rather emissions of greenhouse gases, it will be mostly private entities that actually undertake the polluting activities although state-owned companies may also play a role.[148] This is also true when we talk about destruction of carbon sinks. [149]

The rationale of attributing to a state the conduct of private entities or parastatals lies in the fact that the internal law of the state has conferred on the entity in question the exercise of certain elements of governmental authority although it is not always the case. [150] This is true concerning parastatals. Where an environmental treaty is breached because the proper compliance measures are not put into place, the breach is attributable to the state regardless of the source of emission.[151]

Because greenhouses gas emissions are mainly emitted by private entities Article 8 DASR is therefore worth considering. Article 8 stipulates that: "The conduct of a person or group of persons shall be considered an act of the state under international law if the person or group of person is in fact acting on the instruction of, or under direction or control of that state in carrying out the conduct" A state can therefore be held responsible for the conduct of a private party if in fact it directed or controlled, instructed or even approved such activities.

Article 11 DASR is based on the principle that purely private conduct can't as such be attributed to the state. But it recognizes that private conduct is to be considered as an act of the state if and to the extent that the state acknowledges and adopts the conduct in question as its own.[152] As the biggest emissions activities like industrial gas emissions,

[146] Verheyen n8 235.
[147] Article 4 of the DASR.
[148] The behaviour of state-owned corporations is only considered an act of the state if the exercise public powers see Verheyen n8 235
[149] Verheyen n8 235.
[150] Harris n129 510.
[151] Verheyen n8 239.
[152] The *Diplomatic and Consular in Tehran case (USA v Iran)* 61 International Law Reports 530 judgements, though the case is not environmentally related the principle applicable is the same.

transport and electricity are subject to licensing, it is correct to consider that a state, by approving the behaviour of industrial, transport operators through permitting policies that do not control greenhouse gas emissions it is explicitly or implicitly responsible for the greenhouse gas emissions of private entities[153]

3.3 State liability

At present the legal framework for climate change lacks a liability dimension that is crucial in ensuring that people and states already suffering the negative consequences of climate change are compensated. Ideally, liability and redress rules should be developed at both the national and international levels. State liability differs in context from state responsibility.[154] Liability means a duty to compensate damage caused by a state by lawful conduct. If we follow this definition it is concluded that there is no general rule of state liability, liability is introduced only through treaties such as the *Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment 21 June 1993* and the *Convention on International Liability for Damage Caused by Space Objects,* and the *Protocol on Liability and Compensation for Damage Resulting from Transboundary Movement of Hazardous Waste and their Disposal (1999)* . All these conventions seem to adopt the strict liability principle in recognition of the need to channel liability to the promoter or operator of the dangerous activities.[155] In some cases strict liability is supplemented by fault liability for individuals contributing to the damage through negligence or premeditation. These principles of liability *may* also apply to the climate change regime. For liability to attach a causal connection needs to be established in order to exclude damage that is "too remote", several tests are proposed in order to assess the directness of the causal link e.g. the requirement of a "clear and unbroken" causal link between the act in question and the injury. Establishing causation means establishing a causal relationship between a certain legally relevant behaviour and a loss or injury.[156] In this case, the legal evidence is inextricably linked to scientific findings and the ability of the courts and tribunals to rely on

[153] Verheyen n8 239
[154] Drumbl in Bratspies and Miller n119 84.
[155] See for example Protocol on *Liability and Compensation for Damage Resulting from Transboundary Movement of Hazardous Waste and their Disposal* Article 4. See also Cullet *Liability and Redress for Human Rights Induced Global Warming: Towards an International Regime 14 (2007)* available at Heinonline.org.
[156] Verheyen n8 249.
[156] Ibid.

such scientific evidence.[157] Most of the time science cannot tell causal effect matters with an absolute certainty. Given the climate's complex interactions on a global scale it would be practically impossible to prove individualised responsibility for a specific damage in order to bring out state liability. The important question is who is really responsible for causing climate change? Can we blame the USA for damage caused to the Arctic region by its emission of greenhouse gases? Who is the victim of climate change?

Climate change is a global phenomenon-virtually every state in the international community is affected. The *accumulation* of greenhouse gases in the atmosphere over a period of time is causing climate change. Thus, can an individual state in a community of many be held responsible for the damage caused by global warming? Clearly, under the existing principles of state responsibility, where the doctrine of joint and several liability doesn't generally apply the answer will be no. [158] As professor Strydom puts it:

> "Establishing state responsibility in a climate change regime may encounter serious problems. Since a variety of states and non-states entities may contribute in various ways to factors causing climate change, determining whose wrongful conduct can causally be linked to the harmful consequences is impossible. In the second instance, since it is the atmosphere which is affected and not necessarily a specific state interest, identifying the injured state for the purpose of reparation becomes equally problematic".[159]

However some scholars have proposed that all these issues of lack of liability in the climate change regime can be solved to some extent as will be noted in this study in the following pages.

Specific causation between a specific actor and resulting damage cannot be easily established in climate change and transboundary pollution.[160] Nevertheless, establishing *general causation* can solve the problem. To prove general causation, a causal link between an activity and the general outcome need to be established. In cases of climate change the

[157] Ibid.
[158] Atapatta in Richardson n5 49-50. See also Strydom n21 5.
[159] Strydom n21 4-5.
[160] Eva Hasterttler *State Responsibility and Climate* Change 9 available on line at (http://www.ehs.unu.edu/file/get/3595).

evidence will need to show that anthropogenic greenhouse emissions influence the radioactive forces in the atmosphere, which lead to global warming and cause sea levels to rise or a change in temperature, etc.[161] However, some have still argued that climate change does not fit into the general framework of state responsibility, torts or civil law damages because of the difficulty of proving causation.[162]

Torts arise when someone has sustained injury or loss from the acts of another in breach of a duty owed to him by that other person or a contravention of rights conferred on him by law.[163] Some schools of thought suggest that tort in environmental damage claims may constitute an effective mechanism to allow an injured rights holder to obtain compensation for the negative consequences of environmental damages.[164] So, the possibility of establishing liability for contribution to climate change through tort should be considered as well, either under theory of strict liability or fault based liability. Under strict liability a state will be liable for every act/omission that causes damage, regardless of fault. International law usually reserves state strict liability for ultra hazardous activities such as nuclear operations and the transboundary movements of hazardous waste and their disposal.[165]Arguably greenhouse gas emissions could be treated as ultra hazardous activities, given the possible negative effects on the climate change system.

Under negligence liability also known as fault based liability, a violation of a duty to care or a breach of an international rule needs to be shown. This is expressed in Articles 1 and 2 of DASR which stipulate that every international wrongful act entails responsibility. Wrongful is defined as conduct that breaches international obligations. Here the due diligence test would have to be applied imposing a duty of reasonable care in fulfilling international obligations.[166]

3.4 Conclusion

Without adequate liability and state responsibility the climate change regime will remain legally ineffective from the point of view of people and states suffering severe impacts of

[161] Verheyen n8 248.
[162] Verheyen n8 251.
[163] Ibid.
[164] Cullet n155 11.
[165] *Convention on Nuclear Safety* (1994) preamble. See also *Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Waste and Their Disposal (1999)* Article 4.
[166] Tol and Verheyen n145 1113.

climate change. The liability and state responsibility regime that needs to be adopted should and must be international and comprehensive to cover all issues relating to climate change.

There are two kinds of obligations whose breach could generate responsibility of wrongdoing of states in the context of prevention of climate change. There is on the one hand the procedural obligation to submit certain information in terms of the UNFCCC (Article 4) and on the other hand the substantive obligation to reduce greenhouse gas emissions as required by the KP.[167] If we assume in accordance with the ILC DASR that every state party is entitled to pursue the responsibility of a state having violated those obligations, the former breach of the procedural obligation can be remedied by making the wrongdoing state to cease the breach that is by making the said state to perform the original obligation. If it is a breach of a substantive obligation the wrongdoing state can make a guarantee of non repetition of the harmful conduct.

However a state which is responsible for an international wrongful act is under an obligation to make restitution to the injured state which means the situation must be restored to what it was before the wrongful conduct occurred.[168] If restitution fails the responsible state is under an obligation to compensate the injured state for any financially assessable damage not covered under the first option.[169] If this remedy does not suffice as a last resort, reparation may take the form of satisfaction given by a state and which may take the form of an acknowledgement of the breach, an expression of regret or a formal apology.[170] All these remedies are difficult to implement in the climate change regime as noted above.

[167] Japan's Report on climate change n48 25.
[168] Article 35 DASR.
[169] Article 36 DASR.
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