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«Climate Change: State Responsibility and Dispute Settlement after the Paris Agreement»

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Climate Change: State Responsibility and Dispute Settlement after the Paris Agreement

Λιλή-Κόκκορη Μαρία-Κωνσταντίνα

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Living life in peace…

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List of Abbreviations

AOSIS	Alliance of Small Island States
AR4	Fourth Assessment Report
AR5	Fifth Assessment Report
CBD	Convention of Biological Diversity
CBDR	Common but Differentiated Responsibilities
CBDRRC	Common But Differentiated Responsibilities and Respective Capabilities
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COP	Conference of the Parties
ECT	Energy Charter Treaty
EEZ	Exclusive Economic Zone
EPA	Environmental Protection Agency
FAO	Food and Agriculture Organization
G20	Group of Twenty
G77	Group of 77
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GCF	Green Climate Fund
IACHR	Inter-American Commission of Human Rights
ICAO	International Civil Aviation Organization
ICJ	International Court of Justice
ICSID	International Center for Settlement of Investment Disputes
IIAs	International Investment Agreements
ILA	International Law Association
ILC	International Law Commission
IMO	International Maritime Organization
INDC	Intended Nationally Determined Contributions
IPCC	Intergovernmental Panel on Climate Change
ITLOS	International Tribunal for the Law of the Sea
JI	Joint Implementation
KP	Kyoto Protocol
MEAs	Multilateral Environmental Agreements

MFN	Most Favored Nation
MOP	Meeting of the Parties of the Kyoto Protocol
NAPA	National Adaptation Plan of Action
NAPCC	National Adaptation Plan on Climate Change
NCP	National Contact Points
NDCs	Nationally Determined Contributions
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
PCA	Permanent Court of Arbitration
PCIJ	Permanent International Court of Justice
RE	Renewable Energy
RECIEL	Review of European and International Environmental Law
RIAA	Reports of International Arbitral Awards
SAR	Second Assessment Report
SBI	Subsidiary Body for Implementation
SSRN	Social Science Research Network
UNCLOS	United Nations Convention on the Law of the Sea
UNFCCC	United Nations Framework Convention on Climate Change
UNEP	United Nations Environment Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFSA	United Nations Fish Stock Agreement
UNGA	United Nations General Assembly
UNGA Res.	United Nations General Assembly Resolution
UNHRC	United Nations Human Rights Committee
UNSC	United Nations Security Council
VCLT	Vienna Convention on the Law of Treaties (1969)
WHO	World Health Organization
WTO	World Trade Organization
YBIEL	Yearbook of International Environmental Law

Introduction

1. Overview: Subject and methodology of the current thesis

Climate change is an issue that crosses borders. Countries and communities have already and will in the future suffer more from the effects of climate change. The United Nations Framework Convention on Climate Change (UNFCCC) is the regime that sets out the ground framework and objectives for addressing climate change, but provide only limited guidance on the concrete actions and targets. Therefore, countries have needed to further negotiate agreements under the regime that provide the rights and obligations. The last attempt of the international community to address the impacts of climate change was with the establishment of the Paris Agreement, which implements further the UNFCCC Framework's goals.

The anthropogenic climate change that we are experiencing today has primarily been brought on by GHG emissions from developed countries. However, scientific estimates show that some of the most severe adverse impacts of climate change will strike in regions of the world that have made only minor contributions to the making of the current climate change and that have little capacity to adapt to the changes as they occur. The question put to the fore by this situation is to what extent the GHG emitting States are responsible to compensate the injured States for the damage suffered.

The current thesis submits that the law of State responsibility could provide important guidance for the development of the international regime on climate change. The failure of many States, in particular developed ones, to prevent excessive per capita emissions causing harm to global atmospheric commons constitutes arguably a breach of an obligation arising from the no-harm principle. The barriers to the implementation of the law of State responsibility through litigation do not exclude its applicability and the existence of secondary obligations. The obligation to cease a continuing wrongful act suggests a duty of industrial States to commit much more strongly to reducing their emissions.

The intuition of this research work is that the principles underpinning international law reflect a shared moral understanding, and that such a shared moral understanding may provide important guidance to climate negotiations, even as proper ethical theories remain underdeveloped. More specifically, this research work suggests that the concept of State responsibility could play the role of a prominent and familiar reference that international lawyers could follow.

The key legal question is whether the international law regarding state responsibility is equipped to address injury caused to states by anthropogenic climate change. For example, can an injured state claim compensation for the loss of land and property to sea-level rise or extreme weather events? Is there an obligation to prevent damages on which such responsibility could be shaped? If so, which States? Do States contain duties of State conduct that can be breached i.e. an obligation of States to avoid damages. Another question is whether the UNFCCC and the Paris Agreement contain direct obligations regarding climate change damages that would give rise to a claim for reparation under the law of State responsibility.

This paper will attempt to address these issues by discussing, in Part I the examination of primary obligations for States relating to climate change and in case of violation of these obligations, how the international law of state responsibility applies to breaches of the obligations. The No-Harm-rule is therefore the most interesting primary rule in this context. A breach of the No-Harm rule would, in respect to climate change, consist of failure to exercise diligent control of activities, when it is foreseeable that the activities could cause significant deleterious effects. During the attempt to allocate state responsibility, we have to face several difficulties in bringing claims, such as determination of causality, the multitude of wrongdoers and historic emissions, and withdrawal from treaties by state parties.

There is almost global consensus among scientists as to the causes behind anthropogenic climate change. As for specific causation, it would be unfeasible to link specific emissions to specific damages. However, if claims for responsibility were to be precluded due to difficulties with establishing causation, it would undermine the objective of the primary rule. It should therefore be sufficient that the damage at least to some extent was caused by the emission in order for a tribunal to award damages. If excessive greenhouse gas emissions can be considered as an internationally wrongful act of States, State responsibility could provide important guidance to climate governance.

In Part II, it will be examined the implementation of the law of State responsibility, and how and where a claim could be arise, regarding the dispute settlement procedures. It will be examined the judicial and non-judicial dispute settlement deriving from the treaty law, namely the Paris Agreement and the UNFCCC. Does the Paris Agreement provide an effective compliance mechanism or a dispute settlement mechanism? If not, which

procedures we could use in order to give rise to a claim? Have been arisen climate change disputes to date? Which courts or tribunals could settle these kinds of disputes? Do States want to settle their disputes regarding environmental harm, or they did not want to establish procedures regarding the settlement of environmental and climate change disputes? It will be further examined the eventuality of settling any disputes before few of the international courts and tribunals.

Two preliminary remarks are necessary. Firstly, by suggesting that State responsibility could provide an important guidance to climate governance, this thesis does not contend that State responsibility should determine measures taken in response to climate change. Secondly, it will be examined the law of State responsibility, and not the international liability for climate change damages. This has been chosen intentionally, and for the needs of the current thesis, there is a chapter in the research work explaining the law of State responsibility and the law of International liability, by establishing a distinction between these two rules of law.

We will first examine the legal framework for climate change, an attempt to define the term of climate change damages, the distinction of State responsibility and international liability and we will conclude to the law of state responsibility, underlying the basic framework.

2. The legal framework for climate change

It has been declared that "the protection of mankind against the threat of global climate change has become a distinct area of international law, which is already referred to as 'climate change law".[1] The field of the international climate change law emerged and evolved rapidly.[2] Although international climate change law is based on the international environmental law, particularly on the international law of state responsibility,[3] the

[1] Verheyen Roda, Climate Change Damage And International Law – Prevention Duties and State Responsibility (Developments in International Law), 2005, p. 138.
[2] Carlarne Cinnamon, Gray Kevin and Tarasofsky Richard, International Climate Change Law: Mapping the Field, p.3, in Carlarne Cinnamon, Gray Kevin and Tarasofsky Richard (eds.), *The Oxford Handbook of International Climate Change Law*, Oxford, 2016, pp. 3-26.
[3] Trail Smelter Arbitral Tribunal Decision (United States v. Canada), 11 March 1941, Ad Hoc International Arbitral Tribunal, 3 UN Rep. Int. Awards 1911, 1938 (1941)).

international treaties concerning transboundary air pollution,[4] and other principles under the international environmental and customary law;[5] however, the international community identified the global problem and developed a framework treaty with its own identity, and then a Protocol and an Agreement to define and implement the aspects of the global response to the climate change problem. Additionally, each state party developed domestic laws, measures and regulations to correspond to this response.

The first period of the climate change regime ran from 1990-1995 and involved the negotiation, adoption, and entry into force of the United Nations Framework Convention on Climate Change (hereinafter referred to as UNFCCC).[6] It provides for stabilizations of greenhouse gas emissions in the atmosphere,[7] establishes a normative framework that supports ethical grounds for decision-making,[8] the principle of precaution[9] and the principle 2 of the Rio Declaration, which provides that States have the sovereign right to exploit their own recourses.[10]

The second period ran the decade from 1995-2004, from the commencement of the Kyoto Protocol[11] negotiations to its entry into force. The Kyoto Protocol is a treaty that provides legally binding obligations for the developed countries regarding the emission reduction goals, provides mitigation tools and generally adds a strict form and shape in the legal framework under the UNFCCC. It also defines the roles and responsibilities of States.

Taking into account that the Kyoto Protocol could not meet the 'ultimate objective' of stabilizing GHG concentrations 'at a level that would prevent dangerous anthropogenic

[4] Eg. Convention on Long Term Transboundary Air Pollution (Geneva, 13 November 1979), UKTS 57, (1983), Cmd. 9034, TIAS No 10521, 18 ILM 1442 (1979).
[5] The polluter pays principle, common but differentiated responsibility, no harm principle etc. All these principles are reflected in the UNFCCC, the Kyoto Protocol and the Paris Agreement.
[6] UN General Assembly, United Nations Framework Convention on Climate Change : resolution / adopted by the General Assembly, 20 January 1994, A/RES/48/189, available at: <http://www.refworld.org/docid/3b00f2770.html> [accessed 5 November 2018].
[7] UNFCCC, supra note 6, Art. 2.
[8] The UNFCCC sets out the principle of Common But Differentiated Responsibilities (CBDR). See UNFCCC, Art. 3.1.
[9] UNFCCC, supra note 6, Art. 3.3.
[10] Rio Declaration on Environment and Development, (1992) 31 ILM 876, which states that "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction".
[11] Kyoto Protocol, UN General Assembly, United Nations Framework Convention on Climate Change : resolution / adopted by the General Assembly, 20 January 1994, A/RES/48/189, available at: <http://www.refworld.org/docid/3b00f2770.html> [last accessed 8 November 2018]

interference with the climate system';[12] there was soon a need to establish a new, binding and comprehensive agreement. The Paris Agreement[13] serves the period of the third phase of the United Nations climate change regime, which currently has focused on developing a more global approach, which limits the greenhouse gas emissions of all countries, not only the developed countries, but the developing ones as well.[14]

3. Climate change damages: An attempt to define the substantive content of the term

In the context of the UN-climate regime, climate change damages can be understood as 'the actual and/or potential manifestation of impacts associated with climate change (in developing countries) that negatively affect humans and the natural system.[15] The purpose here is the attempt to explore the legal understanding of climate change damages in public international law, by examining the definitions given in international environmental law and climate change law. In environmental law, damage constitutes 'the harm as effects on human health, industry, property, environment or agriculture in other States'.[16] Notable in this respect is that primary rules in environmental law are not established to regulate damage per se, since liability rules do that.

UNFCCC tried to give a definition through the conclusion in the Fifth Assessment Report; the IPCC concluded that 'in recent decades, changes in climate have caused impacts on natural and human system on all continents and across the oceans. Evidence of climate change impacts is strongest and most comprehensive for natural systems. Some impacts on human systems have also been attributed to climate change, with a major or minor contribution of climate change distinguishable from other influences'.[17]

Taking into account the absence of a clear definition or meaningful articulation deriving from UNFCCC, a range of perspectives on climate damages has emerged, through

[12] UNFCCC, *supra* note 6, Art.2. See also, Oppenheimer Michael and Petsnok Annie, Article 2 of the UNFCCC: *Historical Origins, Recent Interpretations, Climate Change*, Vol 73, 2005, p. 2.
[13] Paris Agreement - Status of Ratification, U.N. Framework Convention On Climate Change, <http://unfccc.int/paris_agreement/items/9444.php> [last accessed 14 November 2018].
[14] Paris Agreement, *supra* note 13, Art. 2.2.
[15] Background paper to the expert meeting under UNFCCC, 2012.
[16] See the commentaries to the ILC Articles on Prevention Of Transboundary Harm from Hazardous Activities (2001).
[17] Fifth Assessment Report, AR5, IPCC, 2014.

calculations of economic loss, from Disaster Risk Reduction (DRR), catastrophe modelling and the latest and newer field of climate change assessment. It should be added that the Damage and Loss Assessment Methodology defines damage as the monetary value of partially destroyed assets.[18]

Taking into consideration all aforementioned efforts to define the term of climate change damages, it is notable that there several challenges regarding the climate change damages, due to the impossible of restoring the situation *ex ante*. The particular challenges are: (a) assessment of environmental harm, (b) contribution to the injury and (c) apportioning of damages.

Environmental harm means damage, moral or material. In climate change damages, material damage will be easier to be defined and compensated than any other ecological damage, which is more difficult to measure and restore.[19] The second challenge is the contribution to the injury, which may happen by a state. In the climate change damages, the claimant state will have contributed to the injury as well, so the extent of reparation has to be adjusted accordingly.[20] This contribution may limit the legal consequences arising from the injury.

Additionally, the third challenge is the uncertainty regarding the allocation of costs. Climate change damages are the result of a multitude of emitters, emitting activities and emitted gases. Consequently, the question of how to divide responsibility needs to be addressed. Could an injured State invoke the responsibility of another state when, in fact, more than one State has contributed to the wrongful act? In cases when there are multiple responsible states, the responsibility of each State may be invoked in relation to that act.[21] The challenge arising here is that Article 47 is not applied to instances where several States independently commit acts that contribute to an indivisible harm, as in the instance of climate change damage. In both common and civil law the principle of joint and several liability is recognized in these instances. In international law, however, an analogy is difficult.

[18] Voigt Christina, Climate Change and Damages, p. 467-483, in Carlarne Cinnamon, Gray Kevin and Tarasofsky Richard (eds.), The Oxford Handbook of International Climate Change Law, Oxford, 2016.
[19] See generally M. Bowman and A. E. Boyle (eds.), Environmental Damage in International and Comparative Law, Oxford, 2002.
[20] International Law Commission, Articles on Responsibility of States for Internationally Wrongful Acts, November 2001, Supplement No. 10 (A/56/10), chp.IV.E.1, available at: http://www.refworld.org/docid/3ddb8f804.html [accessed 22 October 2018], Art. 39.
[21] ILC, ARSIWA, *Supra* note 20, Art.47.

The injury is not an important element of state responsibility in international law, although it is an important element in establishing secondary rules. The absolute sovereignty and the preserving territorial integrity have to be balanced between states; for this reason the no-harm rule has been limited in scope: both State practice and legal scholars agree that not all types of damage must be prevented, but only significant[22] or even serious[23] damage. Significant damage can be defined as "something more than detectable but not at the level of serious or substantial".[24] In this understanding the duty to prevent transboundary harm must require a *de minimis* threshold. These thresholds considered as able to trigger the rule as a prevention duty.[25]It is difficult to determine the tolerable level.[26] However, there is no established international standard that defines what kind of environmental damage can lead to state responsibility.[27] Most types of damages have to be tolerated to a certain extent; and other damages will have a lower threshold. At the same time there is support for the view that radiation should not be tolerated at any level, since there are no safe levels of radiation.[28]

With respect to the application of the rule to risk, it seems that, in cases where the possibility of concrete risk turning into damage is small, the expected damage must be greater to trigger the prevention duty. This would apply mostly to accidental pollution. If the risk of damage occurring is high, the expected damage can be smaller.[29] This situation applies to the impacts of climate change. As the projections of the IPCC show, it is almost certain that damage will occur on the territory of various States. The IPCC Fourth

[22] See 1978 UN General Assembly Resolution 2995 which prohibits "significant harmful effects" on other states when states utilize their natural resources. The ILC defined the term 'significant damage' by stating that this should mean something more than detectable or appreciable, but not necessarily serious or substantial.
[23] Lac Lanoux Arbitration (France v. Spain) 24 ILR 101 (1957). Trail Smelter Arbitration (United States v. Canada) 16 April 1938, 11 March 1941, 3 RIAA 1907 (1941). In this dispute, a smelter located in Canada caused substantial pollution to US territory with black carbon and other aerosols. See Kuhn, the Trail Smelter Arbitration, 32 AJIL (1938) 785 and 35 AJIL (1941), 665
[24] The damage has been determined as significant which means that has a special meaning. The determination is set up In the Oxford Dictionary 2nd edition 1989.
[25] See Rao, note 36, 30 and Report of the ILC, Official Records of the General Assembly. 51st session, Supp. 10 (UN Doc. /51/10), 259 f. as well as Rao (Special Rapporteur), 1st Report on the legal regime for allocation of loss in case of transboundary harm arising out of hazardous activities, ILC Doc. A/CN.4/531, August 2003 (55th ILC Session), 15. See also for further reference the commentary to Article 48 of the IUCN Draft International Covenant on Environment and Development, available at <http://www.iucn.org> [last accessed 14 November 2018]. This document is the product of an international consultation and codification effort of the International Law Centre, involving numerous international authorities on international environmental law.
[26] Okowa Phoebe N, State Responsibility for Transboundary Air Pollution in International Law, Oxford, 2000. p. 88.
[27] Okowa, *Supra* note 26, p. 88.
[28] *Ibid.*
[29] See Epiney Astrid, Das Verboterheblicher Grenzüberschreitender Umweltbeeinträchtigung: Relikt oder konkretisierungswürdige Grundnorm? 33 AVR (1995) 309 p.321.

Assessment Report shows that the impacts of climate change entail significant damages to the environment, caused by landslides, droughts, floods, storms, sea level rise, etc., and to human health and property. It is, therefore, submitted that almost all injury expected from and already resulting from climate change is more than *de minimis* or insignificant.

4. State responsibility and international liability; distinguishing the pathways

Liability and state responsibility rules determine whether "the polluter pays" principle is a principle of consequence in international environmental law or if it is just a principle that hardly applies in practice. From the regimes applied in the international law, one gets a mixed picture. For this reason, within the first thoughts before writing this thesis was to examine both state responsibility and international liability under the climate change regime. The focus though was directed only on state responsibility; a topic that is controversial and easily contested, but this does not preclude that the confusion about the two terms does not remain.

In general, it could be said that state responsibility is applied to international wrongful acts while international liability is applied to acts that are not wrongful.[30] For this reason, the topic of international liability was less difficult, and the core of the final decision was the uncertainty about the allocation of state responsibility. The question that arises though is which actions are considered to be lawful and which unlawful? Taking into account that literature, case law and state practice are poor in the field of environmental law, which scenario is more effective in case of transboundary harm?

Regarding the confusion about the terms, this different usage is mainly caused by the desire to distinguish between subjective and objective elements. The element of fault has been controversial in the ILC work on establishing the terms "responsibility" and "liability" and for this reason ILC makes a distinction between primary and secondary obligations from which breach can either result in state responsibility or international liability. To really understand which concept should be applied in a given situation, it is necessary to know what distinguishes a primary from a secondary duty, starting by explaining the reasons ILC opted for the establishment of two scenarios.

[30] Horbach N. L. J. T., *The confusion about state responsibility and international liability.* Leiden Journal of International Law, 1991, 4, pp. 47-74. Available at: <http://journals.cambridge.org/abstract_S0922156500001837>, [last accessed 29 November 2018].

First, according to the Commission, state responsibility derives from prohibited acts whereas, on the contrary, international liability can stem from permissible (i.e. not prohibited) acts. Besides responsibility of a state for its wrongful acts, that is, for breaches of an obligation attributable to the state, the Commission also recognizes the responsibility for lawful activities which, due to their nature, give rise to certain risks. Additionally, the Commission believed that the difference in the kind of obligations derived from state responsibility, dealing with secondary duties and international liability, dealing with primary duties could best be dealt with separately.[31] According to the Commission, obligations may be indicated as 'primary' if they derive from general rules and principles of international law which impose specific duties on states. All the mentioned above are called primary rules. The secondary rules, on the other hand, are consequences that occur from the failure to comply with the primary obligations. On the other hand, the term "liability" was expressly reserved for injurious consequences of those activities which are not prohibited by international law.

According to ILC, there is a wrongful act of a conduct[32] and a wrongful act of an event.[33] The State's duty to prevent transboundary harm falls within the second scope, which consequently requires the state's duty of due care in order to prevent this harm. The second element when allocating state responsibility is attribution. State responsibility deals essentially with the existence of an internationally wrongful act, while international liability requires the establishment of serious harm which is lawful. The concept of international liability did not include only the requirement for payment of damages, because of an act's injurious consequences, but also the primary obligation to prevent, inform, and negotiate. Consequently, the concept of international liability becomes a unique liability concept with the obligation to reparations.[34] The term liability in legal discourse denotes the breach of an obligation. The purpose of the rules on international liability is to assert obligations without a prior finding of responsibility for a wrongful act or omission.[35]

Furthermore, the topic of international liability has been decided by the Commission since 1978.[36] A Schematic Outline[37] of rules has been codified dealing with transboundary

[31] II-1 Y.B. International L. Comm'n 203, para 20 (1971).
[32] ILC, ARSIWA, *supra* note 20, Art. 20.
[33] ILC, ARSIWA, *supra* note 20, Art. 23.
[34] Louka Elli, International Environmental Law – Fairness, Effectiveness, and World Order, Cambridge, 2006, pp. 448-481.
[35] II-1 Y.B. Int'L. omm'n, paras 17, 31 and 54 (1983).
[36] ILC, International Liability for the Injurious Consequences Arising out of Acts Not Prohibited by International Law, U.N. Doc. A/CN.4/SER A/1978/Add 1 in II-2 Y.B. Int'l L. Comm'n 14 (1978).

harm arising from lawful acts by declaring the guiding duties to prevent, inform, negotiate and finally repair. The liability concept provides for "any human activity within the territory or control of one state which gives rise or may give to loss or injury to persons or things within the territory or control of another state".[38] In relation to this, the combination of the duties comes from the application of prevention, information, negotiation and reparation.[39] The failure of a State to perform or meet these general duties is not (necessarily) a wrongful act and does not mean it is liable. These duties are just a code of conduct, and not legally binding obligations.[40]

As a conclusion, it should be remarkable a repetition through a schematic explanation. State responsibility deals with secondary rules, which mean the consequences of a breach. State responsibility does need an internationally wrongful act, namely a breach of an obligation that is attributable to the State. On the contrary, international liability deals with primary rules, which deal with balance of interests. International liability refers to acts that are not prohibited, namely the activities under State's jurisdiction that cause or create a risk, and the transboundary harm. In case of knowledge or means of knowledge, there are obligations to cooperate, prevent, notify and negotiate. The failure will create coexisting state responsibility for wrongful act and negotiation to determine the amount of compensation with regard to the relevant actors, according to Rapporteur Barboza.

5. The engagement of responsibility under the ILC: elements and consequences

One of the fundamental principles of international law is that States must not harm or violate the rights of other States.[41],[42] Whenever one state commits an unlawful act to another state, this triggers its international responsibility.[43],[44] The International Law Commission (ILC) has dealt with the issue and defined the term, by providing guidance for

[37] Schematic Outline', II-l Y.B. Int'l L. Comm'n 63, Sections 4 and 5 (1982).
[38] Schematic Outline, *supra* note 21, Article 1, Section 1, p. 62.
[39] II-l Y.B. Int'l L. Comm'n 97, U.N. Doc.A/CN.4/413 (1988) (4th Report);
[40] Riphagenhasa referred to these as non-obligations, see A. Rphagen, State Responsibility: NewTheories of Obligation in Interstate Relations, in R. Macdonald & D. Johnston (eds.), *The Structure and Process of International Law: Essays in Legal Philosophy, Doctrine and Theory*, 1983, pp. 594-596.
[41] Tol Richard S. J. & Verheyen Roda, *State responsibility and compensation for climate change damages – a legal and economic assessment*, Energy Policy, 32, 2004, p. 1110.
[42] See generally J. Crawford, *State Responsibility*: The General Part, Cambridge, 2013; *The Law of International Responsibility*, J. Crawford, A. Pellet and S. Olleson (eds.), Oxford, 2010.
[43] Shaw Malcolm, International Law, Cambridge University Press, 2017, p. 589.
[44] The International Law Commission (ILC), has developed a clear model as to the origin for the responsibility of the internationally wrongful act.

the development of international law. According to Art.2 of the ILC's Articles on Responsibility of States for Internationally Wrongful Acts (hereinafter referred to as ILC's Articles on State Responsibility or ILC Articles or ARSIWA)[45], the elements of responsibility depend on specific requirements: The first element provides for the attribution of an act or omission to the state and the second element the failure of the State to fulfil an international obligation.[46],[47] Under the international legal system, states are responsible for breaches of their obligations and shall compensate affected states for any damage caused by their violation of international law. This rule is the basis of the law of state responsibility, and has been made clear through a number of cases. In the *Factory Chorzow* case for example, the court said that "it is a principle of international law and even a greater conception of law, that any breach of an engagement involves an obligation to make reparation".[48] Although as mentioned above it is difficult for states to establish state responsibility, sometimes, states accept responsibility. One such case includes the admission of responsibility by US for its nuclear testing in *Marshall Islands*, in which the US accepted the responsibility for compensation to citizens of the Marshall Islands for loss and damage to property and persons resulting from the nuclear testing program in 1958.[49] Issues of state responsibility are also invoked in the *Nauru* case,[50] and in the *Rainbow Warrior* case.[51]

5.1 The elements of the internationally wrongful act

It is necessary to examine the conditions that need to be fulfilled in order to define an act of a State as being internationally wrongful. The elements of attribution and breach of obligation were clearly expressed by the PCIJ. In the *Phosphates in Morocco* case the Court linked the determination of international responsibility to the existence of an "act

[45] International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts, November 2001, Supplement No. 10 (A/56/10), chp.IV.E.1, available at: <http://www.refworld.org/docid/3ddb8f804.html> [accessed 30 October 2018].
[46] S*upra* note 43, p. 591.
[47] Yearbook., ILC, 1970, vol. II, p. 187; Phosphates in Morocco, Judgment, 1938, PCIJ, Series A/B No. 74, p. 28.
[48] See the Factory Chorzow case, PCIJ, Series A, No.17, 1928, p.29, where the Permanent Court of International Justice (PCIJ).
[49] Before the Nuclear Claims Tribunal of Republic of the Marshall Islands, Memorandum of Decision and Order, in the Matter of the People of Enewetak, et al, Claimants for Compensation, NCT No. 23-0902, April 13, 2000, available at <http://www.nuclearclaimstribunal.com>, [last accessed 29 November 2018].
[50] Certain Phosphate Lands in Nauru (Nauru v. Australia) ICJ Reports 1992 p. 240.
[51] Conciliation Proceedings (New Zealand v. France): Ruling of the UN Secretary General Perez de Cuellar, New York, July 5, 1986, reprinted in 26 ILM 1346 (1987).

being attributable to the State and described as contrary to the treaty right of another State [52] Regarding the element of attribution, there must be a link between the state and the person or entities that are committing the wrongful act or omission. There are certain exceptions where a conduct of private persons or entities is attributed to the state.[53],[54]

The second element to entail state responsibility is the breach of an international obligation.[55] A case in which the unlawful act of a State consisted of an omission is the *Corfu Channel* case.[56] Another example is the *United States Diplomatic and Consular Staff in Tehran* case, where the Islamic Republic of Iran, as previously mentioned[57], was held responsible for inaction consisting of the failure to take appropriate steps.[58], [59]

Breaches of treaties and breaches of other legal duties are namely covered by the notion of internationally wrongful acts.[60] The obligation must also be in force between the states concerned at the time the act occurs[61], as stated in Article 13 of the ILC Articles.[62] A state can thus not be held responsible for breaching an obligation of a treaty if some arguments apply or if the state has not ratified the treaty concerned.[63] Whether or not there has been a breach of an international obligation hinges upon "the precise terms of the

[52] See the Phosphates in Morocco case, Judgment, 1938, PCIJ, Series A/B No. 74.
[53] See the United States Diplomatic and Consular Staff in Tehran case (USA v. Iran), Judgment, I.C.J. Reports 1980, p. 3, where a State may be responsible for the effects of the conduct of private parties, provided that it has failed to respond appropriately to prevent those effects. The Court held the Islamic Republic of Iran responsible for failure to take appropriate steps to protect the United States Embassy and its diplomatic and consular staff from the actions of the militant revolutionaries, not for the actual occupation of the Embassy and the taking of hostages itself.
[54] Report of the ILC, UN doc. A/56/10, 2001, p. 38.
[55] A breach may consist of both actions and omissions as expressed in Article 2 of the 2001 ILC Articles.
[56] See the Corfu Channel case (United Kingdom v. Albania), Judgment of April 9th, 1949, I.C.J. Reports 1949, p.4, in which Albania was held responsible for the damage caused to two British destroyers when they struck mines in Albanian territorial waters, despite the mines not having been placed there by Albania. The ICJ concluded that it was sufficient that Albania knew, or must have known, of the existence of the mines without alerting third States.
[57] *Supra* note 53.
[58] There are cases in which international responsibility was based on a combination of an action and an omission, see Report of the ILC, UN doc. A/56/10, 2001, p. 35.
[59] State responsibility can result exclusively from conduct in violation to international law and it cannot be avoided with national legislation, see Report of the ILC, UN doc. A/56/10, 2001, p. 36.
[60] Brownlie Ian, Principles of Public International Law, Oxford, 7th edition, 2008. p. 435.
[61] *Supra* note 54, p. 34.
[62] See ILC, ARSWA, *supra* note 20, Art.13.
[63] See the Gabčíkovo-Nagymaros Project (Hungary/ Slovakia) case, Judgment, I.C.J. Reports 1997, p. 7, para. 140, where the Court held that new scientific insights and new norms must be taken into consideration. This corresponds to the provision in Article 31 paragraph 3(c) of the 1969 Vienna Convention on the Law of Treaties, which states that "any relevant rules of international law applicable between the parties" shall be taken into account when interpreting treaty provisions.

obligation, its interpretation and application, taking into account its objective and purpose and the factors in the case".[64]

5.2. Consequences

The first consequence regarding state responsibility for a wrongful act is an obligation for the responsible state to cease this act.[65],[66],[67] The victim state that suffered loss or damage as a result of the internationally wrongful act, can attain reparations. Alternately, there must have been a causal link between the activity and the damage.[68],[69]

Another consequence is the obligation for the responsible state to make full reparation for the injury[70],[71] caused by the internationally wrongful act, respecting Article 31 of the ILC Articles.[72] The basic principle with reference to reparation was laid down in the *Chorzow Factory* case.[73] Furthermore, the requirement to make full reparation is well established.[74] Full reparation shall, according to Article 34 of the ILC Articles, take the form of restitution, compensation and satisfaction; either separately or in combination. The first method is restitution, which means the responsible state will reestablish the situation as it existed before the wrongful act was committed.[75] It is a legal principle that restitution has primacy over compensation, but it is in many situations either unavailable or inadequate.[76]

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[64] *Supra* note 54, p. 54.
[65] Shaw, s*upra* note 43, p. 606.
[66] See ILC, ARSIWA, *supra* note 20, Art. 30.
[67] See also O. Corten, "The obligation of cessation", in Law of International Responsibility, YEAR, p. 545, and Crawford, State Responsibility, YEAR, p.464.
[68] See the Rainbow Warrior case, 82 ILR, pp. 499, 573, in which the tribunal held that "the internationally wrongful act must have a continuing character and the violated rule must still be in force at the date the order is given.
[69] See the LaGrand case, ICJ Reports, 2001, p. 466; 134 ILR, p. 512-13, in which the Court held that the obligation to offer assurances of non-repetition was raised by Germany. This was reaffirmed in the Avena (Mexico v. USA) case, ICJ Reports, 2004, 00. 12, 69;134 ILR, pp. 120, 172.
[70] Injury includes any damage, whether material or moral, caused by the internationally wrongful act. Shaw Malcolm, The International Law, Cambridge, Eighth Edition, 2017, p. 607.
[71] The obligation to make compensation is, however, limited to financially assessable damage. Report of the ILC, UN doc. A/56/10, 2001, p. 99.
[72] ILC, ARSIWA, *supra* note 20, Art. 31.
[73] PCIJ, Series A, No. 17, 1928, pp. 47-48, where the Permanent Court of International Justice held that "The essential principle contained in the actual notion of an illegal act is that reparation must wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed.
[74] Sands Philippe, Principles of International Environmental Law, Cambridge, 2003, p. 873.
[75] See the Pulp Mills case (Argentina v. Uruguay), ICJ Reports, 2010, pp. 14, 103-104, where the Court held that "customary international law provides for restitution as one form of reparation for injury, restitution is the re-establishment of the situation which existed before occurrence of the wrongful act".
[76] Supra note 54, p. 99.

In the international practice, compensation is the most common form of reparation.[77],[78] Damage includes both material and moral damage.[79],[80]

[77] Ibid.

[78] See the Gabčíkovo-Nagymaros Project case (Hungary/ Slovakia), Judgment, I.C.J. Reports 1997, para. 152. It was likewise affirmed by the ICJ that: 'It is a well-established rule of international law that an injured State is entitled to obtain compensation from the State which has committed an internationally wrongful act for the damage caused by it.

[79] See ILC, ARSIWA, *supra* note 20, Art. 31 para 2.

[80] See the I'm Alone case, 3 RIAA, p. 1609 (1935); 7 AD, p. 203, in which the Court held the amount of $25,000 as a compensation concerning the unlawfully sinking of a ship. Another form of reparation is satisfaction. This is a non-monetary compensation as a remedy for the breach of an international obligation. This remedy was laid down in the Rainbow Warrior case, 82 ILR, p. 499, where the tribunal made a recommendation to establish a fund and promote good relations between their citizens and the French Government would contribute to the fund. See 82 ILR, p. 577.

PART I: Violation of State Obligations related to Climate Change Law

This chapter identifies the possibility of invoking state responsibility and the legal obstacles a State faces when attempting to sue other States for the injurious consequences of their contributions to climate change. With respect to the scientific findings,[81] the international community has concluded that a behavioural change is required related to the emissions caused by humans. International policies and measures have developed with the aim of stabilizing the concentration of greenhouse gas emissions in the atmosphere at a level that would prevent the catastrophic interference with the climate system. These policies and measures regulate the conduct of international actors in a specific sector of interstate relations and include obligations for States. In the state responsibility, such obligations are referred to as primary obligations of international law.

A. Primary obligations to prevent harm under the climate change regime – an introductory point of view

For state responsibility to be invoked there must be a binding international obligation between two States. In the area of climate change, the law of state responsibility may be applicable when a State breaches its treaty obligations, especially when it does not comply with its commitments to reduce or minimize the greenhouse gas emissions under the treaty regimes.[82] The primary legal rules directly applicable to the situation of climate change are limited in number. However, there are various primary rules that may be considered indirectly applicable to the situation of climate change.[83] There is a couple of relevant international treaty regimes to consider as being the source of primary obligations, which will be thoroughly analysed below; namely, the United Nations Framework of Climate Change Convention and the Paris Agreement. Treaty law is the main source of obligations relating to climate change and, principally speaking, it contains more defined (or identified) rules and obligations for implementation than customary law.

Under the international environmental law there are also primary obligations arising from customary international law; "the no-harm principle" and the prohibition against trans-boundary pollution. Responsibility in environmental cases will normally occur

[81] Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report, Climate Change 2007: Synthesis Report (2007); see also the Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, UNFCCC Decision 1/CP.16 (2010), para. 3.
[82] Mayer Benoit, *State responsibility and climate change governance: a light through the storm*, 13 Chinese Journal of International Law (2014), 539–575.
[83] Peel Jacqueline, *The Practice of Shared Responsibility in relation to Climate Change*, SHARES Research Paper 71 (2015) available at <www.sharesproject.nl> [last accessed 24 November 2018].

because of the breach of a treaty or a customary obligation.[84] Notable in this respect is that primary rules in environmental law are not established to regulate damage per se, since liability rules do that. First to be examined are the States' primary obligations relating to climate change and how the international law of state responsibility applies to infringements upon these primary obligations under the Paris Agreement, and in the case that no primary obligations ensue from it, the international environmental treaty and customary law will then be examined. Kysar adds that "a primary obligation refers to the positive law that is being breached, or the substantive obligations of States in the subject areas of international law: for instance, a failure to comply with the provisions of UNFCCC by a signatory state; or a breach of the transboundary harm principle."[85] The law of state responsibility is the key source for secondary obligations relating to climate change damages. However, neither the UNFCCC and the Paris Agreement nor the customary law contain rules which address the injurious consequences of climate change. They fail to provide how climate change damages should be compensated. Developed countries have rejected the proposals to introduce such new rules[86] and political pressure has already been applied on developing states against legitimate calls for responsibility.[87]

Yet, the UNFCCC and the Paris Agreement do not mention anything that precludes resource to the general law on state responsibility with regard to climate change damages.[88] It has been concluded that there is no single instrument in the environmental area that codifies the generally applicable international rules governing responsibility and liability. In the absence of a more specialized regime, the ILC Articles on State Responsibility are

[84] Voigt, *supra* note 18, p. 3.

[85] See Kysar Douglas, Douglas A., Climate Change and the International Court of Justice: Seeking an Advisory Opinion on Transboundary Harm from the Court (August 14, 2013). Yale Law School, Public Law Research Paper No. 31 (Kysar) and Press Conference on Request for International Court of Justice Advisory Opinion on Climate Change (3 February 2012) available at <http://www.un.org/press/en/2012/120203_ICJ.doc.htm.> [last accessed 6 November 2018], See also <http://climatejustice.org.au/international-palau-seek-icj-advisory-opinion/> [last accessed 6 November 2018].

[86] Lefeber R, Climate Change and State Responsibility, in R. Rayfuse & S.V. Scott (Eds.), International law in the era of climate change, Cheltenham: Edward Elgar, 2012, pp. 321-349. In addition, Voigt Christina states that the UNFCCC" does not contain provisions that define climate change damages or deal with the question of how such damages, if they occur, should be compensated." From Christina Voigt, State Responsibility for Climate Change Damages, 77 NORDIC J. INT'L LAW 1 (2008), p. 4.

[87] For instance, Palau (a small island developing state with a population of about 20,000), which initiated a campaign for the UN General Assembly to request an advisory opinion from the ICJ, had to back out when the US threatened to interrupt the provision of development aid. See e.g. Stuart BECK and Elizabeth BURLESON, "Inside the System, Outside the Box: Palau's Pursuit of Climate Justice and Security at the United Nations" (2014) 3 Transnational Environmental Law 17 at 26. Likewise, Tuvalu, another small island developing state (population 10,000) highly dependent on international aid, has not carried out its repeated threats to seek the responsibility of Australia or the US before an international jurisdiction.

[88] Lefeber, *supra* note 86, p. 3.

applicable to treaty-based and other rules of international environmental law as far as they reflect customary law. The applicability of State responsibility related to environmental damage has also been stated by the ICJ in the *Gabčíkovo-Nagymaros Project* case.

With regard to the applicability of the law of state responsibility for climate change, we should reject the objection that its application in this area would exclude the application of the general law of state responsibility.[89] To support this view, few developing States, especially islands, took the precaution of declaring formally that the UNFCCC and the Kyoto Protocol ''in no way constitute a renunciation of any rights under international law concerning state responsibility for the adverse effects of climate change, and that no provisions in the Convention [could] be interpreted as derogating from the principles of general international law''[90]

It should be noted though that no pollution disaster must be claimed against the concerned State in order for the claim of State responsibility for climate change damages to be possible.[91] This includes Chernobyl, Sandoz and Amoco Cadiz, which all caused significant harm to other states.[92] Regarding Chernobyl, the causes of the inaction have been claimed to have been political reasons and legal uncertainty.[93] On the contrary, it has also been claimed by Brownlie that "States have not habitually claimed damages from another – except on behalf of their nationals. They have not set a money price on wrongs which do not involve damage to nationals".[94]

The future impacts of climate change will further cause harm not only to the environment but also to the human life, health and livelihood of many people and animals. It is a difficult task to set a price on all above mentioned damages. Nevertheless, since climate change damages will include severe damages to private parties and individuals, the unwillingness of States to claim compensation for environmental damages in the past, is not an indicator of continued unwillingness in the future.

[89] *Supra* note 54.
[90] See e.g Declarations of Kiribati, Fiji, Nauru and Tuvalu upon signature of the UNFCCC, 1771 UNTS 317–318.
[91] Birnie Patricia W. and Boyle Alan E. International Law and the Environment, Oxford, 2nd edition, 2002, p. 178.
[92] *Ibid.*
[93] *Lefeber, supra* note 86, p. 3.
[94] Brownlie Ian, System of the Law of Nations: State Responsibility (part I), Oxford, 1983 p. 31.

1. Reflecting on the Paris Agreement

The Paris Agreement and its entry into force mark only the beginning of a sharp momentum to transform human development in order to achieve a low - emission, climate - resilient, and sustainable world. In order to thoroughly study the primary obligations that arise from the Paris Agreement, we must first examine the legal character of this Agreement, and then the binding and non-binding obligations that ensue from it. It will then be concluded whether the soft and hard law have an one-way strict impact on international governance international governance without the possibility to be used alternatively.

1.1 The legal character of the Paris Agreement: a controversial issue

The legal character of the Paris Agreement was on the core of the discussion in the negotiations. Different opinions regarding its legal form, which may affect State behaviour, have been expressed.[95] It is correct to say that some of the Paris Agreement's provisions do not create legally binding obligations, but this does not mean that none of the provisions are binding, or that the agreement is not law.[96] The issues of whether the Agreement is legally binding and whether the specific provisions bind the States are distinct.[97] Not every provision of a legal instrument necessarily creates a legal obligation the breach of which entails non-compliance. Despite the issue of the Paris Agreement's bindingness, it is well known it lacks enforcement machinery and that it is not necessarily justiciable, especially in some countries. Nevertheless, States clearly thought the issue of legal form mattered, and this belief itself became an important reality in the negotiations, which significantly shaped this fundamental legal instrument. Even if soft law instruments are non-binding at first

[95] See generally Goldsmith J. L. and Posner E.A, The Limits of International Law, Oxford, 2006.
[96] Bodansky Daniel, The Legal Character of the Paris Agreement (March 22, 2016). Review of European, Comparative, and International Environmental Law, Forthcoming. Available at SSRN: <https://ssrn.com/abstract=2735252> [last accessed on 6 November 2018].
[97] Bodasky Daniel, Legally Binding versus Non-Binding legal instruments, in *Towards a Workable and Effective Climate Regime*, pp. 155-165.available at: < https://voxeu.org/sites/default/files/file/bodansky.pdf > [last accessed 22 November 2018].

view, in practice they can have some legal effect.[98]Yet, developed and developing countries are equally bound by the Paris Agreement.[99]

The legal character of the Agreement's provisions refers to the extent that the provisions provide rights and obligations for member States, set standards for State behaviour, and offer assessments of compliance and non-compliance and the resulting visitation of consequences.[100] However, when thinking about the Paris Agreement's form, we have to examine some issues individually. These are; (i) the legal form of the agreement itself, that is, whether or not the Agreement is a treaty within the means of international law; (ii) whether individual provisions of the agreement create legal obligations; (iii) whether the provisions of the agreement are sufficiently precise that they serve to constrain States; (iv) whether the agreement can be applied by courts; (v) whether the agreement is enforceable; (vi) whether the agreement otherwise promotes accountability, for example, through systems of transparency and review; and (vii) the domestic acceptance process and legal status of the agreement.

With respect to the legal form of the Agreement, it must be examined whether or not it is a treaty within the meaning of the Vienna Convention of the Law of the Treaties (hereinafter referred to as Vienna Convention of the Law of the Treaties or Vienna Convention or VCLT).[101] It is well known that the Paris conference would need to adopt and implement that could constitute a treaty, namely an agreement between States in written form governed by international law.[102] Fundamentally all participants agreed that a COP decision would not satisfy the Durban Platform mandate[103], because by default, COP

[98] Maljean-Dubois Sandrine, Spencer Thomas and Wemaere Matthieu, The Legal Form of the Paris Climate Agreement: a Comprehensive Assessment of Options, CCLR 1|2015, pp. 1-17.

[99] See Daniel Bodansky and Lavanya Rajamani, 'Key Legal Issues in the 2015 Climate Negotiations' (Arlington, VA: Center for Climate and Energy Solutions, June 2015) <http://www.c2es.org/docUploads/legal-issuesbrief-06-2015.pdf> accessed 20 January 2016, note 7; Lavanya Rajamani, 'The Devilish Details: Key Legal Issues in the 2015 Climate Negotiations', Modern Law Review, 78/5 (2015): 826; see also Jacob Werksman, 'The Legal Character of International Environmental Obligations in the Wake of the Paris Climate Change Agreement' (University of Edinburgh: Brodies Environmental Law Lecture Series, 9 February 2016) <http://www.law.ed.ac.uk/other_areas_of_interest/events/brodies_lectures_on_environmental_law> accessed 20 January 2017.

[100] Rajamani Lavanya, *The 2015 Paris Agreement: Interplay Between Hard, Soft and Non-Obligations*, Journal of Environmental Law, 2016, 28, 337–358

[101] United Nations, Vienna Convention on the Law of Treaties, 23 May 1969, United Nations, Treaty Series, vol. 1155, p. 331, available at: <http://www.refworld.org/docid/3ae6b3a10.html> [accessed 5 November 2018].

[102] VCLT, s*upra* note 101, Article 2.1(a).

[103] UNFCCC, Decision 1/CP.17, Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action (UN Doc. FCCC/CP/2011/9/Add.1, 15 March 2012).

decisions are not binding[104] but can be if the treaty so provides or implies (the latter is a matter of interpretation). As adopted, the Paris Agreement includes provisions addressing how States express their consent to be bound (through ratification, accession, acceptance, or approval),[105] the minimum requirements for entry into force (acceptance by 55 States representing 55% of global greenhouse gas emissions),[106] reservations, withdrawal, and that the United Nations would serve as depositary.[107] Eventually it was signed as the "Paris Agreement", which is a treaty under international law[108],[109] and under the Vienna Convention where the name of the instrument does not affect the legal status of the treaty.[110],[111],[112],[113]

Secondly, while the Paris Agreement is binding on its parties under international law, whether and to what extent its individual provisions establish legal rights and obligations i.e. determine what a party is entitled to do or must do, depend on their phrasing.[114] We have to examine whether the provisions of the Paris Agreement create legal

[104] One of the reasons is the design of national constitutional rules regarding international obligations: if COP decisions were binding, many countries would require parliamentary approval, similar to ratification, before they would agree to be bound at the international level. See Bodle Ralph and Oberthür Sebastian, Legal Form of the Paris Agreement and Nature of Its Obligations, in Klein Daniel et al (eds.), *The Paris Agreement on Climate Change, Analysis and Commentary*, Oxford University Press, 2017.
[105] Paris Agreement, *supra* note 13, Art. 20.
[106] Paris Agreement, s*upra* note 13, Art. 21.
[107] Paris Agreement , *upra* note 13, Art. 26-28.
[108] In accordance with art 2.1(a) of (VCLT), "treaty" means an international agreement concluded between States in 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'. The name chosen for a particular instrument does not necessarily indicate whether it is binding or not, VCLT (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331 art 2.1(a). See also Daniel Bodansky, 'The Paris Climate Change Agreement: A New Hope?' (2016) 110 AJIL 288.
[109] The placement of the Paris Agreement under the umbrella of the UNFCCC is further emphasized in preambular paragraph 2 with the reference to the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) and Decision 1/ CP.17.22. See Decision 1/ CP.17, Establishment of ADP, FCCC/ CP/ 2011/ 9/ Add.1 (15 March 2012) para 2.
[110] VCLT, *supra* note 101, Art. 2.1(a).
[111] Anne-Marie Slaughter has a different view regarding the Paris Agreement when she writes that treaties must contain compliance rules with sanctions for non-compliance and must be ratified by domestic parliaments so that to become part of the domestic law. She concludes that the Agreement is a ''statement of good intentions" rather than law. Anne-Marie Slaughter, "The Paris Approach to the Global Governance", (28 December 2015), found at: < https://www.project-syndicate.org/commentary/paris-agreement-model-for-global-governance-by-anne-marie-slaughter-2015-12?barrier=accesspaylog>, [last accessed 6 November 2018].
[112] A different express of view has also Mr Richard Falk, who describes the Paris Agreement as ''voluntary'' and that ''there is not even an obligation to comply'', found at: < https://richardfalk.wordpress.com/2016/01/16/voluntary-international-law-and-the-paris-agreement/>, [last accessed 6 November 2018].
[113] The choice of the title "Paris Agreement," rather than "Paris Protocol" or "Paris Implementing Agreement," as some states had proposed, does not affect the agreement's status as a treaty, which depends on the parties' intent, not what the instrument is called. See VCLT, art. 2(a), May 23, 1969, 1155 UNTS 331.
[114] Bodansky Daniel, *The Paris Climate Change Agreement: A new Hope?,* American Journal of International Law, vol. 110(2), 2016., p.288-319.

obligations. The legal character of a provision depends on a variety of factors including location (where the provision occurs), subjects (who the provision addresses), normative content (what requirements, obligations or standards the provision contains), language (whether the provision uses mandatory or recommendatory language), precision (whether the provision uses contextual, qualifying or discretionary clauses), and oversight (what institutional mechanisms exist for transparency, accountability, and compliance).[115],[116]

The Vienna Convention provides that "*pacta sunt servanda*",[117] which means that treaties are applied by States in good faith and the provisions legally bind them. However, not all treaty provisions can create legal obligations for the State parties.[118] The legally binding character of a provision is determined by the choice of the verb 'shall'. Additionally, the Paris Agreement sets different obligations between the parties. It states that there are obligations for individual parties by saying "each party" and there are obligations with a plural subject by saying "all parties" or "developing countries" etc. Other provisions do not have a subject at all[119] and appear to create general institutional obligations for the Agreement as a whole, but not obligations for individual parties.[120]

The most difficult issue was to characterize the legal character of the parties' Nationally Determined Contributions (hereinafter referred to as NDCs). The European Union argued that giving the NDCs legal effect – for example, by creating an obligation to implement or achieve – this it would demand a higher level of commitment, would give the NDCs greater credibility, and would provide a stronger assurance of implementation and compliance. The United States argued that the opposite way would lead to the creation of an obligation that it would discourage the State parties to comply with.[121] On the contrary,

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[115] See Rajamani Lavanya, *The 2015 Paris Agreement: Interplay between Hard, Soft and Nonobligations*, Journal of Environmental Law, 2016 p. 342. See also Werksman Jake, *Legal Symmetry and Legal Differentiation Under a Future Deal on Climate*, 2010, 10(6) Climate Policy 672; Werksman Jake, *The Legal Character of International Environmental Obligations in the Wake of the Paris Climate Change Agreement*, Brodies Environmental Law Lecture Series, 2016; Bodansky Daniel, The Legal Character of the Paris Agreement, 2016, 25(2) Review of European, Comparative and International Law 142; and Kenneth W Abbott, Robert O Keohane, Andrew Moravcsik, Anne- Marie Slaughter, and Duncan Snidal, *The Concept of Legalization*, 2000, 54(3) International Organization 401. for further discussion.

[116] *Ibid*,-Rajamani Lavanya, pp. 337–358.

[117] Paris Agreement, s*upra* note 13, Art. 26.

[118] Bodansky Daniel, Legally binding versus non-legally binding instruments, p. 157 in Scott Barrette, Carraro Carlo and de Melo Jaime (eds.), *Towards a workable and effective climate regime,* CEPR Press and Ferdi, 2015.

[119] For example, Vienna Convention, Article 4.5 provides that '[s]upport shall be provided to developing country Parties for the implementation of this Article'.

[120] *Supra* note 67.

[121] This would have given NDCs the same legal status as the Kyoto Protocol's emissions targets, which many countries had already rejected – not only the United States, but also big developing countries such as China

the EU provided a requirement that countries 'implement' their NDCs, which differs from an obligation to 'achieve' because it constitutes an obligation of conduct rather than result.[122] The Warsaw decision[123] decided to characterize them as "contributions" rather than "commitments". The Paris Agreement finally found a solution in Article 4.2, which establishes a number of procedural obligations relating to NDCs, and requires parties to "pursue domestic mitigation measures, with the aim of achieving the objective of their contributions".

The legal status of the Agreement differs from whether it can be applied by the courts and tribunals. The legally binding character of a rule does not depend on whether or not the courts and tribunals have jurisdiction to apply it. The general rule is that courts can apply only legal norms, so justiciability depends on legal character. It should be noted that the Paris Agreement can be applied by domestic courts but this may vary from state to state, depending on the country's doctrines regarding judicial application of treaties.[124]

Yet, legal bindingness might promote effectiveness in several ways, even when there is no judicial application or enforcement.[125] The legal form is different from that of enforcement which consists of measures and sanctions to promote compliance. If a norm is created through an accepted law-making progress, then it is legally binding, whether or not it provides violations for sanctions. Additionally, enforcement does not depend on legal form, since non-legal norms can also be enforced through the application of sanctions.[126] To promote accountability, there is also the system of transparency and review: on the one hand, accountability, transparency and review need not be included in legal instruments or

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and India. See also Bodansky Daniel, *The legal character of the Paris Agreement*, 2016, 25(2) Review of European, Comparative and International Law 142, p. 7.

[122] Bodansky Daniel, The Art and Craft of International Environmental Law, Harvard, 2009, p. 76.

[123] The Warsaw decision, Dec. 1/CP.19 (Nov. 23, 2013), UN Doc. FCCC/CP/2013/10/Add.1, at 3 (Jan. 31, 2014).

[124] Falk Richard, *Voluntary International Law and the Paris Agreement*, 16 January 2016, found at: <https://richardfalk.wordpress.com/2016/01/16/voluntary-international-law-and-the-paris-agreement/>.[last accessed 10 November 2018]. Along similar lines, Falk says that the Paris Agreement raises 'serious questions as to whether anything at all had even been agreed' and 'went to great lengths to avoid obligating the parties'.

[125] Abbott Kenneth and Snidal Duncan, *Hard and Soft Law in International Governance*, *54:3 International Organization*, 2002, p. 421.

[126] For example, US law provides for the imposition of trade sanctions against States that 'diminish the effectiveness' of an international conservation program, whether or not a state has committed any legal violation (Pelly Amendment, 22 USC 1978).

apply to legally binding norms; on the other hand, they can be included in non-legal instruments or apply to non-legal norms.[127]

Concerning another issue, whether a legal norm is precise or not, it is correct that a norm has to be precise, in order to bind a state behaviour, but legally binding norms can be very vague, while non-legal ones can be quite precise. So the binding force of precision is different from the constraining force of law.[128] In conclusion, in domestic legal systems, the elements of legal form, judicial application and enforcement often go together, and this applies in the international level as well, even though many international legal agreements do not provide mechanisms for judicial application or enforcement.

The Paris Agreement contains binding and non-binding provisions referring to the mitigation, the adaptation and the fiancé commitments of the parties. However, the legally binding character of the Paris Agreement and its provisions is arguable. It is true that it can provide a better signal of commitment and greater assurance of compliance. But transparency, accountability and precision can also make a meaningful difference as well.[129] Consequently, the issue of legal character, though important, is only one factor in assessing the significance of the Paris Agreement's outcome.[130]

1.2 Obligations under the Paris Agreement: The light through the storm

1.2.1 Are there any new mandatory obligations?

The Paris Agreement does not replace UNFCCC, but rather implements it, and it provides existing elements of the climate regime. Its architecture is based on defining its overarching purpose,[131] then creating a general obligation on parties to make efforts towards this purpose,[132] and elaborating this general obligation in specific thematic provisions. This general obligation establishes a link between the Agreement's purpose in Article 2 and specific obligations in other articles, and it also identifies core obligations for all parties.

[127] D.G. Victor, K. Raustiala and E.B. Skolnikoff, The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice, MIT Press, 1998, p. 18.
[128] *Supra* note 67.
[129] Bodansky, *supra* note 96.
[130] Ibid.
[131] Paris Agreement, s*upra* note 13, Art. 2.
[132] Paris Agreement, s*upra* note 13, Art. 3.

Few provisions of the Paris Agreement are prescriptive and create precise legal obligations, and these are primarily procedural and focused on NDCs on mitigation and on a core transparency framework, while there are also collective obligations regarding finance. The Paris Agreement uses a broad range of wordings and qualifiers, which give parties more or less flexibility or discretion regarding whether and how to implement its provisions.[133] The provisions tend towards 'obligations of conduct', which are qualified in a number of ways. The obligations relating to finance are generally more strongly bifurcated between developed and developing countries than the other sections.

The individual obligations set out in the Agreement provide that parties shall prepare, communicate and maintain successive NDCs which intend to achieve[134] and serve the information necessary for clarity, transparency, and understanding. Article 4.13 of the Paris Agreement provides for an obligation, starting by saying "Parties shall account for their nationally determined contributions". The obligation to account is in accordance with the above mentioned principles.

However, there is some uncertainty of meaning as to whether the guidance relates to the principles or broadly to accounting, given the use of the words "in accordance with". While the choice of the word "guidance" appears to suggest a lighter approach, the use of prescriptive language ("shall promote" and "shall account") and the fact that these mandatory obligations are required to be fulfilled "in accordance with" guidance adopted by the CMA, it is obvious that the guidance was supposed to be binding. The practice, of course, will depend on the precise language of the guidance, and the extent to which it incorporates mandatory or discretionary elements. By communicating their NDCs,[135] States have to communicate a successive NDC every five years, which will represent a progression beyond the Party's current NDC,[136] account for its NDC so as to promote environmental integrity and avoid double counting,[137] and regularly provide a national greenhouse gas inventory and the information necessary to track progress in implementing and achieving its NDC.[138]

Article 2.2 provides for equity and the principle for Common but Differentiated Responsibilities which is an operational provision and contains a requirement that did not

[133] See eg Paris Agreement Arts 7.3, 7.9, 7.11, 11.4, and 12.
[134] Paris Agreement, s*upra* note 13, Art. 4.2.
[135] *Ibid*, Art. 4.8.
[136] *Ibid*, Art. 4.3.
[137] *Ibid*, Art. 4.13.
[138] *Ibid*, Art. 13.7(b).

exist under UNFCCC; the element of differentiation. As such it has the potential to create binding legal obligations for parties. This element could define the CBDRCR principle.

The collective obligations stemming from the Paris Agreement provide that State parties aim to reach global peaking of emissions as soon as possible and to undertake rapid reductions thereafter, so as to achieve net zero emissions in the second half of the century,[139] encourage developed countries to undertake economy-wide, absolute emission targets and that developing countries continue to advance their mitigation efforts, and encourages developing countries to move towards economy-wide targets over time,[140] strive to formulate and communicate long-term low greenhouse gas emission strategies,[141] take action to conserve and enhance sinks,[142]and encourages parties to take action to implement and support reduced emissions from deforestation and forest degradation.[143]

Collective obligations for developed countries provide that parties shall provide financial resources to assist developing country parties with both mitigation and adaptation ,[144] communicate biennially on financial support, including projected levels of public funding if available,[145] and report on financial, technology transfer and capacity-building support provided to developing countries.[146] This financial obligation is new arising from the Paris Agreement, though all others or the rest have been expressed under the UNFCCC.[147] Finally, under the Paris Agreement there are mandatory provisions but they do not have a collective or individual subject.[148]

The Paris Agreement sets few more mandatory obligations but without making formatting the subject, namely the individual party or collective parties together. These obligations are in accordance to the support that developing countries need in order to adapt and mitigate climate change,[149] emission reduction should not be double counted under Art. 6.5, and most importantly mitigation measures should support sustainable development and ensure environmental integrity and transparency, which is provided under Art. 6.2.

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[139] *Ibid*, Art. 4.1.
[140] *Ibid*, Art. 4.4.
[141] *Ibid*, Art. 4.19.
[142] *Ibid*, Art. 5.1.
[143] *Ibid*, Art. 5.2.
[144] *Supra* note 13, Art. 9.1.
[145] *Ibid*, Art. 9.5 and 9.7.
[146] *Ibid*, Art. 13.9.
[147] *Supra* note 5, Art. 9.1.
[148] *Supra* note 13, Arts. 4.5, 7.13, 4.12, 7.12, 6.2, 6.5.
[149] *Supra* note 13, Art. 4.5, 7.13.

From all the above mentioned binding obligations, the Paris Agreement provides hard obligations or provisions that generate expectations, under the Table 1, see Annex below.

1.2.2 Non - binding commitments

The Paris Agreement on the other hand also contains substantive provisions relating to mitigation which are formulated as recommendations or expectations rather than legal obligations. It contains non-mandatory provisions, relating to parties' mitigation contributions, as well as to the other elements of the Durban Platform, including adaptation and finance. These commitments are; a collective aim to reach global peaking of emissions as soon as possible and to undertake rapid reductions thereafter, so as to achieve net zero emissions in the second half of this century.[150] Article 4.4 recommends that developed country parties should undertake economy-wide, absolute emission targets while developing countries should continue to advance their mitigation efforts, and should encourage developing countries to move over time towards economy-wide targets.[151] It is also recommended under Art. 4.19 that all parties should seek to determine and communicate long-term low greenhouse gas emission strategies and that states should take action to conserve and enhance sinks and should encourage parties to take action to implement and support reduced emissions from deforestation and forest degradation.[152]

Parties are required to strengthen cooperative action on technology development and transfer.[153] Article 11.4 provides that all parties should regularly report on any actions or measures they take to enhance the capacity of developing countries and also that they should cooperate to enhance climate change education, training, public awareness, public participation, and public access to information, which is established under Article 12 of the Paris Agreement.

More recommendations set out in the Paris Agreement provide that adaptation should be a global challenge for state parties,[154] and that it should also be country-driven, based and responsive on national needs as well as guided by lessons learnt as set out in Art.

[150] Paris Agreement, *supra* note 13, Art. 4.1.
[151] *Ibid*, Art. 4.4.
[152] *Ibid*, Art. 5.2.
[153] *Ibid*, Art. 10.2.
[154] *Ibid*, Art. 7.9.

7.5. The Agreement provides that adaptation should be implemented through several ways under Art. 7.7. and recommends that parties should provide updates on adaptation communication regarding Art. 7.10. Another collective recommendation strengthens the action and support in accordance to loss and damage under Art. 8.3. State parties should also be in charge of the mobilization of climate change finance, under Art. 9.3 of the Paris Agreement. It encourages parties to accelerate, encourage and enable innovation the same way that is important for a long-term climate strategy as Art. 10.5 sets out. Developing countries should accept assistance from developed countries under overall cooperation.[155] All parties are supposed to provide reports on climate change adaptation and mitigation, under Art. 13.8. Last but not least, they should provide support for a long term climate strategy.[156]

1.2.3 Intersection between soft and hard law provisions – Does the legally binding character of a rule matter?

Given that the Paris Agreement does not contain precise legally binding provisions and the member States decided to include non-mandatory commitments, the interaction between soft and hard law within the international legislation should be examined, and, through the examination of the advantages and disadvantages of the terms, the State's intentions and consequently whether or not a legally binding character of a rule does really matter will be understood. First, the determination and advantages of the hard legislation should be explored. For instance, the individual ('each Party') obligations, when framed in mandatory terms ('shall'), with clear and precise normative content, and no qualifying or discretionary elements, such provisions can be characterized as 'hard law.[157] The term hard law provides for legally binding obligations that are precise or can be formulated as précised through adjudication. Hard legalization strengthens the possibility for enforcement from non-compliance. This means that when a State does not comply with its obligations and commitments, the hard legal commitments can be applied before arbitral and judicial institutions. Hard-law instruments allow States to commit themselves more credibly to international agreements, and they also solve problems of incomplete contracting by

[155] Paris Agreement, *supra* note 13, Art. 11.3.
[156] *Ibid*, Art. 9.2
[157] See Dinah Shelton, 'Introduction', in Dinah Shelton (ed) Commitment and Compliance: The Role of Non-Binding Norms in the International Legal System (Oxford University Press, 2000) 1, 10–13.

creating mechanisms for the interpretation and elaboration of legal commitments over time.[158]

On the contrary, soft law commitments would only be applied by political institutions. In the middle of the spectrum are provisions that identify actors ('each Party' or 'all Parties') and set standards, but include qualifying or discretionary elements or are formulated in hortatory or advisory terms ('should' or 'encourage'). These provisions can be characterized as 'soft law'.[159] When the internationally agreed commitments, namely the hard law obligations, are being violated, they can be applied by international courts and tribunals, and administrative agencies as well. Violation of legal obligations leads to significant costs, which derives from the *pacta sunt servanda* principle and the good faith principle.

States usually want to use hard law provisions, from which the applicable rules can be supported with justification because they desire to use the benefits and the assurance that the legal instruments provide, as it is a treaty between states. For example, such treaties are the investment agreements, which include reciprocal commitments. States would use the hard legalization to increase the compliance with the commitments, when non-compliance is difficult to be affirmed. In other words, it reduces the costs of enforcement. On the other hand, hard law reduces the transaction costs of subsequent interactions, by managing and elaborating the agreed rules and by assisting in settling forthcoming disputes between states. However, most developed countries, or even the powerful ones, like the US, ignore the hard legislation.

As for the determination and the advantages of the soft law, it must be mentioned that soft law has been criticized by the international community.[160] However, international actors usually prefer softer forms of legalization as greater governmental arrangements. Soft law contains the several advantages of the hard law, but avoids some of its burdens. Soft legalization offers an easier pathway to deal with uncertainty; it facilitates

[158] Kenneth W. Abbott & Duncan Snidal, Hard and Soft Law in International Governance, 54 INT'L ORG, 2000, p. 433.

[159] There are several definitions of 'soft law'. For an overview see Jutta Brunnée, 'The Sources of International Environmental Law: Interactional Law', in Samantha Besson and Jean d'Aspremont (eds), Oxford Handbook on the Sources of International Law, Oxford, 2017 forthcoming.

[160] Hans Morgenthau recognized that states generally obeyed international law but took the lack of enforcement to mean that law did not cover the significant issues of international affairs. A modern reprise of this theme is offered by Downs and his colleagues, who critique much international cooperation for consisting of agreements that re□ ect what states would have done on their own and so do not change behavior. Downs, Rocke, and Barsoom 1996.

compromise, and thus mutually beneficial cooperation, between actors with different interests and values, different time horizons and discount rates, and different degrees of power. States prefer this form of legalization for the reason that it provides an alternative and more desirable way to manage the interaction between the States' obligations and duties which are concluded by international agreements.

One major advantage is the lower contracting costs, namely costs or ratification within the national legislature of each State. Moreover, States can limit sovereignty costs through arrangements that are non-binding, not so precise or do not delegate extensive powers. Most often, States protect themselves by adopting less precise rules and weaker legal institutions, and also they adopt less mandatory legal instruments for the reason that international issues are characterized by uncertainty. Soft-law instruments allow states to be more ambitious and engage in "deeper" cooperation than they would if they had to worry about enforcement. Soft-law instruments cope better with diversity. Soft-law instruments are directly available to non-State actors, including international secretariats, state administrative agencies, sub-State public officials, and business associations and nongovernmental organizations (NGOs).[161]

Some scholars provide soft law as the positive way of hard law. This is because it emergent hard law, that is principles that are first formulated in nonbinding form with the possibility, or even aspiration, of negotiating a subsequent treaty, or harden into binding custom through the development of state practice and *opinio juris.* Soft law is the evidence that there are hard law obligations. For example soft law builds to hard customary law. Furthermore, soft law can be defined as a source of legal obligation, through acquiescence and estoppel, perhaps against the original intentions of the parties.[162]

At the other end of the spectrum are provisions lacking normative content that capture understandings between parties, provide context, or offer a narrative regarding the need for the provision or its location in the broader picture. Even when these provisions are found in the operational part of a legally binding instrument, they are contextual or descriptive and thus might be characterized as 'non-law'—a purely descriptive term that should not be interpreted as denigrating their critical importance in the Paris Agreement.

[161] For good discussions on the purported strengths of soft law, see, for example, John J. Kirton & Michael J. Trebilcock, *Introduction To Hard Choices, Soft Law: Voluntary Standards In Global Trade, Environment, And Social Governance* 3, 9 (John J. Kirton & Michael J. Trebilcock (eds.), 2004.

[162] Christine Chinkin, Normative Development in the International Legal System, in Commitment And Compliance, pp. 30–31.

Consequently, the question of whether or not the legal character of a rule matters will now be discussed. Firstly, legal bindingness might promote effectiveness in several ways, even in the absence of judicial application or enforcement.[163] It is correct to claim that a treaty creates a greater legal impact to the states, than a merely political agreement, which means that it need not be ratified or be established under the States' consensus. Second, legally binding instruments provide for a greater compliance mechanism than a political agreement.[164] Third, states are very careful in respect to their reputation, and they will never try to risk not complying with the legally binding agreements. Moreover, the acceptance of a legally binding treaty has a greater impact on the domestic legislature than the acceptance of a political, non-binding agreement. Legally binding instruments generate credible commitments. They can potentially crystallise international commitments into domestic legislative action, establishing enforcement mechanisms, elaborating certainty in implementation as well as accountability on the domestic and international level. These results could be achieved when States operate the international law through their domestic legislature, by establishing a binding instrument with great impacts. All the above mentioned conclude to the importance of the legally binding Paris Agreement as a rule of law.

However, the effectiveness is an argumentative issue under the examination of the Paris Agreement. States required the establishment of a binding agreement for it to be successful. Even if it had not established a non-compliance mechanism in order to promote implementation and compliance, transparency and accountability are quite similar mechanisms and can relate to climate change, which means, implementation, effectiveness and compliance still exist and serve the analogous aim.

Despite the advantages of hard law, states, in practice, often choose instruments of a relatively soft-law nature to counter existing hard law. States would like to adopt new hard rules, in order to counter existing hard law, but this means they have to secure the Agreement from all States, which sometimes is impossible.[165] States, and non-state actors, may also be reluctant to promote new hard-law provisions and fall back instead on soft-law

[163] Abbott Kenneth and Snidal Duncan, *Hard and Soft Law in International Governance*, 54:3 International Organization, 2002, p. 421.
[164] T.M. Franck, The Power of Legitimacy among Nations (Oxford University Press, 1990).
[165] Shaffer, Gregory C. and Pollack, Mark A., Hard vs. Soft Law: Alternatives, Complements and Antagonists in International Governance (June 26, 2009). Minnesota Law Review, Vol. 94, pp. 706-99, 2010; Minnesota Legal Studies Research Paper No. 09-23. Available at SSRN: <https://ssrn.com/abstract=1426123> [last accessed 4 December 2018].

instruments, for four other reasons, which can be labelled as: (1) systemic, (2) issue specific, (3) stickiness, and (4) non-state actor constraints.

Where there is little distributive conflict between powerful states, such that they agree on the aims and terms of international cooperation, international hard and soft law are most likely to complement each other.[166] The interaction between hard and soft law can be far more adversarial than the existing literature depicts. Understanding the varied interactions of hard and soft law is critical for understanding how, and under what conditions, international law develops.

2. If not the Paris Agreement, then what?

The effectiveness and utility of the Paris Agreement will depend on how seriously the parties translate the agreed commitments into action and build on these in the future. The Paris Agreement contains a mix of hard, soft and non-obligations that bind the parties. Each of the provisions plays a specific role; The hard obligations of conduct in mitigation and finance form the core of the Agreement, and the soft provisions create good faith expectations to parties. Nevertheless, the Paris Agreement cannot itself assist in the allocation of state responsibility for climate change damages. Even though the Paris Agreement establishes legally binding obligations, it is questionable whether their breach can entail a state's responsibility. However, there are more strict and hard obligations arising from the international environmental law and the customary law. Treaties are usually considered to be the most authoritative source of international law.[167] The first of these is the UNFCCC, which will be further discussed below.

2.1 Obligations under the international environmental law – The existing treaty law

Most environmental treaties neither contain clear-cut primary obligations nor secondary rules that deal with the legal consequences of breaches of obligations. The

[166] *Ibid.*
[167] Strauss Andrew, Climate Change Litigation: Opening the Door to the International Court of Justice, School of Law Faculty Publications. 3.available at: <http://ecommons.udayton.edu/law_fac_pub/3> [last accessed 5 December 2018].

UNFCCC contains the basis for the climate change regime. The primary obligations of interest are Arts. 4.2 and 4.4 of the UNFCCC. The articles set up by the UNFCCC bear the disadvantages of the vague and non-compulsory obligations, but have the advantage of nearly global applicability as well.

To begin with, UNFCCC is a 'framework convention', which means that it does not itself regulate climate change but only creates a basis for negotiating multilateral solutions.[168] Regarding its 'framework' nature, the Convention lacks the kind of specific obligations and standards that would allow information about States' relative contribution to global GHG emissions to translate into claims of responsibility for climate change damages. Article 2 of UNFCCC forms the key objective of the Convention. The objective of the Convention is to stabilize the GHG emissions at a non-dangerous level, rather than to reverse the emissions [169],[170] Article 3 of UNFCCC emphasises on prevention supporting States "to take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects."[171] The principal commitments under the UNFCCC are established in Article 4 and differ in extent between parties. Article 4 is the core provision which sets out all of the main substantive commitments, bound by Articles 5 and 6 (Research and Observation; Education, Training and Public Awareness) which are mostly declaratory, and Article 12 (Reporting).[172] Most importantly, developed countries are obliged to assist the vulnerable developing countries,[173] and UNFCCC also commits

[168] Matz-Lueck Nele, Framework Agreements, in Wolfrum Ruediger (ed.), *Max Planc Encyclopedia of Public International Law*, Duncker and Humbolt, 2010, p.65.

[169] Article 2 UNFCCC, ''To achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.''

[170]See Birnie, P. W. & Boyle, A. E. (2002) p. 524. On the other hand, it has been argued by Christina Voigt that the objective of the Convention is to prevent dangerous interference, which according to science and legal standards would be the same as to prevent an increase in the average temperature of 2 °C compared to pre-industrial levels. See Voigt Christina, *State Responsibility for Climate Change Damages*, 77 NORDIC J. INT'L LAW 1 (2008), p. 7. The notion that the objective's emphasis is on prevention rather than stabilization is supported by Sands Philippe, who states that the primary objective of the Convention is climate change prevention. See Principles of International Environmental Law, Cambridge, 2003, p. 361.

[171] *Supra* note 55, p. 20. The principles set out in Article 3 include those of inter-generational equity, common but differentiated responsibilities, the precautionary principle, and the right of all Parties to sustainable development.

[172] Verheyen, supra note 1. 79.

[173] UNFCCC, Article 4.4, in accordance to which the developed country Parties and other Parties listed in Annex II are obliged to "assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects".

developed countries to limiting their anthropogenic emissions of greenhouse gases in article 4.2(a) UNFCCC.[174]

It is questionable whether the Convention creates a legally binding target and timetable at all.[175] Article 4.2 FCCC provides a concrete obligation regarding the reduction of greenhouse gas emissions and the enhancement of sinks, which complement the objective set out in Article 2. Article 4.2 states that parties "shall" adopt national policies and take corresponding measures to mitigate climate change, and "shall" communicate information on these policies and measures as well as the resulting projected emissions. The Convention uses less mandatory phrasing and the verb form that it uses is not compulsory. The COP is to take "appropriate" action based on the reviews, but the Convention does not stipulate whether such action is likely to lead, through an amendment, to stricter or more permissive targets and timetables, or whether protocols might be needed to supplement the parties' obligations.

However, Article 4.2, when interpreted in a teleological way in the light of the objective according to Article 31 Vienna Convention on the Law of Treaties (VCLT), sets forth an obligation of conduct to reverse the long term trend of ever- increasing greenhouse gas emissions. This conduct is required in order to stabilize atmospheric concentrations. Article 4.2 in conjunction with Article 2, therefore, obliges parties to take action to adopt policies and measures to secure the stabilization of atmospheric concentrations of greenhouse gases. These Articles together could, therefore, be understood as a primary rule that when they are breached, a wrongful act is established. Such a breach is committed where a State is taking no or insufficient measures to modify upward emission trends. This argument can also be supported by reference to Article 18 VCLT and the principle of good faith. Consequently, state responsibility for climate change can be applied when a state breaches the primary obligation of Art. 4.2 UNFCCC, given that it derives from the no-harm rule that is an enforceable primary obligation on States to take measures to mitigate climate change and it is identified again in UNFCCC.

[174] UNFCCC, Article 4.2, states that the developed country Parties and other Parties included in Annex I commit themselves to: "adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs".

[175] Sands Philippe, *The United Nations Framework Convention on Climate Change*, 1 REV. EUR. communrry & INT'L ENVTL. L. 270 (1992). p. 274.

2.2 Obligations deriving from the international customary law – Is it sufficient?

A broader ground and an additional aspect of primary obligations for invoking State responsibility, stems from the general principle of international environmental law according to which States must prevent activities that cause cross-boundary environmental damage. It is a leading principle of international law that States must not harm or violate the rights of other States. In international environmental law this principle is captured in the so-called No-Harm-Rule. No State shall cause harm to another. This rule, although it seems to be general, constitutes existing customary international law.[176] States are responsible for not conducting, or permitting activities contrary to the rights of others, and for the protection of the environment within their territory and in common spaces; is also known as the "good neighbourliness" principle.[177] It is furthermore captured in the maxim *sic utere tuo, ut alienum non laedas*.[178] The beginning was the *Trail Smelter* case,[179] holding 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 or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence" and then with the *Corfu Channel* case,[180] where it was stated that "it is every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States".[181]

The no-harm rule constitutes the basic rule in international environmental law.[182] The Stockholm Declaration[183] with the principle 21 and the Rio Declaration[184] with the principle 2, referred to the customary provision of the no-harm rule and adopted the treaty provisions accordingly. Closely linked to the obligation not to cause harm is the obligation to take suitable measures to prevent harm to the environment. The 'principle of preventive

[176] See Rao (Special Rapporteur to the ILC), First report on prevention of transboundary damage from hazardous activities (1998), UN Doc. A/CN.4/487, p. 7.
[177] *Ibid.*
[178] *Ibid.*
[179] *Supra* note 2, p. 1965.
[180] *Supra* note 28, p. 22.
[181] See also, Affair du Lac Lanoux 12 R.I.A.A. 281 (Nov. 16, 1957) p. 316; Nuclear Tests cases, (Australia v. France), I.C.J. Reports 1974, p 253, at p. 389; 216 Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, I.C.J. Reports 1996, 226, para. 29.
[182] It has been held in Certain Phosphate Lands in Nauru (Nauru v Australia), Preliminary Objections, 1992 ICJ Rep. 240 (Nauru).
[183] UN General Assembly, United Nations Conference on the Human Environment, 15 December 1972, A/RES/2994, available at: http://www.refworld.org/docid/3b00f1c840.html [accessed 8 November 2018].
[184] Preamble, UN General Assembly, United Nations Conference on Environment and Development, Rio de Janeiro, UN Doc. A/CONF.151/26 (vol. I); 31 ILM 874 (1992)3-14 June 1992.

action', or the 'preventive principle', requires States to prevent, and otherwise to reduce, limit, or control activities that might cause, or risk causing environmental damage. While the obligation not to cause damage arises as a limitation to the principle of sovereignty, the only objective of the 'the principle of preventive action' is minimising environmental damage. Another distinction is that 'the principle of preventive action' also applies to damage within the territory of the source causing it.[185] This was also affirmed by the ICJ in the *Gabčíkovo-Nagymaros Project* case.[186] Should a rule of customary international law be considered to conflict with a treaty rule, in which case the treaty rule would normally prevail? It should be noted that due to the vagueness of most customary international law rules, such conflicts generally do not occur. However, if a treaty does not contain rules covering what is stipulated by a general rule of customary law, the latter will fill the gap.[187]

It is questionable though, whether the rule of no-harm establishes a rule or a principle of international law. On the one hand, if it does constitute a rule, this means that, providing a breach of this rule, consequences and other rules will apply. On the other hand, if it constitutes a principle of international law, it does not contain a duty of conduct or a duty of result, which will not entail any consequences upon the breach of the rule.[188] It should concluded that it contains a general obligation to prevent transboundary harm and it is applicable to climate change.

In order to impose state responsibility there must be a wrongful act, which is a breach of an international obligation that is attributable to a state. However, relying on customary rules a primary obligation makes it difficult to invoke this kind of responsibility. Hints of the ICJ's willingness to contribute to the law's progressive development in the environmental field emerged in the Nuclear Weapons Advisory Opinion, where the ICJ laid pivotal groundwork in the fight against climate change with two salient statements.[189]

Consequently, we should remark that, any breach of an obligation deriving from the "no-harm" rule constitutes an internationally wrongful act which invokes the State's responsibility, under the ILC Articles, which reflect international customary law, as we have seen above.

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[185] *Supra* note 47, p. 246.
[186] *Supra* note 63, para. 140.
[187] An exemption is established in Arts. 53 (and 64) of the Vienna Convention on the Law of the Treaties (VCLT), which stipulate that treaties violating a peremptory norm of general international law are void.
[188] Verheyen, *su*pra note 1, p. 153.
[189] The Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion) [1996] ICJ Rep 226.

3. The climate change's denouement: States' obligations of conduct

Starting from the customary primary obligation of no-harm, continuing to the UNFCCC and the Paris Agreement, it is clear that state obligations of conduct have a significant role under the international climate change law. They do not result from political agreements, but they implement mitigation measures and the impact is greater, meaning that obligations of conduct are an effective tool to promote ambition, compliance and participation to international efforts on climate change mitigation.[190]

An obligation of result requires the realization of a defined performance. On the contrary, an obligation of conduct requires an endeavour towards the thing which has been promised. The endeavour may be directed at a specific objective (one which may or may not be achieved) or it may point towards a general aspiration.[191] States' obligations are often obligations to work towards a goal, and not to achieve a particular outcome.[192] This distinction between obligations of conduct and obligations of result has been recognized in the international case law as well. In the *Pulp Mills* case, the ICJ interpreted a treaty obligation ''to adopt regulatory or administrative measures either individually or jointly and to enforce them'' as an obligation of conduct, namely an obligation to endeavour to avoid changes in the ecological balance.[193]

Obligations in international law on climate change have to be interpreted as obligations of conduct. These can prove useful when examining the mitigation obligations deriving from the climate change regime. As already examined as, primary obligations for states derive from customary law and treaty law. With respect to the customary primary obligation of no-harm, it is arguable whether or not it is an obligation of conduct or an obligation of result, since it both contains an obligation to prevent activities that would cause transboundary harm and also an obligation to take measures to prevent activities that would cause transboundary harm to other states. Generally, an obligation "to ensure" is

[190] Mayer Benoit, *Obligations of Conduct in the International Law on Climate Change: A Defence* (April 4, 2018). Review of European, Comparative and International Environmental Law (Forthcoming). Available at SSRN: <ttps://ssrn.com/abstract=3156067> [last accessed 24 November 2018].
[191] See R Wolfrum, 'General International Law (Principles, Rules, and Standards)' in R Wolfrum (ed), Max Planck Encyclopedia of Public International Law (Oxford University Press 2010), suggesting that a category of 'goal-oriented obligations' could be distinguished from other 'obligations of conduct.
[192] See generally the provisions set out in International Covenant on Economic, Social and Cultural Rights (adopted 16 December 1966, entered into force 3 January 1976) 993 UNTS 3 art 2.1.
[193] Pulp Mills on the River Uruguay (Argentina v Uruguay) (Judgment) [2010] ICJ Rep 14 para 187.

interpreted as an obligation of conduct, and this has been stated several times in treaty law and case law; the "responsibility to ensure" proclaimed in the Stockholm and Rio Declarations is to be construed as the recognition of an obligation of conduct; the 'Declaration of Legal Principles relating to Climate Change' adopted by the International Law Association in 2004 construes an 'obligation to ensure' as an obligation to 'exercise due diligence to avoid, minimise and reduce environmental and other damage';[194] and in the Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons*,[195] the court held that the no-harm rule is an obligation to ensure, namely an obligation of conduct.

In accordance to UNFCCC, the primary obligation of Art.4.2(a), establishes the obligation to implement programmes and to take measures corresponding to their policies to mitigate climate change. This obligation is an obligation of conduct.

As for the Paris Agreement, in the second sentence of Article 4.2 to what clearly qualifies as an obligation of conduct is the obligation for country parties to 'pursue domestic mitigation measures, with the aim of achieving the objectives of' their successive nationally determined contributions (NDCs). The use of the term ''measures'' is related to state conduct rather than result. It has been indicated that the main obligation of the Paris Agreement is found on Art. 4.2, but this opinion has several opponents and defenders. Although this provision seems to be weak as an obligation of conduct rather than a result, it will be examined that can foster stronger national commitments and provide firm ground for a continuing review of compliance than the obligation of result.

Obligations of conduct are not less effective than obligations of result. It has been held in a case between Bosnia and Serbia, that ''a State does not incur responsibility simply because the desired result is not achieved''.[196] While the Court then found Serbia responsible for a breach of international law, it did so based on evidence that Serbia had not 'shown that it took any initiative to prevent' the genocide in Srebrenica.[197] Consequently, a breach of an obligation of conduct persists whenever the actor fails to adopt the required conduct. Despite that, claims for a breach of an obligation of conduct are relatively

[194] International Law Association, 'Resolution 2/2014, Declaration of Legal Principles Relating to Climate Change' (April 2014) Draft Article 7A.1 and 7A.2.
[195] See Legality of the Threat or Use of Nuclear Weapons (n 37) para 29.
[196] Application of the Convention on the Prevention and Punishment of the Crime of Genocide (n 45) para 430.
[197] *Supra* note 182, para.438.

infrequent, in domestic law, when the result has been achieved or is unknown.[198] However, such cases have occasionally been brought before international courts and tribunals. The recent example is what ICJ held in the *Cost Rica v Nicaragua* case, where each state claimed that the other had breached its obligation to conduct a transboundary environmental impact assessment before embarking on an activity having the adverse potential to cause transboundary environmental damages, by holding that Costa Rica 'ha[d] not complied with its obligation under general international law to carry out an environmental impact assessment'[199]The ICJ thus confirmed its understanding that a State may be found in breach of its obligation of conduct even if the objective of this obligation (here, the avoidance of transboundary harm) has been achieved.

To conclude with, obligations of conduct in international climate agreements reflect the general interpretation of the no-harm principle. They allow on-going negotiations on ambition to be conducted on bases more conducive to State consent. Such obligations may foster ambition and participation as national governments are assured that their efforts will be recognized even if they are unable to achieve their target – or even if they overachieve it.

4. Withdrawal from treaties by state parties – Ostensible repercussions or not? Prospects for compliance with Paris Agreement

When the United States ratified the Paris Agreement, the treaty became the first international climate change agreement to have all of the world's greatest polluters actively involved.[200],[201] On behalf of that, it is contested whether or not a withdrawal from the Paris Agreement, could allocate state responsibility on a state for climate change damages. On

[198] J Combacau, 'Obligations de Résultat et Obligations de Comportement: Quelques Questions et Pas de Réponse' in Mélanges Offerts à Paul Reuter: Le Droit International: Unité et Diversité (Pedone 981) p. 194.
[199] Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v Costa Rica) (Judgment) [2015] ICJ Rep para. 162.
[200] The three main emitters are China, United States and European Union. See statistics available at < https://www.wri.org/blog/2017/04/interactive-chart-explains-worlds-top-10-emitters-and-how-theyve-changed> [last accessed 26 November 2018].
[201] Participation by the world's greatest polluters is widely thought to be necessary to the success of the Paris Agreement. See President Barack Obama, Remarks by the President on the Paris Agreement (Oct. 5, 2016) (transcript available at <https://obamawhitehouse.archives.gov/the-pressoffice/ 2016/10/05/remarks-president-paris-agreement)> [last accessed 14 November 2018]; see also Daniel Bodansky, Ctr. Climate & Energy Sols., Legal Options For U.S. Acceptance of a New Climate Change Agreement Solutions 1 (2015), <https://www.c2es.org/site/assets/uploads/2015/05/legal-options-us-acceptancenew-climate-change-agreement.pdf> [last accessed 14 November 2018]; ("Unless the Paris outcome applies to the world's biggest emitters, it cannot significantly advance the international climate effort.").

1st June 2017, President Donald Trump announced that the United States would withdraw from the Paris Agreement.[202] This was a critical moment in the future of the international and the environmental law, especially for the impact of the American jurisprudence to the Paris Agreement's outcome.

In such a critical moment, two questions prevail. First, what promise does the Paris Agreement, as an instrument of international law, provides for the future of international climate change efforts? When the Kyoto Protocol regime came to an end, the international community had the opportunity to get benefits from the lessons learnt; of urgent importance is whether the Paris Agreement can be an effective expression of international law. Second, how does President Trump's announcement to withdrawal affect the treaty and the legal obligations of participating countries? Specifically, is it possible for the Paris Agreement to be successful without the support of the United States? Third, what are the legal consequences for the United States after the announcement? Having analysed the structure[203] and enforcement mechanisms of the Paris Agreement, we have to examine the legal obligations after President Barrack Obama's lawful ratification, whether the United States will have liability if the Trump Administration chooses not to comply with the Agreement's terms, and what legal impact may be caused from a withdrawal, both for the Paris Agreement and the future of U.S. involvement in international law.

First, when Barak Obama ratified the Paris Agreement he did not have the support of the Senate, which requires the consent of two-thirds of US Senators.[204] However, Supreme Court case law and domestic practice have developed to recognize the executive's ability to conduct foreign affairs through executive agreements.[205] Entering into executive agreements is an alternative to forming treaties, allowing the executive to make

[202] Michael D. Shear, Trump Will Withdraw U.S. From Paris Climate Agreement, N.Y. TIMES, June 1, 2017, available at:<https://www.nytimes.com/2017/06/01/climate/trump-paris-climate-agreement.html.> [last accessed 14 November 2018].
[203] Bodansky, s*upra* note 96.
[204] Under Article II of the Constitution, the President of the United States must secure the advice and consent of two-thirds of the Senate before entering into treaties. U.S. CONST. art. II, § 2; see also GARCIA, supra note 65, at 2 ("Under U.S. law, a treaty is an agreement negotiated and signed by the Executive that enters into force if it is approved by a two-thirds majority of the Senate and is subsequently ratified by the President.").
[205] See, e.g., Cruz Ted, Limits on the Treaty Power, 127 HARV. L. REV. F. 93, 96 (2014) ("[C]ourts should enforce constitutional limits on the President's power to make treaties and Congress's power to implement treaties by preventing either from infringing on the sovereignty reserved to the states. Whether one couches this as a Tenth Amendment or a structural argument, the basic point is the people, acting in their sovereign capacity, delegated only limited powers to the federal government while reserving the remaining sovereign powers to the states or individuals. If the federal government could evade the limits on its powers by making or implementing treaties, then our system of dual sovereignty would be grievously undermined.").

international commitments without ever submitting the proposal to the Senate for its advice and consent.[206],[207] Assuming that the executive agreement is supported by the Constitution, the approval or disapproval of the Congress does not impact the Agreement's effectiveness.[208] President Obama signed the Paris Agreement without the consent of the Senate. The United States is a formal member in the treaty and the ratification included the whole text of the Paris Agreement.[209]

Although Barak Obama's entering into the Paris Agreement is fully valid, we have to examine the legality of US's withdrawal from the Paris Agreement and the legal consequences for both the Paris Agreement and the US. The Paris Agreement is a treaty within the meaning of the Vienna Convention of the Law of the Treaties, and because of that, the withdrawal clause from the Paris Agreement has to be examined in accordance with the VCLT rules.[210],[211] According to Article 28 of the Paris Agreement, the earliest any party could lawfully withdraw from it, is November 4, 2020, which is just one day after the next U.S. presidential election. This means that there is a possibility that the United States may never leave the Paris Agreement.[212] Yet, under the Trump administration, the US federal government has taken no measure to realize the objectives of its NDC. This does not necessarily mean that the United States will not achieve these objectives by 2025. A large coalition of subnational authorities, civil society organizations and citizens has mobilized to try to ensure that the US achieves the objectives disregarded by its federal government. Other countries may also intervene, for instance through trade measures which would reduce industrial production in the United States. A new administration may also shift course in time to reach the objectives of the NDC in 2025. Yet, external circumstances do not exonerate the United States from its obligation of conduct under the Paris Agreement.

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[206] Garcia Michael J, Cong. Research Serv., Rl32528, International Law And Agreements: Their Effect Upon U.S. Law 1, 16, 2015, p.4. (explaining that, ''although executive agreements have been used since the Founding, they "have been employed much more frequently since the World War II era.").

[207] The Supreme Court held in American Insurance Association v. Garamendi that "the president has the authority to make 'executive agreements' with other countries, requiring no ratification by the Senate or approval by Congress, this power having been exercised since the early years of the Republic. Am. Ins. Ass'n. v. Garamendi, 539 U.S. 396, 415 (2003).

[208] Supra note 179, p. 6 (citing Restatement (Third) Of Foreign Relations, § 303(4), 1987).

[209] Kayla Clark, The Paris Agreement: Its Role in International Law and American Jurisprudence, Notre Dame Journal of International & Comparative Law: Vol. 8 : Iss. 2 , 2018, Article 8. Available at <https://scholarship.law.nd.edu/ndjicl/vol8/iss2/8[last>, [last accessed 14 November 2018].

[210] Ibid.

[211] Paris Agreement, *supr*a note 13, Art. 28.

[212] Paris Agreement, *supra* note 13, Art. 24.

It is questionable whether there is an obligation for the US to remain a party into the Paris Agreement treaty, under the international customary law. This is known as the principle of progression. This concept stipulates that once a state has made a commitment to improve its response to climate change, it cannot later return to the prior, lesser, levels of commitment. This doctrine, as a relatively new development in customary international law, finds its source in the Paris Agreement's obligation of non-regression.[213]

Trump's Paris Agreement withdrawal has profound implications for the prospects of compliance with the agreement. First, U.S. exit as a fundamental climate negotiator considerably diminishes the Paris Agreement's universality. Second, US abdication of responsibilities irritates the leadership deficit in global climate governance. The concerted leadership of the US, the EU, and China was critical to the making of the Paris Agreement and any associated compliance, due to the fact that these three are the greatest GHG emitters. Third, cutting U.S. climate aid will make it more difficult for developing countries to mitigate and adapt to climate change and less likely for these countries to achieve the 2oCelcius temperature target of the Paris Agreement. Financing is essential to implementing the Paris Agreement, and under the principle of common but differentiated responsibility, developed countries are obligated to provide climate financing to developing countries.[214]

Consequently, while domestic law may freely empower the President to withdraw from treaties at will, under international law the President may be legally obligated to remain part of international environmental agreements. As regards to that, there is a conflict between the ability of the US to withdraw from the Paris Agreement or UNFCCC under domestic versus international law.[215] The impact of the Paris Agreement will undoubtedly change by President Trump's withdrawal of U.S. involvement, but as an accomplishment of international law, it remains unmoved.

[213] Paris Agreement, *supra* note 13, Art. 4(3).
[214] ZHANG Hai-Bina, DAI Han-Chengb, Hua-Xia Laic, WANG Wen-Taod, U.S. withdrawal from the Paris Agreement: Reasons, impacts, and China's response, Advances in Climate Change Research 8, 2017, pp. 220-225, available at < https://www.sciencedirect.com/science/article/pii/S1674927817300849> [last accessed 26 November 2018].
[215] Daniel Boffey et al., EU to Bypass Trump Administration After Paris Climate Agreement Pullout, Guardian, June 2, 2017, <https://www.theguardian.com/environment/2017/jun/02/european-leadersvow-to-keep-fighting-global-warming-despite-us-withdrawal.> [last accessed 14 November 2018].

B. Issues of international responsibility applicable to the climate change law

To establish State responsibility for climate change damages, it is necessary for the state behaviour or the private actors' and private entities' behaviour to be attributable to the state. As already mentioned above, the state's duty to prevent transboundary harm falls within the scope of a wrongful act of an event, which consequently requires the state's duty of due care in order to prevent this harm. The damage caused by individuals is similar to the damage as a failure to prevent the event by the state. But this act of the individuals is not attributable to the state; the failure to prevent this act however is.[216], [217] It is remarkable that when a treaty is breached because the States do not apply the compliance mechanism procedures, the acts or omissions are attributable to the States, regardless of the source of emissions.[218]

1. State conduct of an event – Failing to act with due diligence

State conduct is distinguished into state conduct of an act with respect to Art. 20 of ILC Articles and into state conduct of an event with respect to Art. 23 of ILC Articles. When we examine the attribution of conduct in order to invoke state responsibility for climate change, we mean the international obligation for states to prevent a given event. This obligation will be breached if states fail to prevent the act of their individuals, not if they (affirmatively - positively) cause injury to other states.[219] Consequently, state responsibility for climate change arises from acts or omissions of a state with regard to the conduct of private actors and entities.

It is known that emissions of carbon dioxide and other greenhouse gases are mostly due to the activities of individuals and private industries, coming from a multiplicity of sources such as industrial installations, traffic, households, farming practices, forestry, etc., and they are not attributable *ipso facto* to the State. However, even where private actors conduct an activity causing environmental harm, the issue remains one of the State's duties

[216] Horbach, *supra* note 30, pp 47-74.
[217] 40.1 Y.B. Int'l L. Comm'n 23-40 (1975); See, e.g., the Alabama case where the United States asserted a claim against Great Britain for violation of a neutral's obligation to prevent conduct of an individual supportive of a belligerent, the Alabama case (United States v. Great Britain) 1872 P.C.I.J. Rep. (Ser. A).
[218] Verheyen, supra note 1, p,.239.
[219] This is an example given by the Commission in the comment on Draft Article 23, II Y.B. Int'l L. Comm'n 170 (1973); II-l Y.B. Int'l L. Comm'n 37-52, Paras. 20-50 (1978).

of control. In this regard, the concept of due diligence – or standard of care – needs to be evoked as a test to evaluate the conduct that is required.[220]

The momentous question though is how to determine *due diligence* when case law, state practice and scholars do not give specific answers. The term *due diligence* gives a legal meaning to states' activities and risks. It has been described as the conduct that can be expected of a good government.[221] What constitutes the appropriate standard of care is, thus, determined by looking at a State's means and capacities at its disposal in an international context.[222] ILC also provides that a state must take measures to prevent transboundary harm and to eliminate it.[223]

In terms of preventing climate change damages, acting with due diligence requires, that climate policies and respective regulations are in place which aim to reverse the trend of ever increasing GHG emissions. The elements that define the standard of care are: (i) opportunity to act or prevent, (ii) foreseeability of harm and (iii) proportionality of the choice of measures to prevent harm or to minimize risk.

Regarding the first element, a state fails to act with due diligence if it does not act where it otherwise could have. It is challenging that not one single State but the accumulated actions over a long time by many States are causing the increased radiative forcing. Reduction efforts by one State would not effectively reduce the risk of harm. Acting with due diligence under the no-harm rule, however, does not require a State to guarantee that a certain harm will be prevented. See also the *Seabed Mining Advisory Opinion*, where the tribunal held that the duty of due diligence is an obligation of conduct, not of result.[224] Due diligence is a standard that varies according to context; this was held in

[220] This principle was applied in the *Nauru* case. The 1919 Nauru Agreement between Australia, New Zealand and the UK resulted in the destruction of land on Nauru due to the extraction of phosphate. The Agreement stated explicitly that the phosphate extraction by private business should be conducted without governmental intervention. This was conceived by the Court as an omission of using regulatory powers to prevent environmental degradation. Therefore, state responsibility (for Australia) would arise. Certain Phosphate Lands in Nauru (Nauru v. Australia) ICJ Reports 1992 p. 240.

[221] Verheyen, *supra* note 1, p. 174.

[222] Ch. Tomuschat, 'International Law: Ensuring the Survival of Mankind on the Eve of a New Century', 281:1 Recueil de Cours (1999) p. 280.

[223] See ILC commentary in the ''2001 Draft Articles on Prevention of Transboundary Harm from hazardous Activities" to take unilateral measures to prevent significant transboundary harm or at any event minimize the risk thereof. Such measures include, first, formulating policies designed to prevent significant transboundary harm or to minimize the risk thereof and, second implementing those policies. Such policies are expressed in legislation and administrative regulations and implemented through various enforcement mechanisms.

[224] See the Seabed Mining Advisory opinion, ITLOS/PV.2010/2/Rev.2, where the tribunal held that ''the sponsoring State's obligation "to ensure" is not an obligation to achieve, in each and every case, the result that the sponsored contractor complies with the aforementioned obligations. Rather, it is an obligation to deploy adequate means, to exercise best possible efforts, to do the utmost, to obtain this result. To utilize the

the *Seabed Mining Advisory Opinion*. The Seabed Dispute Chamber of the International Tribunal for the Law of the Sea stated that due diligence "may not easily be described in precise terms" because it is "variable". It may change "over time" and "in relation to the risks involved in the activity".[225] Due diligence is an obligation to make every effort toward minimizing the risk of harm. It requires a State to do the best it can in reducing the risks that result from climate change.[226]

Any of the highly emitting (industrialized) countries would be able to substantially reduce this risk, even if other nations continue to emit. States have to take the necessary measures to prevent significant harm, namely appropriate preventive measures, even when scientific certainty is not guaranteed. Such a view is in line with the precautionary principle. Acting with due diligence may change over time when, for example, scientists assess that the risk and the resulting environmental damage involved is greater than previously thought. Moreover, a State is required to keep abreast of scientific developments and technological changes. Effective mitigation measures need, therefore, to be based on best available technologies (BAT) in this particular field. Accordingly, acting with due diligence in relation to climate damages, which will affect the livelihood of millions of people, requires each State to substantially reduce its emissions of greenhouse gases, and this gives the opportunity to each state to act.[227]

The second element applied to limit due diligence requirements is that of foreseeability of harm. An appropriate link between the omitted activity and the injurious consequences can be established if the State "actually knew or foresaw or ought to have known or foreseen that (its) individual conduct was or would be part of a composite cause bringing about inadmissible harm".[228] In the *Portuguese Colonies* case, the tribunal held that the test of foreseeability excludes losses that are "unconnected with the initial act …

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terminology current in international law, this obligation may be characterized as an obligation "of conduct" and not "of result", and as an obligation of "due diligence". para 110.

[225] Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area (Advisory Opinion, 1 February 2011) para 117. See generally Voigt Christina, *The Paris Agreement, What is the standard of conduct for parties?*, QIL, Zoom-in 26 (2016), 17-28.

[226] This is in particular important with respect to cumulative pollution or environmental degradation based on the accumulation of certain behaviour. It has been noted "If the application of the no-harm rule would depend on proof of the effectiveness of hypothetical measures taken by states, the norm could not be applied at all to complex environmental phenomena – yet, this is clearly not the position of international law." *Supra* note 144, p. 177.

[227] *Supra* note 55, p. 3.

[228] ILA Report of the 64th conference (1990).

which could only have occurred with the help of causes that are independent of the author of the act".[229]

However, it is not for granted, that a state or an actor must have foreseen the precise importance or location of the injury, but it suffices that a State "ought to have known" the consequences. This leads to the content of the burden of proof.[230] A State cannot easily argue that it did not know the specific facts if it could have or should have been aware of them. It is, therefore, considered acceptable that a State is able to envision the general consequences of an act or omission.

The increase of GHG concentrations will lead to increased average temperatures, and this will result in climate change damages, which cannot be argued by states. Scientific method provides states the opportunity to foresee the increase of GHG concentrations. This is provided by the Intergovernmental Panel on Climate Change (hereinafter referred to as IPCC).[231]

The third element is proportionality of the choice of measures to prevent harm or to eliminate it. A State is required to take measures in relation to its national circumstances and to the risks involved. The settlement of proportionality depends on the specific facts of a case and cannot be answered explicitly. Furthermore, the damage likely to be caused by climate change could result in the loss of land, damage to peoples, health and property and potential casualties.

Not all States have the same abilities and capacities to reduce the amount of their GHG emissions. Equity concerns the requirement to take account of the actual capacity of a State to prevent damage. It is understood that the degree of care expected of a State, which means a well-developed economy, human and material resources and a highly evolved

[229] Portuguese Colonies case (Portugal v. Germany) Award of 1928, II RIAA (1949) para. 1031.
[230] For example, in the Corfu Channel case, the International Court of Justice (ICJ) did not require that Albania knew exactly which ships might be damaged by the mines. What was foreseeable was that damage would be caused to ships using the Channel. See *supra* note 28.
[231] All States that signed and ratified the UNFCCC in 1992 acknowledged that climate change was a real threat and of "common concern to humankind". Therefore, it has been sufficiently foreseeable to all States since 1990 (at the latest) that damage due to climate change is brought about by interference with the climate system caused by anthropogenic emissions. IPCC found at < http://www.ipcc.ch/> [last accessed 14 November 2018].

system of governance, is different from country to country, especially when these instruments are not so well placed.[232]

This is aligned with the principle of common but differentiated responsibilities included in Article 3.1 UNFCCC. Accordingly, differentiated standards with regard to the type, stringency and effectiveness of climate mitigation measures have to be applied to different States based on their level of economic development and historic emission levels. States must exercise due diligence to reduce their net GHG emissions as is appropriate under the circumstances of each country. This principle represents a precise departure from the strict and equal treatment of States under international law and could have a major influence on what constitutes a proportionate measure in any given case.

Moreover, ILC sets a requirement for an Environmental Impact Assessment (EIA), when there is likelihood of transboundary harm, which can be described as a general principle of law or even as a customary law since it is established in national laws regarding the consensus expressed in the principle 17 of the 1992 Declaration.[233]

These duties are most interesting as a failure of states to act with due diligence, in performance of the duty to prevent, reduce and control pollution and environmental harm. This means that highly emitting States have to hold a consultation with those countries that are most likely to be affected by the impacts of climate change. There exists a customary law duty to reach equitable solutions. This duty was first recognized in relation to the utilization of international watercourses in the *Lac Lanoux* arbitration.[234]

The standard of due care can be exercised in climate change issues in regard to the principle of the ‘’highest possible ambition’’. This entails a due diligence standard which requires governments to act in accordance to the risk at stake and to the means at their disposal. With respect to that, each Party has committed to taking all appropriate and adequate climate measures according to its best capabilities and its responsibility in order to successively achieve the long-term temperature goal of the Paris Agreement. “Highest possible ambition” recognizes States differing national circumstances while at the same time attempts to match ambition with the over-all aim, thereby combining effectiveness and fairness.

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[232] See R. Lefeber, ‘Transboundary Environmental Interference and the Origin of State Liability’, (The Hague, Kluwer 1999) p. 65.
[233] *Supra* note 61, p. 131. Judge Weeramantry, Dissenting opinion in Nuclear Tests case (NZ v. France) 1995.
[234] Bodansky, *supra* note 130.

Accordingly, differentiated expectations with regard to the type, scope and austerity of climate mitigation measures apply to different States based on their level of economic development and emission levels and trends. States must exercise due diligence to reduce their emissions to the highest possible degree, in a way appropriate to their circumstances, i.e. responsibilities and capabilities.[235]

As a conclusion, it must be said that, the standard of due care must be defined with regard to a country's capacity to reduce its GHG emissions to the extent possible regarding national circumstances. Moreover, a State is obliged to comply with an objective standard of care ("due diligence")[236] and all States have a duty to "do the best they can" to prevent climate change damage. This means that the due care obligation is a primary obligation, which will bring out state responsibility upon its breach. The primary obligations request states to perform the related obligations of conduct, namely the duty to inform, negotiate and cooperate. This is important since China, India and Brazil are already becoming some of the top emitters of GHG which will only grow in number within the next years.

2. Challenges in allocating state responsibility

The law on State responsibility is well developed in general, but it is ill equipped to address environmental damage.[237] There are specific characteristics of environmental damage, such as the often complex causal mechanisms behind it, and it often involves multiple and cumulative causation, which makes environmental damage ill-equipped to be addressed in state responsibility.[238] Climate change damages make for no exception compared to other forms of environmental damages, but they rather explicate the need for further development of rules for liability in the environmental sector. There are several challenges, which need to be addressed and overcome in order for the traditional regime on State responsibility to be successfully applied to climate change damages. The most obvious challenges are the examination of the multiplicity of actors responsible for the climate change damages and the determination of causality.

[235] Voigt, *supra* note 150.
[236] *Supra* note 144, p.152.
[237] *Supra* note 47, p. 869.
[238] *Supra* note 33, p. 277.

2.1 The multitude of actors – the shared responsibility scenario

One of the greatest difficulties for the invocation of state responsibility for climate change damages is the historic nature of GHG emissions and the fact there are numerous emitters. There is a plurality of actors (states, private entities, international organisations) whose actions produce harm; it is generally private entities, rather than states, which emit GHG or undertake adaptation activities. A breach of primary obligations may potentially have been caused by several actors (i.e. there are multiple wrongdoers). In addition, the injury or damage suffered may have been contributed to by multiple actors or other sources such as environmental factors. Accordingly, there could be multiple sources that caused the harm. If we could examine an hypothetical example that multiple States may exceed their emissions targets, we could see that each that exceeded its limits is guilty of a wrongful act. However, which breach caused the melting of the polar ice caps which raised the sea-level and permanently submerged a small-island state? What about historical emissions? Prior to these breaches there have also been hundreds of years of emissions by industrialising nations.

This large number of actors leads to multiple problems - one of which is whether it would be possible to invoke the responsibility of one, or multiple, states, when in fact all states have made GHG emissions. However, it is a fact that every internationally wrongful act of a State involves the international responsibility of that state under Article 1 of the ILC Articles, and this cannot therefore preclude that other states can also be held responsible for the conduct, or for the injury caused. A fundamental rule of international law is that "each State is responsible for its own conduct in respect of its own obligations".[239] Thus, the notion of "international responsibility" in Article 1 covers the new relations that arise under international law from the internationally wrongful act of a State, regardless of the number of subjects of international law the acts extend to.[240] The multitude of actors and the multitude of injured are therefore no hindrance from claiming State responsibility from one, or several States within this aspect.

Another challenge is expressed under the multiplicity of actors, given than climate change damage is caused by anthropogenic actions also. Christina Voigt suggests that the costs could be shared either based on the percentage of contribution to total global

[239] *Supra* note 54, p. 34.
[240] *Supra* note 54, p. 33.

emission, or apportioned in conformity with the principle of common but differentiated responsibilities.[241] In addition to that, a challenge expressed over time, is that the injured States have also emitted greenhouse gases to some extent and have thus contributed to the injury suffered. This matter has a more obvious solution which is regulated in ILC Articles[242],[243] However, this does not exculpate the wrongful act.[244]

As the analysis to this point highlights, the shared nature of responsibility for climate change damage presents many hurdles for an injured state seeking to secure redress under international law. It is perhaps unsurprising, therefore, that no such international responsibility claims have yet been determined. Nonetheless, the increasing recognition of the inevitability of some climate change damage has led to renewed interest in concepts and procedures for implementing shared responsibility for injuries attributable to climate change.[245]

2.2 Causality: from legal theory to practice

It is a difficult task to establish the requirement of injury under the ILC articles. Establishing that the injury is 'caused by' the internationally wrongful act is an integral element of the obligation on the responsible state(s) to make reparation for the harm.[246]

The anthropogenic impact to climate change gives rise to complex causal mechanisms. Firstly, it will be difficult to separate the anthropogenically caused climate change from changes deriving from natural phenomena.[247] Additionally, it is not the emission of carbon dioxide and other greenhouse gases *per se* that cause damage, but a variety of events, which then cause climate change damages. It is a challenge to establish a

[241] *Voigt, supra* note 150, p. 19.
[242] ILC ARSIWA, supra note 20. - if the injured State wilfully, by negligence, or omission have contributed towards their own injury, it might affect the level of reparation the State is entitled to.
[243] *Supra* note 54, p. 109.
[244] *Supra* note 162.
[245] See, e.g., F. Pearce, 'Should Polluting Nations be Liable for Climate Damages?' (2013) Yale Environment 360, available at <http://e360.yale.edu/feature/should_polluting_nations_be_liable_for_climate_damages/2609/.> [last accessed 24 November 2018].
[246] ARSIWA, Art. 31, 'Injury' is broadly defined in the Articles to include 'any damage, whether material or moral, caused by the internationally wrongful act', ARSIWA, Art. 32. As in the broader field of environmental law, however, serious difficulties exist in terms of quantifying environmental/climate-related damage in financial terms.
[247] Yamin Farhana and Depledge Joanna The International Climate Change Regime – A Guide to Rules, Institutions and Procedures, Cambridge, 2004, p. 380.

link between a state's emission and another state's injury, in order to give rise to State responsibility and it is further necessary to establish a causal link between the activity and the arising damage. For this reason, it is useful here to distinguish between general causation and specific causation. On the one hand, as for the general causal link we need scientific proof in order to establish climate change damages. On the other hand, for the specific causal link, a proof is required that a specific activity causes a specific type of damage.[248]

Causation could be established on the particular basis of contribution to the problem of climate change by a specific actor. But this cannot be proven in cases where the damage is due to multiple emitters or the single emitter cannot be clear identified. For this reason, the "but for test" or condition sine qua non mechanism has been established, which was usually applied to establish causation but it is now of limited use in these conditions. The international community has not agreed on the determination of causality and this makes unclear how a court or tribunal could deal with the issue of complex and cumulative causes. There have been cases and procedures in the domestic courts of states, but even then there is no coherence regarding the applicability of causation theories.

There is uncertainty in the climate change damages due to the non-linear causation of the climatic system.[249] There is no evidence that full proof would be required. In *Corfu Channel* the ICJ indicated that proof based on the "balance of probabilities" would suffice.[250] Furthermore, the quantum of proof required might differ from forum to forum. A new tendency to establish the standard of proof has been introduced, by the use of the precautionary principle, by the International Tribunal of the Law of the Sea in the *Southern Bluefin Tuna* case.

The precautionary principle was used to lower the standard of proof in situations where the complexity of facts led to a degree of uncertainty.[251] Still, the relationship between the precautionary principle and the law on State responsibility is not defined yet. Therefore, it might only be suggested that using the principle in the context of the standard of proof or even reversal of proof might comfort otherwise heavy burdens placed on the injured State which has to establish causation.

[248] Voigt, s*upra* note 55, p. 19.
[249] *Ibid*, p. 20.
[250] Corfu Channel, s*upra* note 56, p. 17.
[251] ITLOS Southern Bluefin Tuna (New Zealand v. Japan and Australia v. Japan), Request for Provisional Measures, Order of August 29th, 1999.

Another challenge in the causality is that there is no specific link that directs the way in the chain of causation, there is no break in the chain of causation, and yet, it remains rather impossible that a specific hurricane might be attributable to climate change, let alone to emissions from a specific country, despite their disastrous effect. The causal link between the GHG emissions and the anthropogenic behaviour is easier to establish.

International courts and tribunals have held governments responsible only for immediate and foreseeable causes of their acts and have denied compensation for remote consequences.[252] Also, the International Law Commission suggests a 'proximate cause' to restrict causation – while failing to define how this criterion might be applied in a specific case. The proximate criterion does not seem to provide any substantial requirement with regard to climate change. All greenhouse gases are equally 'proximate' to the resulting chain of causation leading to 'climate change damages'.

Even so, some alternative theory of causation would still seem to be necessary to satisfy the requirement of proximate cause under international responsibility rules. In the *Clements v. Clements* case the court ruled that in negligence cases involving multiple tortfeasors, the standard 'but for' test of causation should be replaced with a standard whereby the plaintiff need only establish that the defendant materially contributed to the risk of injury.[253] In Massachusetts v. EPA, on the issue of causation, the Supreme Court rejected the Agency's argument that its decision not to regulate GHG from new motor vehicles would not contribute to climate change damage in Massachusetts, noting that US motor vehicle emissions make a 'meaningful contribution' to GHG concentrations and global warming.[254] These causation tests leave open the question of what amounts to a material or meaningful contribution to the risk, which is likely to affect the perceived seriousness of the harm.

3. The legal consequences of state responsibility when the breach persists – the evolving "climate change reparations" issue

[252] See Cheng Beng, 'General Principles of Law as Applied by International Courts and Tribunals', (Stevens, London, 1953) pp. 251 et seq.
[253] The 'but for' test applied in many common law jurisdictions requires the plaintiff to demonstrate that the harm/injury would not have occurred but for the defendant's wrongful conduct.
[254] Massachusetts v. Environmental Protection Agency, 549 US 497 (2007), p. 525.

It is not expected that all climate change impacts can be avoided by mitigation or adaptation alone.[255] The implementation of mitigation and adaptation measures could result in a significant reduction of the risks of climate change, but not in their elimination. 4The legal consequence when a state is responsible for omitting harm is that the primary obligation not to cause harm persists.[256] UNFCCC though does not contain provisions regarding the legal consequences of a breach of its provisions, apart from a reference to the Conference of the Parties considering the establishment of "a multilateral consultative process for the resolution of questions regarding the implementation of the Convention"[257] (for which a process has not been established),[258] and a general provision on dispute settlement that includes a default process for use of a conciliation commission[259] (for which a procedure has not been developed). Nor does the Paris Agreement provide for secondary rules when states breach their agreed commitments. The negotiating histories of the Convention , the Kyoto Protocol and the Paris Agreement, suggest that, although countries were aware of the problem of residual climate change damage (i.e. damage occurring despite mitigation and adaptation efforts), developed states resisted the inclusion of any treaty provisions dealing with issues of responsibility.[260] Consequently, a number of Small Island States, upon the signature and ratification, they appending declarations to the effect that joining the Convention 'shall in no way constitute a renunciation of any rights under international law concerning state responsibility for the adverse effects of climate change'.[261]

However, regarding the legal consequences, when a breach persists, the State is obliged to cease the harm,[262] i.e. by regulating effective reduction gas emissions, and to make full reparation for the injury that it caused.[263]

With respect to Art. 42 of ILC, an injured state can claim reparation, and as Art. 31 of ILC provides, a "responsible State is under an obligation to make full reparation for the injury caused by the international wrongful act"; according to Benoit Mayer though,

[255] IPCC, Fourth Assessment Report, Climate Change 2007: Synthesis Report (2007).
[256] ILC, ARSIWA, *supra* note 20, Art.29.
[257] UNFCCC, *supra note 6*, Art. 13.
[258] Terms of Reference for Operation of the Multilateral Consultative Process have been largely negotiated (Decision 10/CP.4, FCCC/CP/1998/16/Add.1) but are not in force.
[259] UNFCCC, *supra* note 6, Art. 14.
[260] Verheyen, *supra* note 1, p. 88.
[261] See text of the declarations submitted upon signature or ratification of the Convention by Fiji, Kiribati, Nauru and Papua New Guinea, available at: <http://unfccc.int/essential_background/convention/items/5410.php.> [last accessed 24 November 2018].
[262] *UNFCCC, supra* note 6, Art.30.
[263] *Ibid*, Art.31.

reparations in climate change cannot be "full".[264] State practice shows that less than full reparations have already been provided to the extent that customary law reflects, despite the provision of Art. 31 of the ILC articles that contain the term "full reparation". According to Mayer, climate change reparations come as an analogy from war reparations, but for politically reasons, states decided to give less than full reparations.[265] This has been accepted and has been used under several different fields, and shows that States have rejected full reparation in the past.

Some examples can be drawn in several fields, namely i) under war and mass atrocities, where no full reparations have been given after wars, only small per cent of the total amount,[266],[267] ii) under trade measures, where States stated that between their commercial relations full reparation was not their desirable outcome nor a normal practice; the only case under WTO was the *Australia – Automotive Leather II* case,[268] iii) under expropriations, where State practice has concluded to less than full reparations regarding expropriations;[269] since World War II, most investment disputes have indeed been settled through lump-sum agreements providing only partial compensation;[270] and iv) under hazardous activities. One of the greatest industrial disasters of the twentieth century, the Chernobyl nuclear accident, led to no claims for reparations, the general understanding being that "priority should be given, in the wake [of the accident], to endeavours of another nature".[271] As Phoebe Okowa noted, reparation must "take into account the gravity of the

[264] Mayer Benoit, *Climate change reparations and the law and practice of state responsibility*, Asian Journal of International Law, 7 (2017), pp. 185–216.
[265] Mayer Benoit, Less-than-Full Reparation in International Law, Indian Journal of International Law (Forthcoming), 2017, available at SSRN: <https://ssrn.com/abstract=2968347>[last accessed 24 November 2018].
[266] Tomuschat Christian, International Law: Ensuring the Survival of Mankind on the Eve of a New Century: General Course on Public International Law, 2001, 281 Collected Courses of the Hague Academy of International Law, p. 293.
[267] See also Eritrea-Ethiopia Claims Commission, Decision number 7 of 27 July 2007, providing guidance relating jus ad bellum liability, XXVI Reports of International Arbitral Awards 10, p. 19, para. 29. Where the compensation was limited.
[268] WTO,Australia-Automotive Leather II (Art 21.5), decision of 21 January 2000, WT/DS126RW, para. 6.42. The Panel's decision was not based on art. 19(1) DSU, but on a similar provision: art. 4.7 of the Agreement on Subsidies and Countervailing Measure, 15 April 1994, 1867 U.N.T.S. 14.
[269] United Nations General Assembly, U.N.G.A. Res. 1803 (XVII) (1962), part I, para. 4, defined that compensation will be paid according to international law.
[270] See generally Burns H. WESTON, David J. BEDERMAN, and Richard B. LILLICH, International Claims: Their Settlement by Lump Sum Agreements, 1975–1995 (Ardsley: Martinus Nijhoff, 1999).
[271] Sands Philippe, Chernobyl: Transboundary Nuclear Air Pollution—The Legal Materials, Cambridge, 1988, p. 27.

wrongful act, the importance of the obligation breached, and the degree of fault or the wilful intent of the wrongdoer".[272]

Climate change reparations have to be designed in a way that would fulfil and promote the climate change mitigation. Industrial and developed countries would deny full reparation for the reason that this would consume much-needed resources from climate change mitigation. There have been cases where the compensation was not full, but was still valid, effective and covered the expropriated value of the property, according to a report of ILC.[273] P. S. Rao suggested that reparation should be "as complete as possible" in view of the particular circumstances of each case.[274] Less than full reparation measures is not *lex specialis*, but it can be accepted as law, in specific circumstances.

[272] Okowa, *supra* note 26, p. 209.
[273] F.V. Garcia-Amador, Fourth report on State Responsibility, in (1959) Yearbook of the International Law Commission, vol. II.1, at para. 89.
[274] See the Summary Records of the 2615th meeting of the International Law Commission (2000), at paras. 52, 55.

PART II: The Dispute Settlement Mechanisms in Climate Change

A. Is a dispute created? Promising dispute settlement under the Paris Agreement

1. The amicable solution of Non-Compliance - Taking MEAs as a starting point

Once the States comply with the obligations arising from an international agreement and implement the treaty through national legislation, the treaty itself becomes successful and meaningful. The UNEP Guidelines[275] define compliance as "the fulfilment by contracting parties of their obligations under a multilateral environmental agreement and any amendments to the multilateral environmental agreement (hereinafter referred to as MEA)". It is true though that some developing countries cannot comply with any of the treaty obligations due to a lack of resources or technical measures. Others are unwilling as well. For this reason, several multilateral environmental agreements provide provisions for enforcement in order to facilitate compliance including sanctions, penalties, and other measures. Although international courts and tribunals could play an important role settling any environmental dispute between the parties, this possibility could face several difficulties in overcoming causation requirements and due diligence standards.[276],[277]

Most compliance mechanisms of MEAs put the emphasis on facilitation rather than enforcement, but accomplish a certain field of measures. The compliance mechanisms of MEAs usually put emphasis on promoting and facilitating compliance. Some of these measures are "soft" and other compliance mechanisms have somewhat stronger measures available as well.[278]

For these reasons, the compliance mechanisms have slowly but certainly replaced the classic dispute settlement procedures as the preferred means to ensure compliance with environmental obligations in public international law and their importance is growing. These mechanisms and procedures apply uniquely to the treaties that created them. At the same time, they show remarkable overlap and similarities. The primary objective of these procedures is to encourage or assist States in the implementation of their obligations and, in the event of non-compliance, to avoid the confrontation that might result from resort to means such as dispute settlement procedures, invocation of State responsibility,

[275] UNEP Guidelines on Compliance with and Enforcement of Multilateral Environmental Agreements (MEAs), available at < http://wedocs.unep.org/xmlui/bitstream/handle/20.500.11822/17018/UNEP-guidelines-compliance-MEA.pdf?sequence=1&isAllowed=y> [last accessed 3 December 2018].
[276] Brunnee Jutta, Climate change and compliance and enforcement processes, p. 296, in Rayfuse Rosemary and Scott Shirley V. (eds.), *International Law in the Era of Climate Change*, Edward Elgar, 2012.
[277] See generally also Stephens T, International Courts and Environmental protection, Cambridge, 2009.
[278] Oberthür Sebastian, Options for a Compliance Mechanism in a 2015 Climate Agreement, Brill Nijhoff, climate law 4, 2014, pp. 30-49.

countermeasures.[279]The last years' several multilateral environmental treaties have established a number of non-compliance procedures, in order to encourage or assist States in the implementation of their obligations and, in the case of non-compliance, to avoid the confrontation that might result from resort to means such as dispute settlement procedures and allocation of state responsibility.[280]

MEAs are treaties within the scope of the VCLT law, which means that a treaty is binding and should be performed in good faith by its own nature, not because a compliance mechanism is available to deal with enforcement issues. In other words: "The law is not binding because it is enforced: it is enforced because it is already binding".[281] The compliance mechanisms approved so far in the different MEAs greatly in terms of measures that can be taken in cases of non-compliance, with a clear majority of regimes allowing only for facilitative measures and no enforcement measures.[282] The only remarkable exception was the Kyoto Protocol, which contained strict a compliance mechanism, potential sanctions and punishments.

Taking into consideration that some States are unwilling to comply with treaty obligations, and they withdraw from the treaty, we can conclude that there is an inherent weakness of the international environmental law to provide for the enforcement of state obligations against their will.[283]

In cases of non-compliance, the emphasis will be on supportive measures (facilitation), i.e., measures that will help treaty parties with the implementation of the convention, such as information exchange, support in monitoring, verification of the information provided, organizing workshops and simplifying access to financial aid, through the Global Environment Facility[284] (hereinafter referred to as GEF) or a fund specifically created for this purpose, such as, for instance, the climate change funds or the

[279] On the development of non-compliance mechanisms and procedures in international environmental law see in particular: CHAYES, A. and CHAYES, A. H.: "On Compliance", International Organization, 1993, pp. 175.
[280] Pineschi Laura, Non-Compliance Mechanisms and the Proposed Center for the Prevention and Management of Environmental Disputes, 20 Anuario de Derecho Internacional 241, 2004.
[281] Fitzmaurice Gerald, The Foundations of the Authority of International Law and the Problem of Enforcement, 19 Modern LR (1956), 1.
[282] UNEP, Compliance Mechanisms under Selected Multilateral Environmental Agreements, Nairobi, 2009, p. 11.
[283] See the Canada's example of withdrawal from the Kyoto Protocol, which leads to the fact that Committee, is powerless to cope with non-compliance. See Compliance Committee, C/EB/25/2014/2, 20 August 2014, Canada's withdrawal from the Kyoto Protocol and its effects on Canada's reporting obligations under the Protocol, Note by the Secretariat.
[284] UNEP Compliance Mechanisms, above , p. 41.

funds established under the Convention of Biological Diveristy (hereinafter referred to as CBD).

In order to examine the consequences of non-compliance under the Paris Agreement, first we have to understand the similarities and differences of non-compliance under other multilateral environmental agreements. The procedural mechanisms and the institutional framework of non-compliance regimes envisaged under these instruments will be briefly reviewed. First, regarding UNFCCC, we should say that although it does not set targets to parties in reducing the greenhouse gas emissions, it does establish a system in reviewing, reporting, assessing and settling a Party's performance of certain provisions.[285] Under UNFCCC there is Art. 13 that sets the framework for the establishment of a multilateral compliance mechanism, which was inspired by the mechanism under the ozone regime.[286],[287]

The Convention gives the opportunity to states to request for advices, recommendations and assistance to overcome any difficulties. Art. 13 provides for the establishment of a Multilateral Consultative Process (hereinafter referred to as MCP).[288] This instrument has been established by the COP to promote the understanding of the UNFCCC, and to prevent disputes between the parties.[289] The process was designed to be conducted in a facilitative, cooperative, non-confrontational, transparent and timely manner, and be non-judicial, separate from, and without prejudice to, the provisions of Art. 14 of the UNFCCC. The Annex of Decision 10/CP.4 sets the different ways in raising the questions before of this Compliance Committee.[290] However, Parties could not reach consensus on the structure of the entitled Committee regarding the procedures, so the MCP has never been set in action.

[285] UNFCCC, *supra* note 5, Art. 12.
[286] Yamin Farhana and Depledge Joanna, The International Climate Change Regime, Cambridge, 2004, p. 384 et seq who also describe the process of negotiations to arrive at the draft rules in Decision 10/CP.4.
[287] Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, International Legal Materials 1550 (1987).
[288] See generally Verheyen Roda and Zengerling, International Dispute Settlement, Oxford, p. 419, in Carlarne Cinnamon, Gray Kevin and Tarasofsky Richard (eds.), The Oxford handbook of International Climate Change Law, Oxford, 2016, pp. 417-440.
[289] See Decision 10/CP.4, for the establishment of the multilateral Consultative Process (MCP), FCCC/CP/2007/6/Add.1, 2007.
[290] The terms of reference given for such process provide that questions regarding the implementation may be raised, with supporting information, by either a Party with respect to its own implementation, or a group of Parties with respect to their own implementation, or a Party or a group of Parties with respect to the implementation by another Party or group of Parties.

Second, the compliance mechanism under the Cartagena Protocol, dating back to 2004, is designed to help States reach compliance in cases of non-compliance, rather than punish them. Third, the Montreal Protocol's possible non-compliance counter-measures consist of "appropriate assistance", "cautions" and "suspension".[291] This may seem like a healthy mix of facilitation and enforcement; however, in real terms, in the 20 years that the compliance mechanism has been in force, "no [. . .] Party was deprived of assistance, nor were any steps taken to suspend rights and privileges".[292] Indeed, from the early years of the enact ion of the Protocol, when many contracting Parties had severe difficulties meeting the reporting requirements of the treaty, the compliance committees have always been tolerant towards cases of non-compliance. The aim of the procedure was to secure an amicable solution of matters of possible non-compliance.[293]

Fourth, when negotiating the Kyoto Protocol, the parties could not agree on the details of a compliance regime. The core of the Kyoto Protocol compliance system adopted in accordance with Art. 18 of the COP.[294] The adopted mechanism provided "appropriate and effective procedures and mechanisms to determine and to address cases of non-compliance." Art. 18 set a limitation on any future compliance regime, by requiring any mechanism with legally binding compliance measures to be adopted by means of an amendment to the Protocol. Despite this limitation, the Parties developed a compliance mechanism with consequences, if not legally binding measures, through Decision 27/CMP.1, Annex, Procedures and Mechanisms Relating to Compliance under the Kyoto Protocol (2005). The Kyoto Compliance Committee's two branches fulfill different functions, as defined in sections IV and V of the Procedures and Mechanisms;[295] a "facilitative" branch[296] and an "enforcement" branch.[297]

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[291] See Report of the Fourth Meeting of the Parties of the Montreal Protocol, Annex V, UNEP/OzL.Pro.4/5, 1992.

[292] K. Madhava Sarma, Compliance with the Multilateral Environmental Agreements to Protect the Ozone Layer, in: Beyerlin, Stoll and Wolfrum (eds.), *Ensuring Compliance with Multilateral Environmental Agreements: A Dialogue between Practitioners and Academia* (Leiden/ Boston, Martinus Nijhoff Publishers, 2006.

[293] Laura Pineschi, Non-Compliance Mechanisms and the Proposed Center for the Prevention and Management of Environmental Disputes, 20 Anuario de Derecho Internacional 241 (2004).

[294] See Decision 27/CMP.1, Procedures and Mechanisms Relating to Compliance under the Kyoto Protocol, UN Doc. FCCC/KP/CMP/2005/8/Add.3, 30 March 2006.

[295] Kyoto Protocol, *supra* note 211.

[296] The enforcement branch is responsible for determining whether a Party included in Annex I is not in compliance with its emissions targets, the methodological and reporting requirements for greenhouse gas inventories, and the eligibility requirements under the compliance mechanisms.

[297] The mandate of the facilitative branch is to provide advice and facilitation to Parties in implementing the Protocol, and to promote compliance by Parties with their Kyoto commitments. It is responsible for addressing questions of implementation by Annex I Parties of response measures aimed at mitigating climate

The aim of the Kyoto Protocol's mechanism was to ''facilitate, promote and enforce compliance with the commitments under the Protocol''.[298] This procedure operated without prejudice to the more classical dispute resolution clause of the Art. 14 of the UNFCCC which applies *mutatis mutandis* to the Protocol. This mechanism was inspired by the compliance mechanism under the Montreal Protocol in order to protect the ozone layer.[299] The Kyoto Protocol has given rise to the most inclusive non-compliance method to date.[300],[301] The importance of the environmental issues at stake and the specificity of the Protocol explains the preciseness of the monitoring and the control procedure. But the "consequences" are not punitive; they aim at "the restoration of compliance to ensure environmental integrity, and shall provide for an incentive to comply". There exists the possibility of an appeal to the COP-MOP against a decision of the enforcement branch.

It is generally acknowledged, however, that traditional dispute settlement mechanisms cannot function to address the material breach by States of international environmental obligations. Different organs of the United Nations have raised the issue on several occasions. Agenda 21 clearly suggests that new methods should be developed ("In the area of avoidance and settlement of disputes, States should further study and consider methods to broaden and make more effective the range of techniques available at present, taking into account, among others, relevant experience under existing international agreements, instruments or institutions and, where appropriate, their implementing mechanisms such as modalities for dispute avoidance and settlement")[302]

1.1 Are compliance control procedures practically effective? The challenge of assessing compliance with obligations of conduct

change in a way that minimizes their adverse impacts on developing countries and the use by Annex I Parties of the mechanisms as "supplemental" to domestic action.

[298] Kyoto Protocol, *supra* note 11.

[299] UNFCCC, *supra* note 6, Art. 14.

[300] See generally Oberthuer Sebastian, Compliance under the evolving climate change regime, pp. 121-125, in Carlarne Cinnamon, Gray Kevin and Tarasofsky Richard (eds.), The oxford handbook of International climate change law, Oxford, 2016, pp.120-136.

[301] The major case in point concerned the potential non-compliance by Canada. See E.g., Peter J. Murtha, 'Effective International Compliance Is Needed to Avoid 'Dangerous Anthropogenic Interference', in inece Special Report on Climate Compliance: United Nations Climate Change Conference in Copenhagen – cop15, 2009, p. 8–9.

[302] Agenda 21, Chapter 39, para. 10. The text of Agenda 21 is available at: <http://www.un.org/esa/sustdev/docunients/agenda21/english/agenda2lto.htm.> [last accessed 4 December 2018].

It is less difficult to identify whether an obligation of result has been followed by member state than to identify whether or not this state complied with the obligation of result. The breach of an obligation of result can be easily established through the accumulation of evidence. This cannot be the case with the obligation of conduct however. Assessing or monitoring compliance with obligation of conduct is difficult.

Taking Paris Agreement as an example, its primary obligation of conduct is provided in Art. 4.2a, and in order to identify whether or not a state is complying with this obligation, we should conduct a comprehensive review, not only of the measures adopted and implemented by that country, but also of the information and resources available to that country when it adopted and implemented said measures. The crucial question would be whether the state implemented all efforts provided under Art. 4.2a.

The burden of proof belongs, in principle, to the debtor of the obligation.[303] Likewise, in the process of determining whether a State has complied with its treaty commitments regarding climate change mitigation, it belongs to each State to provide evidence of the measures that it has pursued. Alleged breaches of obligations of conduct may as well be brought before international courts and tribunals, which would eventually need to assess the evidence of compliance provided by the parties. The breach of an obligation of conduct must be proven by evidence by the debtor, which entails the establishment that he failed to comply with the agreed commitments of the Agreement.

Alternatively, the breach of an obligation of conduct can also be established by evidence that the debtor took the initiative to implement measures which prevented the realization of the objective. The approval of several pipeline projects by the Trump administration, for instance, cannot comply with the objective of the Paris Agreement's NDCs. The obligation to take or not to take such actions is generally not absolute, but conditional on an alternative course of conduct of an equivalent effect.

The obligations of conduct related to climate change mitigation entail a variety of actions. States have procedural obligations of conduct regarding the customary principle of no-harm, which means that states have to contribute their global GHG emissions, and wait until it has been defined whether the contributions were significant or not. Obligations start as of conduct but when a commitment has been formulated, the obligations become

[303] See as an example, the Application of the Convention on the Prevention and Punishment of the Crime of Genocide, (Judgment) [2007] ICJ Rep 191, para 438.

obligations of result, once the states formulated the programs, measures and all the steps to mitigate climate change. The same reasoning applies in relation to Article 4.2 paragraph 2, second sentence, of the Paris Agreement. Once a party to the Paris Agreement has identified the measures on which it would rely to pursue the objective of its NDC, it is obligated to implement these measures, unless it implements alternative measures of an equivalent effect. A party which, without reason, fails to develop a strategy to realize the objective of its NDC, or which, having adopted relevant laws, fails to implement them, would be in breach of its obligation under Article 4.2 paragraph 2, of the Paris Agreement.[304]

1.2 The Non-Compliance Mechanism of the Paris Agreement

The scope of the Paris Agreement is to develop climate-friendly, economic and social sustainable activities. To ensure Parties' fulfillment of the agreed commitments, Parties of the UNFCCC decided to include an in-house compliance mechanism.[305] The structure and responsibilities are not determined yet, and in many regards the mechanism lacks concrete steps to make it possible to translate into a complete institution. The fact that the Paris Agreement does not impose any hard new obligations on states is a reason to continue to rely on existing processes.[306] In this regard, the existence of policy processes, and domestic measures for implementation still remain; States implement their international environmental obligations in three distinct phases. First, by adopting national implementing measures; second, by ensuring that national measures are complied with by those subject to their jurisdiction and control; and, third, by fulfilling obligations to the relevant international organizations, such as reporting the measures taken to give effect to international obligations.[307] However the Agreement does not provide certain foundations

[304] Meyer Benoit, Obligations of Conduct in the International Law on Climate Change: A Defence (April 4, 2018). Review of European, Comparative and International Environmental Law (Forthcoming).
[305] Paris Agreement, *supra* note 13, Art. 15. According to the Decision of the Conference of the Parties to the UNFCCC adopting the Paris Agreement ('COP Decision'), the mechanism is to consist of twelve persons 'with recognized competence in relevant scientific, technical, socioeconomic or legal fields'. See generally UNFCCC, Decision 1/CP.21, Adoption of the Paris Agreement, FCCC/CP/2015/10/Add.1 (2015), para 102.
[306] Zahar, Alexander, A Bottom-Up Compliance Mechanism for the Paris Agreement (February 6, 2017). Chinese Journal of Environmental Law, Vol. 1, No. 1, 2017. Available at SSRN: <https://ssrn.com/abstract=2912560> [last accessed 4 December 2018].
[307] See generally D. Victor, K. Raustiala and E. Skolnikoff (eds.), The Implementation and Effectiveness of International Environmental Commitments (1998); T. Zhenghua and R. Wolfrum, Implementing International Environmental Law in Germany and China 2001. See also G. Handl, Controlling Implementation of and

for the compliance mechanism's formation and operation and after seeing the components in their interrelated context, its features, structure and design can be further analyzed. The Compliance Committee of the Paris Agreement serves what lawful actions the states have to take in order to implement their obligations.

In order to understand the character of the Paris Agreement's Compliance Committee, we have to identify and analyze the provisions that provide legally binding obligations to the states. This because only provisions that create legal obligations on the Parties actually binds them to adopt a determined behavior, which in turn can be expected to be monitored and ensured under the compliance mechanism. We have examined the legal character of the Paris Agreement, and the legal form of its provisions in Part I, by analyzing the relevant substantive and procedural obligations arising from the Paris Agreement. The word "relevant" in this context means those parts of the Agreement that can be expected to go under the compliance mechanism.

Article 15 of the Paris Agreement states that the purpose of the mechanism is 'to facilitate implementation of and promote compliance with the provisions of this Agreement'. Parties were able to agree on the nature of the Committee: it shall be facilitative and function in a manner that is transparent, non-adversarial and non-punitive and shall pay particular attention to the respective national capabilities and circumstances of parties – language that reflects elements both from the multilateral consultative process[308] and the Implementation and Compliance Committee.[309] Even though the Paris Agreement and the COP decision have not further developed the compliance committee,[310] scholars and commentators agree that the development of this Compliance Committee would be meaningful for the Paris Agreement success.[311] It would be vital if it could be

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Compliance with International Environmental Commitments: The Rocky Road from Rio, 5 Colorado Journal of International Environmental Law and Policy 305 (1994); L. Boisson de Chazournes, La Mise en Oeuvre du Droit International dans le Domaine de l'Environnement, 99 Revue Ge´ne´rale de Droit International Public 37, 1995; P. Sands, Institution Building to Assist Compliance with International Environmental Law: Perspectives, 56 Zao¨RV 754, 1996.

[308] UNFCCC, *supra* note 6, Art. 13.

[309] Paris Agreement, *supra* note 13, Art. 15 para 2.

[310] The parties to the Paris Agreement were until recently still at the stage of compiling party views on how to develop Article 15; see Ad-Hoc Working Group on the Paris Agreement, Informal Note by the Cofacilitators: Agenda item 7: *Modalities and Procedures for the Effective Operation of the Committee to Facilitate Implementation and Promote Compliance Referred to in Article 15.2 of the Paris Agreement*, available at: <https://unfccc.int/files/meetings/marrakech_nov_2016/insession/ application/pdf/apa_item_7_informal_note.pdf> [last accessed 19 November 2018].

[311] See, for example, Mehling Michael, Enforcing Compliance in an Evolving Climate Regime, in Jutta Brunnée, Meinhard Doelle, and Lavanya Rajamani (eds), *Promoting Compliance in an Evolving Climate Regime*, Cambridge, p. 214; Rajamani Lavanya, Developing Countries and Compliance in the Climate Regime, ibid pp. 393-394; Rajamani Lavanya, Brunnee Jutta, and Doelle Meinhard, *Introduction: The Role of*

shaped with a Bottom-Up design.[312] A bottom-up approach to compliance is adequate for the Paris Agreement because it lacks a feature which the Kyoto Protocol enjoyed and which enabled the Protocol's top-down compliance mechanism to at least run on one piston: namely, it had legally binding mitigation targets. Therein lies the critical difference, and it has nothing to do with any divergence between the two treaties' approaches to the method of generation of mitigation targets. On the other hand, writers suggest that it may be enough to sustain an acceptable level of compliance.[313],[314]

The agreed arrangement does not contain any differentiated architectural element. In particular, it does not refer to developed and developing country categories or any other bifurcated elements. Parties' views converged around the understanding that differentiation among parties is reflected in the specific elements of the Agreement, while the compliance and implementation arrangement will be of application to all parties.[315]

The Compliance Committee can be considered as an important common design element of the Paris Agreement, with its goal being to secure the effectiveness of the Agreement's provisions. By including an arrangement to facilitate the implementation of, and promote compliance with, the provisions of the Agreement, a normative continuum can be achieved, covering all normative stages: from the design and content of parties' obligations and commitments, to the reporting and review of the implementation of the provisions of the Agreement (Article 13), to addressing issues of non-implementation

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Compliance in an Evolving Climate Regime, ibid p. 11; and Van Asselt Harro et al, Maximizing the Potential of the Paris Agreement: Effective Review in a Hybrid Regime, Stockholm Environment Institute 2016, pp. 1 and 6.

[312] As Zahar Alexander states. See generally Zahar Alexander, A Bottom-Up Compliance Mechanism for the Paris Agreement (February 6, 2017). Chinese Journal of Environmental Law, Vol. 1, No. 1, 2017. Available at SSRN: <https://ssrn.com/abstract=2912560> [last accessed 4 December 2018].

[313] See Bodansky Daniel, *The Legal Character of the Paris Agreement*, 2016, 25(2) Review of European Community and International Environmental Law 142, 149; Bodansky Daniel, *The Paris Climate Change Agreement: A New Hope?*, 2016, 110(2) American Journal of International Law 288, 291 ('peer and public pressure'); Van Asselt Harro and Hale Thomas, *Reviewing Implementation and Compliance under the Paris Agreement*: Arizona State University Workshop Background Note (2016), available at: <https://conferences.asucollegeoflaw.com/workshoponparis/files/2012/08/Reviewing_implementation_compliance_background_note_310316.pdf>, 3, Table 1 (where the claim is made that 'An expert review process flagging problems with implementation can help facilitate compliance without the intervention of a compliance mechanism'; however, the authors give no argument in support of this claim); and Van Asselt Harro et al, *supra* note 226, p. 2 ('opportunities to apply political pressure').

[314] See *supra* note 229, p. 8.

[315] See generally Voigt Christina and Ferreira F, *Differentiation in the Paris Agreement*, 1:1–2 Climate Law (2016), p. 58.

and/or non-compliance. This mechanism should give parties reassurances of their mutual willingness to follow up on the provisions agreed under the Paris Agreement.[316]

However, certain questions regarding the Paris Agreement's Compliance Committee need to be answered. In particular, questions of architecture, procedures, triggers and outcomes. During the negotiations, parties suggested that the form of the Kyoto Protocol's Compliance Mechanism would be appropriate for the Paris mechanism as well. But despite the well-established mechanism of the Kyoto Protocol, it needs to be noted that the Paris Agreement is different than the Kyoto. The Kyoto contained legally binding emission limitation and reduction commitments while the Paris Agreement contains legally binding obligations but of a procedural nature only. It needs to be clarified that compliance in its legal sense is only possible with provisions that set legally binding obligations for parties, that is, obligations that require certain actions or omissions from parties. Other provisions of a non-legally binding nature can be implemented if they require domestic action or if they guide the design and establishment of the organizational structure of the regime, but they cannot be 'complied with'. Implementation is thus a term which captures more broadly than compliance.[317] As for the Compliance Committee more detailed methodologies and procedures still need to be negotiated and agreed upon. Additionally, Parties could also agree to regularly review the mechanism so as to provide for the opportunity to strengthen it, sine the international cooperation advances and deepens.

1.3 Compliance Mechanisms and classical dispute settlement procedures

The procedures under the Compliance Mechanism of each MEA have to be distinguished from the classical dispute settlement procedures, procedures like bringing a claim before an international tribunal or court, or before arbitration. In MEAs there are no judicial proceedings in the case of compliance mechanisms. MEA's compliance

[316] Voigt Christina, *The compliance and implementation mechanism of the Paris Agreement*, RECIEL 25 (2) 2016, pp. 161-173.

[317] The two terms of functions, namely promoting compliance and facilitating implementation have a different nature. The committee should consist of two different chambers or branches. To this end, the committee could, for example, consist of a compliance branch and an implementation branch – mirroring the architecture of the Paris Agreement. As a 'Compliance and Implementation Mechanism',
the mechanism should cover both aspects in its architecture, functions and proceedings: compliance with (legally binding) obligations and implementation of (not legally binding) NDCs. See generally Voigt, *supra* note 316.

mechanisms are not dispute settlement procedures aiming to reach an independent judicial outcome and to settle a dispute by legal analysis and interpretation of facts.[318]

The international community may prefer the compliance mechanism procedures rather than the dispute settlement procedures, for the reason that legal solutions such as tribunals and international courts are not frequently used and are not an effective way to ensure compliance within multilateral treaties. At the same time, from a purely theoretical perspective it could be argued that specific compliance mechanisms take away cases of non-compliance from the legal authority of international courts and tribunals.

Parties are unwilling to challenge non-compliant States and the compliance mechanisms try to circumvent this unwillingness by providing alternative non-confrontational means to persuade Parties into compliance; this is occurring through technical and financial assistance, reporting requirements, advice, technology transfers and capacity building. "All parties need assurance that their efforts will be supported by appropriate, sustained efforts from all other parties. A well-designed compliance system can provide such assurance by enhancing trust and confidence that each Party is doing its fair share to achieve the agreement's objectives".[319]

It is not for granted that when signing and ratifying a MEA, a non-compliance mechanism and a dispute settlement mechanism should be included as well. Most MEAs explicitly provide that procedures under compliance mechanisms are without prejudice to dispute settlement procedures. In MEAs, where classic reciprocity is lower, the effectiveness of compliance mechanisms is higher than that of classic dispute resolution. Similarly, dispute settlement is more commonly used in situations where reciprocity is high, such as in trade relations.

Compliance mechanisms are therefore to be considered as a form of dispute prevention rather than dispute settlement. Dispute settlement mechanisms exist primarily to deal with disputes between two (or more) countries about their obligations under specific international agreements. Some kind of tribunal or court is established to hear the case and reach conclusions, though there is usually a preliminary phase where the parties in dispute

[318] See Brack Duncan, International Environmental Disputes. International Forums For Noncompliance and Dispute Settlement in Environment-related Cases (London, Royal Institute of International Affairs, 2001) <www.riia.org/Research/eep/eep.html> [last accessed 25 November 2018].
[319] Key Concepts, Procedures and Mechanisms of Legally Binding Multilateral Agreements That May Be Relevant to Furthering Compliance under the Future Mercury Instrument, UNEP(DTIE)/Hg/INC.1/1 (15 March 2010), p. 7.

are encouraged to reach an amicable settlement. Dispute settlement mechanisms are clearly most appropriate where the breach of an agreement causes measurable harm to a country (e.g. loss of market access in a trade agreement) and where the case revolves around the interpretation of general rules and principles (e.g. the WTO agreements).

Non-compliance systems exist where a party's failure to comply with the obligations, set out in the Agreement, damages the integrity and success of the regime itself, rather than causing direct and measurable harm to any single country. They work best where an agreement deals with global environmental issues (e.g. atmospheric pollution) and their provisions are highly specific (e.g. the Montreal Protocol). To simplify, dispute settlement mechanisms tend to be bilateral (or plurilateral) whereas non-compliance systems are multilateral.

Compliance mechanisms fulfill similar functions as, but are clearly distinct from, traditional dispute settlement. Like traditional dispute settlement, compliance mechanisms address implementation problems. However, they are multilateral rather than bilateral in character and thus better suited to the structure of global environmental problems. Here, the effects of non-compliance and implementation deficits are usually dispersed, providing insufficient incentives for states to trigger bilateral dispute settlement.[320]

2. The judicial solution of the Dispute Settlement Mechanism under the Paris Agreement

International disputes in the climate context may arise under the climate treaty regime and involve an interpretation or application of the relevant agreements, namely the UNFCCC or the Paris Agreement. The final clauses of the Paris Agreement contain articles on dispute settlement, as Article 24[321] provides, and it is the same as for the UNFCCC itself. By applying Article 14 of the Convention to the settlement of disputes concerning the interpretation or application of the Paris Agreement, the parties have the alternative solution of settling the disputes through peaceful procedures.[322] Art. 14 of UNFCCC provides for a

[320] Bodansky Daniel, The Art and Craft of International Environmental Law, Cambridge, 2010, pp. 245–250.
[321] Paris Agreement, *supra* note 13, Art. 24: The provisions of Article 14 of the Convention on settlement of disputes shall apply mutatis mutandis to this Agreement.
[322] This proposal recognized that, with regard to international environmental treaties, traditional dispute-settlement procedures are rarely, if ever, invoked by parties. In the climate change context, given the global nature of greenhouse gas emissions and the difficulty of pointing the responsible at one particular party, the

"hierarchy of procedures"[323] designed to respond to bilateral disputes or disputes between several parties.

The UNFCCC's provisions reflect those of many other international environmental agreements. Negotiation as a first step in dispute settlement is an almost universal element in international treaties. Such negotiations do not have to be disclosed, and thus it is not known to what extent climate-related disputes have been resolved through negotiation. However, Parties have not yet used the Convention's dispute settlement procedure. As a consequence, the Parties to the UNFCCC have yet to develop procedures for arbitration. As a result, any dispute outside of the compliance mechanism would take place before the ICJ, provided that each Party in the dispute has consented to the jurisdiction of the ICJ.

However, the countries which have entered reservations to their acceptances, they mainly agree to settle the disputes by other means of peaceful settlement.[324] While the system envisioned in Article 14 would seem to constitute other means of peaceful settlement, the fact that no party has opted into Article 14 ICJ jurisdiction, and that neither the procedures for arbitration nor conciliation called for by Article 14 have ever been adopted by the parties, could be interpreted to mean there is, in fact, no final or implementable agreement providing for another means of peaceful settlement under the parties' reservations.

For the reason that the ICJ does not have compulsory jurisdiction to hear disputes, nations must provide their consent to the ICJ's jurisdiction for climate change disputes through their ratification documents to the UNFCCC. States are very unwilling to accept a mandatory jurisdiction, and only the Netherlands has used this for both the ICJ and arbitration. The same has been done by the Solomon Islands with arbitration. Because of the requirement of reciprocity, only a dispute between the Netherlands and the Solomon Islands could lead to a settlement under Article 14 of UNFCCC, taking the form of

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Working Group considered that a non-adversarial and non-confrontational approach was warranted. Many negotiators reasoned that dispute avoidance was preferable to dispute settlement in a climate change regime, particularly since incidents of noncompliance by one or moreparties have an effect on all parties to the convention. See generally Butler Jo Elizabeth, *The Establishment of a Dispute Resolution/Noncompliance Mechanism in the Climate Change Convention*, 91 Am. Soc'y Int'l L. Proc. 1997, p. 251.

[323] See Jacob Werksman, Designing a Compliance System For the Climate Change Convention, Oct. 27, 1995 (Foundation for Intemational Environmental Law and Development working paper, SOAS, University of London, UK).

[324] Strauss, *supra* note *167.*

arbitration.[325] Of course the Parties to a dispute can still agree to bring the matter before the ICJ or an arbitration tribunal after the dispute has arisen and only for this dispute. But this remains exceptional, in the case of a multilateral dispute, even if international law permits it.[326]

The second type of dispute which can be brought by either Parties or non-Parties to the Convention that raise claims derives from customary international law. The most widely discussed example of such a claim is one brought by a low-lying island State threatened by the sea level rise due to climate change that seeks compensation or other remedies for harms caused by the major emitters of greenhouse gases.

B. The existing judicial international Dispute Settlement Bodies - Precedents

1. Revising environmental disputes under the existing international law regime - Case law

Dispute settlement is a wide-ranging term in international law. It is only recently that governments and people have come to recognize the significance of international environmental problems, and to view them as appropriate subjects of international concern. An international environmental dispute has been defined by Cooper as a dispute that exists whenever there is conflict of interest between more states or persons concerning the alteration and condition of the physical environment. Even though states have developed amicable and alternative ways for dispute avoidance, nevertheless, they agreed also that some environmental issues need to be handled through a multilateral rather than bilateral basis.

Additionally, despite the fact that the number of international courts and tribunals has increased dramatically the last decades, each court and tribunal is responsible not only

[325] The Solomon Islands has made a declaration recognizing as compulsory arbitration in accordance with the annex to be adopted.

[326] See the ILC Articles on State Responsibility, 2001 (art. 48), and the commentaries of the ILC (Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, 2001, at 126). See also the 2011 advisory opinion of the Seabed Disputes Chamber of the ITLOS which elaborates on the work of the ILC stating that "Each State Party may also be entitled to claim compensation in light of the erga omnes character of the obligations relating to preservation of the environment of the high seas and in the Area" (about the Montego Bay Convention). ITLOS, Advisory
Opinion of February 1 2011, Case N°17, Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, Para. 180, available on the Internet at: <http://www.itlos.org/index.php?id=109&L=1%25252f> [last accessed 17 November 2018].

for particular cases or in response to specific issues, since, these bodies may still have occasion to examine questions of international environmental law. While the potential role for courts and tribunals is therefore quite significant when it comes to the interpretation, development and application of international environmental law, the reality of current practice is that courts or tribunals have exercised reticence or caution when dealing with these principles. The number of disputes before international courts and tribunals that involve environmental concerns is growing, whether they arise from domestic law, environmental treaties or economic treaties.

There have been several environmental disputes. We will attempt to examine just few historic disputes. When reviewing a few of these disputes in chronological order, it is of great significance that the first case with regard to the environmental issues, examined by an international court, the case concerning factory at the *Case Concerning Factory at Chorzow*, where the court expressed through principles of state responsibility or liability the breach of general environmental obligations, under the no-harm rule, including the duty to take preventive measures. The *Trail Smelter* case was the first arbitral dispute, and the most frequently cited case law to date, Canada was held responsible for damages caused by air pollution produced by a smelter located on its territory. The court also held that states have an obligation to prevent cross-border pollution.

The *Corfu Channel* ruling included a significant reference to the no-harm rule; it was not in fact an environmental law case, but it was interpreted as formulating the prohibition of transboundary harm. The court held that "every state's obligation not to allow knowingly its territory to be used for facts contrary to the rights of other states" appeared to link this statement to the international environmental law. In the *Lac Lanoux* case the tribunal held that France was required to communicate and negotiate with Spain in good faith about the use of a shared resource and it stopped short of according Spain supplementary rights to protect its own environment from France's activities. Additionally, environmental considerations were held in the *Nuclear Tests* case, in which the tribunal stated that the precautionary principle has invoked, in which New Zealand claimed that France was bound by customary international law to respect the precautionary principle, but the court did not rule upon this principle.

In the *Advisory Opinion on the Legality of Nuclear Weapons*, the obligation that States have is "the responsibility to ensure that activities within their jurisdiction or control

do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction". States have the international obligation to prevent transboundary harm; otherwise they trigger their state responsibility.[327]

In the *Gabcikovo – Nagymaros* project case the ICJ held that Hungary should provide evidence of potential environmental damage and regarding its failure, was still bound by the treaty between Slovakia and Hungary. Also, the court held that States have to take all the proper measures to prevent an emergency from occurring.[328]

The precautionary principle has been evoked in the *MOX plant* case as well, in which the court underlined the duty to cooperate as a fundamental principle in the prevention of pollution of the marine environment under UNCLOS and general international law. The ITLOS ordered the parties to consult in order to 'devise, as appropriate, measures to prevent pollution of the marine environment which might result from the operation of the MOX plant'[329]

In the *Pulp Mills* case the court took the view that any alleged violation of international environmental norms by Uruguay could be remedied at the merits stage,[330] and that the evidence did not otherwise sufficiently demonstrate that there was a present threat of irreparable economic and social damage.[331]

The Inter American Court of Human Rights published an *Advisory Opinion*[332] *on the Environment and Human Rights*,[333] ruling that states must take measures to prevent significant environmental harm to individuals inside—and outside—their territory. In other words, if pollution can travel across the border, so can legal responsibility. The Court (a) recognized for the first time the existence of a fundamental right to a healthy environment under the American Convention; (b) articulated a new test to determine the Convention's extraterritorial application in cases involving environmental harm; and (c) clarified the

[327] Para. 29.
[328] Para 7.
[329] Para 37.
[330] Paras 70-1
[331] Paras 73-5
[332] The Environment and Human Rights (State Obligations in Relation to the Environment in the Context of the Protection and Guarantee of the Rights to Life and to Personal Integrity – Interpretation and Scope of Articles 4(1) and 5(1) of the American Convention on Human Rights), Advisory Opinion OC-23/18, InterAm. Ct. H.R., (ser. A) No. 23 (Nov. 15, 2017), available at <http://www.corteidh.or.cr/docs/opiniones/seriea_23_esp.pdf>(in Spanish) [last accessed 26 November 2018].
[333] Request for Advisory Opinion OC-23, Inter-Am. Ct. H.R. (Mar. 14, 2016), available at <http://www.corteidh.or.cr/solicitudoc/solicitud_14_03_16_ing.pdf > [last accessed 26 November 2018].

content of the duty to prevent transboundary environmental harm as a matter of human rights law.

The Court in the *Whaling in the Antarctic* case held that Japan violated three provisions of the ICRW by conducting large-scale whaling under the second phase of the Japanese Whale Research Program. In the *Costa Rica v. Nicaragua* case the Court found that the construction of the road by Costa Rica carried a risk of significant transboundary harm and, therefore, it found that Costa Rica had not complied with its obligation under general international law to carry out an environmental impact assessment (EIA). The most recent environmental case was the *South Sea China* case.[334]

Concluding, it should be mentioned that States have implemented the most useful and effective dispute settlement mechanism within the international environmental law disputes to date. This has be done by applying general principles and soft law standards, as well as procedural obligations, in accordance with dispute avoidance and dispute management methods.[335]

2. Revising climate change disputes under the existing international law regime– Case law

Not many climate change disputes have been heard before the international courts and tribunals so far. Much of the climate change litigation to date has ensued on a national level.[336] Cases have been brought in the United States based on the Clean Air Act,[337] public nuisance doctrine[338] and, more recently, the public trust doctrine;[339] in Canada for alleged violations of the UNFCCC and the Kyoto Protocol;[340] in Pakistan based on principles of

[334] In the Matter of the South China Sea Arbitration (Phil. v. China), PCA Case No. 2013- 19, Award (Perm. Ct. Arb. 2016), <https://pca-cpa.org/wp-content/uploads/sites/175/2016/07/PHCN-20160712-Award.pdf.> [last accessed 28 November 2018].
[335] Klein Natalie, Settlement of international environmental law disputes, pp.379-400, in Fitzmaurice Malgosia, Ong David and Merkouris Panos (eds.), Research Handbook on International Environemntal Law, Edward Elgar, 2010.
[336] See Generally United Nations Environment Program, The Status Of Climate Change Litigation: A Global Review (2017). A compendium of cases related to climate change is maintained by the NGO, Climate Justice. The Climate Law Database, climate justice Program, <http://www.climatelaw.org/> [last accessed 26 November 2018].
[337] E.g., Massachusetts v. EPA, 549 U.S. 497 (2007).
[338] See, e.g., Am. Elec. Power Co. v. Connecticut, 564 U.S. 410 (2011); Native Vill. Of Kivalina v. ExxonMobil Corp., 696 F.3d 849 (9th Cir. 2012).
[339] E.g., Juliana v. United States, No. 6:15-cv-1517-TC, 2016 WL 183903 (D. Or. Jan. 14, 2016).
[340] E.g., Friends of the Earth v. Canada, [2008] F.C. 1183 (Can. Fed. Ct.).

sustainable development, precaution, and inter-generational equity;[341] in Nigeria on the basis of human rights law;[342] and in Australia and New Zealand,[343] among others, based on. While we will examine the international case law before specific fora with respect to climate change, in the next chapters, it should be mentioned that the case law related to climate change, for cases that were initiated with a view to enforcing climate-protective rules in order to control state compliance. These cases have been initiated by Non-Governmental Organizations (NGOs).

Regarding the first case that was brought before the UNESCO World Heritage Committee this was not a dispute and the Committee tried to control state compliance with the climate rules; NGOs and private persons filed three petitions [344] requesting from the Committee to inscribe several heritage sites on the List of World Heritage in Danger. These sites were the world heritage sites Blue Mountains in Australia, the Great Barrier Reef in Australia, the Barrier Reef n Belize, the Sagarmatha National park in Nepal, the Huascaran National Park in Peru, and the Waterton-Glacier Peace Park. These sites were threatened by climate change. NGOs and the private persons requested for measures to be taken and from the governments to reduce the greenhouse gas emissions. In particular, the petitions asserted that climate change would lead to, inter alia, the rising of sea temperatures; coral bleaching; and the melting of ice caps and flood disasters respectively. The petitions proposed a program of corrective measures to repair the damage done by the effects of climate change.

Despite the numerous sites in danger,[345] the Committee did not include them as being in Danger. Nevertheless, it suggested for states, private companies and entities to develop strategies, to take measures and action in implementing appropriate response measures in managing the effects of climate change, by saying that "all states should consider the climate change impacts by taking early action''. The Committee asked from

[341] E.g., Leghari v Fed'n of Pakistan, W.P. No. 25501/2015 (Lahore High Ct.) (Sept. 4, 2015) (Pak.)
[342] E.g., Gbemre v. Shell Petroleum Dev. Co. Nigeria [2005] AFR. HUM. RTS. L. REP. 151 (F.H.C. Nigeria).
[343] E.g., Greenpeace New Zealand v. Northland Reg'l Council [2006] NZHC CIV 2006-404-004617 at [57] per Williams J. (N.Z.); Genesis Power Ltd. v. Franklin Dist. Council [2005] NZRMA 541 (N.Z.).
[344] The petitions are available at <http://www.climatelaw.org/media/UNESCO.petitions.release> [last accessed 26 November 2018].
[345] For a detailed documentation of such cases, see <http://www.climatelaw.org/cases/topic/unesco> [last accessed 25 November 2018]. See also Colette Augustin, Case studies on climate change and World Heritage, UNESCO World Heritage Centre, available at: <http://whc.unesco.org/document/106621> [last accessed 25 November 2018].

states to prepare a report[346] which would describe adaptation and mitigation measures,[347] without going any further or interpreting the claim of GHG reduction emissions that the parties requested. This claim would be heard before an international court or tribunal, but the parties did not bring it before a dispute settlement body, so the Committee could not interpret and develop the climate change law under the Art. 2 of UNFCCC.

Another try to hear a claim before its body was the OECD Guidelines,[348] a control mechanism which has established the National Contact Points (NCPs) from the national government offices from Germany. The first claim before OECD Guidelines was brought by the NGO Germanwatch against Volkswagen. The Germanwatch stated that the Volkswagen products do not comply with OECD Guidelines' climate change obligations and they damage the climate system.

A second claim by Greenpeace Germany as claimant was heard against Vattenfall, in which Greenpeace stated that Wattenfall alleged the high level of greenhouse gas emissions from its coal-fire power plant in Hamburg, which does not comply with IECD Guidelines as well.[349]

In both cases, the German NCP Guidelines did not accept the claims for the reason that none of the companies breached the national or international law. The NCP Guidelines held that it can deal with cases and issues irrelevant to environmental departments, in order to protect the global climate, which means that the practice of NCPs is still in a good position and varies greatly.

Another climate change case was the *Naftrac v. Ukraine*[350]. Naftrac was an investment company from Cyprus, containing the investor f a Joint Implementation Project under the Kyoto Protocol and claimed compensation under the Collateral Custody Agreement and GHG emission reduction. Both parties violated specific provisions of the Agreement. The arbitral tribunal dismissed the claim for compensation and accepted the claim for reduction of GHG emissions.

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[346] World Heritage Commission, Decision 29COM 7B.a, Threats to World Heritage Properties, paras 5, 6, 7, and 9, available at: <http://whc.unesco.org/en.decisions/351/> [last accessed 25 November 2018].

[347] Strategy and report are available at: <http://whc.unesco.org/en/climatechange/> [last accessed 25 November 2018].

[348] See Germanwatch v. Volkswagen, Statement of NCP Germany of 20 November 2007.

[349] See Greenpeace Germany v. Vattenfall, Statement of NCP Germany of 15 March2010. Compliant of 29 October 2009, pp. 5-9.

[350] Naftrac Limited (Cyprus) v. State Environmental Investment Agency of Ukraine, award of 4 December 2012 according to a publication of the Ukrainian Bar Association for foreign Affairs, available at: <http://ukrinur.com/publications/?year=2013> [last accessed 3 December 2018].

As mentioned above, the ILC has already provided a set of principles with respect to climate law. According to the ILC mandate, the outcome of the work on the topic "will be draft guidelines that do not seek to impose on current treaty regimes legal rules or legal principles not already contained therein".[351]

3. Need for an Environmental forum? Potentials for future International Dispute Settlement

International environmental disputes started making their appearance these past years before international courts and tribunals. While courts and tribunals could have a valuable role to play in interpreting and applying international environmental law, this role has not usually been pursued with any vigor. Beyond these rules and institutions, there is no established international court or tribunal with competence over international environmental issues, despite the fact that human activity causes transboundary and environmental harm and contributes to global climate change.

Even though an international court for environmental disputes has not been established, there are domestic environmental courts in several countries, namely in New Zealand, which constituted in 1991; Kenya operated the National Environmental Tribunal, which was appointed effective in 2002; Sweden has an environmental supreme court; Austria contains specialists Planning Appeal Tribunal; and Kenya provides for an Environmental Appeal Tribunal.[352]

Regarding the already mentioned precedent about environmental disputes, what should be addressed first is, whether or not the existing international institutions could settle environmental disputes and second, whether there should or not be established a new specialized adjudicative body for the environment that would be part of the global dispute settlement system. With regards to the first question, we should define the term of international environmental dispute, but there is no clear answer when approaching this term. Moreover, the environmental law is not a self-contained system, which means that its treaty provisions are frequently vague, that makes it more difficult when choosing the most

[351] Lit. (d) of mandate, available at: <http://legal.un.org/ilc/summaries/8_8.htm>, [last accessed 4 December 2018].
[352] UNEP, Application of environmental law by national courts and tribunals, resolving environmental disputes, available at < https://wedocs.unep.org/bitstream/handle/20.500.11822/20278/Resolving-Environmental-Disputes.pdf?sequence=1&isAllowed=y> [last accessed 26 November 2018].

applicable law for the dispute arisen between States, and this would lead to forum shopping or fragmentation of the international law.[353]

On the other hand, urgently important would seem to be the design of a new, specialized environmental court or tribunal. Even though such progress would lead to a more centralized system regarding environmental disputes; containing experts and scientists as critical assistance in settling the disputes, striving to clarify the legal obligations and harmonize the international law; nevertheless, a new specialized environmental court or tribunal could also have negative impact, as which applicable law to choose from, what is the scope of the jurisdiction, and whether or not a threshold test should exist, to ensure that only the most critical cases would arise before its jurisdiction.

It is unlikely that an environmental dispute settlement body would be the mere solution for that kind of disputes. On the contrary, contemplating better models for resolving international environmental disputes can provide solutions to modernize the existing dispute settlement regime.[354]

3.1 The eventuality of a climate change dispute before the ICJ

The jurisdiction of ICJ includes contentious and advisory opinions. It is the only international forum with a general subject-matter jurisdiction.[355] There is a variety of disputes that could arise regarding the climate change. This could be done under the implementation and application of the UNFCCC provisions or under the implementation and application of the Paris Agreement. Under the existing dispute settlement provisions applicable in the UNFCCC and the Paris Agreement, such disputes might conceivably be raised before the International Court of Justice (ICJ), or in arbitration or conciliation proceedings. Other dispute settlement mechanisms and bodies may also be called upon to decide climate related disputes, including, for example, courts and tribunals established or utilized under other specialist regimes, such as the UN Convention on the Law of the Sea, which will be discussed below in part B.3.2.

[353] Bruce Stuart, *An International Court for the Environment?*, 2016, Climate2020, available at: < https://www.climate2020.org.uk/international-court-environment/> [last accessed 26 November 2018].
[354] Bruce Stuart, The Project of a World Environment Court, in Christian Tomuschat (ed.), *The OSCE Court of Conciliation and Arbitration*,Brill, 2016.
[355] Art. 36.1 and 38 ICJ Statute.

During the last years, ICJ has ruled on few cases regarding the international environmental law. However, it did not have many cases regarding climate change law, and the option of tasking the ICJ with an advisory opinion on a climate change matter has been considered just few times. Recently, the government of Palau, proposed specific questions in the General Assembly in 2011;[356] "what are the obligations of States under international law in relation to preventing the causes of climate change, minimizing its adverse effects and providing compensation for climate change damages?" Although it seems that this initiative has been abandoned, nevertheless, there has been a broader discussion of the role of ICJ with respect to climate change from Yale Centre for Environmental Law and Policy.[357] Additionally, the idea of seeking an I.C.J. advisory opinion on climate change has renewed by a resolution adopted at the International Union for Conservation of Nature (IUCN) 2016 World Conservation Congress in Hawaii.[358]

The international climate negotiations have finally shown significant progress with the early entry into force of the Paris Agreement and the Montreal Protocol and ICAO decisions to address HFCs and aviation emissions, respectively. Given this momentum, international climate litigation seemed to have a greater potential to cause mischief than to do good, by distracting from and even interfering with the negotiations.

The ICJ can only deal with a dispute when the States involved have recognized its jurisdiction. However, only few States have accepted its compulsory jurisdiction.[359] With this regard, we assume that ICJ could deal with climate change cases regarding mitigation, adaptation and reparation for any injuries due to anthropogenic climate change, for example on the basis of State responsibility rules. Furthermore, the ICJ could contribute to how States further establish treaty provisions and coordinate State practice to formulate customary international law. As discussed above, it could settle disputes on the basis of the no-harm rule.[360],[361] Given that there is a numerous of cases dealing with territorial conflicts

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[356] Available at: <http://www.un.org/apps/news/story.asp?NewsID=39710&Cr=pacific+island&Cr1=#.UVngfjetZ70> [last accessed 3 December 2018]. See also the comment by the Climate Justice Program: <http://theconversation.com/see-you-in-court-the-rising-tide-of-international-climate-litigation-3452> [last accessed 3 December 2018].

[357] Yale Center for Environmental Law and Policy, Climate Change and the International Court of Justice, <http://environment.yale.edu/courses/detail/823/> [last accessed 3December 2018].

[358] Int'l Union for Conservation of Nature [IUCN], Request for an Advisory Opinion of the International Court of Justice on the Principles of Sustainable Development in View of the Needs of Future Generations, WCC-2016-Res-079-EN (Sept. 10, 2016).

[359] See also the list of States, available at: <http://www.icj-cij.org/> [last accessed 3 December 2018].

[360] See the Territorial Jurisdiction of the International Commission of the River Oder (Czechoslovakia, Denmark, France, Germany; Great Britain, Sweden v. Poland) [1929] PCIJ (ser. A) no 23, 5.

before the ICJ, it is more possible considering the projections of loss of land, under future climate change scenarios.

We should have a look on environmental cases before the ICJ, in order to understand how would be the process in terms of assessing opportunities of such an approach. This is due to the applied principles and norms that could be applied in climate change disputes as well.

In the *Territorial Jurisdiction of the International Commission of the River Oder* for example, the court held that rivers contain a 'community of interest' and this rule could be used in accordance to the atmosphere as well, by saying that it is a common and shared resource, and as other shared resources, the atmosphere has a user limit,[362] which is legally and universally determined by Art.2 UNFCCC. In the *Barcelona Traction* case, the court held that the no-harm rule is a principle or *erga omnes* obligations.[363] The protection of the global climate system is in the interest of the international community. It could be well argued that limiting GHGs in the atmosphere is an *erga omnes* obligation, also given the universal acceptance of the UNFCCC.

The procedure and the decision of the ICJ are transparent. Hearings are generally public[364] and since 2009 also webcasted. Further strengths of the ICJ with a view to a future climate case are its option to seek expert advice and wide range of applicable remedies. The main constraints for climate change litigation before the ICJ are the vague provisions, given that only States can be parties in contentious proceedings,[365] and the limited willingness of States to accept the ICJ's jurisdiction on bringing cases before its Statute.

3. 1. 1 Contentious case or an Advisory Opinion?

A climate change dispute could potentially apply before the ICJ. The International Court of Justice has jurisdiction in two types of cases: contentious cases between states in which the court produces binding rulings between states that agree, or have previously agreed, to submit to the ruling of the court; and advisory opinions, which provide reasoned,

[361] See Verheyen Roda, Climate Change Damages in International Law, Brill, 2005, p. 225.
[362] See German Advisory Council on Global Change, Solving the climate dilemma: The budget approach, Special Report 2009, Berlin 2009, available at: <http://www.wbgu.de> [last accessed 3 December 2018].
[363] Barcelona Traction, Light and Power Company, Limited (Belgium v. Spain), Judgment, ICJ Reports 1970, p. 32.
[364] Art. 46 ICJ Statute.
[365] Art. 34.1 ICJ Statute.

but non-binding, rulings on properly submitted questions of international law, usually at the request of the United Nations General Assembly, the Security Council, or other organs of the United Nations and specialized agencies.[366] Advisory opinions do not have to concern particular controversies between states, though they often do.[367]

The ICJ is the only judicial forum for States to resolve any question or dispute concerning international law. All States have to accept compulsory jurisdiction of the ICJ and they have the ability to request Advisory Opinions from it. The request for an Advisory Opinion must be made in compliance with Article 96 of the U.N. Charter, which provides that "[t]he General Assembly or the Security Council may request the [ICJ] to give an Advisory Opinion on any legal question."[368] A question is legal if "it is by its nature susceptible of a reply based on law."[369]

The advantage of the advisory approach is its simplicity and ability to articulate a "clear legal standard applicable to all states."[370] Even though an Advisory Opinion is non-binding, it can establish a new baseline of common understanding for climate change negotiations and is preferable for several reasons. Seeking an Advisory Opinion from the ICJ will strengthen climate change negotiations and accelerate a process that is moving far too slowly to effectively address climate change. Moreover, an advisory opinion would have a more general affect to parties, while a contentious case and the resulting judgment bind only the parties to the dispute. Moreover, in an advisory opinion, all States would state their opinion, in contrast to the contentious cases, where only States binding to the dispute can intervene.

An advisory opinion on the general rules of international law relating to climate change would not require the Court to make specific determinations of standing or causation, and would avoid the problem of leakage.[371] the ICJ that it give an advisory

[366] For example Food and Agriculture Organization or World Health Organization. Note that there is no UN agency explicitly tasked with environmental protection.
[367] Jurisdiction of the International Court of Justice., Available at: <https://en.wikipedia.org/wiki/Jurisdiction_of_the_International_Court_of_Justice> [last accessed 2 December 2018].
[368] Timo Koivurova, *International Legal Avenues to Address the Plight of Victims of Climate Change: Problems and Prospects*, 22 J. ENVTL. L. & LITIG.267, 276, 2007.
[369] Mohamed Sameh M. Amr, The Advisory Role Of The International Court Of Justice, In The Role Of The International Court Of Justice As The Principal Judicial Organ Of The United Nations, 87, 2003.
[370] Andrew Strauss, Climate Change Litigation: Opening the Door to the International Court of Justice, in *Adjudicating Climate Change: State, National, And International Approaches 350* (William C.G. Burns and Hari M. Osofsky,(eds.), 2009.
[371] Daniel Bodansky, *The Role of the International Court of Justice in Addressing Climate Change: Some Preliminary Reflections*, 49 Ariz. St. L.J. 689 2017.

opinion on the future obligations of states and other actors—by convention and general international law—in relation to climate change. Such an opinion would need to focus not only on the prevention of further adverse effects, but also on the mitigation of those effects, and in particular the issue of burden sharing. Perhaps in the future, contentious cases concerning climate change might become appropriate. But, at present, they would provide little value-added and they are "less attractive".[372]

On the one hand, defendants would likely not comply, so contentious proceedings would not successfully resolve disputes between countries through legally binding judgments-their chief advantage over advisory opinions. On the other hand, contentious proceedings would likely be contentious. In contrast, an advisory opinion would allow the I.C.J. to clarify and elaborate the relevant norms and principles of general international law. Since the utility of an I.C.J. advisory opinion would depend on the issues it was asked to address, the request for an advisory opinion should be pursued by an international organization likely to formulate questions about which the I.C.J. could make a useful contribution. In this regard, the World Meteorological Organization might be a better choice than the U.N. General Assembly, since it is a more technical, less politicized forum, in which it might be easier to resist efforts to encumber the request with unhelpful baggage. Alternatively, to keep control of the issues presented to the I.C.J., two similarly-inclined states might agree to have the I.C.J. hear a "contentious" case between them.[373]

3.2 Filing a claim before the ITLOS – Implications under UNCLOS for the future dispute settlement process over climate change

There is a variety of noticeable issues that arise from the intersection between climate change and the international law of the sea. Climate change causes increase of the temperature, acidification of ocean and sea-level rise; the latter is also expected to change the existing boundaries of maritime zones, with several consequences to economic, social and political life as well. The International Tribunal of the Law Of the Sea (hereinafter referred to as ITLOS) might address a more limited issue, yet arising under the rubric of general international law: what is the responsibility of an United National Convention on

[372] Sands Philippe, Climate Change and the Rule of Law: Adjudicating the Future in International Law, Journal of Environmental Law, 2016, 28, pp. 19–35.
[373] Daniel Bodansky, The Role of the International Court of Justice in Addressing Climate Change: Some Preliminary Reflections, 49 Ariz. St. L.J. 689 2017.

the Law of the Sea (hereinafter referred to as UNCLOS) party to prevent sea-level rise? Or its responsibility to take certain measures to mitigate against the consequences of climate change? Again, one could envisage a contentious case, or an advisory case. A principal question would be whether the UNCLOS provisions can apply in climate change disputes and whether it can provide legal avenues to motivate States to take effective mitigation measures in order to protect and preserve the marine environment. Is a mechanism under UNCLOS that could settle climate change disputes when States do not take the appropriate measures for protecting the environment and for the States' failure mitigating to climate change?

The UN Convention on the Law of the Sea[374] establishes a general obligation to protect the marine environment, as well as more specific obligations pertaining to pollution, and these obligations may carry potential implications for the emission of greenhouse gases to the atmosphere. With regard to the general obligation set out in UNCLOS, "States have the obligation to protect and preserve the marine environment",[375] as a legal basis for disputes regarding climate change, despite the UNCLOS, it could be applied customary law of the provision of no-harm and also the United Nations Fish Stocks Agreement (UNFSA).[376] Regarding to the customary applied law, the Chamber held that the obligation to conduct an environmental impact assessment (EIA) constitutes a general obligation under customary law.[377]

Additionally, the provisions of UNCLOS, particularly under Part XII, are sufficiently broad to allow for a State to claim that a failure by another State to mitigate on climate change violates its obligations to preserve and protect the marine environment.[378] Given that the general obligation of States refers to climate change mitigation measures, there is a challenge that occurs in establishing the link of causation, namely the claimant's ability to establish the link between the failure of a particular state to reduce GHG emissions on the one hand, and the impacts of climate change to the marine environment on the other hand.

[374] United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S.
[375] UNCLOS, Art. 192.
[376] United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.
[377] Case No. 17, Advisory Opinion of February 2011, at 145.
[378] UNCLOS, Art. 194.

Under the examination of climate change disputes with regard to part XV we have to consider two basic subjects. First, what will the jurisdiction be and, second, what will the substantive claims be with comparatively strong rules on use and protection of marine resources.[379] In other words, regarding the first issue, ITLOS has jurisdiction regarding disputes arising from the application and interpretation of UNCLOS and its subsequent agreements.[380] Art. 288 establishes broad jurisdiction for dispute settlement. A central question is whether part XV of UNCLOS establishes compulsory jurisdiction with respect to claims belonging to climate change and the law of the sea and on substantive claims, the relevant questions relate to the causes of action and theories that could be enunciated in relation to climate change and the law of the sea.

The question of jurisdiction is the most important question regarding a claim before the UNCLOS tribunals,[381] as well as substantive issues related to such a claim. On the issue of jurisdiction to obtain a tribunal ruling under UNCLOS, the most important decisions have been the rulings related to the dispute involving Australia, Japan, and New Zealand over *Southern Bluefin Tuna*,[382] in which the Arbitral Tribunal replaced the binding dispute settlement procedures under UNCLOS with a non-binding process under CSBT Convention, one that can be permanently stalled by one party's refusal to agree on a process for resolving the dispute. Art. 281.1 of part XV of UNCLOS provides that parties may apply the dispute settlement mechanisms under UNCLOS, only if they have not reached other mechanisms for settling their disputes.[383] This provision sets the question whether a dispute is law-of-the-sea dispute or climate-change-dispute, or both.

A defendant would argue that a climate change dispute hardly falls under UNCLOS, and that it refers to UNFCCC, which establishes a different dispute settlement mechanism that does not apply to the settlement procedures under part XV of UNCLOS.[384] This presentation of argument is similar to Japan's position in the *Southern Bluefin Tuna*

[379] Orellana Marcos, Mapping the legal issues, in Randall S. Abate(ed.), *Climate Change Impacts on Ocean and Coastal Law: U.S. and International Perspectives*, 2015, Oxford Scholarship Online, available at < https://global.oup.com/academic/product/climate-change-impacts-on-ocean-and-coastal-law-9780199368747?cc=gr&lang=en&>,[last accesses 26 November 2018].
[380] UNCLOS, Art. 288.1. See also Art. 21 and 22 of the ITLOS Statute.
[381] The UNCLOS tribunals could be ICJ, ITLOS, and arbitral tribunal. See Art. 287 UNCLOS. Articles 279-299 UNCLOS regulate the settlement of disputes. Articles 286-286 refer to compulsory jurisdiction with binding decisions. For advisory opinions see Art. 138.1 ITLOS Rules.
[382] International Tribunal for the Law of the Sea, Southern Bluefin Tuna Cases (New Zealand v. Japan; Australia v. Japan), Request for Provisional Measures, reprinted in (1999) 38 I.L.M. 1624 and Arbitral Tribunal, Southern Bluefin Tuna Cases (New Zealand v. Japan; Australia v. Japan), Award on jurisdiction and Admissibility, reprinted in (2000), 39 I.L.M. 1359.
[383] UNCLOS, Art. 281.1
[384] United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 10.

arbitration conducted under Annex VII of part XV.[385] In that case, the Annex VII arbitral tribunal concluded that the disputing parties had agreed to seek settlement of the dispute under the terms of a regional fishery convention that rejected any further procedure which was not accepted by all disputing parties, and accordingly dismissed the claims regarding jurisdiction.[386]

Based on the existing jurisprudence of UNCLOS, a claimant would need to convince the court that the effects of climate change short-term – maybe as little as a couple of weeks - until the arbitral tribunal has been constituted would amount to serious or possibly irreparable damage or harm.[387]

On the contrary, the claimant would argue that the climate change dispute arises under UNCLOS, for the reason that its aim is the protection of the marine environment. The Southern Bluefin Tuna arbitration based on the subject matter of GHG emissions and marine pollution, could be distinguished from the interplay of the various instruments involved, and the global dimension of the environmental threat. It should be noted that jurisdiction is not rejected from UNFCCC in cases where there are violations of UNCLOS.

Additionally to this, the question of the context of Art. 21 of the Statute of ITLOS will be examined, which states that "the jurisdiction of the Tribunal comprises all disputes and all applications submitted to it in accordance with this Convention and all matters specifically provided for in any other agreement which confers jurisdiction on the Tribunal". According to Art. 138.1, "it may give an advisory opinion on a legal question if an international agreement related to the purpose of the Convention specifically provides for the submission to the Tribunal of a request for such an opinion".[388]

Furthermore, due to the open to the public proceedings and documents,[389],[390] ITLOS rules state that only intergovernmental organizations can submit *amici curiae* statements in proceedings before ITLOS. There has been an Advisory Opinion when Greenpeace and

[385] See, e.g., Marcos Orellana, The Law on Highly Migratory Fish Stocks: ITLOS Jurisprudence in Context, 34 GOLDEN GATE U. L. REV. 459, 463 (2004).
[386] Southern Bluefin Tuna (N.Z. v. Japan; Austl. v. Japan), Jurisdiction and Admissibility, Award of the Arbitral Tribunal, 39 I.L.M. 1359 (2000).
[387] ITLOS, MOX Plant Case (Ireland v. UK), Request for Provisional Measures, Order of 3 December 2001, para.81; Separate Opinions of Judge Anderson, Judge Mensah, and Judge Wolfrum
[388] Request for Advisory Opinion, Case No. 21, available at <http://www.itlos.org/fileadmin/itlos/documents/cases/case_no.21/Request_eng.pdf> [last accessed 28 November 2018].
[389] Art. 26.2 ITLOS Statute, Art. 74 ITLOS Rules.
[390] Art. 84.1 and 2 and 4. Art. 107,115, 133 ITLOS Rules.

WWF requested permission to participate in the advisory proceedings as *amici curiae*. Although the Seabed Disputes Chamber did not grant the request, the request submitted to the website.[391]

Consequently, the applicability of the dispute settlement mechanism established in UNCLOS could also eventually attract claims relating to climate change. The Tribunal has not decided on any issues relating to climate change. However, it has applied international environmental law; it has appeared to be willing to interpret law within its jurisdiction. One of the most memorable decisions before the Tribunal was an Advisory Opinion, which strengthened the environmental impact assessment requirement.[392]

3.3 Arbitration's role in combatting changing climate

3.3.1 Procedural avenues under WTO provisions; climate change claims and possible solutions

There has not been a case directly regarding climate change issues, although climate change seems to be as a related issue containing disputes for recycled materials[393] and renewable energy.[394] European Union might have launched an aviation emissions directive which might be the first WTO climate dispute.[395] The WTO dispute settlement system aims to preserve its Members' rights and obligations, although the WTO law does not contain any provision regarding measures for adaptation and mitigation to climate change. However, WTO members can raise climate change disputes before the Dispute Settlement Body, arguing for a violation under Art. XX of the GATT.[396] Even though the Appellate Body does not have jurisdiction to apply international law, however, the Appellate Body

[391] Case No. 17, Advisory opinion of 1st February 2011, paras 13 and 14.
[392] Case No. 17, Responsibilities and obligations of States sponsoring persons and entities with respect to Activities In The Area (Request For Advisory Opinion Submitted To The Seabed Disputes Chamber), Advisory Opinion of 1 February 2011, available at < https://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/17_adv_op_010211_en.pdf >[last accessed 28 November 2018].
[393] Brazil – Measures affecting Imports of retreaded types. WT/DS332/AB/R, adopted 17 December 2007.
[394] Canada – Certain measures affecting the renewable energy generation sector, WT/DS412/AB/R, adopted 24 May 2013.
[395] Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008.
[396] Marrakesh Agreement 1994, Annex 1A.

declared that "the General Agreement was not to be read in clinical isolation from public international law".[397]

The trade and climate debate is being developed also with trade disputes and their settlement through case law. Over time, exporting countries have challenged various environmental requirements by importing countries, on the grounds that they constitute protectionism, and that the importing country is exercising an unacceptable form of extraterritorial regulation in areas beyond its national jurisdiction.

It is submitted that climate change disputes could be resolved through the arbitral structures of the Permanent Court of Arbitration (PCA), and that the establishment of an international environmental tribunal should be welcomed. Of course, the ICJ should also play a role, but arbitration presents inherent advantages in dealing with climate change disputes. The WTO Dispute Settlement Body could apply treaties, customary law and principles, in order to interpret WTO provisions regarding environmental disputes.

The first dispute raised under the US fishing standards that contested in the *Shrimp/Turtle*[398] and the *Tuna/Dolphin*[399] cases regulated non-product-related PPMs, in which the Appellate Body referred to the environmental law such UNCLOS and the soft law such as Agenda 21, in order to interpret the terms of Art. XX of the GATT.[400],[401] Thus, the disputes touched on the key question of what features determine whether traded goods (tuna, shrimp) are "like" products if the process of their production differs with respect to environmental impacts (killing dolphins or turtles). Negative economic effects on the exporting countries were also part of the discussion, as PPMs can create financial and technological burdens for developing countries' producers.

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[397] United States – Standards for Reformulated and Conventional Gasoline, WT/DS2/AB/R, adopted 20 May 1996, at III.B. See also Marcaeu Gabrielle, A Call For Conherence In International Law-Praises For The Prohibition Against ''Clinical Isolation" In WTO Dispute Settlement, 33 J World Trade, 1999, p.87.

[398] WTO DS58 (1996): United States – Import Prohibition of Certain Shrimp and Shrimp Products, see https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds58_e.htm; WTO (1996): United States — Import Prohibition of Certain Shrimp and Shrimp Products, see https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds61_e.htm .

[399] GATT (1990): United States – Restrictions on Import of Tuna, see https://www.wto.org/gatt_docs/English/SULPDF/91530924.pdf ; WTO DS381 (2008): United States — Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products, see: https://www.wto.org/english/tratop_e/dispu_e/381r_e.pdf.

[400] United States – Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/AB/R, adopted 6 November 1998, paras 130, 131.

[401] See generally, Doelle Meinhard, *Climate Change and the WTO: Opportunities to Motivate State Action on Climate Change through the World Trade Organization*, RECIEL 13 (1) 2004. ISSN 0962 8797, pp. 85-103.

Even though there have been just few environmental cases before the Appellate Body of the WTO, some of the latest disputes have addressed cases relating to preventing climate change.[402] Climate-related disputes are still a small proportion of the total number of disputes initiated under the WTO's dispute settlement system, yet the latest cases can be linked to national climate policy targets. A growing tension can be observed between trade rules and national renewable energy laws and policies. In addition, anti-dumping measures have increased, involving allegations related to unfair subsidies, the use of LCRs, or the calculations of countervailing duties. Some of the recent disputes have involved feed-in tariff measures designed to incent the development of renewable energy, in order to reduce GHG emissions.

Moreover, trade regulation could potentially combat climate change and prevent corresponding human rights[403] deterioration.[404] The WTO seems to be willing to attempt to find a balance between trade and environmental issues on a case-by-case basis and has the power to mandate the direction of climate-related energy policy. Where a case involves large energy consumers, such as the US or China, a WTO decision can have significant global environmental effects. The WTO has become a significant forum to achieve some progress where international climate change negotiations have not.[405]

However, arbitration claims brought on the basis of the UNFCCC and the Paris Agreement would face several legal obstacles, also shared by cases brought before the ICJ. The first is States establishing a sufficient legal interest allowing them to bring a legal action (''standing''). In the absence of a *lex specialis bis* in terms of state responsibility, arbitral tribunals would likely look to the ILC Articles—often invoked in investment arbitration—and in particular, Article 42(b)(i). This article builds upon the ICJ decision in the *Barcelona Traction* case, which cemented the modern *erga omnes* conception of "communitarian norms".[406]

[402] Brazil – Measures supra note 387.
[403] Elborough Luke, *International Climate Change Litigation: Limitations and Possibilities for International Adjudication and Arbitration in Addressing the Challenge of Climate Change*, 21 N.Z. J. Envtl. L. 89.
[404] Philipp Aemi and others Climate Change and International Law: Exploring the Linkages between Human Rights, Environment, Trade and Investment, 2010, 53 GYTL 139, p. 159.
[405] Nilmini Silva-Send, *Climate Change Disputes at the World Trade Organization: National Energy Policies and International Trade Liability*, 4 San Diego J. Climate & Energy L. 195, 2012-2013.
[406] Crawford James, 'Responsibility for Breaches of Communitarian Norms: an Appraisal of Article 48 of the ILC Articles on Responsibility of States for Internationally Wrongful Acts' in Fastenrath, and others (eds), From Bilateralism to Community Interest (OUP 2011) 364.

A participation in the WTO with implementation of climate-energy policies becomes the basis for: (1) disputes that must be resolved by balancing global climate concerns and international trade law rights and duties; (2) resolution of disputes that signal the direction of national climate-related energy policies; (3) state liability through trade remedial measures; and (4) potentially longer-term state responsibility for climate damage. Given these thoughts, we consider WTO dispute settlement as a potential forum to address climate change cases which could contribute to the strengthening of international climate change law.

3.3.2 Investment claims related to climate change before the ICSID - Are IIAs and ICSID important to addressing climate change? - Case law

Climate change is recognized as one of the greatest challenges in history. The IPCC considers that investment has a key role to play in meeting the challenges presented by climate change. This may be correct, but on the other side, the international law on foreign investment contains approximately 3000 international investment agreements (IIAs) worldwide which have the potential to impede host states taking measures to mitigate or adapt to climate change. Thus, there is a need for effective measures to promote climate-friendly investment. IIAs are treaties for the protection and promotion of states' foreign investments. Their formulation could be through bilateral treaties (BITs), or multilateral or regional trade agreements[407] and they are considered to be important in addressing climate change.

As yet, no climate change dispute has arisen before any international court or tribunal. The only fora that dealt with cases, were the International Centre for the Settlement of Investment Disputes (ICSID) and the Permanent Court of Justice (PCA). The case that was raised before ICSID, was between Vattenfall, a Swedish energy corporation against Germany regarding the construction of a coal-fired plant,[408] under which Vattenfall claimed damages for an alleged breach of the Energy Charter Treaty, since Vattenfall was obliged to comply with the German water law. This case was not linked to climate change

[407] E.g. the Energy Charter Treaty (ECT), whose Parties primarily consist of eastern and western European states and many of the Newly Independent States formerly part of the Soviet Union., available at: <http://www.encharter.org/fileadmin/user_upload/document/EN.pdf>, [last accessed 28 November 2018].
[408] Vattenfall AB, Vattenfall Europe AG, Vattenfall Europe Generation AG v Federal Republic of Germany, ICSID Case No. ARB/09/6; award of March 2011, embodying the parties' settlement agreement.

issues, but to the climate policies. The case shows that climate protection aims can be arisen before ICSID. In this regard though it is argued by scholars and commentators that climate change disputes might not be heard before ICSID, because the tribunal would interpret national environmental laws, regarding the parties.[409]

On the contrary, it has been said that Investment arbitration is possible to considerably limit the instability that currently affects the implementation of climate change mitigation policies. By limiting regulatory risks — and thus risk premiums— or low-carbon investments, investment protection law can reduce the costs of the international GHG emission reduction efforts. The contribution of investment arbitration to the improved regulatory certainty of low-carbon investments will, however, depend on the certainty of the arbitral process itself. The ongoing negotiations on the conclusion of a post-2012 international agreement on climate change provide a unique opportunity to address investors' concerns and create a special investment regime for low-carbon investments.

The arbitration's role in combatting changing climate can, and should be, substantial. Several steps which would help the Agreement to bear fruit are already clear. In the investor–State context, States considering amending their BITs or adopting new model BITs will naturally seek to give effect to the Agreement but may be anxious about potential investor claims. Although specific wording is arguably not necessary on the basis of awards like Saluka, States should consider inserting wording in their IIAs that bona fide and public interest-based regulation adopted in pursuance of climate change goals shall not be considered a breach of IIA obligations, similar to certain provisions of the new Indian Model BIT

[409] Verheyen Roda and Zengerling Cathrin, International Dispute Settlement, p. 422, in Carlarne Cinnamon, Gray Kevin and Tarasofsky Richard (eds.), The Oxford Handbook of International Climate Change Law, Oxford, 2016, pp. 417-440.

CONCLUSIONS

This research work has attempted to answer the fundamental question; what are the obligations under international law for a State to ensure that activities within its jurisdiction or control that emit greenhouse gases do not cause, or substantially contribute to, serious damage to other States? From the high-level discussion in this thesis we can see that the law of state responsibility is a complex set of secondary rules which would be able to address damage caused by a State of its international obligations relating to climate change. A State's primary obligations may arise under international treaty or customary international law. The Paris Agreement sets-out many primary obligations for developed and developing States. Customary international law also obliges States to ensure they do not cause or allow trans-boundary harm to arise from within their territories. An important international obligation, which seems to have more potential in this context, is the No Harm-rule. As a rule of customary law, it has the advantage of being applicable to all States, but also the disadvantage of being quite vague. However, international law is ill equipped when confronted with a complex situation, such as compensation for climate change damages. Vague primary rules, multiplicity of actors, different types of damages, withdrawal from treaties by state parties and non-linear causation, all pose significant challenges to the traditional law on State responsibility for climate change damages.

Given that States are very reluctant to institute proceedings before international courts and tribunals and that any broadening of access provisions to non-State actors is politically unlikely to happen in the near future, we consider a case before ITLOS and ICJ would be the most likely and short-term scenario to shape current obligations and interpret such as how Art. 2 UNFCCC might translate into obligations. The compliance and dispute settlement mechanisms established in Article 13 and 14 of the UNFCCC remain attractive, although their modalities will likely remain difficult to negotiate. Additionally, the ILC established the topic 'Protection of the Atmosphere' in its programme of work, the outcome of which was 'draft guidelines that do not seek to impose on current treaty regimes legal rules or legal principles not already contained. Such draft guidelines would be a valuable source for the substance of any future international climate change litigation.

Furthermore, the international environmental treaty law establishes a framework of dispersed international statutory environmental obligations assigned to states for the addressing of the present and catastrophic threat of climate change. In the absence of a lex

specialis regulatory framework governing international state responsibility with respect to the violation of those obligations, the ILC Draft Articles, so far as they inscribe customary international law, provide the regulatory plexus of reference. The applicability of this law is dependent on the degree of normativity the environmental law obligations have achieved. A degree subject to the textual formulation, the realization of customary status and ultimately the willingness of the states to observe them. The seriousness and imminence of the phenomenon of Climate Change will hopefully incite states to assume their roles more responsibly and seek judicial accountability for violators more consistently.

ANNEX

Table 1. The Paris Agreement's Obligations.

		Hard Obligations	
		Obligations	**Excpectations**
Each Party		Art. 4.2	Art. 4.3
		Art. 4.3	
		Art. 4.9	
		Art. 4.17	
		Art. 7.9	
		Art. 13.7	
		Art. 13.11	
All Parties		Art. 3	
		Art. 4.8	
		Art. 4.13	
		Art. 4.15	
		Art. 4.16	
		Art. 6.2	
		Art. 10.2	
		Art. 11.4	
		Art. 12	
Developed Countries		Art. 9.1	
		Art. 9.5	
		Art. 9.7	
		Art. 13.9	
Developing Countries			
No subject		Art. 4.5	
		Art. 7.13	
		Art. 10.6	
		Art. 13.14	
		Art. 13.15	
Blanket		Art. 3	Art. 3
		Art. 4.8	

		Art. 4.13	
		Art. 4.15	
		Art. 4.16	
		Art. 6.2	
		Art. 10.2	
		Art. 11.4	
		Soft Obligations	
		Recommendations	**Encourages**
Each Party		Art. 7.10	
		Art. 13.8	
All Parties		Art. 7.7	
		Art. 8.3	
Developed Countries		Art. 4.4	
		Art. 9.3	
		Art. 11.3	
Developing Countries		Art. 4.4	Art. 4.4
		Art. 11.4	Art. 9.5
		Art. 13.9	Art. 9.7
		Art. 13.10	
No subject			

Blanket		Art. 4.14	Art. 5.2
		Art. 4.19	Art. 9.2
		Art. 5.1	
		Non-Obligations	
		Aspirations	**Capture understanding**
Each Party			
All Parties		Art. 4.1	
Developed Countries			
Developing Countries			
No subject			

Blanket		Art. 10.1	Art. 6.1
			Art. 6.8
			Art. 7.2
			Art. 7.4
			Art. 7.5
			Art. 7.6
			Art. 8.1

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