Legal Responses for Adaptation to Climate Change: The Role of the Principles of Equity and Common but Differentiated Responsibility

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Acronyms

AAU - Assigned Amount Unit

AWG LCA - Ad Hoc Working Group on Long Term Cooperative Action

AWG-KP - Ad Hoc Working Group/ Kyoto Protocol

BASIC - Brazil, South Africa, India and China

CBDR – Common but Differentiated Responsibilities

CDM – Clean Development Mechanism

CER – Certified Emission Reductions

CITES – Convention on International Trade of Endangered Species

COP – Conference of the Parties

COP/MOP – Conference of the Parties Meeting as the Parties

EB – Executive Board

EC – European Community

EU – European Union

EU ETS – European Union Emissions Trading Scheme

GCCA – Global Climate Change Alliance

GEF – Global Environmental Facility

ICJ – International Court of Justice

IET – International Emissions Trading

IPCC - Intergovernmental Panel on Climate Change

JI – Joint Implementation

MRV - Monitoring, Reporting and Verification

NAPA – National Adaptation Programmes of Action

NGO – Non Governmental Organisation

ODA - Official Development Aid

REDD – Reducing Emissions from Degradation and Deforestation

SBI - Subsidiary Body for Implementation

SBSTA - Subsidiary Body for Science and Technological Advice

UN – United Nations

UNCLOS – United Nations Convention on the Law of the Sea

UNFCCC – United Nations Framework Convention on Climate Change

1. Introduction

1.1 Background

In December 2009 over thirty thousand participants gathered in Copenhagen to negotiate a post 2012 agreement on global climate change.[1] It was the largest environmental negotiation to have taken place[2] and the most contentious. The expectations were extremely high, yet the outcome was disappointing. However, the size of the negotiations and the acute disagreement between parties over determining responsibility demonstrates that climate change is a critical issue. Each Intergovernmental Panel on Climate Change (IPCC) report publishes scientific evidence indicating that the impact of climate change is more severe than previously thought.[3] It is clear that this will mean increased floods, droughts, spread of disease, fires and extreme weather patterns. These will all immediately impact upon ecosystems, biodiversity and human survival.[4] The most recent report makes clear that climate change is due to human activity and that current climate mitigation efforts are wholly insufficient. As a result, adaptation is necessary.[5] The international climate change regime is designed to respond to mitigation and adaptation requirements. It was created by two international treaties; the 1992 United Nations Framework Convention on Climate Change (UNFCCC)[6] and 1997 Kyoto Protocol,[7] alongside the expansive development of institutional bodies.[8]

The scientific and economic impacts of climate change are well documented.[9] As a result, mitigation has been given significant attention, and commitments and mechanisms to reduce greenhouse gases (GHG) have been designed.[10] An aspect less discussed is that climate change raises profound ethical challenges. This is the case in particular for adaptation, an aspect of climate change that until recently received little consideration, and where equity has not yet played a major role in the debate.[11] The

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[1] The Kyoto Protocol first commitment period (2008-2012) will expire in 2012.
[2] In comparison, the sessions in Bali in 2007 attracted close to 11,000 participants, including 3,500 government officials, over 5,800 representatives of UN bodies and agencies, intergovernmental and non-governmental organizations, and almost 1,500 accredited members of the media. The UN Climate Change Conference in Poznań last year had around 9,300 participants. (UNFCCC, *Fact Sheet: Poznan – COP 14/CMP 4*, 2008).
[3] Compare J.T. Houghton *et al*., Climate Change the IPCC Scientific Assessment, 1990 with R.K. Pachauri *et al*.,(eds.), Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, *2007*
[4] Pachauri *et al*., Climate Change 2007: Synthesis Report.
[5] *Ibid*.
[6] 1992 United Nations Framework Convention on Climate Change (UNFCCC), *International Legal Materials*, 1992, p.849.
[7] 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change, *International Legal Materials*, 1998, p.22.
[8] Including, for example, the Conference of the Parties (CoP) and its subsidiary bodies, the Subsidiary Body for Science and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI), Executive Board (EB).
[9] The work of the IPCC (Pachauri *et al*., Climate Change 2007: Synthesis Report) and N.Stern, *The Economics of Climate Change,* H.M. Treasury, 2006 have been highly influential in these areas.
[10] For an overview see D. Freestone *et al*., *Legal Aspects Carbon Trading: Kyoto, Copenhagen and Beyond*, 2009.
[11] P. Cullet, 'Liability and Redress for Human Induced Global Warming: Towards an International Regime', 2007 *Stanford Journal of International Law*, vol. 43 pp.99-121, p.104.

problem is that climate change harms countries that have the least capacity to deal with the impacts and who have historically contributed the least to the problem. Thus climate change is not only an ecological problem, but also a social and equity issue. As countries vulnerable to climate change will require large amounts of funding, technology transfer and capacity building in order to adapt, questions of legal responsibility are raised.[12]

Climate change policy and law are among the fastest moving areas of international law.[13] The pace and number of international negotiations combined with the complexity of the problem is challenging for international law. It calls for legal flexibility, fairness and a reflection on the ethical dimensions. As a result, the global climate change treaties incorporate principles to guide and structure the legal obligations. The principles set out at the beginning of the UNFCCC 1992 are articulated in Article 3. [14] The five principles, equity and common but differentiated responsibility, intergenerational equity, special recognition of least developing countries, the precautionary principle and sustainable development are a unique way to provide the necessary legal and moral structures. As ethical foundations, the principles are applied throughout the two climate change treaties and guide the decisions and negotiations. The common but differentiated responsibility (CBDR) principle has been the most significant in conveying equity concerns, with its application evident throughout the mitigation obligations.

The principles of equity and CBDR are equally relevant for the adaptation to climate change. Adaptation raises important equity questions in relation to determining responsibility and the capability of countries to respond. However, as adaptation has only recently gained prominence, the global climate treaties are focused on mitigation. As we move towards designing an agreement for the post 2012 climate change regime, it is valuable to examine how the international climate treaties respond to adaptation and where the problems are. The equity problems raised by climate change are becoming increasingly important in international law. Currently, for example, there attempts to litigate against countries with high GHG emissions, such as the U.S.A., on human rights grounds, for the damage caused by climate change.[15] This indicates that the current climate change treaties are not successfully addressing adaptation. The overarching objective of this work is to evaluate the legal responses for adaptation to climate change, in light of the equity questions the issue raises, and provide recommendations for reform in the climate change regime.

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[12] F. Soltau, *Fairness in International Climate Law and Policy*, 2009, p.5.
[13] J. Lufevere, 'A Climate of Change: An Analysis of Progress in EU and International Climate Change Policy' in J. Scott (ed.), *Environmental Protection*, 2009, pp.171-208.
[14] The principles are re-affirmed by the 1997 Kyoto Protocol. The pre-amble provides, "The parties to this Protocol…*Being guided* by Article 3 of the Convention".
15 E. Posner, 'Climate Change and International Human Rights Litigation: A Critical Appraisal', 2007 *University of Pennsylvania Law Review,* pp.1925-1945, and H. Osofsky, 'Climate Change, Environmental Justice, and Human Rights: A Response to Professor Posner', Paper Presented at the annual meeting of The Law and Society Association, TBA, 24 July 2007.

1.2 Research objectives

In light of the above objective, the purpose of this thesis is to examine the role of the principles equity and CBDR for responding to adaptation in the international climate treaties. In order to undertake this analysis, two research questions are posed:

- *What is the meaning and role of the principles of equity and common but differentiated responsibility in the climate change treaties?*

- *To what extent are these principles applied to adaptation in the global climate treaties and European Union law and policy?*

These questions are answered in a four stage approach. First, in chapter 2 the equity dimensions of climate change are laid out, followed by a discussion of the way in which they are incorporated into the climate treaties through principles. Noting that the principles of equity and CBDR are the most significant in conveying the equity dimensions, Chapter 3 examines the meaning and role of these principles. The chapter begins by examining the challenges of applying equity in international law before turning to an in depth analysis of the meaning and role of the CBDR principle in the climate treaties. In Chapter 3 the focus is on mitigation, reflecting how the CBDR principle has been substantially applied so far. Chapter 4 analyses the extent to which the principles are applied to adaptation in the climate treaties and climate change regime. The chapter concludes with an examination of adaptation and the CBDR principle under the Copenhagen Accord as an indication of the post 2012 climate change regime. In Chapter 5 an examination of the implementation of the CBDR principle by developed countries is undertaken by way of an analysis of EU external law and policy. Finally, conclusions on the central research questions are offered, tying together threads and suggesting recommendations for the post 2012 climate change regime.

1.3 Research methodology

This research is primarily a legal analysis. It examines sources of public international law,[16] European law and relevant scientific writings. The analysis of international climate law focuses on the 1992 UNFCCC, 1992 Kyoto Protocol[17] and relevant COP/MOP decisions.[18] The examination of European Union implementation of the principle of CBDR centres on the Treaty on the Functioning of the European Union and European Union climate change policy. Overall, the legal analysis is undertaken in the context of environmental governance and policy.

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[16] Art. 38, 1945 Statute of the International Court of Justice, 1 *United Nations Treaty Series*, p. 16 identifies four sources of international law; treaties, customary law, general principles of law and judicial decisions and teachings.

[17] The treaties are interpreted in light of the 1969 Vienna Convention on the Law of Treaties, 1155 *United Nations Treaty Series*, p.331.

[18] For debate on the legal status of COP/MOP decisions see B., Muller *et al*., *Unilateral Declarations: The Missing Legal Link in the Bali Action Plan*, European Capacity Building Initiative, 2010., pp. 15-17, and compare F. Yamin, *et al*., *The international climate change regime*, 2004, p. 426.

In addition, the research has been supplemented by two internships, contributing insights to the practical side of the international and European climate change law and policy. A five months traineeship was undertaken at Directorate General for the Environment at the European Commission in Brussels and a second internship was undertaken at Climate Focus, an international consultancy based in the Netherlands. Although no formal interviews were conducted, insights from professionals at the European Commission and the COP 15 climate change negotiations in Copenhagen have shaped the views of the author.

2. Translating Equity through Principles

"The world's poor cannot be left to sink or swim with their own resources while rich countries protect their citizens behind climate-defence fortifications"[1]

- -Human Development Report 2007/2008

"Science is about truth and should be wholly indifferent to fairness or political expediency"[2]

- James Lovelock

"Climate change presents a unique challenge for economics: it is the greatest example of market failure we have ever seen"[3]

- Nicholas Stern

2.1 Climate Change as an Ethical and Legal Problem

Climate change is an environmental, social and economic problem. Sustainable development is a threefold concept that connects these three spheres.[4] To date, significant attention has been given to the environmental and economic impacts of climate change. Science has provided the environmental impacts of climate change and future projections, while economics has debated the costs and benefits of different courses of (in)action. However, the social side of climate change is underrepresented.[5] Climate change raises ethical challenges,[6] which in turn give rise to questions of legal responsibility. These aspects can be seen as part of the social element of sustainable development. This chapter examines the ethical considerations of climate change and the legal implications that result therein. We begin by briefly presenting the environmental and economic dimensions before turning to an examination of the ethical and legal aspects. Following this, the principles in the climate change treaties are examined as the way in which equity is conveyed in international climate law. Lastly, the implications of using principles to convey ethics are discussed.

Put briefly, climate change is caused by human activities such as burning fossil fuels, land use and deforestation that emit greenhouse gases (GHG).[7] GHGs remain in the atmosphere, forming a cover around the earth and trapping heat. When the concentration of GHG in the atmosphere increases, more heat is retained and the earth becomes warmer – known as the 'greenhouse effect'. The concentrations of carbon

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[1] United Nations Development Programme, *Human Development Report 2007/2008, Fighting Climate Change: Human Solidarity in a Divided World*, 2007, p. 6.
[2] James Lovelock, *The Vanishing Face of Gaia,* 2010, p.11.
[3] N.Stern, *The Economics of Climate Change,* H.M. Treasury, 2006, p.1.
[4] For a legal perspective see M.-C. Cordonier Segger *et al*., *Sustainable Development Law*, 2004.
[5] R. Cook *et al*., 'Accommodating Human Values in the Climate Regime', 2008 *Utrecht Law Review*, no. 4, pp.18-34, p.18; E. Posner *et al., Climate Change Justice*, University of Chicago Public Law and Theory Working Paper no.177, 2007, p.7.
[6] For the ethical side of environmental policy see I. Rens, 'Sur quelques controverses relatives à l'éthique, à la politique et du droit international de l'environnement', in: I. Rens *et al*. (eds.), *Le droit international face à l'éthique et à la politique de l'environnement*, 1996, pp. 9-18.
[7] R.K. Pachauri *et al*., (eds.), Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007.

dioxide, the most prominent GHG, have increased by one third since pre industrial times, and are now proven to be due to human activities.[8] The result is an increased global average temperature, currently increasing at 0.2 degrees Celsius per decade.[9] Increased temperatures cause changes to physical and biological systems, resulting in enormous damage to the environment, ecosystem and human livelihoods.[10] This includes increased droughts, severe flooding, food shortages and the spreading of diseases[11] In light of the environmental implications, economists have studied the costs and benefits of taking action. The Stern Review concluded that the benefits of strong, early action on climate change considerably outweigh the costs or waiting for the impacts of climate change to occur.[12] Ignoring climate change will damage economic growth and as the impacts of climate change are difficult and near impossible to reverse, we will have to adapt to the changes. Adaptation measures such as infrastructure changes require great foresight and this aspect of adaptation has been underemphasised.[13] However, while the Stern Review has been internationally praised and invigorated the global climate negotiations,[14] the report has been criticised by other leading economists.[15]

There is substantial literature on the economic and scientific implications of climate change, reflecting the importance of the two disciplines. Yet, translating the scientific and economic implications into international action is not easy. It involves decisions that affect our social, environmental and economic lifestyles, which have ethical and fairness dimensions.[16] The equity and fairness aspects of climate change are less discussed, although there is growing body of scholarship in this area.[17] Climate change requires consideration of the ethical and equity issues.[18] Equity is at the heart

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[8] N.Stern, *The Economics of Climate Change,* H.M. Treasury, 2006, p.3.
[9] *Ibid*, p.5.
[10] Pachauri *et al,* Climate Change 2007: Synthesis Report.
11 For an elaboration of the health effects see A.J. McMichael, 'Global Climate Change and Health: an Old Story Writ Large', in: A.J. McMichael *et al*. (eds.), *Climate Change and Human Health: Risk and Response*, 2003, pp.1-17.
[12] N.Stern, *The Economics of Climate Change,* Executive Summary, H.M. Treasury, 2006, p. 1.
[13] *Ibid*, p. 21.
[14] P. Birnie*, et al*., *International Law and the Environment*, 2009, p. 370.
[15] See for example, W. Nordhaus, 'Critical Assumptions in the Stern Review on Climate Change', 2007 *Science*, pp. 201-202.
[16] See generally R. Cook *et al*., 'Accommodating Human Values in the Climate Regime', 2008 *Utrecht Law Review*, no. 4, pp.18-34.
[17] For a selection see H. Shue, 'Subsistence Emissions and Luxury Emissions', 1993 *Law and Policy*, no. 15, pp. 39-59; M. Grubb, 'Seeking Fair Weather: Ethics and the International Debate on Climate Change', 1995 *International Affairs*, no. 71, pp. 463-496; F. Toth, *Fair Weather? Equity Concerns in Climate Change*, 1999; H. Shue, 'Global Environment and International Inequality', 1999 *International Affairs*, no. 75, p. 531-545; M. Paterson, 'International Justice and Global Warming' in B. Holden (ed.), *The Ethical Dimensions of Global Change*, 1996; L. Rosa *et al*., (eds.), *Ethics, Equity and International Negotiations on Climate Change*, 2002; B. Muller, *Equity in Climate Change: The Great Divide*, Oxford Institute for Energy Studies, 2002; S. Gardiner, 'Ethics and Global Climate Change', 2004 *Ethics*, no. 114, p. 555-600; H. Osofsky, 'The Inuit Petition as a Bridge? Beyond Dialects of Climate change and Indigenous Peoples Rights', 2006-2007 *American Indian Law Review*, no.31, pp. 675-699; M. Grosso, 'A Normative Ethical Framework in Climate Change', 2007 *Climatic Change*, no. 81, pp. 223-246; J. Garvey, *The Ethics of Climate Change: Right and Wrong in a Warming World,* 2008; F. Soltau, *Fairness in International Climate Law and Policy*, 2009.
[18] International Council on Human Rights Policy, *Climate Change and Human Rights: A Rough Guide*, 2008; Gardiner, 'Ethics and Global Climate Change'; A. Gillespie, *International Environmental Law, Policy and Ethics,* 1997.

of the discussion on ways to tackle climate change[19] and for successful international negotiations on the post 2012 climate regime, there must be a consensus on how to deal with equity issues.[20] Moreover, the 1992 UNFCCC places the principles of equity and CBDR at the head of the convention, requiring consideration the ethical aspects.[21]

Equity concerns can often be framed as legal and justice questions.[22] As equity is about the ethical dimensions, it asks what is right and what is wrong?[23] Ethics considers whether a situation is fair or unfair, just or unjust. Law has a role in giving effect to fairness and enforcing shared morals as it is founded on ethics and morals. Moral values and standards are the basis of legal reasoning, and are often the foundations of legislation and legal interpretation.[24] In this way, legal rules acquire standing and importance not only through legal status, but also through their immediate moral appeal.[25]. International law is a legal system described as "positive international morality",[26] and often conveys moral values.[27] Human rights law is a prominent example of this. The concept of human rights is rooted in ethics and the ideologies of naturalism and the Enlightenment. Positive human rights, as enshrined in the human rights treaties, are the way in which the law conveys the commonly agreed ethical values.[28] There are many equity considerations raised in the climate debate. Broadly, the philosophical and legal literature can be classified into six dimensions; responsibility, capacity and needs, equal entitlements, comparable action, procedural equity and future generations.[29] Below, each of these dimensions is examined, alongside the legal implications raised.

First, equity advances questions of responsibility. When interests are harmed, the issue of culpability is raised. [30] Responsibility for climate change asks who should pay for the damage caused and how are the burdens to be distributed? Europe and North America have emitted 70% of global carbon dioxide emissions, the most prominent GHG, while developing countries have contributed less than a quarter.[31] Moreover,

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[19] F. Soltau, *Fairness in International Climate Law*, p. 2.
[20] J. Ashton *et al*., 'Equity and Climate Change in Principle and in Practice' in J. Aldy *et al*., *Beyond Kyoto: Advancing the International Effort Against Climate Change*, 2003, p. 62; S. Barrett, *Environment and Statecraft: The Strategy of Environmental Treaty Making*, 2005, p. 14.
[21] M. Grubb, 'Seeking Fair Weather: Ethics and the International Debate on Climate Change', 1995 *International Affairs*, no. 71, pp. 463-496, p. 463; Soltau, *Fairness in International Climate Law and Policy*, p. 3.
[22] ICHR, *Climate Change and Human Rights*, p. 55.
[23] C. Stone, 'Ethics' in D. Bodansky *et al*. (eds.), *Oxford Handbook of International Environmental Law*, 2007.
[24] "Law and Morals" as defined by D. Walker, *The Oxford Companion to Law,* 1980, p. 722 and see generally M. Kramer, *Where Law and Morality Meet*, 2008.
[25] Cook *et al*., 'Accommodating Human Values in the Climate Regime', p. 12.
[26] John Austin cited in D. Bederman, *The Spirit of International Law,* 2002, p. 2.
[27] Compare T. Nardin, 'Legal Positivism as a Theory of International Society' in C. Lynch *et al*, *Law and Moral Action in World Politics*, 2000.
[28] Cook *et al*., 'Accommodating Human Values in the Climate Regime', p. 12.
[29] See Ashton *et al*., 'Equity and Climate Change in Principle and in Practice', pp. 64-66; ICHR, *Climate Change and Human Rights*, pp. 55-59; Ott, S., *et al*, *North-South Dialogue on Equity in the Greenhouse: A Proposal for an Adequate and Equitable Global Climate Agreement*, Wuppertal Institute, 2004, p.2; Gardiner, 'Ethics and Global Climate Change'; and Cook *et al*., 'Accommodating Human Values in the Climate Regime'., pp. 19-21.
[30] Ashton *et al*., 'Equity and Climate Change in Principle and in Practice', p.64.
[31] Pachauri *et al,* Climate Change 2007: Synthesis Report.

while everyone will be affected by climate change, developing countries will feel the greatest impact. It can be argued therefore that developed countries are responsible for causing climate change and therefore under principles of corrective justice they should correct past wrongful behaviour.[32] This would be in line with the polluter pays principle that states that those who cause the harm should pay to repair it.[33] However, it is difficult to pinpoint exact responsibility. The Inuit Petition[34] to the Inter-American Commission on Human Rights demonstrates this difficulty. Here it was argued that as the United States is the largest emitter of greenhouse gases and had failed to ratify the Kyoto Protocol, the country should be liable for the harm caused to the Inuit under international law.[35] The petition was rejected by the court because it could not be proven that the United States is responsible solely for the damage to the Inuit.[36] Although it is a major emitter of GHG, many other countries emit GHG also and it cannot be proved that the emissions from the USA caused harm to the Inuit. Thus, it is difficult to establish sufficient proximity in the chain of causation for responsibility for climate change.[37] This is further complicated by the fact that GHG emissions were started by previous generations who did not intend to cause global warming when they set out to industrialise. It can be argued that it would be unethical to punish those who did not know they were causing harm. In international law and many national legal systems, the principle of non retroactivity of law is firmly established.[38] This means that one cannot retroactively apply law; you cannot commit a wrong if it was not a wrong at the time.[39] On the other hand, the precautionary principle provides that precautions should be taken ahead of full scientific knowledge and that not knowing an action would result in harm is not an excuse.

Responsibility for climate change leads to a second equity dimension; the capacity and needs of countries. Developed countries are better able to deal with the impacts of climate change as they have greater resources and technology to implement

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[32] ICHR, *Climate Change and Human Rights*, p. 55.

[33] Although it should be noted that it is not only states, it is also private companies that are causing the harm.

[34] *Petition to the Inter-American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States*, 7 December 2005, http://www.earthjustice.org/library/legal_docs/petition-to-the-inter-american-commission-on-human-rights-on-behalf-of-the-inuit-circumpolar-conference.pdf (accessed 10 May 2010).

35 M. Wagner *et al*., *An Inuit Petition to the Inter-American Commission for Dangerous Impacts of Climate Change*. Presented at the 10th Conference of the Parties to the Framework Convention on Climate Change, December 15 2004, Buenos Aires.

[36] S. Attapattu, 'Global Climate Change: Can Human Rights (and Human Beings) Survive this Onslaught?' 2008-2009 *Colorado Journal of International Environmental Law and Policy*, no. 20, pp. 35-67, p.65.

[37] For a discussion on the challenges of using litigation to determine responsibility for climate change see E. Penalver, 'Acts of God or Toxic Torts? Applying Tort Principles to the Problem of Climate Change' 1998 *Natural Resources Journal*, no. 38, pp. 563-601; D. Grossman, 'Warming Up To a Not-So-Radical Idea: Tort-Based Climate Change Litigation', 2003 *Columbia Journal of Environmental. Law*, no. 28, pp. 1-61; J. Salzman *et al*, 'Negligence in the Air: The Duty of Care in Climate Change Litigation', 2007 *University of Pennsylvania Law Review*, no. 155, pp. 1741-1794.

[38] See, for example, 1948 The Universal Declaration on Human Rights, Art. 11(2) "No one shall be held guilty of any penal offence on account of any act or omission which did not constitute a penal offence, under national or international law, at the time when it was committed". See Also ICCPR Article 15 (1), ECHR Article 7.

[39] However, there are exceptions such as reasonable foreseeability of acting in a way that may be held culpable. See K. Gallant, *The Principle of Legality in International and Comparative Criminal Law*, 2008, Chap. 7.

adaptation policies. This is in part due to the benefits from industrialisation[40] and also geographically coincidental that they will not as affected by warmer climates and rising sea levels.[41] An equitable approach arguably means that those most able to respond should do more.[42] On this basis, developed countries should assist developing countries that have the least capacity to respond to climate change. In particular, some developing countries will require greater assistance because climate change poses a challenge to the basic needs of their citizens, threatening the implementation of The Millennium Development Goals and their development.[43] This raises questions of whether there should be, and how to agree upon, a prioritisation of assistance in funding, technology and knowledge to the most needy.

A third equity consideration is concerned with whether there is an entitlement to emit GHG. Preventing future damage from climate change means we must significantly reduce our GHG emissions. In our current infrastructure this would impact upon development as many livelihoods and human rights fulfilment are dependent on carbon intensive economies.[44] In international law, all countries have a right to develop.[45] To prevent this would lock in present global inequity. Moreover, international law is based on respect for state jurisdiction over its own territory and that inside a state it has the freedom to act without interference from other nations. However, the 'no harm' principle,[46] considered customary international law, applies a limit to this. It provides that while states have a sovereign right to exploit their resources, this must be undertaken in way that does not cause serious harm to others. Yet, the boundaries of this principle are unclear. It is difficult to exploit resources in a way that does not emit GHG and do not cause damage beyond the state jurisdiction.[47] It is difficult, therefore, to determine which level of GHG emissions invoke serious harm. The entitlement argument purports that the distribution of equity should be based on the rules that were in force at the time of acquisition. However, as Shelton notes, "an entitlement approach may also serve to deny essential goods to others".[48]

A fourth equity consideration is comparable action. It is important that the action taken by parties to tackle the equity issues in climate change is perceived as fair.[49] Fairness is often measured in comparison to the efforts of other parties. It is clear from EU legislation, for example, that the EU will not agree to an international agreement unless other developed countries also commit to taking action.[50] Furthermore, the USA refused to ratify the Kyoto Protocol on the grounds that rapidly developing countries did not have to take on mitigation reduction targets, and thus did

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[40] H. Shue, *UNFCCC SBSTA Technical Briefing: Historical Responsibility*, UNFCCC, 2009.
41 ICHR, *Climate Change and Human Rights*, p. 1.
[42] Ashton *et al*., 'Equity and Climate Change in Principle and in Practice', p. 66.
[43] L. Schipper *et al*., 'Disaster Risk, Climate Change and International Development: Scope for, and Challenges to, Integration', 2006 *Disasters*, no. 30, pp. 19-38.
[44] ICHR, *Climate Change and Human Rights*, p.56.
[45] 1992 Rio Declaration, 1992 *International Legal Materials*, no. 31, p. 874.
[46] Principle 21, 1972 Declaration of the United Nations Conference on the Human Environment, Stockholm, 1972 *International Legal Materials*, no. 11, p. 1416.
[47] ICHR, *Climate Change and Human Rights,* p. 64.
[48] D. Shelton, 'Equity' in Bodansky, *et al*. (eds.), *Oxford Handbook*, p. 654.
[49] Barrett, S., *Environment and Statecraft: The Strategy of Environmental Treaty Making*, 2003.
[50] See Chapter five.

not have comparable action. This aspect of equity reflects that equity arguments often are tied to country interests and the costs and benefits of taking on action.[51]

Procedural equity is another equity dimension. It means that all affected parties are able to voice their concerns and interests. This entails access to information and participation in the decision making process.[52] In the climate change negotiations all states are affected by decisions such as the level of GHG reductions undertaken. However, developed states have a greater capacity to represent themselves at the international negotiations, employing experts and many skilled negotiators.

Finally, a sixth dimension of equity aspect is future generations. Given that we now about the serious consequences of climate change, there is an onus to prevent future harm. The duty to protect the environment for future generations is considered customary international law,[53] and if GHG emissions are not reduced this will not be adhered to. As Brown Weiss states, "We have certain moral obligations to future generations which we can transform into legally enforceable norms".[54] Developed countries have high GHG emissions and developing countries undergoing rapid industrialisation have high projected emissions for the near future. At the same time, sustainable development means development that does not compromise the ability of future generations to meet their needs.[55] In many ways, this dimension of equity cuts across the aforementioned five dimensions, impacting on responsibilities, capacities and entitlements.

Examination of the different approaches to equity through six dimensions demonstrates that the issues are complex and multifaceted. Some of the different approaches complement each other, such as responsibilities and future generations, while others contradict such as climate change harming a country's capacity to fulfil basic human rights and while other countries claim an entitlement to emit GHG.

2.2 Principles in the Climate Change Regime

The climate change treaties take these different equity issues into account by using principles to create the ethical and legal foundations. Articulated at the beginning of the UNFCCC in Article 3, the principles provided are; equity and common but differentiated responsibility, special consideration to vulnerable parties, the precautionary principle, sustainable development and sustainable economic growth. Together, these principles can be seen to have two key roles. Firstly, they provide the context, aim and interpretation of the Convention. This is the ethical and moral basis for action. Second, they are the basis for future developments. By setting up the legal

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[51] Ashton *et al*., 'Equity and Climate Change in Principle and in Practice', p. 66.
[52] See D. Shelton, 'Equity' in D. Bodansky, *et al*. (eds.), *Oxford Handbook of International Environmental Law*, 2007, pp.660-661.
[53] See generally, E. Brown Weiss, *In Fairness to Future Generations*: *International Law, Common Patrimony and Intergenerational Equity*, 1989; E. Brown Weiss 'Our Rights and Obligations to Future Generations to Preserve the Global Environment' 1990 *American Journal of International Law*, no. 84, pp. 190-212; C. Redgwell, 'Intergenerational Trusts and Environmental Protection in Churchill *et al* (eds.), *International Law and Global Climate Change*, 1981; A. Emmanuel *et al*, *Future Generations and International Law*, 2009.
[54] Brown Weiss, *In Fairness to Future Generations*: *International Law*, p. 21.
[55] World Commission on Environment and Development, *Our Common Future; The Bruntland Report*, 1987.

institutional framework for implementation and future action,[56] the principles are the boundaries by which to shape the next developments. In this way they have a broader a role in also advancing and forming international law.[57]

Legal principles are often found in the preamble to treaties; however, in the UNFCCC a rather unique approach has been taken by way of including the principles in the text of the convention.[58] . Rather than detailing the aspirations of the treaty only in the preamble, as is common practice, Article 3 separately provides five legal principles as a guide to "implement its provisions". This indicates an aim to give special significance and elevated status.[59] In this way the principles stated in Article 3 play a different role than the pre-amble. While the pre-amble sets the objectives of the treaty and is a guide to the legal interpretation of the provisions,[60] the inclusion of principles in the text confers a broader application. They are a guide for the treaty and set the foundations and boundaries of the climate change regime. During the drafting of the UNFCCC, the inclusion of principles in a separate article was controversial. Developed countries, in particular the USA, expressed concerned that they could amount to commitments in disguise.[61] For this reason, the parties reduced the strength of the originally proposed Article 3 to having the principles as a 'guide' to the convention only.

However, while the role of the principles is to guide the convention, this broad role is significant. The principles reflect the five dimensions of equity and offer a compromise on the differing viewpoints. As they are phrased in broad language, they are applicable to a diverse range of circumstances and may be a way in which to achieve greater support for an environmental treaty. It can be argued that by phrasing the obligations in terms of principles and 'soft law' rather than strict rules, states are more likely to agree to and ratify a treaty. Moreover the soft norms that are agreed upon can later develop in to hard obligations and custom. However, there are drawbacks to this approach. Ulrich Beyerlin is very critical of this practice, arguing that states use this language to avoid binding international obligations which makes the law weak and unclear.[62] He believes the obligations in the treaty are significantly de-valued. Furthermore, critics have contended that the principles in the climate change regime are appealing political language yet rather meaningless, "lofty goals"[63]. However, it can be counter argued that if equity is an important element in

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[56] Paradell-Trius, L., 'Principles of International Environmental Law: an Overview', 2000 *Review of European Community and International Environment Law*, no. 9, pp. 93-99, p.93

[57] Sands, *Principles of International Environmental Law*, 2003, pp. 190-194.

[58] Although it is unusual, a few other conventions have also taken this approach. See Art. 3 of the 1992 Biological Diversity Convention, Art. 2 of the 1992 The Convention for the Protection of the Marine Environment of the North East Atlantic (OSPAR) Convention and Art. 2 of the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes. See also the Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union, 2010/C 83/01, entry into force 1st December 2009.

[59] D. Bodansky 'The United Nations Framework Convention on Climate Change: A Commentary' 1993 *Yale Journal of International Law*, no. 18, pp. 451-558, p.497.

[60] G. Fitzmaurice, 'The Law and Procedure of the ICJ', 1951 *British Yearbook of International Law*, no. 28, pp. 1-28, p..25.

[61] Bodansky, 'The United Nations Framework Convention on Climate Change', p. 497.

[62] U. Beyerlin, 'Different Types of Norms in International Environmental law' in Bodansky, *et al.* (eds.), *Oxford Handbook*.

[63] D. Esty, 'The Fount of Climate Change Scholarship', 2000 *Yale Journal of International Law*, pp. 318-321, p.320.

the climate change regime, it should be incorporated into the treaties, but the nature of interpreting equity and agreeing on the concept prevents the creation of strict legal framework. Soft law offers flexibility that accounts for the different ethical problems and complexities facing states. Thus the principles in the climate treaties can be seen to have a dual role; one in conveying the moral dimensions and another connected practical role in securing greater cooperation for an agreement.

Using principles in the climate change treaty potentially have further practical benefits. Firstly, principles could offer a way to react quickly to the impacts of climate change. Climate change is a problem that requires urgent action, yet the development of international law has traditionally been slow and reactionary rather than anticipatory. The negotiations of the global climate change treaties took a long time, and the Kyoto Protocol took eight years to enter into force.[64] The failure to achieve a legally binding agreement at the COP 15 in Copenhagen demonstrates that drafting a treaty for a complex problem takes time. However, since 1992, when the UNFCCC was drafted, the climate change regime has substantially expanded. There are now working groups, expert advisory groups, implemented flexible mechanisms and funding mechanisms. The COP/MOP, the "supreme body" of the Convention has issued many decisions that give details to the framework ideas in the conventions. This expansion has resulted in many social, legal and ethical implications. In particular, setting up the institutional architecture for the flexible mechanisms and funding arrangements involves consideration of who is responsible for what? Who benefits from the mechanisms/funds? And should how procedural equity be ensured? This is where legal principles are important. They can prescribe the framework and boundaries for a smooth and swift development that does not compromise the objectives of system and one that can accommodate future growth. They can state the standards and objectives for development without being rigid. Importantly, they allow the system to be responsive to challenges, "filling in the gaps" while treaty law takes longer to catch up.

A second advantage is that principles can offer flexibility to an extremely complex issue. Climate change is an unprecedented global issue. It is much greater and more complex than difficulties previously faced. Tackling climate change requires, for example, engaging the international community, understanding impacts of climate change, carbon sinks, protecting individuals and human rights, and confronting the challenge this poses to economic growth. This means measures for mitigation, Reducing Emissions from Degradation and Deforestation (REDD), finance mechanisms, technology transfer and adaptation. As a result, rigid rules are not appropriate here as they cannot be applicable to the diverse range of circumstances. There is a strong advantage in having broad meanings and flexibility to adapt to each issue and approach unexpected problems.

Thirdly, another practical advantage is that principles are an excellent way to deal with future uncertainty. In evolutionary regimes, principles can provide the future framework for development. This ensures predictability as to future developments. For example, equity will always be an important and contentious issue in climate change. Therefore, having a principle that sets the boundaries of discussions are invaluable in ensuring equity is always considered. In this way, principles can play a

[64] The Kyoto Protocol was negotiated in 1997 and came into force until 2005.

role in emerging and forming international law.[65] However, it is worth noting, that even if the equity principles are always 'considered', it does not necessarily result in their content being mainstreamed into the climate change regime.

2.3 Using Principles to Convey Ethics

The approach of embodying five principles into the climate treaties is quite unique. This raises the question of what it means to convey ethical dimensions through principles, and what the legal implications are. Legal principles can be a bridge between legal rules and moral principles. Legal rules apply in a "general and absolute"[66] fashion whereas legal principles can be context specific. As principles use broad language and flexible they can reflect differing views on an issue,[67] and adapt to particular circumstances.

However, determining the legal nature of this 'bridge' between law and morals has given rise to substantial debate.[68] As principles have practical consequences, their legal force is a discussion point. Article 38(1) of the Statute of the ICJ states; "general principles of law recognized by civilized nations" are one of the four sources of international law, yet the court has never elaborated upon their meaning.[69] Principles have been described as a legal notion between hard and soft law, so called "twilight norms".[70] As Dworkin explains, whereas hard law prescribes rules in "an all or nothing fashion", principles "have a dimension that rules do not – the dimension of weight or importance."[71] Both principles and rules contain standards but do this in different ways. Thus, both principles and rules embody ethical and moral standards, but with principles the standards can be broader and more dynamic. Some principles do not necessarily dictate the action that must be taken,[72] instead they set the limits and boundaries in which the action should take place. This is case for the principle of sustainable development, for example, where economic development should be balanced with the social needs of the present and future.[73] However, this interpretation is not strictly true for all principles. Other principles provide procedural rules such environmental impact assessment deriving from the precautionary principle. While it has been argued that principles alone do not constitute binding obligations,[74] it has been advocated, for example, that the principles embodied in the climate change

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[65] P. Sands, 'International Law in the Field of Sustainable Development: Emerging Legal Principles' in W. Lang (ed.), *Sustainable Development and International Law*, 1995, p. 66.
[66] "Law and Morals" as defined by Walker, *The Oxford Companion to Law*, p. 722
[67] Sands, 'International Law in the Field of Sustainable Development' in Lang (ed.), *Sustainable Development and International Law*.
[68] See, for example, N. Petersen, 'Customary Law without Custom? Rules, Principles, and the Role of State Practice in International Norm Creation' 2008, *American University Intramural Law Review*, no. 23, p. 275.
[69] Sands, 'International Law in the Field of Sustainable Development' in Lang (ed.), *Sustainable Development and International Law*.
[70] U. Beyerlin, 'Different Types of Norms in International Environmental law' in Bodansky, *et al.* (eds.), *Oxford Handbook*.
[71] Dworkin, R., *Taking rights seriously*, 1970, p.24.
[72] Bodansky, 'The United Nations Framework Convention on Climate Change'
[73] See generally, C. Voigt, *Sustainable development as a principle of international law*, 2009.
[74] A. Kiss *et al*., 'Systems Analysis of International Law: A Methodological Enquiry' 1986 *New York Journal of International Law*, no. 45, p.72.

convention do act as rules with legal consequences.[75] It is difficult to measure the impact of principles. In this way, principles are the basis for establishing binding obligations and conveying dimensions of importance.

Principles clearly have an important role in international law, but determining what constitutes a general principle of law is somewhat subjective. Within the term 'legal principle' there are differing categories. Some principles are firmly established as customary international law whereas others can be merely political or expressions of ideals. Moreover, it can be difficult to disassociate principles from sensitive political concerns. [76] The nature of each principle depends on the circumstances. Phillipe Sands has offered defining factors to determine the nature of a legal principle. This includes aspects such as textual content, specificity in drafting, circumstances in which it is relied upon, use in treaties and reliance by international tribunals.[77] Moreover, although legal principles do not have a clear legal status, it is clear they are tool to convey ethical and moral standards in a more flexible way than legal rules. This is important for climate change law, where flexibility and ethical standards are needed.

Overall, principles can have different roles in international law. In the climate change treaties, principles are used to convey the many equity dimensions of climate change. They are given legal effect through incorporation into Article 3 of the UNFCCC.

2.4 Conclusions on Equity and Principles

The equity dimensions in climate change can be seen as part of the social sphere of sustainable development. They are social factors that must be balanced with the economic and ecological aspects of the problem. Climate change raises many fundamental ethical questions, as the analysis through the six dimensions of equity demonstrated. There are many perspectives to the problem and they give raise to many interpretations as well as a number of legal questions concerning responsibility and duties towards other states. It can be seen, therefore, that international law has a role in giving effect to and resolving equity concerns.

The international climate treaties use principles to convey aspects of the equity dimensions. They guide and interpret the treaties and are the foundations of the specific obligations later in the treaty. While some states have expressed concern over the principles being obligations in disguise, and thus, tried to limit their legal impact, the principles are still significant. The value of soft law principles is that they can inspire new standards, reaffirm existing ones and potentially develop these

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[75] Sands, *Principles of international environmental law*, p.190.
[76] L. Paradell-Trius, 'Principles of International Environmental Law: an Overview', *2000 Review of European Community and International Environment Law,* no. 9, pp. 93-99.
[77] P. Sands in Lang, *Sustainable Development and International Law*, 1995, pp. 54-56 and see also the comments of H. Mann, 'Comment on the Paper by Philippe Sands' in *ibid* pp.68-70. However, compare Lang who argues there are three categories of legal principle. These are; principles of existing environmental law (such as responsibility for environmental damage, rooted in ICJ jurisprudence), principles of emerging law (such as intergenerational equity and procedural duties including environmental impact assessment) and potential principles (such as precautionary and common but differentiated responsibility). W. Lang, *U.N. Principles and International Environmental Law*, 1999.

standards.[78] Although soft law is not legally binding in the same way as hard law, the integration of soft law principles into law and policy documents results in a process of "legal socialisation".[79] It is this aspect that is the true value in using principles. As they express the "most deeply held values of the legal system as a whole",[80] the principles underpin all of the substantive obligations in the treaty. In this way, every provision can be traced back to an equity principle. Some will strongly reflect a principle, such as the CBDR principle, more than provisions, but the idea behind principles is they carry equity values into substantive provisions and shape future developments. Thus, their exact legal nature is not as important, their role is to be the "touchstones for international discussions on climate change".[81].

In 1993 Daniel Bodansky commented that whether the strategy of using legal principles proves effective "is a question for the future".[82] As we determine the post 2012 climate change regime, it is now a timely moment to review the meaning and role of the legal principles in Article 3. The first principle in Article 3, equity and CBDR, is the most significant for conveying equity, in the following chapter this is examined.

[78] D. Shelton, 'Compliance with International Human Rights Soft Law' in E. Brown Weiss, *International Compliance with Non-Binding Accords*, 1998, p. 120.
[79] M. Campins-Eritja *et al*., 'The Role of Sustainability Labelling in the International Law of Sustainable Develoment' in N. Schrijver *et al*. (eds.), *International Law and Sustainable Development: Principles and Practice*, 2004, p. 260.
[80] J. De Cendra, 'Distributional choices in EU climate change policy: In search of a legal framework', 2009 *IOP Conference Series. Earth and Environmental Science*, no. 6, pp.1-2.
[81] D. Esty, 'The United Nations Framework Convention on Climate Change: A Commentary on A Commentary', 2000 *Yale Journal of International Law*, p. 315.
[82] Bodansky, supra, note ??, p.497 See also W. Lang, 'UN Principles and International Environmental Law', 1999 Max Plank United Nations Yearbook, no. 3 p.167 who poses a similar question in relation to the principle of common but differentiated responsibilities.

3. The Principles of Equity and Common but Differentiated Responsibilities

"Perhaps the most politically charged issue in international negotiations is that of equity"[1]

-IPCC Working Group, Fourth Assessment

The first, and arguably the most practically significant, legal principle in climate change law is provided in Article 3 of the UNFCCC. It states, *"The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of* ***equity and in accordance with their common but differentiated responsibilities and respective capabilities****. Accordingly, the* ***developed country Parties should take the lead*** *in combating climate change and the adverse effects thereof"* (emphasis added). This principle has underpinned many significant obligations in the climate change regime. Placed at the beginning of the UNFCCC and as the first principle, it makes clear that climate change is an ethical concern. In addition, it reflects the political reality that equity must be a central part of the response to climate change.[2] However, to date, the international climate regime has avoided substantial discussion on the concept of equity. The two most recent IPCC scientific reports, for example, only contain two small paragraphs on equity.[3] While it can be countered that the IPCC is a scientific body, the avoidance of the debate on equity indicates that the topic is very controversial amongst countries and easier not to tackle.[4]

Against this backdrop, this chapter examines the meaning and role of the legal principles of equity and common but differentiated responsibility in international law and the global climate change treaties. Equity and common but differentiated responsibilities form one principle under the Article 3 of the UNFCCC. In this analysis, the principles are analysed separately to determine their origin, meaning and connection to one another. Next, the CBDR principle is examined under the climate change treaties, followed by its application to the flexible mechanisms and procedural equity. Finally, conclusions are offered on the main components of the equity and CBDR principles. The findings are the basis for the analysis of the application of the principles to adaptation.

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[1] R.K. Pachauri *et al*.,(eds.), Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 2007 p.790*.

[2] M. Grubb, 'Seeking Fair Weather; Ethics and the International Debate on Climate Change', 1995 *International Affairs*, No. 71, pp 463-496.

[3] J. McCarthy *et al*., Climate Change 2001: Working Group III: Impacts, Adaptation and Vulnerably, 2001, p. 879.

[4] T. Honkonen, 'The Principle of Common But Differentiated Responsibility in Post 2012 Climate Negotiations', 2009 *Review of European Community and International Environmental Law*, no. 18, pp. 257-267, p.261.

3.1 Equity

There is a clear link between equity and common but differentiated responsibilities. The explicit reference to 'equity' in Article 3 emphasises its importance as the foundation of the principle and many legal scholars have noted that the CBDR principle is rooted in and developed out of the broader concept of equity.[5] However, equity has does not have a clear meaning in international law. The concept can b interpreted in light of different philosophical bases. These include viewing equity in terms of property rights, causality and responsibility, utilitarianism and impartiality.[6] As equity is the foundation of the principle of CBDR, differing interpretations of equity will impact on the meaning of the CBDR principle. It is valuable, therefore, to determine the meaning of equity in international law and the connection to principle of CBDR.

Equity is not an easy concept to deal with.[7] Equity is one of the oldest principles of international law,[8] and has received significant attention by the International Court of Justice.[9] Equity is synonymous to fairness as in international law equity means to promote fairness.[10] In recent decades, equity has been at the centre of many global environmental issues such as resource allocation and problems including the Ozone layer. The diversity of viewpoints on applying equity or equitable principles makes the area extremely complex and challenging. There are two main ways in which the meaning and interpretation of equity in international law has developed. First, through judicial discretion, establishing the 'classical' interpretation of equity rooted in Aristotelian reasoning and secondly through distributive equity in environmental treaties. Each of these is examined below.

3.1.1 Equity and Judicial Discretion

Throughout the standing of the ICJ, international lawyers have grappled with principles of equity. Article 38(1)(c) of the ICJ Statute provides that general principles of law are a source of international law. The legal principle of equity has therefore been a legal consideration in arbitration; however the court as never explicitly relied on this authority when referring to equity.[11] The ICJ has approached equity as a

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[5] P. Sands, 'Emerging Legal Principles' in W. Lang, *Sustainable Development and International Law*, 1995, p.63; L. Rajamani, *Differential Treatment in International Environmental Law*, 1996; P. Cullet, *Differential Treatment in International Environmental Law* , 1999.

[6] See P. Harris, *Understanding America's Climate Change Policy: Realpolitik, Pluralism, and Ethical Norms*, OCEES Research Paper No. 15; E. Weigandt, 'Climate Change, Equity and International Negotiations' in U. Luterbacher et al, *International Relations and Global Climate Change*, 2001.

[7] R. Jennings, 'Equity and Equitable Principles' 1986, *Annuaire Suisse de Droit*, pp.38-65; S. Chattopadhyay, 'Equity in International Law: It's Growth and Development', 1975 *Georgia Journal of International and Comparative Law*, no. 5, pp381-407; L. Lapidoth, 'Equity and International Law' 1987 *Israel Law Review*, no. 27, pp. 161-183; A. Lowe, 'The Role of Equity in International Law', 1988-*1989 Australian Yearbook of International Law*, no. 12, pp. 54-81; R. Higgins, *Problems and Process*, 1994.

[8] S. Atapattu, *Emerging Principles of International Environmental Law*, 2006, p. 384.

[9] See for example Case Concerning the Continental Shelf, (Tunisia/Libya), [1982] ICJ Reports, p. 18 and Case Concerning Maritime Delimitation in the Area between Greenland and Jan Mayen (Denmark/Norway) [1993] ICJ Reports, p. 38, judgement of Judge Weeramentry.

[10] F. Soltau, *Fairness in International Climate Law and Policy*, 2009.

[11] T. Franck, *Fairness in International Law and Institutions*, 1995, p.49.

discretionary concept that should be interpreted by considering what is equitable.[12] There are three ways in which equity can be applied: *equity infra legem* - adapting law to the facts of individual cases; *equity praetor legem* – using equity to fill in the gaps in law; *equity contra legem* – using equity as a reason to refuse to apply unjust laws. [13]

According to the ICJ, equity is a source of general principle of international law that can be directly applied.[14] In the Continental Shelf Case the court described equity as a "direct emanation of the idea of justice"[15] and noted that there is no clear definition of equity, rather its application must take account of the individual circumstances and balance these considerations in order to achieve an equitable result. However, at the same time, the ICJ has stressed that equity is not discretional nor are there clear rules on how much weighting should be given to the concept. These comments indicate the difficulty in agreeing upon and applying the concept. Professor Ian Brownlie provides greater clarity, stating equity is "considerations of fairness, reasonableness, and policy often necessary for the sensible application of the more settled rules of law which can comprise factual considerations and legal principles".[16] Thus, equity in international law aims to overcome unjust decisions that would occur if the law was simply applied universally. This mirrors Aristotle's definition; "the equitable is not just in the legal sense of "just" but as a corrective of what is legally just".[17]

The ICJ has been cautious in applying equity. There has been significant criticism, by the former president of the ICJ Rosalyn Higgins for example, that the application of equity is a licence for judges to let anything 'through the door named equity', and contrary to the principles of sovereignty and consent by nation states.[18] Aware of this, judges have continually stressed their unwillingness to determine controversial decisions, even when the treaty text has called for consideration of fairness and equity.[19] Arguably, it is for reasons of fairness and equity that judicial bodies such as the ICJ exist at all.[20] However, as the role and importance of the ICJ in global issues has been declining in past forty years,[21] equity in treaty law has become more significant than court decisions.

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[12] R. Higgins, International Law and the Avoidance, Containment and Resolution of Disputes (General Course in Public International Law), 1991 *Recueil des Cours*, no. 230, p. 292.
[13] M. Akehust, 'Equity and General Principles of Law', *1976 International and Comparative Law Quarterly,* pp. 801-825.
[14] Thus, it could be viewed as incorporated into Article 38(1)(c) of the ICJ statute as a "general principle of law". For discussion on what constitutes a general principle of international law see B. Cheng, *General Principles of Law as Applied by International Courts and Tribunals,* 1987.
[15] Case Concerning the Continental Shelf, (Tunisia/Libya), [1982] ICJ Reports, p. 18.
[16] I. Brownlie, *Principles of Public International Law*, 1979, p.27.
[17] Artistotle, *The Nicomachean Ethics*, 2008, p. 163.
[18] C. Jenks, 'Equity as Part of the Law Applied by the Permanent Court of International Justice', 1937 *Law Quarterly Review*, no. 53, pp. 519-524.
[19] North Sea Continental Shelf (Federal Republic of Germany/Denmark), [1969] *ICJ Reports*, p. 3.
[20] Rossi, for example, argues that the ICJ's authority to apply equity is inherent in the role the court has in deciding cases, see C. Rossi, *Equity and International Law: A Legal Realist Approach to International Decision Making*, 1993.
[21] M. Whinney, *Equity in International Law, Equity in the Worlds Legal Systems: A comparative Study*, 1973, p.583.

3.1.2 Equity and Environmental Treaties

While the ICJ has only invoked equity *contra legem*, environmental treaties have applied equity *praetor legem*, fillings in the gaps as new issues have arisen and *infra legem* by using equity as the principle to interpret legal norms.[22]

This can be seen through the treaty negotiations moving towards 'common heritage equity'[23] by agreeing on principles for the equitable distribution of benefits and obligations. A core component of the 1997 Watercourses Convention, for example, is that states should use the international watercourse "in an **equitable and reasonable** manner" (emphasis added).[24] In the UNFCCC, it is noted that there must be "**equitable** and appropriate contributions" (emphasis added)[25] by Annex 1 Parties in reaching the objective of the convention. Also, Article 11 which resulted in the establishment of three climate change funds, states they "shall have an **equitable and balanced** representation of all Parties" (emphasis added). In this approach, equity becomes the rule in itself rather than a factor to consider in relation to existing law. This approach can be seen as equity *infra legem*.

However, this application of equity as a wider 'distributive' tool has also been criticised as being 'non legal'. As it opens up broad possibilities for interpretation, the concept risks being not being able to ensure legitimacy, predictability and consistency, which are fundamental aspects of law. At the same time there is a clear need for this interpretation of equity, particularly in the case of climate change. Climate change is a problem that is rapidly growing, causing greater environmental damage and impacting on more and more aspects of human lives. With these impacts, the discrepancy between rich and poor nations is also growing. Thus, while there must be equitable considerations, there must also be legal certainty. For this reason, in the climate change treaties it is the 'common but differentiated' direction that informs the interpretation of equity and ensures a more consistent application.

3.1.3 Connecting Equity and Common but differentiated Responsibilities

It can be argued that viewing equity in terms of discretionary justice is very 'Western centric' as it has been developed by Western international lawyers during a time where developed countries were dominant in international relations. Developing countries, on the other hand, generally define equity on the international level in terms of distribution. Rooted in the aspirations during the 1970s to create an International Economic Order, developing countries view equity in terms of disparities between global wealth and power. The 1974 General Assembly resolutions calling for a new economic order referred to equity in terms of distributive justice. The text stated "all states, irrespective of their economic and social systems shall correct inequalities and redress existing injustices, make it possible to eliminate the widening gap between the developed and the developing countries".[26] Thus, although these are not legal documents, in tandem with the calls by developing countries, it illustrates a very

[22] D. Shelton, 'Equity' in D. Bodansky *et al*. (eds.), *Oxford Handbook of International Environmental Law*, 2007, p. 642-645.
[23] Franck, *Fairness in International Law and Institutions*, p.57.
[24] Art. 5(b) 1997 Watercourses Convention.
[25] Art. 4(2)(a) 1992 UNFCCC.
[26] UN Doc A/9556 (1974), in 1974, *International Legal Materials*, no. 13, p. 715.

different view point on equity. Arguably, the views of developing countries are therefore close to equity *infra legem* where as developed countries have traditionally applied equity *contra legem*.

Overall, the function of equity in international law is to achieve the 'right' balance between differing interests. It is a way to take account of justice and fairness in the application of law. Thus, equity is rooted in consideration of what is morally right and what constitutes a fair outcome. It is not about cost effectiveness or economic feasibility.[27] The principle of equity looks at the 'real' circumstances of the case. The concept in international law doesn't provide clear guidance on the elements and factors that should weigh in the decision of how to apply equity.[28]

The 'common but differentiated responsibility' in Article 3 of the UNFCCC gives practical effect to equity. Importantly, it provides the factors to consider in the interpretation of equity. We examine these in detail below.

3.2 The Principle of Common but Differentiated Responsibilities

The principle of CBDR is fundamental in the climate change regime. It embodies equity, fairness[29] and cooperation,[30] providing forming an "ethical anchor"[31] in negotiations. As explicitly phrased in the climate change convention, the principle of CBDR is tied to the broader concept of equity. Thus, the CBDR principle is a practical tool for applying different interpretations of equity, including discretionary and distributive equity. In many respects, the principle offers a way to compromise the "north-south divide".[32]

Common but differentiated responsibilities were first recognised at two cornerstone agreements in the development of international environmental law; the 1972 UN Conference on the Human Environment in Stockholm[33] and the 1992 UN Conference on Environment and Development.[34] These agreed that there was a "common responsibility" for the global environmental problems, yet for equity reasons it must be coupled with "differentiated action". Together, the concept of common but differentiated responsibilities emerged. Since, the principle has developed significantly and has consequently raised questions as to whether it is a principle of customary international law.[35] Some scholars have suggested it is an "emerging

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[27] E. Melkas, 'Sovereignty and Equity within the Framework of the Climate Regime', 2002 *Review of European Community and International Environmental Law*, no. 11, pp. 115- 128, p.120.
[28] Shelton, 'Equity' in D. Bodansky *et al*. (eds.), *Oxford Handbook*, p. 647.
[29] P. Harris, 'Common But Differentiated Responsibility: The Kyoto Protocol and United States Policy', 1999 *New York University Environmental Journal,* no. 7, pp. 27-48, p. 27.
[30] P. Cullet, 'Differential Treatment in International Law: Towards a New Paradigm of Inter-state Relations', 1999 *European Journal of International Law*, no. 10, pp. 547-582, p.550.
[31] L. Rajamani, *Differential Treatment in International Environmental Law*, 1996, p. 244.
[32] For further discussion on the north-south divide see J. Roberts *et al*, *A climate of Injustice: Global Inequity, North- South Politics and Climate Policy*, 2006.
[33] 1972 UN Conference on the Human Environment in Stockholm, *International Legal Materials*, 1972, p.1614.
[34] 1992 UN Conference on Environment and Development, *International Legal Materials*, 1992, p.876.
[35] For a discussion see Rajamani, *Differential Treatment in International Environmental Law*, pp. 158-162.

principle of international environmental law"[36] while others argue that while it is not customary international law, it is not merely soft law either. Instead, it is framework principle,[37] representing the interpretations of equity in the international community.[38] However, although the legal status is debatable, the legal status of the principle is the not crucial issue. Any recognition of the status principle will remain uncertain as the CBDR principle can be interpreted in different ways. Despite this, it is clear that the legal significance of the principle in the climate change treaties and international environmental is substantial.

The UNFCCC and Kyoto Protocol were the first international agreements to directly refer to the principle of CBDR.[39] This recognises that equity and fairness concerns are crucial aspects of tackling climate change. The purpose of this section is to examine the core characteristics and meaning of the principle of CBDR in the climate change regime against the backdrop of developments in international environmental law. Climate change is one of a number of global environmental problems. It is valuable therefore to examine the principle of CBDR in light of synergies and developments across international environmental law. In this analysis, the focus is on mitigation as this is how the CBDR principle has been mainly applied in the climate change treaties. This shall be carried out by examining the role and importance of the principle through its three core features. These are common action, differentiated responsibility, and substantive equity. Subsequently, these core features will provide the basis to analyse adaptation provisions in chapter four.

3.2.1 Common Responsibilities

3.2.1.1 States

'Common responsibilities' means that all parties to the international convention should participate in the response to addressing a global problem. The 'common responsibilities' in the principle of CBDR can be interpreted in light of the pre amble of the two treaties that have established the principle. The preamble sets the foundations of a treaty and has "legal force and effect from an interpretive standpoint".[40] The 1992 Rio Declaration on Environment and Development preamble begins by stating the Declaration has the "goal of establishing a new and equitable **global partnership**" (emphasis added). The UNFCCC preamble also reflects this by beginning the "earth's climate and its adverse effects are a **common concern of humankind**" (emphasis added). The phrasing does not invoke hard obligations,[41] and

[36] E. Brown Weiss, 'The Rise and Fall of International Law', 2000 *Fordham Law Review*, no. 69, pp. 345-372, p.350.
[37] Birnie *et al*, *International Law and the Environment*, pp. 132-133.
[38] D. Bodansky, 'Customary (and Not so Customary) International Environmental Law', 1995, *Indiana Journal of Global Legal Studies*, no. 105, pp.105-119, p.116.
[39] However, in many other international treaties the term can be implicitly deduced. The 1982 UN Convention on the Law of the Sea, *International Legal Materials*, 1982, p.1261 gives "special privileges to developing countries and fish dependant nations". The 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, *International Legal Materials*, 1987, p.1550 differentiated by allowing developing countries extra time before the convention came into force and providing funds to aid the implementation of their obligations.
[40] G. Fitzmaurice, 'The Law and Procedure of the ICJ', 1951 *British Yearbook of International Law*, no. 28, pp. 1-28.
[41] A. Boyle 'Some Reflections on the Relationship of Treaties and Soft Law', 1999 *International and Comparative Law Quarterly,* no. 48, pp. 901-913; C. Chinkin, 'The Challenge of Soft Law:

the term "common concern of humankind" is limited to the pre-amble. However, the recognition of climate change as a common problem is significant for the principle of CBDR. In tandem with the 'global partnership' established in the Rio Declaration, it is clear that the CBDR principle creates a shared conviction on the importance of climate change. In this way it can be seen as a way to establish solidarity, partnership and cooperation between states for a common problem.[42] The principle is a tool to foster greater cooperation between states,[43] and convey the spirit of an international community.

Common but differentiated responsibilities developed out of ideas of "common heritage of mankind", "common interests" and "global commons",[44] terms found throughout conventions such as 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and 1992 Biological Diversity Convention. These developments recognised that no one state can protect the global environment alone. By designating an issue as a common problem, unity and solidarity in environmental action is established. At the time of drafting the UNFCCC, the concept of 'common concern' was relatively new in international law. Thus, the idea had a broad meaning with the expectation that its interpretation would evolve with the climate change regime and international law.[45]

A key question raised by "common responsibility" is whether this entails a departure from the entrenched idea of sovereign entities in international law. Sovereignty implies that a state has the freedom to act as it chooses within its territory. This includes a right to its resources, to exploit them, and to pursue its own environmental policies.[46] By opting for collective action to an environmental problem, such as in the climate change regime, there is a tension between state sovereignty, in sense of the right for states to carry out their own agenda, and collective action where there is a duty for states to follow the common agenda. "Common responsibility" could imply that the traditional notion of sovereignty is fading out.[47]

Development and Change in International Law', 1989 *International and Comparative Law Quarterly,* no. 38, pp. 850-866.

[42] L. Rajamani, 'The Principle of Common but Differentiated Responsibilities and the Balance of Commitments under the Climate Regime, 2000 *Review of European Community and International Environment Law*, no. 9, pp. 120-131 ; P. Birnie *et al*., *International Law and the Environment,* p.134; Y. Matsui, 'Some Aspects of the Principle of Common but Differentiated Responsibilities', 2002 *International Environmental Agreements: Politics, Law and Economics*, no. 2, pp. 151-171; Cullet, 'Differential Treatment in International Law', p.550.

[43] Cullet, 'Differential Treatment in International Law', p.550.

[44] Centre for International Sustainable Development Law (CISDL), *The Principle of Common but Differentiated Responsibilities; Origins and Scope*, CISDL Legal Brief, 2002; the 1972 Stockholm Declaration refers to "common good of mankind"; Note, the term "common concern of humankind" in the UNFCCC was incorporated from UN DOC. A/RES/43/53 (1988) on the 'Protection of global climate for present and future generations of mankind where it stated "climate change is a common concern of mankind, since climate is an essential condition which sustains life in earth".

[45] M. Tolba, *The Implications of the "Common Concern of Humankind" Concept on Global Environmental Issues*, note of the Executive Director of UNEP to the Group of Legal Experts Meeting, Malta, December 13-15, 1990.

[46] N. Schrijver, 'Joint Implementation from an International Law Perspective', in C. Jepma (ed.), *The Feasibility of Joint Implementation*, 1995, pp. 133-143.

[47] For a discussion see, P. Sand, 'Sovereignty Bounded: Public Trusteeship for Common Pool Resources?', 2004 *Global Environmental Politics* , no. 4, pp. 47-71.

The counter argument to this is, that in practice states have retained a prominent role in international environmental law. It could be argued, therefore, that the move towards community interests and concepts such as "common concern of humankind" reaffirms existing sovereignty[48] and indicates an idea of a public trusteeship or guardianship[49] over resources and the environment. In the 1982 United Nations Convention on the Law of the Sea (UNCLOS), for example, the designated Exclusive Economic Zone (EEZ) gives coastal states sovereign rights over the marine affairs in the area.[50] However, this right is limited by international obligations to conserve living resources, share resources with other states and cooperate.[51] As a result, the overall duty is one of good faith, to protect the area. Similarly, in the 1992 Convention on Biological Diversity,[52] while states have "sovereign rights over their natural resources",[53] the rights are subject to a number of conservation and cooperation duties.[54] In the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),[55] states are again guardians of endangered species by regulating their trade according to international standards.[56]

This raises the question of whether "common responsibilities" creates a guardianship over the atmosphere in relation to climate change. As the causes and impacts of climate change are much broader than other environmental problems, it would be difficult to conclude this. However, it could be argued, though, that certain areas are akin to a guardianship. The concept of Reducing Emissions form Degradation and Deforestation (REDD)[57] in the climate change regime creates a (complex) forest trusteeship. By introducing a financing mechanism that helps developing countries to conserve and manage their forests instead of deforestation, developing country governments are given an incentive to become guardians of their forests.[58] While there may be implicit forms of guardianship in specific areas of climate change, in general states are unwilling to explicitly designate guardianships in international law.[59] In the 1980's there were proposals for the UN to act as a global trustee over the

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[48] Birnie *et al, International Law and the Environment*, p. 130.
[49] For a discussion of the concept of a guardianship in international relations see R. Keohane, *Global Governance and Democratic Accountability*, 2002, p. 29.
[50] Art. 56 1982 UNCLOS.
[51] Art. 61-70 UNCLOS.
[52] 1992 Convention on Biological Diversity (CBD), *International Legal Materials*, 1992, p.818.
[53] Art. 15 CBD.
[54] Arts. 5-14 CBDR, on conservation duties and Art. 15(2) on allowing access to the resources by other states.
[55] 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora, *International Legal Materials*, 1973, p. 1085.
[56] See also the guardianship approach at the European level through river basis management, A. Keessen *et al*., "Transboundary River Basin Management in Europe: Legal Instruments to Comply with European Water Management Obligations in Case of Transboundary Water Pollution and Floods", 2008 *Utrecht Law Review*, no. 4, pp. 35-56, p.44.
[57] There is a growing body of literature on this subject, see C. Streck *et al* (eds.), *Climate Change and Forests, Emerging Policy and Market Opportunities*, 2008; C. Palmer *et al*, *Avoided Deforestation; Prospects for Mitigating Climate Change*, 2009 and for a legal perspective, I. Fry, 'Reducing Emissions from Deforestation and Forest Degradation: Opportunities and Pitfalls in Developing a New Legal Regime', 2008 *Review of European Community and International Environmental Law*, no. 17, pp. 166-182.
[58] Another 'guardian' in the climate change regime is the World Bank in the capacity of trustee for the Adaptation Fund. See Section 4.3.4.
[59] P. Sands, 'Environment, Community and International Law', 1989 *Harvard Journal of International Law*, no. 30, pp.393-420.

environment, however, the plans were later dropped.[60] The climate treaties do not create a guardianship over the atmosphere, however, the creation of community interests through common responsibilities is different to the principle of the sovereign equality of states. Their philosophical basis's are different with the CBDR principle implying states should act in the common interest and sovereign equality implying a state can chose not to. This raises the question of whether the CBDR is an exception to the rule of sovereign equality,[61] or is creating a new norm in international law?

Analysis of ''common responsibility' in international environmental law shows the term aims to create cooperation and solidarity between states. Parallels with the post Second World War developments in international human rights law can be drawn here. Human rights law established certain crimes as so grave they amount to a "common concern of humankind".[62] The result is that irrespective of state sovereignty and boundaries, certain violations, such as genocide and crimes against humanity, affect everyone and are in the interest of the whole international community to prevent. This is an extremely powerful mechanism and has had a profound impact on human rights law. Indeed, it has been described as having the potential to "reshape the foundational elements of the international legal order".[63] While the human rights regime is different from climate change, it is interconnected.[64] It has been argued that the Kyoto Protocol expands upon standards set by binding international human rights law and that the two "powerfully reinforce each other".[65] Following this, it could be argued that the "common responsibility" in the principle of CBDR links to human rights law and emphasises the greater interests of humanity in tackling environmental problems over individual state concerns. This raises the question of whether it can be taken a step further and argued that common concern is an *erga omnes* obligation; that is a legal obligation owed to the community as a whole,[66] trumping individual interests. Arguments to support this would be the elevated status of the principles in article 3 of the UNFCCC, the fact that climate change affects all states and is in everyone's interest and the acceptance of common interests over individual state concerns by the international community.[67] The benefits to this classification would be that climate change would be stated as a legitimate problem to be tackled by the

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[60] P. Brown, 'Stewardship of Climate: An Editorial Comment', 1997 *Climate Change*, no. 37, pp. 329-334. See also C. Stone arguing that NGOs should be trustees of the environment, C. Stone, *Should Trees have Standing? Law, Morality and the Environment*, 2010.

[61] As argued by P. Cullet, 'Equity and Flexibility Mechanisms in the Climate Change Regime: Conceptual and Practical Issues, 1999 *Review of European Community and International Environmental Law*, no. 8, pp. 168-179, p. 169.

[62] See the 1948 Convention on the Prevention and Punishment of the Crime of Genocide, crimes against humanity, as defined by the 1998 Rome Statue of the International Criminal Court, 1998 *International Legal Materials*, no. 37, p. 1002.

[63] J. Brunnee, 'International Law and Collective Concerns: Reflections on the responsibility to protect' in T. Mensah, *Law of the Sea, Environmental Law and Settlement of Disputes*, 2007.

[64] R. Cook *et al*., 'Accommodating Human Values in the Climate Regime', 2008 *Utrecht Law Review*, no. 4, pp.18-34.

[65] M. Robinson, 'Climate Change and Justice: Barbara Ward Lecture'. International Institute for Environment and Development, December 2006.

[66] See Barcelona Traction, Light and Power Company, Limited (Belgium v. Spain), [1970] *ICJ Reports*, p. 3; Art. 48, International Law Commission's Articles on the Law of State Responsibility, UN DOC. A/56/10 (2001).

[67] Kiss, A., *et al*., *Guide to International Environmental Law*, 2007.

international community,[68] and one that overrides national concerns over national resources and economic growth, resulting in the potential to hold states accountable for their (in) action against climate change.[69] Interestingly, the International Law Commission, in its work to codify existing law, proposes that any state could claim for a breach of obligation that; affects the enjoyment of the rights of all states concerned; is established for the protection of collective interests of a group of states; or the international community as a whole.[70] A broad interpretation of this could include climate change.

Interpreting climate change as an *erga omnes* may be an adventurous judgement. It is unusual to refer to environmental duties as *erga omnes*, a term most commonly found in human rights law. This raises the wider question of the implications of environmental lawyers using human rights law to attach a higher status to problems such as climate change.[71] It is noticeable in water law, for example, that states are increasingly recognising the link between water and fulfilling human rights obligations.[72] As climate change will affect human rights it may sense to use this area of law to enforce obligations. For example, lawyers are increasingly looking at the link between human rights and climate change damage, and whether a claim can be brought using the CBDR principle.[73] It can be argued that litigation using the CBDR principle goes against the cooperation and trust aspects of the principle. However, in general, the concept of 'common responsibilities' in the climate treaties is similar to the approach in human rights law. It could be useful in the future to examine further synergies between the two regimes in order to improve the climate change regime.

Finally, it should be noted that 'common responsibilities' is a broad concept and can have different meanings between the parties to the UNFCCC, depending on their priorities.[74] For developing countries this includes poverty irradiation and fulfilling basis human rights such as a right to education. In developed countries, on the other hand, their interests are in ensuring economic development and protecting biodiversity.

3.2.1.2 Non State Actors

Common Responsibilities in the climate change treaties means that climate change is the responsibility of all states that are party to the treaties. The UNFCCC, Kyoto Protocol and COP/MOP decisions are directly applicable to the parties, which can

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[68] F. Kirgis,' Standing to Challenge Human Endeavours That Could Change the Climate', 1990 *American Journal of International Law*, no.84, pp. 525-530.
[69] Birnie *et al*., *International Law and the Environment*, p.131.
[70] Arts. 42, 48, UN DOC. A/56/10 (2001).

[71] See generally, A. Boyle *et al*., *Human Rights Approaches to Environmental Protection*, 1998.
[72] Council of the European Union, *Declaration by the High Representative, Catherine Ashton, on behalf of the EU to Commemorate the World Water Day, 22nd March*, 7810/10 (Presse 72).
[73] Attapattu, for example, argues that in the Inuit Petition to the Inter American Commission (see Section 2.1), if the Commission were to find the U.S. government liable, they would have to do so under the CBDR principle. See S. Attapattu, 'Global Climate Change: Can Human Rights (and Human Beings) Survive this Onslaught?' 2008-2009 *Colorado Journal of International Environmental Law and Policy*, no. 20, pp. 35-67, p.58.
[74] Y. Matsui, The Principle of "Common But Differentiated Responsibility" in N. Schrijver and F. Weiss (eds.), *International Law and Sustainable Development. Principles and Practice*, 2004, p.80.

only be state entities. As a result, non state actors are not directly bound by duties arising from common but differentiated responsibilities. However, there is increasing recognition of the role of the private sector, both in contributing to climate change through GHG emissions and solving the problem through new technologies and private investment.[75]

In light of this, while only states are bound by the principle of CBDR, they involve the private sector in order to fulfil their state obligations towards the principle. The CDM is a clear example of this. The idea behind the Clean Development Mechanism is for developed countries to meet part of their emission reduction target by funding emission reduction projects in developing countries. In terms of CBDR, developed countries provide emission reduction projects in developing countries, helping them to achieve sustainable economic development. Article 12(9) of the Kyoto Protocol explicitly states that public and private entities can participate in the mechanism. On this basis, it has become common practice for states to authorise private companies to design and implement CDM projects. Developed countries authorise private entities to design, register and execute the emission reduction project. In the project host country (the developing country), private companies are designated as the project owner. The validation and verification of the projects are undertaken by Designated Operation Entities (DOE's), authorised private companies. They ensure the project design meets the required standards and verify the emission reductions at the end. This is a very important role, the DOE's are responsible for determining if the project worked and consequently if states can count this towards their reduction target under the Kyoto Protocol.

Private actors are also involved in implementing the CBDR principle at the regional and national levels. In the Europe Union, the European Union Emissions Trading Scheme (EU ETS) Directive[76] clearly states in the preamble that the scheme is designed to implement the European Communities' obligations under the Kyoto Protocol. This implicitly includes the CBDR principle. The trading scheme covers the carbon dioxide emissions of 20,000 installations (private actors) across Europe and was created against the backdrop of the Kyoto Protocol coming into force, committing member states to reducing emissions by 8% compared to 1990 levels. In this way, the EU ETS contributes towards implementing the EU's CBDR obligations at the international level.

Non state actors are also involved in the CBDR principle by way of Non Governmental Organisations (NGO's) being observers to the UNFCCC sessions.[77] This allows them to play a significant role in promoting and being a watchdog for the CBDR principle. Organisations such as Friends of the Earth, Greenpeace and the Climate Action Network lobby governments, business and international negotiations over fairness issues in climate change. They raise awareness of the impacts of climate

[75] There is substantial literature on corporate social responsibility. See K. Kulovesi, 'The Private Sector and the Implementation of the Kyoto Protocol: Experiences, Challenges and Prospects', 2007, *Review of European Community and International Environmental Law*, no. 16, pp.145-157; D. Omg, 'The Impact of Environmental Law on Corporate Governance: International and Comparative Perspectives', 2001 *European Journal of International Law*, no. 12, pp. 685-726; J. Zerk, *Multinationals and Corporate Social Responsibility: Limitations and Opportunities in International Law*, 2006.
[76] Directive 2003/87/EC, OJL 275, 25.10.2003.
[77] Art. 7(6) UNFCCC.

change on developing countries and act as a check on developed country action. At the Copenhagen negotiations, large numbers of NGO's applied to be spectators to the negotiations. They closely followed the negotiations,[78] producing position papers on all the major issues and presented them to state negotiators as they came out of meetings.

3.2.2. Differentiated Action

3.2.2.1 Moral Basis

"Common" and "differentiated responsibilities" are intertwined. There is the collective goal of tackling climate change yet there must be shared burdens to achieve this, with states helping the less able to fulfil their obligations. The idea behind "differentiated responsibility" is to realise the differences between country capacity and historical responsibility in the common goal of environmental problems. The first moral basis of differentiation is country capacity. This recognises that developing countries are less able to respond to environmental problems.[79] This includes a reduced economic, technical, political and administrative advantage.[80] It is common in modern international law for states to help counties with less capacity and thus the UNFCCC, the principle of CBDR explicitly notes it should be applied in accordance with **respective capabilities**" (emphasis added). The concept of capacities in the climate treaties is sensitive to country circumstances and facts that make it less able to implement the treaty.[81] It also takes account of country's present and future needs.[82]

The second basis of moral differentiation in the climate treaties is historical contribution to the problem. The CBDR principle purports to acknowledge a responsibility by developed states for environmental problems. Principle 7 of the 1992 Rio Declaration on Environment and Development, which was negotiated at the same time as the UNFCCC, states that the principle arises "In view of the different contributions to global environmental degradation". However, the extent to which developed countries have acknowledged their greater role in causing climate change remains controversial. Although Rio states "The developed countries acknowledge the responsibility…of the pressures their societies place on the global environment and of the technologies and financial resources they command," it stops short of fully admitting they are the main contributors. During the Rio negotiations developing

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[78] Although, there was controversy in the final days of the COP 15 as some accredited NGO's were restricted from observing as the conference centre did not have sufficient capacity to hold everyone. See M. Doelle, 'The Legacy of the Climate Talks in Copenhagen: Hopenhagen or Brokenhagen?', 2010 *Carbon and Climate Law Review*, pp.86-100, p.86.

[79] See Principle 23 1972 Stockholm Declaration Principle.

[80] The pre-amble of the UNFCCC states clearly that action should mirror the parties "respective capabilities and their social and economic conditions". It goes on to call upon states to enact environmental standards and legislation while giving special consideration to the impact upon developing countries and possible "unwarranted economic and social cost" arising. Finally, there are a number of paragraphs that recognise that developing countries in particular require assistance to achieve sustainable development and note that they will have other priorities before carbon reduction such as the "achievement of sustained economic growth and the eradication of poverty".

[81] Honkonen, 'The Principle of Common But Differentiated Responsibility in Post 2012 Climate Negotiations', p. 266.

[82] Shelton, 'Equity' in D. Bodansky, *et al*. (eds.), *Oxford Handbook*, p.658.

countries advocated for much stronger wording but were unsuccessful, with developed countries fearing legal repercussions.[83] In particular, after the Rio Conference the USA issued an interpretative declaration clarifying that the reference to CBDR was not legally binding. The pre-amble to the UNFCCC similarly takes a cautious approach to recognising the historical contribution of developed states. Although it begins by noting the "largest share of historical and current global emissions of greenhouse gases has originated in developed countries", it is qualified by drawing attention to the fact that in the future, developing country emissions will grow. The paragraph represents a substantial compromise between different equity dimensions and interpretations by states.

In the UNFCCC, the CBDR principle, as phrased in Article 3, states that, "the developed country Parties should **take the lead** in combating climate change. (emphasis added)"[84] This explicitly provides that developed countries have a leadership role in mitigating and adapting to climate change. While taking the lead does not explicitly acknowledge responsibility for climate change or the responsibility for past injustices, it is a compromise with developing countries[85] This tension over responsibilities is at the core of the north-south divide in the climate change regime. In the post 2012 climate regime, it is evident from the position of many developing countries that acknowledging past emissions is important. Many of the developing country proposals at the COP 15 negotiations began on the basis that developed countries have a historical responsibility for their disproportionate contribution to climate change. However, developed countries are unwilling to accept historical responsibility for fear of legal liability. This arguably creates a tension in the principle of CBDR over the meaning of the principle. It is unclear whether greater weighting should be given to differential responsibly based on historical contribution to the problem (favoured by developing countries) or the diverging capacities to respond between states. (favoured by developed countries)[86] On the other hand, the flexibility of the principle to encompass both tensions is its main advantage. It is a tool to convey different interests and balance two competing equity arguments.

It is interesting in this respect to note that the CBDR principle was included in the climate change regime due to strong reluctance to incorporate the polluter pays principle. It was viewed as a 'softer' alternative to an admission of historical emissions.[87] However, scholars have argued that historical responsibility is essentially an application of the polluter pays principle as the states that have mainly caused the problem are being held responsible for their actions.[88] Moreover, Henry Shue argues that the polluter pays principle is "considerably weaker" than CBDR because it does

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[83] Stone, C., 'Common but Differentiated Responsibilities in International Law', 2004 *American Journal of International Law*, no.98, pp. 276-301, p. 280.

[84] Article 3(1) UNFCCC.

[85] For a more detailed discussion on this see D. Bodansky, 'The United Nations Framework Convention on Climate Change: A Commentary' 1993 *Yale Journal of International Law*, no. 18, pp. 451-558, p.498.

[86] Rajamani, *Differential Treatment in International Environmental Law,* 159.

[87] Bodansky, 'The United Nations Framework Convention on Climate Change', p.473.

[88] P. Sands, 'International Law in the Field of Sustainable Development, 1994 *British Yearbook of International Law*, no. 65, pp. 303-381, p. 347; Rajamani, *Differential Treatment in International Environmental Law,* p.122.

not consider equity.[89] The moral basis of CBDR is applied through creating duties and beneficiaries of the principle.

3.2.2.2 Duties and beneficiaries

Differentiation in the climate change regime is applied by distinguishing between developed and developing countries. Developed counties take on greater responsibilities and have duties to support developing countries to implement their responsibilities. Developing countries are thus the beneficiaries of the principle. The Annexes to the UNFCCC and Kyoto Protocol specify the differentiation. Developed countries are listed in Annex I to the UNFCCC. These are developed countries and countries with economies in transition. Together, these countries take on more substantial responsibilities for climate change. The main different responsibility of developed countries is to take on emission reduction targets for GHG emissions. The aim of the target is to achieve a reduction of at least 5 per cent below 1990 levels in the commitment period 2008 to 2012. [90] Developed countries are required to show "demonstrable progress in achieving" this.[91] However, there are different commitments between developed countries towards this goal. This was negotiated between developed countries, based on factors such as historical contribution, economic efficiency and capacity to reduce.[92] The result is that some countries have targets such as the EC to reduce by 8% below 1990 levels, USA, Cananda. New Zealand and Russia must stabilise their emissions and Norway, Australia and Iceland can increase their emissions.[93] However, it should be noted that the devil is in the detail and an increase on 1990 levels still means a decrease in current GHG emissions. Countries with economies in transition are differentiated from developed countries through flexibility in their baseline for the emission reduction targets. [94] On an ethical and equitable basis, though the emission reduction targets are not stringent enough. According to the IPCC, the targets will not prevent serious climate change impacts on developing countries.

Developing countries are the beneficiaries of the CBDR principle. Throughout the climate change treaties the term' developing country' is used and often followed by noting a special consideration to small island states and least developing countries. However, no definition in the conventions or COP/COP MOP decisions is given for the meaning of 'developing country'.[95] It is taken to mean Parties to the UNFCCC and Kyoto Protocol that are not listed in the Annex 2. In general, developing countries have grouped together to form a negotiation block called the Group of G77 and China. Within this group are vastly different interests, broadly this can be classified into three groups. First there are the countries with rapidly growing economies, known as the BASIC countries. These are China, India, Brazil and South Africa. Their main interest is maintaining rapid industrialisation and economic development. Next, there is the

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[89] H. Shue, 'Global Environment and International Inequality' 1999 *International Affairs*, no. 75, pp. 531-545.
[90] Article 3(1) Kyoto Protocol.
[91] Article 3(2) Kyoto Protocol.
[92] Compare, J. Garvey, *The Ethics of Climate Change: Right and Wrong in a Warming World*, 2008, p. 122.
[93] Annex B Kyoto Protocol.
[94] Countries with economies in transition are maintaining they should receive differentiated emission reduction targets in a post 2012 regime, see para 21(d) FCCC/KP/AWG/2007/2.
[95] F. Yamin *et al*., *The International Climate Change Regime*, 2004, p. 272.

OPEC oil producing countries such as Iran, Iraq and Saudi Arabia who are concerned about the threat to their economies if there is a reduction in oil consumption. Then there is The Alliance of Small Island States (AOSIS) and least developing countries that are campaigning for immediate stringent action on climate change given their immediate danger to the adverse impacts of climate change. Although they have diverging interests, the G77 and China are united in their conviction that developed countries should take the lead in the response to climate change.[96]

Due to the wide disparity within the group of developing countries, the differentiation between developed and developing countries was and remains controversial. One of the reasons why the USA refused to ratify the Kyoto Protocol is because there were no commitments for the BASIC countries that have rapidly growing emissions. Although the US agreed there should be different obligations for developing countries, they disagreed with Kyoto on the scope of the differentiation.[97] The Clinton administration explicitly called for meaningful developing country commitments at the Kyoto negotiations amid concerns that developing countries would have an unfair economic advantage in the future. It was thought that it would be unfair if China's emissions would soon surpass Americas without restrictions. Developing countries, on the other hand, refused to accept obligations unless developed countries took the lead. In terms of distributional equity, developing country per capita emissions are still far below developed country emissions. Yet another equity problem arises if developing countries are not subject to emission reduction commitments because it allows developed countries to outsource their production to these countries,[98] avoiding CBDR responsibilities.

In the negotiations for the post 2012 climate change regime the application of differentiation is being subject to substantial scrutiny. There is a strong basis for arguing that the current differentiation is too simple and does not capture the inter country differences.[99] China, for example, does not have the same capacities, circumstances or historical contribution as small island states to climate change. The purpose of the CBDR principle is to reflect the real differences between states, this is how the principle conveys equity and fairness. Currently, the way in which the CBDR is applied does not reflect this. However, achieving truly equitable differentiation is difficult. Differentiating between each of the 200 states would be highly political, lengthy and complex. Gunther Handl argues that by introducing differing obligations there are higher administrative costs, distortions in international trade and that this impedes on the progress of developing countries introducing national climate change obligations.[100] On the other hand, Cullet suggests that differentiation could be undertaken for each state in the same way that financial contributions to the UN are calculated.[101] As there is a substantial difference in circumstances within developing countries it seems imperative and only fair to reflect this in the climate obligations. The challenge is to introduce more dynamic definitions that can capture more fairly historical responsibility, country capacity, circumstances and future needs in the

[96] M. Grubb, *et al*., *The Kyoto Protocol: A Guide and Assessment*, 1999.
[97] C. Stone, 'Common but Differentiated Responsibilities in International Law', p. 280.
[98] Birnie *et al*., *International Law and the Environment*, p.357.
[99] P. Cullet, 'Differential Treatment in International Law', p.552.
[100] G. Handl, 'Environmental security and global change: the challenge to international law 1990 *Yearbook of International Environmental Law*, no. 1, pp. 3-43, p. 9-10.
[101] P. Cullet, 'Differential Treatment in International Law', p.552.

climate change regime.[102] At the same time there needs to be legal certainty with clear agreement as to when a country should take on greater responsibility for climate change. The differentiation might differ for mitigation and adaptation.[103]

3.2.3. Dual Moral/Practical Objective

Finally, the CBDR principle has a twofold objective. One is a moral aim to create substantive equity between the parties by differentiation. Another is practical by using differentiation as a way to achieve greater support for the treaty.

First, the overall moral objective is to achieve greater equity between states, both in terms of formal provisions and the operation of the climate change regime.[104] It aims to achieve substantive equity between states to create a level playing field for tackling climate change.[105] There are boundaries to the goal of substantive equity though. First of all, the equity must be sought in light of the objective of the convention – "stabilization of greenhouse gas concentrations". Secondly, equity means equity for present and future generations. As Article 3 defining the CBDR reads, "The Parties should protect the climate system for the benefit of **present and future generations of humankind**"(emphasis added).[106] Third, when there is substantive equity between the parties, and states are on a level playing field, the principle of CBDR should no longer be applied. Thus, the principle of CBDR is a "temporary legal inequality to wipe out an inequality in fact". [107]Given the objective of CBDR, it can be concluded that it is an ambitious principle. The principle is ambitious in seeking equity between countries when there is substantial inequality in the system to counter. For developing countries this includes the legacy of colonialism and the benefits of the industrial revolution.

Greater substantive equity, it is hoped will result in greater state cooperation and consequently a more effective implementation of the treaty. The reasoning is that treaties that are perceived as fair are more likely to be implemented and adhered to in the long term.[108] As Dinah Shelton comments, "equitable differentiation probably has become the price to be paid to ensure universal participation in environmental agreements"[109] In this way, the CBDR principle can make treaties more politically feasible by balancing different equity principles.[110] Differing responsibilities provides a greater incentive for developing countries to participate in the climate change

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[102] For a proposal for differentiation based on emission and income per capita differentiation, see J. Gupta, 'International Law and Climate Change: The Challenges Facing Developing Countries', 2007 *Yearbook of International Environmental Law*, no. 16, pp. 119-152.
[103] See Chapter 4.
[104] Honkonen, 'The Principle of Common But Differentiated Responsibility in Post 2012 Climate Negotiations', p. 257.
[105] P. Cullet, 'Differential Treatment in International Law', p.574.
[106] Article 3 UNFCCC.
[107] Cullet, 'Differential Treatment in International Law', p. 557.
[108] See generally, S. Barrett, *Environment and Statecraft: The Strategy of Environmental Treaty Making*, 2003.
[109] Shelton, 'Equity' in D. Bodansky, *et al*. (eds.), *Oxford Handbook*, p. 662.
[110] Dellink, R., *et al*., Common but Differentiated Responsibilities for Adaptation Financing: An Assessment of the Contributions of Countries, Institute for Environmental Studies (IVM) Working Paper, VU Amsterdam, 2009, p. 17.

regime.[111] However, it is noticeable that the CBDR has also developed where it is in the interests of more powerful states to do so.[112]

3.2.4 Analysis of the meaning of CBDR

The emergence of the principle of CBDR reflects that contemporary international law is in a state of reformation. Traditionally, and until quite recently, international law was based on the "sovereign equality of states", meaning a state is the supreme legal authority over its territory and is not subject to any other law. It was believed this was the basis to achieve "a peace and security in which all may share equally".[113] However, global interdependence has required the international community to respond to environmental problems without borders. By coming together to accomplish this, the reality of the inequality between states has become evident.[114] Thus, the approach to state sovereignty as the "supreme legal authority"[115] of the international legal system is increasingly being viewed as inadequate to ensure equality and thus foster collective action.[116]

The 'common responsibility' in the CBDR principle aims to create a partnership between states, invoking solidarity and cooperation. Designating climate change as a common problem attributes a higher status, implying that tackling international climate change takes precedence over national law and polices. Tracing the origins and meaning of 'common responsibility' in international environmental law has revealed a departure from the principle of sovereign equality. The approach in the climate change treaties is to 'internationalise' climate change as a problem. It is treated as a problem that humanity has inherited and must face as a whole. Interpreting 'common responsibility' through international human rights law illustrates that the principle could have powerful implications. Although an adventurous judgement at this stage, in the future human rights violations from climate change are likely to more prominent.[117]

The analysis of 'common responsibilities' showed that the implementation of the CBDR principle involves non state actors. Although the climate treaties only bind states, in practice, states designate private entities to implement their obligations or introduce national law. As the industrial sector is one the greatest contributors to climate change, it is important that they involved in reducing emissions. However, only a limited number of private actors are involved, and they depend on state authorisation. The role of the private sector in tackling climate change is gaining more

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[111] French, D., 'Developing States and International Environmental Law: The Importance of Differentiated Responsibilities', 2000 *International and Comparative Law Quarterly*, no. 49, pp. 35-60, p.48-59.
[112] Cullet, 'Differential Treatment in International Law', p. 574.
[113] P. Kooimans, *The Doctrine of the Legal Equality of States*, 1964.
[114] See, for example, the (failed) negotiations to try and establish an International Economic Order, 1974 *International Legal Materials*, no. 13, p.715; and for a discussion R. White, 'A New International Economic Order', 1975 *International and Comparative Law Quarterly*, no. 24, p. 542-552.
[115] R. Jennings *et al*., (eds.), *Oppenheim's International Law*, 1992, p. 122.
[116] Franck, *Fairness in International Law and Institutions*, introduction.
[117] R. Cook *et al*., 'Accommodating Human Values in the Climate Regime', 2008 *Utrecht Law Review*, no. 4, pp.18-34.

attention, [118] yet it is perhaps unclear at this stage as to how large a role the private sector should take, and to what extent this domain is the competency of states. Given the increasing emphasis on the importance of the private sector in climate change, it could be useful to examine what role they should play.

Differentiated action in the climate change treaties has been applied on the basis of historical contribution to climate change and the capability of states to respond to the impacts. It can be seen as balancing some of the different equity dimensions discussed in chapter 2. However, the practical division of responsibilities under the principle require revising to reflect the reality of differences between states. The challenge for the post 2012 regime is to seek agreement on how to undertake this differentiation.

The objective of the CBDR principle is substantive equity between the parties and greater implementation of the climate treaties. The idea is that when states reach a level playing field, the principle should no longer be applied. This is because the CBDR principle is seen as an exception to the rule of sovereign equality of states. However, it is difficult to determine when states are equal. It could be argued that differences between states will always exist in international law. One could venture, therefore, that given differentiation will always be needed in international law, the notion of sovereign equality as the basis of international law needs to be rethought.[119]

Finally, while the above sections have analysed the main aspects of the CBDR principle it should be noted that the principle does not have an exact meaning or interpretation. The analysis has revealed the main components and debates within the principle as it is applied in the climate change treaties. However, as a flexible principle, with broad meaning this can change and evolve over time. Having considered the three main aspects of the CBDR principle, we turn to an analysis of the key provisions that implement the principle. These are the mitigation articles in the UNFCCC and the Kyoto Protocol, the flexible mechanisms and the procedural equity in the climate change regime. These provisions shall be analysed through the lens of 'common action', 'differentiated responsibilities' and the dual objective of 'substantive equity and practical implementation'.

3. 3 Examination of the CBDR principle to mitigation provisions

3.3.1 Treaty Obligations

The general commitments in Article 4 of the UNFCCC are shaped by the CBDR principle. Article 4(1) provides a comprehensive list of obligations for all parties. These include publishing national inventories on emissions and sinks, formulating national measures to mitigate emissions, coopering in technology transfer, sustainable development, adaptation, promote scientific research on climate change, educational awareness and finally communicating implementation measures to the Conference of the Parties.[120] While these are very general obligations, they are the foundations for

[118] See K. Kulovesi, 'The Private Sector and the Implementation of the Kyoto Protocol: Experiences, Challenges and Prospects', 2007, *Review of European Community and International Environmental Law*, no. 16, pp.145-157.
[119] I owe this point to discussions with Eljalill Tauschinsky.
[120] Art. 12 (1) UNFCCC tates that on the basis of Art. 4(1) parties must provide the following information: A national inventory of anthropogenic emissions by sources and removals by sinks, A

international cooperation, coupled with action at the national level. Moreover, these are significant…These obligations are for all parties to the UNFCCC but it is stressed that they should be undertaken in relation to common but differentiated responsibilities and the specific national and regional development priorities of the parties.[121] This rather vague direction is expanded upon in Article 4(3) which provides the differentiation should be applied by developed countries providing "such financial resources, including for the transfer of technology **needed** by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by paragraph 1" (emphasis added). This should be organised by looking at the "need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties".

The implication of these articles is that allocation should be based on country capacity as assistance should be given where developing countries "need" it. How developed countries should arrange this assistance could be on the basis of capacities, historical contribution or both. The phrase "appropriate burden sharing" encompasses all of these options. Interestingly, the principle of CBDR is applied in Article 4(6) in relation to the historical level of anthropogenic emissions of greenhouse gases. It provides that countries with economies in transition shall be "given certain degree of flexibility"[122] to implement their commitments, with historical contribution as the reference.

Article 4(4) and (5) requires special assistance by developed countries to "developing county Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects." In particular this should include "the transfer of, or access to, environmentally sound technologies and know-how" to developing countries. This indicates that assistance should be given to countries who are the least equipped to deal with climate change, rather than on the basis of historical emissions.

It can be seen that developed countries have clear duties under the UNFCCC to assist developing countries, in line with the principle of CBDR. However, the degree of solidarity these provisions actually offer is debatable. The commitments are phrased in vague terms and many developed countries have issued interpretative declarations noting that their responsibility to help developing countries is voluntary. Yet, despite this, article 4(7) provides developing countries with a way in which to hold industrialised countries accountable to their differential responsibilities. The provision reads; "the extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments". This could mean that developing countries could refuse to participate in the climate change regime without the necessary support from developing countries. However, Article 4(7) is also a provision that has been subject to debate. It could mean that developing countries do not have to do anything until developed countries fulfil 100% of their obligations. Thus, while the provision helps to provide formal equity between the parties, in

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general description of steps taken or envisaged by the Party to implement the Convention and Any other information that the Party considers relevant to the achievement of the objective of the Convention.

[121] Art. 4(1) UNFCCC.

[122] Art. 4(6). UNFCCC.

practice it has not worked. The provision can be further criticised as it does not build trust and partnership between the parties, an aspect that is essential in the climate regime.

The Kyoto Protocol developed and re-affirmed the importance of the CBDR, stating that there will be no new commitments for developing counties[123] and introduced legally binding emission reduction targets for developed countries only.[124] Throughout, a number of provisions give special consideration to developing countries. These include ensuring no negative impacts for developing countries when implementing the emission reduction targets,[125] promoting technology transfer and capacity building to developing countries[126]and providing finance to developing countries, particularly those most vulnerable to climate change.[127] The most significant part of the CBDR application in the Kyoto Protocol is through the flexible mechanisms.

3.3.2 Flexible Mechanisms

The flexible mechanisms of the climate change regime were introduced as implementation tools for the reduction commitments.[128] At the time of their creation, the Clean Development Mechanism, Joint Implementation and International Emissions Trading[129] were viewed as highly innovative.[130] Out of the three mechanisms, the Clean Development Mechanism is viewed as one of the strongest applications of the CBDR principle in the climate change regime.[131] Supporters have described the mechanism as a pioneer in truly supporting developing countries under multilateral environmental treaties.[132] The chapter analyses the role and application of the CBDR principle in the Clean Development Mechanism.

3.3.2.1 The Clean Development Mechanism

The Clean Development Mechanism was established under Article 12(2) of the Kyoto Protocol has a twofold objective. First it aims to assist developing countries in achieving sustainable development. The idea is that developing countries are assisted in their development in a way that prevents a rapid increase in GHG emissions. To provide an incentive to developed countries to invest in this, the second objective is to

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[123] Art. 10 Kyoto Protocol.
[124] Art. 3(1) and Annex 2 Kyoto Protocol.
[125] Art. 3(14) Kyoto Protocol.
[126] Art. 10 (c), (e) Kyoto Protocol.
[127] Art. 11, 12 Kyoto Protocol.
[128] Art. 12(2) Kyoto Protocol.
[129] JI and IET are not included in this examination as JI has not been implemented on a large scale and IET has not been implemented at the international level.
[130] E. Hay, 'The Climate Change Regime: An Enviro-Economic Problem and International Administrative Law in the Making', 2001 *International Environmental Agreements: Politics, Law and Economics*, pp. 75-100 and compare W. Moomaw, 'Commentary: In Response to the Paper by Ellen Hey, The Climate Change Regime Sustainable Development and International Administrative Law in the Making', 2001 *International Environmental Agreements: Politics, Law and Economics*, p.101-102.
[131] P. Cullet, 'Equity and Flexibility Mechanisms in the Climate Change Regime: Conceptual and Practical Issues, 1999 *Review of European Community and International Environmental Law*, no. 8, pp. 168-179, p.173.
[132] See Streck, C., *et al*., Making Markets Work: A Review of CDM performance and the Need for a Reform', 2008 *European Journal of International Law*, no. 17, pp. 409-422.

assist Annex I Parties comply with quantified emission cuts and reduction commitments under Article 3 of the Kyoto Protocol.

In principle, the CBDR promotes greater equity between the parties. Developed and developing countries and private actors are brought together in partnership. The mechanism combines capacity building and technology transfer with emission reductions. However, in practice there have been a number of problems. As a result, the future of the Clean Development Mechanism in the post 2012 regime has been subject to scrutiny by the international community. Broadly, there is a divide between two camps. On the one hand it is advocated that the Clean Development Mechanism is a success as it is a financial mechanism that brought together the international community for common action and mobilised financial support on a large scale.[133] One the other hand it is argued that the mechanism has failed to apply differentiation in line with the principle of CBDR. Ultimately the Clean Development Mechanism has not significantly reduced global greenhouse emissions, and where is has done so has been in the wealthiest developing countries, and consequently should be discontinued.[134]

In terms of "common responsibility", the Clean Development Mechanism has been successful at involving both state and private actors in the compliance regime of the Kyoto Protocol. Their involvement is more so than any other international mechanism. In this way the Protocol has helped to leverage significant financial resources for clean energy investment in developing countries. In 2007 and 2008, the Clean Development Mechanism mobilized USD 15billion in primary Clean Development Mechanism transactions.[135] This can be compared to the Global Environmental Facility - the single biggest environmental trust fund and the financial mechanism for four international environmental conventions – which in August 2006 received USD 3.13 billion from 32 donor governments for its operations between 2006 and 2010.[136] The Clean Development Mechanism has created a community of investors and compliance buyers. All of these actors are in effect part of the implementation of the principle of CBDR. For these reasons, the Clean Development Mechanism has been popular with developing countries. In particular, poorer and smaller countries have recently established their national Clean Development Mechanism authorities and are starting to engage in the mechanism.[137] This has served to strengthen cooperation and goodwill between the parties to the Kyoto Protocol.

However, in practice the differential action has not achieved the objective of the Clean Development Mechanism. The incentive of the Clean Development Mechanism has been too weak to foster the necessary economy transformation required for sustainable development and to prevent developing countries following high emission paths. As a result countries with rapidly growing emissions, namely the BASIC

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[133] Figueres, C *al*., The Evolution of the CDM in a Post 2012 Climate Agreement, 2009 *Journal of Environment and Development*, no. 18, pp. 227-247.., *et*

[134] M. Wara, *Measuring the Clean Development Mechanism's Performance and Potential*, Stanford University Working Paper, 2006.
[135] Capoor, K. *et al*, *State and Trends of the Carbon Market 2009*, The World Bank, 2009.
[136] GEF Working Documents, GEF/R.5/Inf.20.
[137] Figueres, C *al*., The Evolution of the CDM in a Post 2012 Climate Agreement'.

countries, are being asked to take on emission reduction commitments. However, the Clean Development Mechanism causes an equity problem because the mechanism can use up emission reduction opportunities of countries that do take on mitigation targets. Moreover, arguably if the Clean Development Mechanism had worked in the first place, developing countries would be on the path towards sustainable development and would not have to take on mitigation targets.

A key problem with equity and differentiation is that the private sector is driven by cost effectiveness and this makes it difficult to give as much consideration to sustainable development. Clean Development Mechanism operates bilaterally with investor states agreeing with a developing country to undertake a project. As a result almost all of the projects are in countries with the most stable political system, developed infrastructure and institutions. Consideration is not given to countries that are the most in need of sustainable development. No Clean Development Mechanism projects are least developing countries, arguably the countries that require projects the most. This has lead to the criticism that the Clean Development mechanism allows developed countries to abdicate their responsibilities.[138]As a result, there is the suggestion that there should be a 'mutli lateral clearing house' that distributes the Clean Development Mechanism projects more equally and shares the risk among investors.

Overall, while the Clean Development Mechanism is a step towards creating greater equity between the parties, it suffers difficulties in achieving this in practice. Many of the aforementioned issues are being addressed in proposals to reform the Clean Development Mechanism in the post 2012 regime.[139] These include proposals for a programmatic Clean Development Mechanism, sectoral Clean Development Mechanism and 'nationally appropriate mitigation measures' (NAMAs). However, they do not address the most important problem in relation to the principle of CBDR. This is that the market cannot solve or convey equity problems. This is examined below.

3.3.2.2 A Critique of the Flexible mechanisms

The Clean Development Mechanism is an excellent example of the principle of CBDR being applied on a practical level. However, in practice the mechanism has encountered problems creating greater equity between the parties. The Clean Development Mechanism is criticised as simply paying China to develop and failing to help least developing countries. This is contrary to the objective of the CBDR principle. The implementation of the Clean Development Mechanism illustrates the main drawback to economic instruments; there is a limit to what they can achieve.[140] The translation of environmental targets into economic terms leads to a focus on

[138] D. Tlasi, *Sustainable Development in International Law*, 2007, p. 149.
[139] D. Bodanksy, *International Sectoral Agreements in a Post-2012 Climate Framework*, Pew Center, 2007; Streck *et al*., 'Making Markets Work'; E. Boyd *et al*., 'Reforming the CDM for Sustainable Development: Lessons Learned and Future Policies, 2009 *Environmental Science and Policy*, no. 12, pp. 820-831; Figueres *et al*., 'The Evolution of the CDM in a Post 2012 Climate Agreement'; L. Schneider, 'A Clean Development Mechanism With Global Atmospheric Benefits for a Post 2012 Climate Regime', 2009 *International Environmental Agreements*, no. 9, pp.95-111.
[140] Cook *et al*., 'Accommodating Human Values in the Climate Regime'.

material (financial) aspects, disregarding non-material values. Equity and related values such as sustainable development and fairness are difficult to translate into a market price. The equitable and moral dimensions of the Clean Development Mechanism, which are the original basis for environmental policy, have not been as strongly applied as the economic side. As a result, the mechanism in its current operation is an illegitimate and malfunctioning environmental policy.[141]

Efficiency does not necessarily entail equity. Sometimes the most efficient choice is also the most equitable. However, often this is not the case.[142] Consequently a choice often has to be made between efficiency and fairness. Experience from the flexible mechanisms indicates there needs to be careful thought as to their aim. Efficiency is one aim of the Clean Development Mechanism. However, the flexible mechanisms should comply with the principle of equity and CBDR. Thus, cost effectiveness should not be achieved at the expense of principles of equity and sustainable development.[143]

3.4 Procedural Equity

Differential treatment is not only relevant for the treaty provisions and implementing measures. The principle is also important for procedural fairness. This means equal and transparent participation in the climate change regime and respective institutions. Developing countries should be able to participate and influence the decision making system, irrespective of their wealth.[144] This is dependant on states being able to represent themselves and influence decisions within the institutions.

Although formally addressing differentiated responsibilities in the climate change convention and decisions, the principle of CBDR is often not reflected in institutional practice. During the UNFCCC negotiations there is a great disparity in the size of negotiation teams for developed and developing countries. In the past, small developing countries have been represented by one or two delegates where as wealthier countries may send around twenty, and America and Japan sending "mega delegations" of even greater numbers.[145] Consequently, smaller, poorer countries have less expert advisors and less time for negotiation preparation. Small delegations are unable to participate in the numerous simultaneous meetings and informal meetings where important negotiations take place.[146] This severely disadvantages their negotiation strength. Moreover, the use of English as primary working language in many meetings is problematic for many negotiators.[147]

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[141] So also J. Gupta, 'Climate Change and International Relations: Urgent Challenges', in N. Teesing (ed.), *Klimaatverandering en de Rol van het Milieurecht*, 2007, p. 23.
[142] H. Shue, 'Global Environment and International Inequality', 1999 *International Affairs*, no. 75, p. 531-545, p. 533.
[143] P. Cullet, 'Equity and Flexibility Mechanisms in the Climate Change Regime', p. 174.
[144] See D. Shelton, 'Equity' in D. Bodansky, *et al*. (eds.), *Oxford Handbook of International Environmental Law*, 2007, pp.660-661.
[145] J. Depledge, *The Organisation of Global Negotiations: Constructing the Climate Change Regime*, 2005, p. 28.
[146] S. Page, *Developing Countries: Victims or Participants? Their Changing Role in International Negotiations*. Overseas Development Institute, 2003.
[147] Depledge, *The Organisation of Global Negotiations*, p.118.

Assistance is given to assist developing countries to fully participate in the UNFCCC negotiations. The Trust Fund for Participation in the UNFCCC and Trust Fund for Supplementary Activities aim to assist developing countries to participate fully and effectively in the climate change negotiations. Developed countries are not required to contribute to these funds, although they are strongly urged to do so.[148] Assistance to developing countries is a step to overcoming substantive inequality in the system however a great deal more help is required to fully address the inequalities in participation.[149]

3.5 Conclusions on Equity and CBDR

Equity is not easy to convey and apply in law. As the concept of equity can be interpreted in different ways, often in terms of political interests, it is easy to criticise its application as 'non legal' and instead based on a moral judgement. Judicial discretion, rooted in Aristotelian reasoning shows that equity can be applied for individualised justice, whereas in international environmental treaties distributive justice is often being applied. The CBDR principle is rooted in equity, it is a way to convey different dimensions and legal interpretations of equity. Importantly, it is also a practical tool, by providing the factors that should be included to weigh equity into the decision making process.

Analysis of the CBDR principle in the climate treaties shows that these factors are 'common responsibility', 'differentiated action' and a dual overall objective of seeking substantive equity and encouraging and facilitating greater implementation of the treaty. However, these are guiding factors with broad meanings and thus to a degree can change and evolve over time. The principle therefore has a role as providing the basis and boundaries for debating the differing equity dimensions that inform the principle. The boundaries are the aforementioned three factors, and the ultimate objective of the convention to stabilise GHG emissions.

All of the substantive treaty provisions reflect the CBDR principle. It is in the common obligations and differentiated duties for developed countries. However, the provisions are laden with ambiguous terminology and as a result it could be said that they provide for greater equity in a formal sense but are not always applied materially. The analysis of the Clean Development Mechanisms illustrates the difficulties of applying the principle in practice. As it is difficult to give equity a monetary value, it is hard to apply in financial mechanisms even when equity is the monetary basis.

The examination of the CBDR principle in institutional practice showed that developed counties have a much greater capacity to influence the decision making process in the climate change regime. Thus, although in theory all countries are equal in the climate negotiations, and every country carries one vote, in practice developed countries are much stronger.

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[148] Decision 1/CP.13, para. 13, UN Doc FCCC/CP/2007/6/Add. 1.
[149] J. Paavola, *et al*, 'Fair adaptation to climate change', 2006 *Ecological Economics*, no. 56, pp.594-608.

Overall, the CBDR principle is very significant and innovative in the climate change regime. The principle of CBDR translates equity into a legal tool with practical consequences. The principle underpins all of the substantive obligations and has shaped the climate change treaties. The result of the principle is that equity is always considered, in every provision and in the future development in the climate change regime, it is a factor. While, the material implementation of the principle has been less successful and needs to be improved, the impact of the principle is substantial. Compared to international law 30 years ago, the fact that differential treatment and equity is a basis in all the treaty obligations is considerable progress. The analysis so far has focused on mitigation, however, adaptation also raises important equity questions, making the CBDR principle extremely relevant. In the next chapter this is examined.

4. Adaptation

"Climate change threatens to erode human freedoms and limit choice. It calls into question the Enlightenment principle that human progress will make the future look better than the past."

-Human Development Report 2007/2008[1]

The common but differentiated responsibility principle conveys different equity dimensions and legal interpretations in the climate change treaties. The analysis in the previous chapter showed that the principle is a tool to differentiate between countries based on inequity in the international community. In turn, by doing this the principle seeks to attain greater substantive equity between the parties and support for the climate change agreement. To date, the climate treaties and the application of the CBDR principle have focused and developed in relation to mitigation. Adaptation has been given less attention, yet it raises significant equity questions. The current climate treaties have been described as having an "adaptation deficit"[2] as there are very few provisions on the issue. However, it is now commonly agreed that adaptation is as important as mitigation,[3] and that equity is equally relevant,[4] thus the CBDR principle is very relevant. This chapter seeks to determine the extent to which the principles of equity and CBDR are applied to adaptation in the international climate treaties, and to identify potential problem areas. It begins by discussing the meaning of adaptation and the equity dimensions of this issue. Next, the adaptation provisions in the two climate change treaties and funding mechanisms are analysed in light of the three main aspects of the CBDR principle; common responsibilities, differentiated action and the dual objective of substantive equity and effective implementation of the convention. This is followed by an analysis of the extent to which these provisions and funding mechanisms overall apply the CBDR principle. Finally, adaptation and the CBDR principle are examined at the COP 15 and under the Copenhagen Accord.

4.1 History and meaning of adaptation

'Adaptation' in the context of climate change was not a common concept before the UNFCCC. To begin with it was politically unwise to strongly support adaptation measures as it was considered to be a fatalist approach, avoiding measures to mitigate GHG emissions and circumventing tackling climate change.[5] The term was also not widely understood. It carried unpopular connotations of social Darwinism, and 'survival of the fittest'[6] and in the early 1990s the impacts of climate change were not

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[1] United Nations Development Programme, *Human Development Report 2007/2008, Fighting Climate Change: Human Solidarity in a Divided World*, 2007, p. 1.
[2] I. Burton, 'Climate Change and the Adaptation Deficit' in L. Schipper *et al*., *The Earthscan Reader on Adaptation to Climate Change*, 2009, p.90.
[3] FCCC/CP/2007/6/Add. 1; J. Ruhl, 'Climate Change Adaptation and the Structural Transformation of Environmental Law', Florida State University College of Law, Public Law Research Paper No. 406, 2010.
[4] J. Ashton *et al*., 'Equity and Climate Change in Principle and in Practice' in J. Aldy *et al*., *Beyond Kyoto: Advancing the International Effort Against Climate Change*, 2003, p.71.
[5] L. Schipper, 'Conceptual History of Adaptation in the UNFCCC Process', 2006 *Review of European Community and International Environmental Law,* no.15, pp. 82-92, p.84;
[6] See generally, Schipper *et al*., *The Earthscan Reader*, Chap. 2.

largely researched.[7] However, during the UNFCCC negotiations the term gained widespread usage as a way to define the impacts of climate change where mitigation would not prevent the damage. Although it is now accepted that both mitigation and adaptation are essential elements of a comprehensive climate change strategy, the climate change regime carries a tension between the two. The current treaties focus on mitigation which developing countries view as deliberate by industrialised countries as a way to avoid taking responsibility for climate change and paying for it.[8] Now it is becoming apparent that for many communities there is no option but to adapt,[9] and consequently both mitigation and adaptation measures are required.

There is no clear consensus on the definition of adaptation. The term and interrelated terminology such as "particularly vulnerable" and "resilience" is not defined in the climate treaties, negotiation text or COP/MOP decisions. However, meaning can be derived from definitions outside of the climate treaties and the interpretation of adaptation references in the climate regime. The Intergovernmental Panel on Climate Change (IPCC) defines adaptation as, "Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation"[10] This is considered to be one of the most comprehensive definitions of adaptation.[11] However, a number of policy makers, international organisations and national bodies use broader definitions that encapsulate the institutional and governance aspects of the issue.

The lack of consensus on the meaning of adaptation demonstrates that adaptation is a complex and wide-ranging issue. Currently, there is not full scientific understanding of adaptation and how far the consequences of climate change reach.[12] Adaptation means macro and micro measures. There must be macro measures such as poverty reduction, improved infrastructure and access to education and healthcare. At the same time this should be coupled with micro level measures such as building dykes against sea level rise, water purification and agricultural changes. Adaptation will be reactionary and anticipatory.[13] Reactionary measures are after the impacts of climate change occur, whereas anticipatory is planning ahead. Overall, the response to adaptation requires good governance, strong institutional capacity and economic capacity. These will be needed at the regional and local levels, as well in the international arena, [14] raising different justice implications. [15] In addition, many of the adaptation needs connect to aspects outside the climate change regime such as

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[7] R. Pielke, 'Rethinking the Role of Adaptation in Climate Policy', 1998 *Global Environmental Change*, no. 2, pp.159-170, p.162.
[8] Schipper, 'Conceptual History of Adaptation in the UNFCCC Process', p.82.
[9] J. Paavola *et al*, 'Fair adaptation to climate change', 2006 *Ecological Economics*, no. 56, pp.594-608.
[10] Intergovernmental Panel on Climate Change, IPCC Third Assessment Report: Climate Change 2001:*Working Group II: Impacts, Adaptation and Vulnerability*, 2001, p.982.
[11] R. Klein *et al, Adaptation to Climate Change: Options and Technologies. An Overview Paper*, 1997, FCCC Secretariat FCCC/TP/1997/3), p. 4.
[12] IPCC, Summary for Policy Makers 2007, p.8.
[13] R. Klein, 'Adaptation to Climate Variability and Change: What is Optimal and Appropriate?', in C. Giupponi *et al* (eds), *Climate Change and the Mediterranean: Socio-Economics of Impacts, Vulnerability and Adaptation*, 2002.
[14] Paavola *et al*, 'Fair adaptation to climate change', p. 596.
[15] See generally, W. Adger, 'Scales of Governance and Environmental Justice for Adaptation and Mitigation of Climate Change', *2001 Journal of International Development*, no. 13, pp. 921-931.

international development, poverty,[16] security and refugee law.[17] It is difficult therefore to define exactly what adaptation is and what measures that are need to respond. It could be argued that varying definitions lead to differing expectations and hopes with different implications for funding.[18] On the other hand, a broader definition means flexibility as our understanding of adaptation develops.

4.2 Adaptation as an equity problem

Scientific evidence shows that small island developing states are extremely vulnerable to sea level rise.[19] A global temperature above two degrees Celsius could cause some small island states to disappear. This will result in the unprecedented event of sovereign states ceasing to exist, and the loss of homes, livelihoods and culture. At the COP 15 negotiations in Copenhagen, the Alliance of Small Island States (AOSIS) pleaded for substantial international action against climate change.[20] Least developing countries are also extremely vulnerable to climate change. In Africa, the most vulnerable continent to climate change, droughts and famines will become more frequent, impacting on food security, water access and human health.[21] In low income Asian countries there will be significant flooding resulting in the loss of ecosystems as well as human impacts. By comparison, Europe and North America will also experience these affects although there will be a less imminent threat to human lives.[22]. The implications of adaptation raise very sensitive equity questions. In Section 2.1 equity was presented through six dimensions; responsibility, capacity and needs, equal entitlements, comparable action, procedural equity and future generations. These dimensions remain very relevant for adaptation. We examine their implications for adaptation below.

First, a very contentious issue in adaptation is who is responsible for causing climate change, and in turn, which parties are responsible for the financial, capacity building and technological implications of adapting to the impacts. As previously discussed, it is difficult to establish legal responsibility because the exact actions that caused the harm are not traceable to specific entities. However, it has been argued that it could be possible to overcome this.[23] It is clear, for example, that developed countries GHG

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[16] See G. O'Brien *et al*., 'Climate Adaptation from a Poverty Perspective', 2008 Climate Policy, no. 8, pp. 194-201.
[17] See, for example, S. Aminzadeh, 'A Moral Imperative: The Human Rights Implications of Climate Change', 2007 *Hastings International and Comparative Law Review*, no. 2, pp. 231-265; A. Williams, 'Turning the Tide: Recognising Climate Change Refugees in International Law', 2008 *Law and Policy*, no. 30, pp. 502-529.
[18] R. Verheyen, 'Adaptation to Impacts of Anthropogenic Climate Change – The International Legal Framework', 2002 *Review of European Community and International Environmental Law*, vol. 11, pp 129-143.
[19] M. Pelling *et al*., 'Small Island Developing States: Natural Disaster Vulnerability and Global Change', 2001 *Global Environmental Change*, no. 3, pp. 49-62.
[20] See Alliance of Small Island States, *Declaration on Climate Change*, 2009.
[21] M. Boko *et al*, 'Chapter 9, Africa' in M. Parry *et al*, *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Forth Assessment Report of the Intergovernmental Panel of Climate Change*, 2007.
[22] J. Alcamo *et al*., 'Chapter 12, Europe' in M. Parry *et al*., *ibid*.
[23] See M. Allen, 'Liability for Climate Change: Will it ever be Possible to Sue Anyone for Damaging the Climate?' 2003, *Nature*, no. 421, pp. 891-892; P. Stott et al, 'Human Contribution to the European Heatwave of 2003, 2004 *Nature*, no. 432, pp. 610-614; S Atapttu, 'Climate Change, Differentiated Responsibility and State Responsibility: Devising Novel Legal Strategies for Damage Caused by

emissions are far higher than developing countries and consequently they should take responsibility for adaptation. There are problems, however, analysing responsibility for adaptation solely through the north and south dialogue. Developing countries with rapidly growing emissions, such as China, are outstripping the emissions of many developed countries. There is a new band of middle class in these countries with very high emissions.[24] Furthermore, deforestation in developing countries is a major cause of GHG emissions. Moreover, poorer communities in developed countries are also affected by adaptation[25] The Inuit in North America, for example, who petitioned to the Inter-American Commission on Human Rights for the damaged caused by climate change, is an example of this. These different perspectives show that determining responsibility is complex. It suggests that while developed countries have a responsibility for the impacts of climate change, they are not wholly responsible. This problem of inequity across countries has prompted calls for a citizen responsibility for climate change, rather than state responsibility.[26]

A second equity approach is to determine responsibility for adaptation on the basis of country capacity and adaptation needs. Here, the response to the problem is 'what matters now' rather than past harms.[27] In terms of adaptation needs, all countries face environmental and 'nature' impacts from climate change.[28] Examples include increased floods, forest fires and the loss of biodiversity. However, for least developing countries, climate change poses a direct challenge to human survival and fulfilment of human rights. Crop failure and famine are major threats to human life. Pre-existing difficulties in reaching the Millennium Development Goals and fulfilling human rights are further exacerbated by climate change. Adapting to the impacts of climate change requires large amounts of money and technology, coupled with strong institutional structures with good governance. At the same time, countries that are the most vulnerable have the least adaptive capacity, whereas developed countries have much greater financial resources and technological capacity to tackle climate change.[29] Although the full implications of climate change impacts are not known, it is clear that adaptation will be very expensive.[30] The cost will depend on the strength of mitigation efforts and extent to which preventative adaptation measures are taken.[31] The World Bank has estimated the cost to developing countries to adapt as 20 billion

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Climate Change' in B. Richardson *et al*, *Climate Law and Developing Countries: Legal and Policy Challenges for the World Economy*, 2009, p.37 *et seq*.

[24] See P. Harris, 'Climate Change and the New China' in S. Schneider *et a*l (*eds*.), *Climate Change Science and Policy*, 2010, pp.317-320; E. Economy, 'China and its Environment' in D. Cuff *et al(eds,)*, *The Oxford Companion to Climate Change*, 2008, pp.115-118.

[25] Atapttu, 'Climate Change, Differentiated Responsibility and State Responsibility', p.37.

[26] P. Harris, *World Ethics and Climate Change: From International to Global Justice*, 2009.

[27] For further discussion see D. Jamieson, 'Global Responsibilities, Ethics, Public Health, and Global Environmental Change, 1997-*1998 Indiana Journal of Global Legal Studies*, pp. 99-121, p.117.

[28] B. Muller, *Equity in Climate Change: The Great Divide*, Oxford Institute for Energy Studies, 2002.

[29] R. Mendelsohn *et al*, 'The Distributional Impact of Climate Change on Rich and Poor Countries', 2006 *Environment and Development Economics*, no.11, p. 159-178.

[30] There is substantial discussion on the costs of adaptation to climate change. For a selection see European Environment Agency, *Climate Change: The Cost of Inaction and the Cost of Adaptation*, Technical Report no. 13, 2007; Oxfam International, *Adaptation to Climate Change: What's Needed in Poor Countries and Who Should Pay*, Oxfam Briefing Paper, 2007; Organisation for Economic Cooperation and Development, *Economic Aspects of Climate Change: Costs, Benefits and Policy Instruments*, 2008; The World Bank, *The Costs to Developing Countries of Adapting to Climate Change, New Methods and Estimates*, Consultative Draft, 2009.

[31] N.Stern, *The Economics of Climate Change*, H.M. Treasury, 2006.

US Dollars (USD),[32] the UNFCCC between 40 and 170 billion USD,[33] while more recent estimates calculate it will be 2-3 times higher than this.[34] Currently there is a lack of reliable information about the impacts in developing countries and there is a bias towards developed country research,[35] as this where the capacities are to undertake the research. Under this equity approach developed countries have a greater capacity to deal with the impacts of climate change and should help countries with the greatest adaptation needs, namely least developing countries and small island states.

This leads to a third equity consideration of comparable action and support. Supposing developed countries should assist developing countries, who should contribute what, and how should the help be distributed? As adaptation involves high costs, developed countries might be unwilling to pledge substantial sums without comparable amounts by other countries, similar to their conditionally in relation to GHG reduction targets.[36] At the same time, vulnerability to adaptation differs, and least developing countries and small island states would argue that they should receive greater assistance as their adaptation needs are larger. However, larger developing countries such as India are also have substantial adaptation needs and may argue for comparability in receiving assistance in a different way.

The discussion on responsibility for adaptation, challenges the debate on whether everyone has an equal entitlement to emit GHGs. In relation to mitigation targets, it can be argued that in our current infrastructure we have a right to emit GHG in order to develop. This reasoning is difficult with adaptation because the group of people who emit the most and benefit from climate change are not those who will suffer the severe consequences. Entitlement is justified on the basis of cost benefit analysis. It is thought that the consequences of climate change are worth putting up with because the benefits of a carbon economy are high. However, the loss to human rights in countries most affected by climate change is unquantifiable.[37]

As developing countries are the most affected by adaptation they should be adequately involved in the decision making process.[38] This is the fifth equity dimension, procedural equity. Small island states, for example, face a difficulty in being able to influence and have their opinion heard in the negotiation process.[39]

Lastly, intergenerational equity applies across the equity dimensions. Global climate change will continue to occur because of past emissions. Even if mitigation efforts are undertaken now, their impact will not materialise until the next century. The emissions today cause harm in the future and therefore adaptation is required for the

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[32] The World Bank, *The Costs to Developing Countries of Adapting to Climate Change*.
[33] UNFCCC, *Climate Change: Impacts, Vulnerabilities and Adaptation in Developing Countries*, 2007, p.5.
[34] M. Parry et al, *Assessing the Costs of Adaptation to Climate Change: A Critique of UNFCCC Estimates*, International Institute for Environmental and Development, 2009.
[35] Schipper *et al*., *The Earthscan Reader*, chap. 2; IPCC, Summary for Policy Makers, p.8.
[36] See Chapter 5 .
[37] R. Cook *et al*., 'Accommodating Human Values in the Climate Regime', 2008 *Utrecht Law Review*, no. 4, pp.18-34.
[38] See N. Ravindranath *et al*, *Climate Change and Developing Countries*, 2002, p. 288 *et seq*.
[39] A. Gillespie, 'Small Island States in the Face of Climatic Change: The End of the Line in International Environmental Responsibility', 2003 *UCLA Journal of Environmental Law and Policy*, no. 22, p. 107-131, p.119.

present and future generations.[40] Comparisons can be made with the Nuclear Tests Case,[41] where dissenting Judge Weeramantry noted, "the half life of a radioactive product can extend to over 20,000 years…if this Court is charged with administering International law…this principle [intergenerational equity] is one which must inevitably be a concern of this court".[42] If intergenerational equity is an enforceable right,[43] long term adaptation measures must be taken.

Framing adaptation through these six dimensions demonstrates that adaptation is a significant equity and fairness problem. It can be argued that adaptation, even more so than mitigation, demonstrates the substantial inequity between and within countries.[44] Adaptation is about global injustice, development, poverty and historical responsibility. Whatever the equity approach, failing to address adaptation will result in the most inequitable result of all; leaving the most vulnerable countries to face the impacts of climate change without the means to tackle the problem.[45] The principle of CBDR gives effect to equity and fairness considerations in the climate change regime. It sets the legal basis for differentiation and boundaries for this. It is valuable, therefore, to examine to what extent it is applied to adaptation.

4.3 Adaptation and CBDR in the Climate Treaties

Adaptation is a very important aspect of climate change. It is now commonly agreed that the issue is as important as mitigation,[46]and that equity is equally relevant.[47] Analysis in the previous chapters[48] identified three main aspects of the CBDR principle: common action, differentiated action and a dual objective of substantive equity and giving an incentive for implementation of the climate agreement. Reflecting on interpretation of the CBDR principle in international law, it has significant implications for adaptation. The factors to consider are that there should be solidarity and cooperation between states for adaptation, with all countries participating in action. The responsibility for global adaptation should be determined on the basis of capabilities, country circumstances, future needs and historical contribution. Overall, the CBDR principle should balance differing interests and varying interpretations of equity to achieve greater substantive equity and implementation of the treaties. Differential treatment means non reciprocal agreements between developed and developing countries to help the later adapt to climate change.

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[40] IPCC, Summary for Policy Makers.
[41] Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgement of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case, [1995] *ICJ reports*, p.309.
[42] Ibid, p. 341.
[43] See E. Brown Weiss, *In Fairness to Future Generations*: *International Law, Common Patrimony and Intergenerational Equity*, 1989, p.21.
[44] A. Pittock, *Climate change : turning up the heat*, 2005, p. 143; J. Patz *et al*, 'Climate Change and Health: Quantifying a Global Ethical Crisis', 2007, *EcoHealth*, no.4, pp397-405.
[45] Claussen *et al*., *Equity and Global Climate Change: The Complex Elements of Global Fairness*, Pew Centre of Global Change, 2000.
[46] J. Ruhl, *Climate Change Adaptation and the Structural Transformation of Environmental Law*.
[47] J. Ashton et al, 'Equity and Climate Change in Principle and in Practice' in J. Aldy et al, *Beyond Kyoto: Advancing the International Effort Against Climate Change*, 2003, p.71.
[48] See Chapter 3.

This section seeks to answer the extent to which the CBDR principle applied to adaptation in global climate change treaties. Firstly, the provisions on adaptation in the global climate treaties are examined. Next, the financial mechanisms for adaptation established under the climate treaties are analysed, and finally an analysis on the extent to which the CBDR principle is applied to adaptation is offered.

4.3.1 General Approach

Several of the provisions in the UNFCCC and Kyoto Protocol address adaptation. Although mitigation is clearly favoured,[49] the treaties acknowledge that adaptation is necessary.[50] The objective of the Convention[51] begins with mitigation, with the first sentence noting the aim is the stabilisation of greenhouse gas emissions.[52] However, the second sentence states that the stabilisation "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." (emphasis added). Thus, adaptation is clearly part of the ultimate objective of the convention, a point that can be often forgotten with the emphasis on mitigation.[53] Although, it should be noted that "adapt naturally to climate change" is a vague objective, and difficult to measure. Stabilisation of GHG emissions, on the other hand, is a much clearer objective.

The provisions and responsibility for adaptation in the international climate treaties is limited to those caused by human activities. This is part of the general approach in the UNFCCC and Kyoto Protocol to limit climate change to responsibilities and obligations from the human induced effects. This was done to limit the responsibility of developed countries to only the fault of humans as opposed to also including natural effects. [54] Thus, Article 1(2) of the UNFCCC states that the definition of climate change is the "change of climate which is **attributed directly or indirectly to human activity** that alters the composition of the global atmosphere and which **is in addition to natural climate variability** observed over comparable time periods" (emphasis added). This is a narrower interpretation compared to the IPCC definition.[55] Limiting liability to human induced climate change makes sense for mitigation. It is the basis for establishing the obligations for developed countries to reduce their GHG emissions and it would be difficult to require mitigation from natural GHG emissions. However, for adaptation, this limitation on human activity is a problem. Scientifically it is very difficult to make a clear distinction between natural and human induced climate impacts.[56] Whether adaptation is required due to natural or human induced climate change, the impact will still be felt the hardest by the most poor and vulnerable nations.. Limiting adaptation to human induced harm has been criticised as

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[49] D. Bodansky, 'The United Nations Framework Convention on Climate Change: A Commentary' 18:2 *Yale Journal of International Law* (1993), 451-458.
[50] D. Cole, 'Climate Change, Adaptation, and Development', 2008 *UCLA Journal of Environmental Law and Policy,* no. 26, pp,1-19, p.5.
[51] See Art. 2, 1992 UNFCCC.
[52] Indeed, the original draft of Art. 2 UNFCCC stated the stabilisation of greenhouse gas concentrations was an "imperative goal". Schipper *et al*, *The Earthscan Reader*, p.362.
[53] S. Ott *et al*, *North-South Dialogue on Equity in the Greenhouse: A Proposal for an Adequate and Equitable Global Climate Agreement*, Wuppertal Institute, 2004, p. 21.
[54] F. Yamin *et al*, *The international climate change regime*, 2004, p.214.
[55] See section 4.1 'History and Meaning of Adaptation'.
[56] Schipper *et al*., *The Earthscan Reader*, chap. 2.

giving developed countries a way to limit their obligations.[57] However, the CBDR is based on both historical responsibility and capabilities, and thus the latter basis applies to natural induced climate change.

4.3.2 Common Responsibilities

All parties have common responsibilities for dealing with adaptation to climate change. These are obligations to report on adaptation measures being undertaken and to develop national adaptation plans, integrating them into national policy. In the UNFCCC, Article 4(1)(b) provides that all parties under the convention, taking into their account their common but differentiated responsibilities are required to "Formulate, implement, publish and regularly update national…measures to facilitate adequate adaptation to climate change". Furthermore, the parties must cooperate in preparing for adaptation by developing integrated plans on how they propose to do this.[58] This obligation is fairly specific as it states that the integrated plans should cover "coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas". Moreover, the article continues by stating that the cooperation and development is particularly important in Africa. Lastly, governments should take adaptation (and mitigation) in to account in all relevant social, economic and environmental policies and actions.[59] The Kyoto Protocol strengthens the UNFCCC obligations by requiring national adaptation policies to be integrated into the information that has to be communicated to the secretariat (Annex 1 parties) or in their national communications (all other parties).[60] Additionally, the Kyoto Protocol specifically notes in relation to the implementation of national adaptation polices, "adaptation technologies and methods for improving spatial planning would improve adaptation to climate change".[61] Adaptation is mentioned in Article 3(3) of the Convention as an aspect that should apply the precautionary principle. A precautionary approach must therefore be taken to adaptation policies and measures, and this principle underpins all the obligations in the climate change treaties.

These common obligations under the climate treaties for adaptation are potentially far reaching obligations. Formulating, publishing and sharing information on adaptation promotes cooperation and understanding between the parties. As the obligations apply to all parties, all states are required to participate in responding to adaptation, reflecting the CBDR principle. However, in practice the obligations have not been implemented by the parties.[62] One reason for this could be that they do not contain specific responsibilities. There is, for example, no time frame or deadline for the implementation of these measures.[63] While the integrated plans should cover a range of areas such as coastal zone management, there are no specific measures that have to be taken. Moreover, the obligation in Article 4(1)(b) of the UNFCCC to formulate and implement adaptation policies is to "to facilitate **adequate** adaptation" (emphasis added). The term "adequate adaptation", also used in the Kyoto Protocol, is not

[57] Verheyen, 'Adaptation to Impacts of Anthropogenic Climate Change'.
[58] Art. 4(1)(e) UNFCCC.
[59] Art. 4(1)(f) UNFCCC.
[60] Art. 10(b)(i) UNFCCC.
[61] Art. 10(b)(i) 1997 Kyoto Protocol.
[62] R. Verheyen, 'Adaptation to Impacts of Anthropogenic Climate Change', p. 132.
[63] *Ibid*.

defined in the climate change treaties. It leaves open for discretion how much climate change damage states are willing to accept.[64] Adequate could mean taking all preventative measures against climate change impacts, or taking just enough measures for survival. A second reason is that as adaptation was not considered an urgent issue at the time of the UNFCCC as there was a popular perception that when the impacts of climate change became apparent, this would be the time to adapt.[65] Thus, while the common obligations are significant, the vague language of 'adequate adaptation' gives states substantial leeway in judgement in how parties chose to implement the obligations.

4.3.3 Differentiated Responsibilities

Generally, developed countries should "take the lead in combating climate change and the **adverse effects thereof**." (emphasis added) [66] This is part of the first principle in the UNFCCC and combating the 'adverse effects' of climate change can be taken to mean adapting to the impacts of climate change.[67] Furthermore, the second principle in Article 3 of the UNFCCC gives special consideration to the "specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change." The principles in the convention therefore recognise that developed countries should take the lead in tackling adaptation, helping least developing countries who are most vulnerable. Thus, differentiation is specifically applied to countries vulnerable to the impacts of climate change.

To operationalise these principles, the treaties and COP/MOP decisions provide for differentiation in the implementation of adaptation measures. In relation to the aforementioned adaptation obligations in Article 4(1) of the UNFCCC, the developed parties must "provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs"[68] of these obligations. This commitment should "take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties".[69] Furthermore, Article 4(4) of the UNFCCC states developed countries shall "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". This duty is supported by Articles 4(8) and 4(9) stating that the parties should give full consideration to the actions needed to meet the needs of developing countries and least developed countries arising from the adverse impacts of climate change.[70] Finally, Article 4(7) provides developing countries with the leverage to enforce these commitments as the "extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments" on financial resources. Although

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[64] *Ibid*.
[65] S Schipper *et al*., *The Earthscan Reader*, p.7.
[66] Art. 3(1) UNFCCC.
[67] Ott *et al*., 'North-South Dialogue on Equity in the Greenhouse', p. 22.
[68] Art. 4(3) UNFCCC.
[69] Art. 4(3) UNFCCC.
[70] Adaptation is also implied in a number of other paragraphs in the UNFCCC; in relation to 'Research and systematic observation' in Art. 5 in conjunction with Art. 4(1)(g), 'Education training and public awareness' in Art. 6 in conjunction with Art. 4(1)(i) and Technology Transfer in Art. 4(5).

this provision is not specific to adaptation, it implies that developing countries do not have to do anything until developed countries provide the finance and technology.[71]

An example of developed countries implementing the adaptation funding obligation is through National Adaptation Programmes of Action (NAPA's). The implementation of Article 4(1)(b) of the UNFCCC to formulate and implement adaptation policies was problematic for many developing countries as there was a lack of data and capacity to access urgent adaptation needs. As a result, NAPA's were introduced at COP 7. This is a tool for least developing countries to identify and prioritise urgent adaptation requirements and estimate funding needs. To date, 44 out of 48 NAPA's have been submitted to the UNFCCC Secretariat. Together, they identify almost 500 projects at a cost of 1.7 billion USD. Financial support to implement the projects will come from the LCD Fund. Currently, the deposited donations from developed countries to the fund stand at 135 million USD.[72] Although the funding is far below the required amount and must be increased, the fact that almost all least developing countries have identified their urgent adaptation needs is a significant step forward. The next step will be to assess the long term adaptation requirements.

It can be seen that financial support from developed countries is a major component of international adaptation and application of the CBDR principle. The Kyoto Protocol builds on the provisions in the UNFCCC, providing a way to fund adaptation. Article 12(8), provides that a share of the proceeds of Certified Emission Reductions from the Clean Development Mechanism should be used to "assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation". As adaptation has gained increasing awareness at subsequent COP/MOPs, a number of funds have been established to raise finances for adaptation. These are now examined.

4.3.4 Financing adaptation

A critical aspect of adaptation is determining who will bear the costs. Funding is the prerequisite for determining adaptation needs and implementing programmes and strategies for capacity building and technology transfer. The current funds and financial mechanisms for adaptation are complex. A number of multilateral funds[73] have been established under the climate change treaties that are relevant for adaptation. Article 11 of the UNFCCC created the Least Developed Countries Fund, Special Climate Change Fund and GEF Trust fund and Article 12(8) established the Adaptation Fund. The four funds are evaluated in light of the principles of equity and CBDR. Each of the funds are briefly described below, followed by an analysis.

4.3.4.1 The Three UNFCCC Climate Funds

The Least Developed Countries Fund was established in 2001 at the seventh session of the Conference of the Parties in Marrakesh. It aims to help states which are especially vulnerable to the adverse impacts of climate change, namely least developed countries (LCD's), by assisting them to carry out National Adaptation

[71] See the discussion earlier in section 3.3.1.
[72] As of May 2009, see Overseas Development Institute, Climate Funds Update, http://www.climatefundsupdate.org/listing/least-developed-countries-fund (accessed 10 May 2010).
[73] There are also a number of bilateral funds.

Programmes of Action (NAPAs). The purpose of NAPAs is to identify urgent and immediate needs of LDCs to adapt to climate change. As of June 2009, the Least Developed Countries Fund had disbursed 31.8 million USD.[74] The two other UNFCCC climate funds, the Special Climate Change Fund and GEF Trust Fund, are not focused specifically on adaptation, although it is one aspect of their mandate.[75] Currently, they are undertaking pilot projects for adaptation.

It has been stated that the success of these funds will be a measurement as to whether the principle of CBDR has been implemented in the climate change treaties.[76] Although the funds are not yet fully operational, there have been two main controversial equity aspects concerning the above funding mechanisms. First, the funds are underfinanced and consequently cannot meet the needs of developing countries. Moreover, contributions to all three funds are considered part of Official Development Aid (ODA), and thus do not go beyond existing commitments by developed countries. Developing countries view finance going beyond ODA as very important for demonstrating responsibility for climate change. The second issue has been the role of the GEF and procedural equity. The Global Environmental Facility (GEF) was established to fund global environmental issues and thus has the criteria of 'global benefits' and 'incremental costs' for financing projects. While these make sense for many environmental projects, they do not reflect the nature of adaptation.[77] With adaptation it is difficult to show that a project will have global environmental benefits. The GEF has noted that this test does not apply to these funds,[78] but confusion remains as to whether it is applicable.[79] In general, developing countries have voiced opposition to the GEF managing these funds because of previous difficulties accessing the funds with bureaucratic processes. Also, while the GEF has taken on more funding programmes, the level of funding has not increased alongside this.[80] As the funds are not from donor countries, but rather internationally agreed funds, they argue that there is no reason for the GEF to manage it. On the other hand, there is currently not an adequate alternative to the GEF. There is not another international institution that has the immediate capacity to take on this role, and in the past ten years there have been substantial reforms to improve the governance of the GEF.

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[74] Overseas Development Institute, Climate Funds Update, http://www.climatefundsupdate.org/listing/least-developed-countries-fund (accessed 10 May 2010).
[75] The Special Climate Change Fund finances projects relating to adaptation, technology transfer and capacity building, energy, transport, industry, agriculture, forestry and waste management; and economic diversification. GEF Trust Fund funds mitigation and adaptation projects
[76] F. Soltau, *Fairness in International Climate Change Law and Policy*, 2009, p.220.
[77] R. Klein *et al*, 'Integrating Mitigation and Adaptation into Climate and Development Policy: Three Research Questions', 2005 *Environmental Science and Policy*, no. 8, pp. 579-588, p. 581.
[78] Decision 7/CP.7 and 10/CP.7, FCCC/KP2001/13/Add.1.
[79] Burton, I., *et al*., *Adaptation to Climate Change: International Policy Options*, Pew Centre, 2006, p. 14; M. Mace 'Adaptation under the UN Framework Convention on Climate Change: The International Legal Framework' in N. Adger et al, *Fairness in Adaptation to Climate Change*, 2006, pp. 53-77.
[80] D. Freestone, 'The Establishment, Role and Evolution of the Global Environment Facility: Operationalising Common but Differentiated Responsibility?' in Ndiaye (eds.), *Law of the Sea, Environmental Law and Settlement of Disputes*, 2007, p. 1107.

4.3.4.2 The Adaptation Fund

The Adaptation Fund was established to help particularly vulnerable countries adapt to climate change.[81] The legal foundations for the fund began in Article 12 of Kyoto Protocol establishing the CDM, specifying that a share of the proceeds must be used for funding adaptation.[82] The fund subsequently evolved though a series of COP/MOP decisions[83]. The Adaptation Fund Board is the operating entity and it is supported by a Secretariat and Trustee. Controversially, the GEF is the Secretary and the World Bank the Trustee. For now this is on an interim basis and is subject to review in 2012. The Adaptation Fund Board is now in operation,[84] although to date no funds have been disbursed.

Unlike the Least Developed Countries Fund and Special Climate Fund, the AF receives the majority of its funding from an "adaptation levy" on Certified Emission Reductions (CERs) generated under the CDM. This contrasts to the traditional approach of donations by developed states. In this sense the fund is rather unique.[85] The levy, which is essentially is a 2% tax on CERs, has been welcomed by many developing countries because it is additional to ODA, reflecting one of the strongest calls from developing countries. The money will come from private entities and not national governments, an innovation given the difficulties of securing private involvement at the international level. In this way it could be said the tax operates as an application of the polluter pays principle.

However, the source of finance could be risky. Relying on CERs generated to fund adaptation means depending on market conditions. The carbon market is by nature unpredictable and the price of carbon has fluctuated since the inception of the market. Therefore, it raised questions as to whether it can be relied upon to secure the funds that are required for adaptation. Moreover, the future of the adaptation fund is dependant on the future of the CDM and whether or not the mechanism continues in the post 2012 regime. At the moment this is quite uncertain. However, despite this, the predicted revenue for the adaptation fund is much higher than that of donations to other funds for adaptation. Moreover, as the fund is based on CDM revenues, and the CDM is implementing the CBDR principle,[86] it can be seen as applying the principle.

Finally, there is equity in the procedural governance of the fund. This contributes to at least formal equity between countries. The levy is collected by the CDM Executive Board, the institution overseeing the CDM mechanism and then transferred to the Adaptation Fund. The Adaptation Fund Board is composed of 16 members with

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[81] For an analysis on the development of the Adaptation Fund see R. Czarnecki *et al*, 'The Adaptation Fund after Poznan', 2009 *Carbon and Climate Law Review*, pp. 79-88.
[82] Art. 12(8), Kyoto Protocol.
[83] In Marrakech in 2001 the establishment of the fund was agreed upon (COP 7, Decision 10/CP.7, "Financing under the Kyoto Protocol"), and during the CMP in 2005/06 the operationalization of the fund was decided. (COP/MOP 1 Montreal, 2005, Decision 28/CMP.1 "Initial Guidance to an entity entrusted with the operation of the financial system of the Convention for the operation of the Adaptation fund") and COP/MOP 2 Nairobi, 2006 asserted that the fund operates under the "authority and guidance of and be accountable to the COP/MOP (Decision 5, COP/MOP 2.)
[84] The institutional procedures and priorities for the fund were adopted at Poznan. Decision 1/CMP.4.
[85] E. Sopoaga, *et al*, *On the Road to Bali: Operationalising the Kyoto Protocol Adaptation Fund,* International Institute for Environment and Development, 2007.
[86] Although see earlier section 3.3.2.2.

strong recipient country representation.[87] Decisions by the Board are taken by consensus; if no agreement has been reached, decisions are taken by a two-thirds majority of the members present at the meeting on the basis of one member, one vote.[88] Procedural equity gives legitimacy to the operation of the fund. As a result it is popular with developing countries who have since called for the adaptation levy to be extended to cover proceeds from joint implementation and emissions trading also.

4.3.5 The Bali Action Plan

The funding mechanisms that have evolved from the climate treaties demonstrate that adaptation is becoming a more important aspect in the climate change regime. Subsequent COP/MOPs support this, with COP 13 considered a breakthrough for adaptation recognition. The Bali Action Plan (BAP)[89] established a 'shared vision' for long term cooperation, giving equal importance to adaptation and mitigation.[90] It affirmed that adaptation is one of the four pillars[91] to the post 2012 regime and introduced a strict time frame to complete the work by the COP 15 in Copenhagen. In order to implement this plan, the BAP created the Ad Hoc Working Group on Long Term Cooperative Action under the Convention (AWG-LCA), which among other areas is working on adaptation. This working group has been responsible for really starting the process going for adaptation. Article 1(e)(iii) of the Bali Action Plan, for example, calls for innovative funding to help the most vulnerable developing countries fund adaptation measures. The post 2012 negotiation treaty, which was drafted by the AWG-LCA for the COP 15 had a specific chapter on adaptation.[92] Thus, the Bali Action Plan and creation of the AWG-LCA was seen as great progress for adaptation.[93]

4.4 Analysis of Adaptation in the Climate Treaties

The examination of the CBDR principle for adaptation raises a number of points. First, adaptation and the CBDR principle are addressed in the climate change treaties. There are duties for all parties to formulate and implement measures for adequate adaptation-recognising that adaptation is a common problem to be tackled by all. Moreover, there are duties on developed countries to help developing countries meet the costs of adaptation. This includes a specific provision stating that developing country Parties that are particularly vulnerable to the adverse effects of climate change must be helped with adaptation costs.[94] Thus, there is further differentiation between developing states in light of those very vulnerable to climate change. In addition, four multilateral funds have been established to assist in implementing these

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[87] The representation comprises of: Two representatives from each of the five United Nations regional groups, one representative of the small island developing States, one representative of a least developed country, two other representatives from the Parties included in Annex I to the Convention and two other representatives from the Parties not included in Annex I to the Convention, FCCC/KP/CMP/2008/11/Add. 2.

[88] To date there has always been consensus.

[89] Decision 1/CP.13.

[90] Decision 1/CP.13; For a discussion see, United Nations Environment Program *et al*., *Negotiating Adaptation: International Issues of Equity and Finance,* 2009, p. 3.

[91] The Bali Action Plan states there are 5 key building blocks required for the post 2012 regime; shared vision, mitigation, adaptation, technology and financial resources.

[92] FCCC/AWGLCA/2009/INF.1.

[93] Cole, 'Climate Change, Adaptation, and Development', p.19.

[94] Art. 4(4) UNFCCC.

obligations. Overall, the provisions reflect that adaptation raises equity concerns, particularly in relation to geographic vulnerability, and they apply differential treatment to the obligations. However, the provisions are phrased in broad language, giving discretion to the parties on the extent to which the obligations must be implemented and over what the obligations exactly entail. The provisions, therefore, provide some formal equity between states, yet as they are not fully implemented or very detailed obligations, they are unlikely to result in greater substantive equity.

Secondly, as there are few provisions on specifically for adaptation in the climate treaties, they do not and can not comprehensively address the issues and needs raised by adaptation. This includes, for example long term measures assistance on adaptation to ensure intergenerational equity. The NAPAs are a positive tool in helping least developed countries with adaptation. However, they only identify and cost urgent adaptation needs, they do not take into account the long term infrastructure costs.[95] Insurance has been proposed as a tool to address climate risks. The UNFCCC calls on parties to consider this,[96] and the issue was given substantial consideration at the COP 15. This approach will need to involve the private sector and ensure that the most vulnerable people are covered by insurance.[97] One problem a global insurance scheme might encounter is similar to problem of the CDM, of involving business, which has the objective of profit making, and using the market to apply moral and equity objectives.[98]

Another aspect missing in the treaties is the clear differentiation of assistance for adaptation. The prioritisation of adaptation support is not clear in the climate treaties. Prioritisation of adaptation needs in terms of capacity and state circumstances is a key aspect of the CBDR principle and conveying the capacity dimension of equity. The general obligations in Article 4(3), including the common obligations for adaptation, provide that developed countries should assist developing countries. Least developing countries have criticised this as large developing countries have been much more successful at securing finance under these obligations.[99] The provisions in the climate treaties use 'particularly vulnerable' and 'least developing countries' in the adaptation provisions and the NAPAs, implying these countries will be prioritised. However, these terms are not defined and there are not clear criteria on allocation assistance. Many countries will argue that they should be prioritised. The CBDR principle is not designed to determine how exactly the prioritisation should be undertaken, but it does provide basis for the differentiation and a framework to debate the capacity of states to respond, special circumstances, responsibility and future needs. It should be applied alongside scientific evidence[100] on vulnerability, and other relevant fairness

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[95] The World Bank, *The Cost to Developing Countries of Adapting to Climate Change: Executive Summary*, 2009, p.1.
[96] Art. 4(8) UNFCCC.
[97] For a discussion on adaptation and insurance see, L. Bouwer *et al*, 'Financing Climate Change Adaptation', 2006 *Disasters*, no. 30, pp.49-63; E. Mills, 'Synergisms Between Climate Change Mitigation and Adaptation: An Insurance Perspective', 2007 *Mitigation and Adaptation Strategies for Global Change*, no. 12, pp. 809-842; ClimateWorks Foundation *et al*., *Shaping Climate-Resilient Development: A Framework for Decision Making*, 2009.
[98] See 3.3.2.2 A Critique of the Flexible mechanisms.
[99] R. Verheyen, 'Adaptation Funding: Legal and Institutional Issues' in J. Smith *et al*., *Climate Change, Adaptation and Development*, 2003, p. 194.
[100] See for example N. Diffenbaugh *et al*., *Indicators of 21st Century Socioclimatic Exposure*, Proceedings of the National Academy of Sciences, 2007.

principles. Thus, there is a limit to the role of the CBDR principle in determining responsibilities for adaptation.

A third comment can be offered on the finance for adaptation. The analysis indicated this is a key issue and that the financial mechanisms are a positive step in addressing adaptation in line with CBDR principle. They do prioritise countries vulnerable to climate change and the procedural equity of the funds, particularly in the Adaptation Fund allows for countries with strong adaptation needs to influence the decision making process. However, there is still a lot of work to be done. Adaptation is a patchwork of bilateral and multilateral funding initiatives and not a comprehensive functioning regime.[101] There are logistical problems in accessing the funds and the interplay of the different sources of funding. The funds do not address the burden sharing the costs of adaptation between developed countries, currently the pledges are voluntary. This aspect does not follow the CBDR principle as the contributions are not based on capacity or responsibility. However, in reality, transfers of public funds will never meet all the financial needs of developing countries.[102] Moreover, it is difficult to differentiate between transfers of funds for climate change and those that would have occurred anyway. To raise the finances required by adaptation, the private sector will have to be involved and it could be beneficial to define which aspects of adaptation these funds will finance.

In light of these comments it can be seen that adaptation was and continues to be a secondary issue to mitigation. It could be ventured, therefore, that the principle of CBDR is in part used by developed countries to get developing countries to participate on 'northern' concerns such as mitigation but not given as much importance for adaptation as it affects developing countries more.[103] However, as adaptation is important for developing countries, their participation in the climate treaties depends on differential treatment for adaptation. One problem in applying the CBDR principle to adaptation is that the issue is very broad. As greater research is being undertaken on the topic it is clear that adaptation is a significant problem requiring a range of responses. These measures will differ over varying time scales and be needed at all levels of governance. There is no definition of adaptation in the climate treaties. It could be valuable to agree on definition of what adaptation means in the context of the treaties to ensure there are clearer responsibilities that the issue is given as much attention as mitigation. It could also be useful to rethink the objective of the climate change treaties to incorporate the goals of adaptation.

Finally, adaptation is an issue raising much wider questions than the climate change regime had previously had to substantially deal with. The problem is much broader than mitigation. It impacts, for example, on human rights, biodiversity and desertification. Action taken in these areas will affect adaptation, raising the potential

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[101] Burton *et al*, *Adaptation to Climate Change*, p.13.

[102] J. Ashton *et al*, 'Equity and Climate Change in Principle and in Practice' in J. Aldy et al, *Beyond Kyoto: Advancing the International Effort Against Climate Change*, 2003, p.72.

[103] D. French, 'Developing States and International Environmental Law: The Importance of Differentiated Responsibilities', 2000 *International and Comparative Law Quarterly*, no. 49, pp. 35-60, p. 57; . Cullet, 'Differential Treatment in International Law: Towards a New Paradigm of Inter-state Relations', 1999 *European Journal of International Law*, no. 10, pp. 547-582, p. 574. It can also be noted that the UN Convention to Combat Desertification has much weaker language and application of the CBDR principle and desertification is an issue that affects developing countries, see Soltau, *Fairness in International Climate Change Law* p.186.

need to mainstream adaptation into other areas of international law. This could require a broader perspective on the CBDR principle.

Overall, international adaptation is still in its infancy[104] and equity has yet to be thoroughly examined in relation to adaptation in the climate change regime.[105] There are suggestions in the future that there may need to be separate protocol just for adaptation.[106]

4.5 Adaptation at the COP 15 and under the Copenhagen Accord

The previous sections examined adaptation and the CBDR principle in the international climate treaties and developments under the COP/MOP decisions. It was concluded that although the treaties address adaptation and apply the principle of CBDR, there is still significant work to be done in implementing the responsibilities. In the following section we turn to an examination of adaptation at the COP 15 and under the Copenhagen Accord. Although the outcome of the conference is not legally binding, it is valuable to examine the developments as an indication of where the negotiations are heading for the post 2012 climate regime.

4.5.1 The COP 15

The COP 15 in Copenhagen was the largest environmental conference that has taken place, and perhaps the most fraught. The expectations were high, with UNFCCC led high level negotiations in Bonn, Bangkok and Barcelona throughout 2009, building up momentum before Copenhagen. Aside from difficulties reaching an agreement on the post 2012 regime for climate change, there were major practical problems. The Bella centre had a capacity for 15,000 people at any time. However with many more registered to attend, a number of delegates, noticeably from developing countries, were left queuing outside in the cold for hours before they could enter. Overall, there was poor organisation, combined with a weak and clumsy presidency and a cold winter set in an economic crisis. These issues didn't help to inspire a positive negotiating atmosphere and over the course of two weeks there were long, intense negotiations. Heads of states arrived in the final days to find no agreement and stayed late into the night negotiating. The outcome of the COP 15 was the Copenhagen Accord, a five page political agreement, leaving fundamental divisions over equity and fairness unresolved. However, while it is disappointing that a legally binding agreement was not agreed upon, significant attention was drawn to issues of global justice and there were greater calls for increasing the finance for adaptation to climate change. The principle of CBDR was at the heart of these discussions.

The negotiations on climate change took and continue to take place under two tracks. The division is between the Ad Hoc Working Group/ Kyoto Protocol (AWG-KP) negotiating under the Kyoto Protocol and the Ad Hoc Working Group on Long-Term Cooperative Action (AWG-LCA) negotiating under the UNFCCC. As some parties to the UNFCCC have not ratified the Kyoto Protocol, or do not wish to continue under

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[104] Verheyen, 'Adaptation to Impacts of Anthropogenic Climate Change', p.130.
[105] P. Cullet, 'Liability and Redress for Human Induced Global Warming: Towards an International Regime', 2007 *Stanford Journal of International Law*, vol. 43 pp.99-121, p.104.
[106] See Generally S. Huq *et al*, 'Mainstreaming Adaptation in Development', *IDS Bulletin*, no. 35, pp. 15-21 and Bouwer *et al*, 'Financing Climate Change Adaptation' , p. 50.

the Protocol, the negotiations take place under twin tracks. Adaptation work is undertaken in the AWG-LCA, and within this working group significant progress was made. Unfortunately, though, this progress was not reflected in the Accord.

The AWG-LCA working group was due to complete its work in 2009 at Copenhagen. However, as agreements could not be reached, the COP extended its mandate to the end of next year.[107] The AWG-LA negotiating text for Copenhagen was a very complex document, with around 200 pages and thousands of brackets around the text where there was disagreement.[108] Some progress was made on adaptation at the COP 15. Many of the options were narrowed down,[109] although much of the text remains in brackets. The draft conclusions aimed to establish a Copenhagen Adaptation Framework Programme. This a detailed list of actions for developing countries to undertake, supported by developing countries. These include assessing the impacts of climate change, the adaptation actions needed and strengthening institutional capacities.[110] It is explicitly noted that parties are invited to do this, taking in to account their common but differentiated responsibilities and capacities. This shows the importance of the principle in underpinning the obligations of developed countries. The rest of the AWG-LCA work undertaken at Copenhagen contains a number of different options for moving forward as well as bracketed text on the key issues such as the amount of funding and the timescale. The CBDR principle is present throughout the wording. However, the final negotiations will tell if the CBDR retains a prominent role.

Many equity concerns over adaptation were raised and discussed during the negotiations. This included the prioritisation of assistance for adaptation for countries with the least capacity and the most vulnerable to climate change,[111] and whether developed countries have a historical ecological debt.[112]

4.5.2 Adaptation under the Copenhagen Accord

The Copenhagen Accord was drafted by heads of state from the BASIC[113] (Brazil, South Africa, India and China) countries, the USA and EU. When the Accord was presented to the rest of the parties, a number of countries objected. As a result, the Conference of the Parties could only "take note of the Copenhagen Accord"[114]. Yvo de Boer, the Executive Secretary of the UNFCCC stated, "since the Parties…merely took note of [the Accord], its provisions do not have any legal standing within the UNFCCC process even if some parties decide to associate themselves with it".[115]

As the Copenhagen Accord was drafted by countries most interested in mitigation, this is reflected in the content. The discussion of the Accord centres on the potential

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[107] Decision -/CP. 15.
[108] FCCC/AWGLCA/2009/14.
[109] See M. Doelle, 'The Legacy of the Climate Talks in Copenhagen: Hopenhagen or Brokenhagen?', 2010 *Carbon and Climate Law Review*, pp.86-100, p.88 et seq.
[110] Art. 4, FCCC/AWGLCA/2009/L.7/Add.1
[111] FCCC/AWGLCA/2009/14, p.123.
[112] *Ibid*, p.22.
[113] This was a new negotiating group formed at Copenhagen.
[114] The Copenhagen Accord, FCCC/CP/2009/11/Add.1, p.4.
[115] UNFCCC, Executive Secretary, Notification to Parties: Clarification relating to the Notification of 18 January 2010 (25 January 2010).

for developing countries with rapidly growing economies to take on mitigation targets. From the adaptation perspective, however, the Copenhagen Accord also raises some important points. Most noticeably, it has been criticised as taking a step backwards.[116]

Paragraph three on adaptation begins, "Adaptation to the adverse effects of climate change and the potential impacts of response measures is a challenge faced by all countries". Although the paragraph acknowledges adaptation as a common problem, it stops short of providing that countries have different responsibilities and capabilities for dealing with adaptation.[117] It ignores the fact that countries that have contributed the least to the problem of climate change will be the most affected. The issue of responsibilities is distinctly lacking from the paragraph, although it does provide that international cooperation is required to support developing countries and in particular countries most vulnerable to climate change. In addition, the paragraph states that developed countries shall "provide adequate, predictable and sustainable financial resources, technology and capacity-building to support the implementation of adaptation action in developing countries".[118] While this is positive, compared to the legally binding 1992 UNFCCC,[119] the language is neither stronger nor more detailed, despite adaptation now being a much greater issue.

The question of country prioritization for adaptation assistance was very contentious at Copenhagen. As a result, a very broad definition of the term 'vulnerable countries' was given. This was to overcome the concerns of some countries that prioritizing certain states above others would hinder their ability to access funds for their own adaptation requirements. The Accord specifies that countries particularly vulnerable to climate change are "especially least developed countries, small island developing States and Africa". In the Bali Action Plan a narrower definition was agreed upon. This stated that vulnerable countries consisted of "least developed countries and small island developing States, and further taking into account the needs of countries in Africa affected by drought, desertification and floods".[120] This built on the even more detailed 1992 UNFCCC definition of vulnerable countries, "low-lying and other small island countries, countries with low-lying coastal, arid and semi-arid areas or areas liable to floods, drought and desertification, and developing countries with fragile mountainous ecosystems".[121] Thus, it could be said that over time, the definition of a vulnerable country has become progressively broader and less clear. One explanation could be that as greater research is undertaken on adaptation, it is clear that many more countries will be severely affected. However, the definition in the Copenhagen is too broad. It is difficult to prioritize funding when the whole African continent is included. In article 8 of the Copenhagen Accord on funding states, it provides, "Funding for adaptation will be prioritized for the most vulnerable developing countries, such as the least developed countries, small island developing States and Africa". The reference to "such as" implies that these countries are just an example of a much longer list of countries. Although the Accord was drafted quickly under great

[116] L. Siegele, *Adaptation Under the Copenhagen Accord,* Foundation of International Environmental Law, 2010.
[117] *Ibid*, p.3.
[118] Art. 3, Copenhagen Accord .
[119] See in particular, Art. 4(4) UNFCCC.
[120] The Bali Action Plan, Article 1(c)(i).
[121] *Preamble*, UNFCCC.

international pressure, this inconsistent treatment will not help to resolve difficult questions and may prolong decisions on funding. Moreover, the approach is not in line with the principle of CBDR and respective capabilities.

Lastly, the Copenhagen Accord addressed funding adaptation. Paragraph 8 of the Accord emphasizes the importance of funding for adaptation and explicitly states that funding mechanisms for adaptation should have a "governance structure providing for equal representation of developed and developing countries". In support of this, the Copenhagen Green Climate Fund was established, with adaptation as one of the priority areas.[122] The fund has been hailed as one of the successes to come out of Copenhagen. While this is a significant amount of money, it is to be split between a range of activities and not only adaptation measures. The fund intends to support projects related to mitigation including Reducing Emissions for Degradation and Deforestation (REDD), adaptation, capacity-building, technology development and transfer.[123] Moreover, the responsibility between developed countries to contribute to the fund has not been decided upon. At the moment the contributions are voluntary, likely to come from ODA and unlikely to reflect responsibility for adaptation. This does not inspire solidarity between states for adaptation.

The Copenhagen negotiations began to tackle some of the substantial equity issues surrounding adaptation. The discussed considered who will pay, who is responsible and crucially how to prioritise assistance for adaptation. These are not easy questions. The principles of equity and CBDR have a role to play in shaping the debate. However, they are not the only considerations. Developed countries will have to provide the finance and cost effectiveness and some degree of control over where the money goes.

4.5.3 Conclusions on the COP 15

Analysis of the COP 15 and Copenhagen Accord demonstrates that mitigation still dominates the climate agenda. This is evident from both the Accord and its subsequent analyses.[124] Although the work of the LGW-LCA was not completed and adopted by the COP, the negotiation text shows that equity was on the agenda and is was difficult to agree upon. Adaptation is of most importance to developing countries that are particularly vulnerable. These are smaller countries, who are the least able to represent themselves in the negotiations. It is essential that the voices of these countries are heard above or along with those of larger and developed states to achieve at least formal equity. The Copenhagen Accord, drafted by a few large states with interests primarily in mitigation, does not reflect the needs of countries vulnerable to climate change.

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[122] Art. 10, Copenhagen Accord.
[123] *Ibid*.
[124] See for example, C. Egenhofer *et al*, *The Copenhagen Accord: A First Stab at Deciphering the Implications for the EU*, Centre for European Policy Studies, 2009; D. Bodansky, 'The Copenhagen Climate Change Conference: A Post Mortem', 2010 *American Journal of International Law*, no. 194, forthcoming; J. Rojeli *et al*, 'Copenhagen Accord Pledges are Paltry', 2010 *Nature*, no. 464, pp. 1126-1128; W. Sterk *et al, Something was Rotten in the State of Denmark: COP-Out in Copenhagen*, Wuppertal Institute, 2010; B. Muller, *Copenhagen 2009: Failure or Final Wake Up Call for Our Leaders?*, Oxford Institute for Energy Studies, 2010.

Overall, the Copenhagen Accord side-stepped many of the difficult equity concerns in adaptation. This includes determining the scope of adaptation, translating the responsibilities into clear obligations and finding a way to divide the burden of responsibilities and distribute them among recipients. The failure to agree on these and find a compromise between historical responsibility and capabilities has led to a pledged based approach rather the application of the CBDR principle.[125] However, the Copenhagen Accord is only a political agreement and negotiations are continuing, with all parties to the convetion, under the UNFCCC towards COP 16 in Cancun.

[125] M. Doelle, 'The Legacy of the Climate Talks in Copenhagen: Hopenhagen or Brokenhagen?', 2010 *Carbon and Climate Law Review*, pp.86-100, p.88.

5. The European Union, Equity and Adaptation

This chapter turns to an examination of the practical implementation of the common but differentiated responsibilities (CBDR) principle by developed countries for adaptation. While the previous chapters examined the meaning of the role of equity and the CBDR principles for adaptation in international law, the reality of state implementation is quite different. In this chapter, the European Union (EU) is analysed as a group of 27 developed countries who have ratified the climate treaties, and thus accepted the CBDR principle into EU law. The EU is a particularly interesting example of the application of the CBDR because it is considered a leader in climate change negotiations[1] and often cited as recognising the ethical aspects of climate change.[2] In addition, EU law is regarded as one of the most successful international legal systems as it often has ambitious policy and strong enforcement.[3]

This chapter seeks to examine the extent to which the CBDR principle is applied to EU external adaptation law and policy.[4] In order to answer this question, the EU external climate change policy and law is analysed through the three main features of the CBDR principle, 'common action', 'differentiated action' and the dual objective of 'substantive equity and practical implementation'. The focus of this chapter is the way in which the EU implements its duties towards developing countries under CBDR principle and the climate treaties for adaptation.[5] The analysis is structured by first considering EU climate change policy generally, before turning to a specific examination of the external adaptation policy. Finally, an analysis and conclusion is offered.

5.1 The CBDR principle in EU law

The CBDR principle is not specifically incorporated as a legal principle in the EU Treaty on the Functioning of the European Union (TFEU). However, as the EU is a party to the UNFCCC and the Kyoto Protocol, both as the EC and as individual member states,[6] it is part of EU law. International agreements that all member states sign are considered secondary EU law. The TFEU explicitly provides that the EU's international action and policies shall be "guided by principles of international law"[7]

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[1] S. Oberthur *et al*., 'EU Leadership in International Climate Policy: Achievements and Challenges', 2008 *The International Spectator*, no. 43, pp. 35-50; C. Damro *et al*., *The Kyoto Protocol's Emissions Trading System: An EU-US Environmental Flip-Flop*, Working Paper no.5, European Union Centre, Centre for West European Studies, University of Pittsburgh, 2003.

[2] P. Harris, 'Environment, History and International Justice', 1997, *Journal of International Studies*, no. 40, pp. 1-33, p. 1.

[3] K. Alter, *Establishing the Supremacy of European Law: The Making of an International Rule of Law in Europe*, 2001, p.1.

[4] The EU also has internal burden sharing between member states, such as burden sharing mitigation targets. This could be seen as an application of the CBDR principle. Full examination of this aspect is outside the scope of this thesis.

[5] See Chapter 4.

[6] For further discussion on the legal nature on the EU in international negotiations, see T. Delreux, "The European Union in international environmental negotiations: a legal perspective on the internal decision-making process", 2006 *International Environmental Agreements: Politics, Law and Economics*, no.6, pp. 231-248.

[7] Art. 21, Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union, 2010/C 83/01, entry into force 1st December 2009.

As the CBDR is a principle of international law, EU external policy on climate change should be guided by this principle. However, 'guided' is vague term, providing for significant discretion.

The legal basis for EC environmental law and policy is found in Article 191 of the TFEU. This provides that EU policy should contribute to the objectives of "promoting measures at the international level to deal with regional or worldwide environmental problems, and in particular combating climate change."[8] Noticeably, climate change is specifically mentioned, an addition that was inserted by the Lisbon Treaty. The EU external competence is stated in Article 191(4); "the Union and the Member States shall cooperate with third countries and with the competent international organisations. The arrangements for Union cooperation may be the subject of agreements between the Union and the third parties concerned". Therefore, the EC has competence to enter into international agreements and must follow the procedure under Article 218 TFEC. It is on this basis that the EU establishes external policy encompassing the CBDR principle. Below the general approach is examined, followed by a specific analysis of external adaptation policy.

5.2 General EU approach to CBDR

The EU has sought to be a leader in international climate change.[9] When the USA repudiated the Kyoto Protocol, the EU found itself as the central player in climate negotiations. Since then, the EU has developed an ambitious and extensive climate change programme. In particular, the European Council has been significant in advancing EU climate action and promoting ambitious international action.[10] International EU climate policy and law embodies the principle of CBDR, at least in the formal sense. In general, the EU climate policy tries to implement the CBDR principle. The principle is often referenced in international climate policy documents and it is reflected in the policy discourse.

Currently, the core EU climate policy for mitigation is the 'Climate and Energy Package' 2007,[11] which was endorsed by the European Parliament and Council in December 2008, becoming law in June 2009. For the commitment period beyond 2012, the aim is to prevent the overall global annual temperature exceeding 2°C above pre-industrial levels. This is based on IPCC scientific evidence that to go beyond this temperature would have disastrous consequences.[12] In light of this, the EU has

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[8] Art. 191 (1), Treaty on the Functioning of the European Union.

[9] For further discussion on this topic see, J. Gupta *et al*., 'The EU's Climate Leadership: Reconciling Ambition and Reality', 2001 *International Environmental Agreements: Politics, Law and Economics*, no.1, pp. 281-299; M. Groenleer *et al*., 'United We Stand? The European Union's Actorness in the Cases of the International Criminal Court and the Kyoto Protocol', 2007 *Journal of Common Market Studies*, no. 45, pp. 969-98.

[10] S. Oberthur *et al*., *The New Climate Policies of the European Union: Internal Legislation and Climate Diplomacy*, 2010, pp.12-13.

[11] Also know as the "20 20 by 2020" package, it consists of four parts; reforming the EU ETS, establishing emission reduction targets, designing a legal framework for carbon capture and storage and binding targets for renewable energy. Directive 2009/28/EC, OJL 140/16, 5.6.2009; Directive 2009/29/EC, OJL 140/63, 5.6.2009; Directive 2009/30/EC, OLJ 140/88, 5.5.2009; Directive 2009/31/EC, OLJ 140/114, 5.6.2009

[12] R.K. Pachauri *et al*, eds, *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change,* 2007.

committed to reducing at least 20% of greenhouse gas emissions by 2020 compared to 1990 levels. The EU has also stated that it will increase this reduction to 30% if there is an 'acceptable' international climate agreement. 'Acceptable' to the EU means that the international agreement must contain commitments by other developed countries with comparable emission reduction targets and commitments from economically advanced developing countries. Thus, comparable action is an important equity dimension for EU mitigation policy, as emphasis is placed on the fact that everybody should take significant action against climate change. The EU position introduces a 'conditionality' that other states should cooperate also in mitigation. This could be seen as leveraging support for stronger international mitigation targets and promoting common responsibilities for climate change. However, at the COP 15 in Copenhagen this strategy was not very successful as non EU developed countries were less concerned with EU legislation and more interested in their national implications.[13]

In relation to differentiation, the general EU post 2012 position shows a shift in the interpretation of this aspect. During the drafting of the UNFCCC and the Kyoto Protocol in the 1990's, the EU advocated developed countries taking the lead in emission reduction and agreed that developing countries should not take on any mitigation targets., Although the EU maintains that developed countries, including the EU Member States, should continue to take the lead,[14] developing countries are expected to take on reduction targets also. The reasoning of the EU is that developing countries, namely the so called "BASIC countries" (Brazil, South Africa, India and China) have rapidly growing emissions from economic growth and are overtaking or are about to surpass European countries.[15] It is argued that as advanced developing countries, they have greater capacities to tackle climate change and arguably a greater responsibility given their predicted emission projections in the future. The EU has not given exact mathematical formulas on how developing countries should take on these commitments. However, the EU Copenhagen strategy stated the BASIC countries should take on meaningful emission reduction targets in the form of 15 to 30 % cuts in predicted emissions growth rates[16] by 2020. The European Council explicitly notes this approach is in line with the principle of CBDR and respective capabilities.[17] This perhaps shows an indication that following the CBDR principle is important for the EU as it legitimises its policy. In the European Commissions most recent communication on international climate policy and post Copenhagen strategy,[18] this position has been reiterated. The move towards future responsibility for climate change as a moral basis in the CBDR principle shows a greater emphasis on sustainable development and future generations. However, although the BASIC countries are now in the top 15 of the worlds biggest emitters, in terms of distributional equity their per capita emissions are still far below the average European, an equity dimension that appears not to be as important for the EU as it is for developing countries. Overall, a shift can be seen in the interpretation of differentiation, reflecting that the CBDR principle evolves over time and is closely linked to a country's national interests.

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[13] Personal communication with Mr. J. Leinen, MEP and Chairman of the EU Parliament delegation to the COP 15 in Copenhagen, 3 February 2010.
[14] COM(2010) 85 final, p. 5.
[15] R.K. Pachauri *et al*, eds, *Climate Change 2007: Synthesis Report*; COM (2010)86 final.
[16] R.K. Pachauri *et al*, eds, *Climate Change 2007: Synthesis Report*.
[17] Council of the European Union, 7224/1/07, 2.5.2007, p.13.
[18] COM (2010)86 final, p.5.

Another change in the EU application of the CBDR is balance between environmental integrity and differentiating in order to persuade more parties to be part of the treaty. Under the Kyoto Commitment period 2008-2012 countries with economies in transition, especially Russia and Ukraine, were allocated a significant number of assigned amount units (AAUs) according to the 1990 benchmark to reflect their low emissions at that time and thus lesser historical responsibility for climate change. The result was that these countries had surplus units in relation to their current emissions, so called 'hot air' and in reality did not have to reduce their emissions.[19] Whereas previously the EU agreed to this, as a means to encourage these countries to ratify the Kyoto Protocol, banking AAU's to the next commitment period is no longer favourable. It is argued that to allow this would significantly undermine the environmental integrity of developed countries? emission reductions[20] and is not in line with respective capabilities.

The new EU interpretation of the principle of CBDR places a greater emphasis on capabilities, comparable action, current and future responsibility and environmental integrity. This is a shift from the EU position in the 1990s. It can be seen that different equity dimensions, as discussed in chapter 2, inform the interpretation of the CBDR principle compared to before. This shows that perceptions of equity can differ over time.[21] However, the above analysis is centred on mitigation. In the following section we turn to the EU climate policy on adaptation, before an analysis and comparison to the mitigation approach.

5.3 EU external adaptation policy

5.3.1 Aims

The EU does not have one core external adaptation policy. Instead, there is framework for EU and non EU adaptation and a patchwork of development aid policies. First, the framework was established in April 2009 in the European Commission's *White Paper on Adaptation to Climate Change*.[22] The paper focuses on EU adaptation but also sets out the framework policy for action to support developing countries. The policy is currently in the initial stages and proposes a very broad strategy on how the EU will respond to adaptation at the international level. It is too early to comment on its implementation, however, a number of comments can be made on its objectives and the application of the CBDR principle.

A core component of the policy is that adaptation should be mainstreamed into all EU external policies. In trade, for example, there should be a liberalisation of trade in environmental goods and services to enable countries to have the resources to adapt.[23] Adaptation should also be integrated into water management, agriculture, biodiversity

[19] S. Barrett *et al*., 'Increasing Participation and Compliance in International Climate Change Agreements', 2003 *International Environmental Agreements: Politics, Law and Economics*, no. 3, pp. 349-374, p. 360.
[20] COM(2010) 86 Final, p. 6.
[21] H. Winkler, 'An Architecture for Long-Term Climate Change: North-South Cooperation based on Equity and Common but Differentiated Responsibilities' in F. Biermann *et al*., *Global Climate Governance Beyond 2012: Architecture, Agency and Adaptation*, 2010, p. 98.
[22] COM(2009) 0147 final.
[23] *Ibid*, p. 16.

and health. Disaster risk reduction in developing countries is also emphasised as a particularly important area. The mainstreaming approach reflects that adaptation is a wide reaching and complex issue with implications at the international, regional and local level. There cannot be one single measure or policy. However, mainstreaming does not mean that adaptation will always be applied across EU policies. It could be valuable, therefore to monitor and review its implementation and the extent to which it meets the EU's obligations under the UNFCCC and Kyoto Protocol. Currently, there is no monitoring or review process for this. The principle of CBDR attributes a higher status to climate change and for the EU this means that tackling international climate change should take precedence over national interests. Thus, mainstreaming adaptation could ensure that a higher priority is given to the issue.

The analysis of adaptation in chapter four showed that it is closely linked to development. The EU has an ambitious development cooperation agenda and donates almost 60% of all global development aid (ODA).[24] The European Commission integrated adaptation to climate change into its development policy in 2003,[25] noting that climate change will hinder the achievement of the millennium development goals. In order to implement this link, the Global Climate Change Alliance (GCCA) was established in 2007.[26] The GCCA is a 'cooperation and funding program' between the EU and least developing countries and small island states. It aims to create a "policy dialogue" between the countries, or in other words, agree on a consensus for adaptation policy in terms of needs and priority regions. The EU will then provide financial assistance to implement this. The Alliance can be seen as the EU undertaking its differential responsibilities for adaptation under the global climate treaties. However, it's operation and implementation will determine if the duties are truly implemented.

5.3.2 Implementation

It can be seen the EU has high objectives for adaptation. The EU currently[27] implements its external adaptation policy through two mechanisms. These are; bilateral agreements between the EU and developing countries and the aforementioned GCCA. Each of these is considered below.

First, the EU has special bilateral agreements with "partner countries" (usually developing countries) where there are trade benefits for implementing national climate change and adaptation policies and cooperating under the UNFCCC and Kyoto Protocol. The advantage to this policy is that if partner countries implement the UNFCCC and the Kyoto Protocol it strengthens the international climate change regime and cooperation between the parties. It also strengthens the EU position and influence in the negotiations because developing countries are implementing a policy designed by the EU. This aspect of the EU policy has been criticised as disrespectful

[24] M. Lanfranchi *et al*., 'Climate change in the European union development cooperation policy' in B. Richardson *et al*., *Climate Law and Developing Countries: Legal and Policy Challenges for the World Economy*, 2009, p. 386.
[25] COM(2003) 85 final.
[26] COM(2007)540 final.
[27] It is too early to assess the implementation of the White Paper on Adaptation.

of the national sovereignty of the developing countries involved.[28] While one of the six guiding principles of the 2003 European Commission's Action Plan is "primacy of national ownership of development strategies and processes",[29] the reality is debatable because the EU is giving economic incentives to implement a policy designed by the EU. This criticism illustrates one of the problems in developed countries giving effect to their CBDR responsibilities. Developed countries do not want to provide finance and support without some control over how the money is spent. However, exerting control carries connotations of colonialism. It indicates that a fairer way is to donate the money to an international fund that disperses the financial aid. However, EU bilateral arrangements are much quicker than setting up international funds. Overall the approach of bilateral agreements can be seen as the EU implementing the CBDR principle. The EU is assisting developing countries with adaptation and securing support for the international climate treaties. The approach is perhaps not what the UNFCCC had in mind, as in the climate treaties developed countries responsibility to help developing countries is not conditional; it is based on a moral duty. Furthermore, in the UNFCCC, the funding would be through multilateral funds rather than ad hoc bilateral agreements. On the other hand, the EU approach could be more effective and quicker at delivering assistance.

The second way the EU implements adaptation policy is through the GCCA. The GCCA has been operational since November 2009, funding a number of pilot projects in least developing countries (LCD's) and small island developing countries (SIDC's). The selection of countries is decided internally by the European Commission and strongly determined by the countries willingness to engage in the climate negotiations.[30] Countries seen as blocking the climate negotiation progress are less likely to be selected for funding programmes. Thus, country capacity or historical responsibility may be contributing considerations to determining who gets assistance, but the process is also very political. There are five priority areas and actions of the GCCA. It aims to help developing countries to 1) improve their knowledge base on the effects of climate change, 2) To decrease CO_2 emissions from deforestation, 3) participate in the Clean Development Mechanism, 4) To improve the preparedness to climate-related natural disasters and 5) To assist in integrating climate change into development strategies and investments. These are ambitious and far reaching objectives. However, analysis below of three of the most relevant priority areas for adaptation reveals that to truly implement this policy, stronger action is required.

The first priority under the GCCA is to improve the knowledge base on the effects of climate change for developing countries through supporting National Adaptation Programmes of Action (NAPAs).[31] This is a process under the UNFCCC secretariat where Least Developed Countries (LDCs) identify priority activities that should be undertaken to support urgent and immediate adaptation requirements.[32] The EU states it will also support similar programmes for vulnerable countries who are not LDCs, although to date, no program has been established to do this. Within the EU, the

[28] M. Lanfranchi *et al*., 'Climate change in the European union development cooperation policy', p.391.
[29] COM(2003) 85 final, p.16.
[30] Personal communication with Mr. J. Lufevere, lead negotiator on climate change for the European Commission. 25 February 2010.
[31] COM(2007) 540 final, p.5.
[32] See chapter 4.

Commission is currently in the process of setting up a 'Clearing House Mechanism' for adaptation (to be completed in 2011). As the White Paper provides, it is "an IT tool and database on climate change impact, vulnerability and best practices on adaptation".[33] The primary aim is knowledge transfer between European countries although it will also be made available to other states, with developing counties explicitly noted. The Commission also plans to fund research projects for technical solutions for adaptation. The research projects would be in EU countries and the results would be shared with least developing countries. While it is positive that adaptation research and technological solutions will be available to developing countries, adaptation needs will be significantly between the countries. Thus, the EU research and solutions alone may not be enough for developing countries to adapt to climate change.

Another key adaptation priority under the GCCA is to improve the preparedness of developing countries and societies for climate-related natural disasters, and to mitigate the risks and limit their impact. The EU currently lacks a strategic framework on Disaster Risk Reduction (DRR) to support to developing countries. The Council conclusions on an EU Strategy for Supporting Disaster Risk Reduction in Developing Countries[34] show that this problem is being addressed. Currently, the Commission funds DRR programmes on an ad hoc basis through development aid. The main setback is that the EU does not have a unified position on DRR. There are disagreements between member states over which disasters the EU should respond to (natural disasters or also man made) and how to undertake the action (sending experts from member states or contracting third parties). Additionally, there is overlap between member states national policies on developing countries and the EU policy.[35] The process is very political and all member states want to be 'seen' helping without interfering in the affairs of other countries.

The EU strategy for DRR is to support countries, giving priority to least developing? and most vulnerable countries. This should take place within the current United Nations International Strategy for Disaster Reduction and 2005 Hyogo Framework for Action. Thus, adaptation is not only an issue in the climate change regime, it must also be approached through other international agreements. The aim of the EU is to integrate DRR into development aid policies. The main funding source will be the European Development Fund (EDF), a funding instrument for providing aid for development cooperation in the African, Caribbean and Pacific states and overseas countries and territories. The Commission has not indicated how measures in countries not covered by the EDF will be funded.

While the EU seeks to improve preparedness for climate related natural disasters, there is also a need to respond in the immediate aftermath. The Civil Protection Unit in DG Humanitarian Aid and Civil Protection at the European Commission coordinates the immediate response to natural and manmade disasters both within the EU and outside. This includes disasters resulting from climate change.[36] In developing countries, the Civil Protection Unit coordinates member state assistance in the immediate aftermath of disasters and then hands over to an international "partner"

[33] COM(2009) 0147 final., p. 7
[34] Council of the European Union, 8571/09, 8.4.2009.
[35] *Ibid*, p.4.
[36] Council of the European Union, 16071/09, 17.11.2009, p.9.

organisation such as the International Red Cross or a UN agency. However, as the EU itself does not respond, instead bringing together and co-financing member state action, there are coordination difficulties.

Finally, the GCCA aims to integrate climate change into development strategies and investments. As adaptation is also a development issue, this is an important objective. In recent years EU strategies, policies and communications on development have increasingly discussed the link and implications of climate change.[37] This indicates that climate change is now a key priority in development policy. In turn this demonstrates that the EU is taking on greater responsibilities for the impacts of climate change in developing countries. It is important now that the formal acknowledgement of these responsibilities is turned into substantive results through finance for developing countries.

5.3.3 Financing

The EU finances the external adaptation policy in two ways; ODA and through the UNFCCC multilateral funds.[38] In general, while the EU significantly expanded its adaptation policy in the past five years, the finance required to implement the objectives has not. Climate change is being integrated into EU development policy but the EU development aid budget has decreased over the past few years. The EU's target is to contribute 0.56% of gross national income (GNI) in 2010, increasing to 0.7% of GNI in 2015. This is in line with UN objectives which the EU supports.[39] However, OECD reports indicate that this figure is being reduced each year and has barely increased since 1996.[40] Finance for the GCCA is similarly far below requirements to meet the objectives. Initially, 60 million Euros was pledged by the Commission to the fund. However, in 2008 the European Parliament criticised this as "woefully inadequate" and recommended that the Commission increase this to at least 2 billion Euros annually by 2010.[41] Currently, the funds stand at 140 million Euros, which is far below what is required. The Climate and Energy package proposes raising additional funding for adaptation by auctioning allowances for the EU ETS. It states that 50% of the revenue from auctioning allowances will go towards supporting adaptation in the EU and developing countries. The merit to this approach is that involves the private sector and has the potential to raise large revenues. However, as the price of allowances is dependant on the carbon market, it could be an unpredictable way of raising financial resources. In chapter 4, it was discussed that developing countries are strongly opposed to developed countries assisting with adaptation by using ODA. As climate change is due to unsustainable development by developed countries, they argue that their responsibility to assist developing countries who are now vulnerable to climate change is arguably additional to existing aid commitments.[42] However, the problem is that, some, although not all, adaptation is a

[37] Council of the European Union, 16071/09, 17.11.2009.
[38] For an analysis of the latter see Chapter 4.
[39] UN Doc. A/RES/52/2 (2000).
[40] Europe aid was 0.37% in 1996 and 0.38% in 2007.
[41] European Parliament, 2008/2131(INI), p. 5.
[42] J. Ayers, 'International Funding to Support Urban Adaptation to Climate Change', 2009 *Environment and Urbanisation*, no. 21, pp. 225-240.

development issue. [43] It makes sense to for ODA to address adaptive capacity in vulnerable countries. It is difficult, to determine boundaries between development adaptation.

5.4 Conclusions on the EU and Adaptation

Analysis of the external EU adaptation policy in light of the CBDR principle indicates the EU approach is very ambitious. The policy covers a broad range of areas, covering all of the provisions on "common responsibilities" for adaptation under Article 4 of the UNFCCC that were discussed in the previous chapter. Moreover, the EU has arguably gone beyond these obligations by integrating adaptation into development policy. The EU has, therefore, shown significant progress in supporting developing countries adapt to climate change. However, the aims of the policy are not yet fully translated in to concrete action, in particular securing the finance for the policies[44] Furthermore, sometimes the EU interpretation of the CBDR principle may be different from the intension of the international climate treaties, such as introducing a conditionality for developing countries when they receive EU assistance, or providing help to countries willing to cooperate in the international negotiations. We examine each of these aspects below.

While the objectives of the EU external adaptation policy are ambitious and commendable, a significant weakness is the lack of commitment on financial assistance and complicated procedures to access the funds. There are many European adaptation funding initiatives at the international level, all with slightly different objectives and funding criteria. In addition to the GCCA established by the European Commission, the German government created The International Climate Initiative and the UK government created The Environmental Transformation Fund. Both the German and UK funds will contribute to, amongst other areas, adaptation to climate change. Each of the three funds has different objectives, conditions and eligibility requirements. This does not make it easy for developing countries to apply for projects and funding. Parallels can be drawn with the international approach for funding AIDs prevention. A number of global funds were established after 2000 to help developing countries fight aids. This included the Global Fund to Fight Aids under the UN, a World Bank initiative and an American initiative from the Clinton Foundation. Recipient countries reported difficulty and frustration with negotiating with three different funding programmes.[45] While the number of different funds for adaptation indicate that the EU and other developed countries are committed to helping developing countries adapt to climate change, the uncoordinated approach also shows a self interest in 'being seen' to support adaptation. The most recent EU external position on climate change, the Council Conclusions of March 25th/26th,[46] are very cautious towards financial assistance. The EU notes, "Financial contributions in the longer term need to be seen in the context of meaningful and transparent actions to

[43] See generally, J. Ayers *et al*., 'Supporting Adaptation through Development: What Role for ODA?', 2009 *Development Policy Review*, no. 27, pp. 675-692.
[44] J. Ayers *et al*., 'Assessing the EU Assistance for Adaptation to Climate Change in Developing Countries: A Southern Perspective' in Oberthur *et al*., *The New Climate Policies of the European Union,* p.246.
[45] R. Brugha *et al*., 'The Global Fund: Managing Expectations', 2004 *The Lancet*, pp. 95-100, p.98.
[46] European Council, EUCO 7/10, 26.03.2010.

be taken by developing countries to mitigate climate change".[47] This indicates that financial help with adaptation will be conditional. Similarly, many bilateral agreements between the EU and developing countries for adaptation are conditional on implementing EU objectives and cooperating under the UNFCCC. Attaching conditions could be seen as contrary to the interpretation of the CBDR principle in the international climate treaties. As chapter 3 explained, the purpose of CBDR in the climate treaties is to counter inequality in the system by assisting developing countries who have not historically caused climate change and do not have the capabilities to deal with its impacts. It implies that developed countries help the less able for moral reasons and not for self interests. However, the CBDR principle should also be interpreted in light of the ultimate objective of the UNFCCC; stabilisation of GHG at a level that systems can naturally adapt. It could be argued, therefore that the EU is applying the CBDR principle with consideration to the ultimate objective.

The EU adaptation strategy is not always coherent. The allocation of assistance, for example, is not always structured through a principle based allocation framework. It is often strongly influenced by politics. Moreover, bilateral agreements between certain least developing countries and not others could be seen as an unfair and unprincipled approach. However, bilateral agreements are valuable because they can allow for concessions that a state might find unacceptable to grant to a large group of countries.[48]At the same time, the analysis in chapter 4 showed that it is unclear as to how to differentiate between developing countries in the climate regime. Without clear guidelines at the international level, the EU has formed its own approach.

It is not easy to determine the extent to which the EU applies the CBDR principle to its external adaptation policy. As discussed above, the CBDR principle can be interpreted in many ways and it would be hard to claim the EU does not apply the principle. Another problem is that adaptation is a broad issue, and closely connected to development, which is outside the scope of the international climate treaties. It is likely in the post 2010 regime that the international community will have to allocate more specific responsibilities for adaptation to climate change. This raises the question of whether the fact that the EU channels adaptation assistance through bilateral development agreements should be taken into account in determining responsibilities for a climate agreement? It is clear that countries with good governance and institutional capacity are better able to deal with adaptation, yet how do we determine the extent to which EU development aid has benefited adaptation?

Finally, the EU approach to adaptation shows that mitigation is still the focus and much less attention is given to adaptation. This is clear from the EU position in the Bali Action Plan (BAP) which states, "The EU considers that a key issue to explore under the BAP is what the principle of common but differentiated responsibilities and respective capabilities means for national appropriate mitigation action between and within groupings"[49] Currently, adaptation appears to be a much small component of EU climate policy and aimed specifically at least developing countries. Thus, the EU's interpretation of the CBDR principle appears to be that rapidly growing developing countries must take on mitigation targets and least developing countries

[47] *Ibid*, Para.13 (b).
[48] Biermann *et al*., *Global Climate Governance Beyond 2010*, p. 28.
[49] FCCC/AWGLCA2008/MISC.2, p. 5.

will be assisted with adaptation and development. EU legitimises this in its policy discourse by relying on the CBDR principle.

6. Conclusion

6.1 Meaning and Role of the Principles Equity and CBDR

The analysis in Chapter 2 illustrated that equity is a very important element in the climate change regime. It is about fairness, justice and what is wrong and right. However, less attention has been given to the social dimension of climate change.

One explanation for this may be that the concept of equity can be interpreted in different ways. In chapter two these were presented through six broad dimensions; responsibility, capacity and needs, equal entitlements, comparability of efforts, procedural equity and intergenerational equity. Analysis revealed that there are many perspectives to the problem, as well as a number of legal questions concerning responsibility and duties towards other states. It is clear that international law has a role here in giving effect to and resolving equity concerns. The international climate change treaties use principles to convey equity dimensions. These are articulated in Article 3 of the UNFCCC and guide the interpretation of the treaty. The value in using principles as a legal tool to convey the equity dimensions is that by using 'soft' language with broad meanings, they can convey many meanings and are applicable to a diverse range of circumstances. It can be argued that states are more likely to agree to these, and later the agreed soft norms can develop in to hard obligations and custom. Through this legal socialisation, principles convey the values of the climate change regime and are the basis of all the substantive obligations in the climate treaties. In this way they provide the ethical standards, and shape future developments.

Chapter three examined the first principle in the UNFCCC, "equity and common but differentiated responsibility", regarded as the most significant principle for conveying equity in the climate change regime. Analysis showed that equity is not an easy concept to apply in law. The ICJ has long grappled with how to apply equity considerations in a 'legal way', trying to avoid criticism that the judgement is based on moral opinion rather than law.

The second part of Chapter 3 demonstrated that the principle of CBDR is a multifaceted concept giving effect to, and offering a compromise over, the different equity dimensions and legal interpretations. The broad meaning of the principle in the climate change regime is threefold. First, there should be common responsibilities for climate change, meaning all parties to the convention should participate in addressing the problem. Second, the nature of the obligations should be differentiated. In the climate change treaties, the differentiation is currently undertaken based on two factors; the historical contribution to the problem and the capacity of countries to tackle the problem in light of their 'real' circumstances. Thirdly, the principle has a dual moral/practical objective to achieve substantive equity between the countries and greater implementation of the treaty. Thus, the idea of the CBDR principle is that it applies a temporary "positive discrimination" until countries reach a level playing field.

Examination of the treaty provisions illustrated that the CBDR principle has become ingrained in climate treaties. The principle is the basis for the central obligations of the treaty, such as GHG reductions, and the obligations to implement the treaty, such

as monitoring and reporting and the flexible mechanisms. The principle is also the legal basis for provisions that grant assistance to developing countries to implement their commitments. However, while these provisions are significant, they are phrased in broad language and not always fully implemented. They create formal equity between the parties but greater implementation is needed for substantive equity to be achieved.

It can be concluded that the three components of the CBDR principle do not have a fixed meaning. Different dimensions of equity can be more or less prominent in the principle, and this can change over time. Thus, the role of the principle in the climate treaties is to convey and facilitate debate over the different dimensions of equity. CBDR provides the guiding factors for debating equity and the boundaries. The principle operates within the boundaries of the climate treaties and its ultimate objective is the stabilization of greenhouse gas concentrations in a manner that allows ecosystems to naturally adapt. In this way, equity can be seen as one aspect of the international effort to tackle climate change and it will be balanced against other factors such as ecological and economic considerations. The CBDR principle will not provide the exact equity responsibilities states should undertake for climate change, instead, it is the legal basis for incorporating equity in to the negotiation process and creating differentiated obligations.

6.2 Application of the Principles to Adaptation

Chapter Four turned to an examination of the application of the CBDR principle to adaptation. Adaptation is a relatively underdeveloped component of the climate regime. Politically, it was seen as a fatalist issue, accepting climate change rather than tackling GHG emissions. As a result there are few provisions specifically for adaptation in the climate change treaties. The focus is on mitigation. However, examination of the equity dimensions of adaptation revealed that equity is a significant problem and one that is more complex and wide ranging than mitigation.

In the climate treaties, the obligations concerning adaptation can be found mainly in the general obligations, as well as a few provisions specifically for adaptation. The content of the obligations are significant in addressing adaptation. Specifically, there are duties on developed countries to help developing countries meet the costs of adaptation and implement their common obligations. This includes an explicit provision stating that developing countries that are particularly vulnerable to the adverse effects of climate change must be helped with adaptation costs. Out of these treaty obligations, four multilateral funds have been established to assist in their implementation. Thus, the broad language in the treaties provides for fairly extensive action on adaptation and reflects the CBDR principle. However, it also gives discretion to states as to the extent to which they implement them and there is uncertainty as to the precise boundaries of the CBDR principle. Moreover, the provisions on adaptation do not comprehensively address the action that must be taken to adapt to climate change. Currently, the duties are focused on short term adaptation needs and do not provide clarity on issues such as how to differentiate between developing countries when providing adaptation assistance. It can be concluded that the climate treaties provide the basis for adaptation measures and apply the CBDR principle. However, thirteen years on from the Kyoto Protocol, and

in light of substantial research into adaptation, it is time to give greater substance to the adaptation commitments.

Examination of the COP 15 and Copenhagen Accord showed little progress on adaptation. The focus remains on mitigation and the negotiations side stepped difficult equity problems such as how to prioritise the countries who will receive adaptation assistance. However, the Bali Action Plan and creation of the AWG-LCA is significant progress for adaptation and acknowledging the equity dimensions. Hopefully this can be continued at the COP 16 in Cancun.

In Chapter Five, the EU implementation of the CBDR principle was examined. As a group of 27 developed countries who have ratified the climate treaties, the EU has accepted the CBDR principle into EU law. The EU external policy on adaptation is to mainstream the issue into all of its policies. Currently, the EU is integrating adaptation into development aid and is establishing bilateral agreements with developing countries for adaptation assistance. Developing countries are given assistance with adaptation needs if the country implements an EU strategy on climate change and is cooperative in the UNFCCC negotiations. While there are merits to this approach, noticeably greater cooperation in the international climate negotiations and faster implementation, it can be argued that the approach does not follow the spirit of the CBDR principle in terms of non reciprocal agreements to help developing countries. Implementing an EU climate policy does not respect state sovereignty and indicates the differentiation is about political cooperation as well as capacities and historical contribution. On the other hand, bilateral agreements could be more effective at enticing developing countries to participate in the climate change regime, another goal of the CBDR principle. Overall, the EU approach to adaptation demonstrates the problem that without clear guidance from the international climate treaties, there is significant leeway in implementing the CBDR principle. It also illustrates, that for the EU, equity is one factor for states in the implementation of the climate change treaties, to be weighted against others such as cost effectiveness. While the EU external adaptation policy is still in the early stages, analysis of the current direction is important for the next international development.

Finally, it is worth noting that Chapter 5 illustrated the EU's general changing emphasis on the interpretation of the CBDR principle. During the 1990s, the EU position was that developed countries had a greater historical responsibility for climate change and should take the lead in tackling climate change. They also agreed that developing countries should not take any emission reduction targets. However, the capacities and future emissions of developing countries are now very important. The EU will not agree to reduction targets without comparable goals for rapidly developing countries. Also, adaptation policy is aimed at least developing countries rather than all developing countries. Although the EU often cites the CBDR principle in its policy documents as basis to legitimise differentiation, there has not been a discussion at EU level on what the CBDR principle means. This suggests that the EU may not be aware of its changing interpretation of the CBDR principle.

6.3 Recommendations for a post 2012 Agreement

In light of the conclusions above, four recommendations for a post 2012 agreement can be offered. These are: defining the scope of adaptation in the climate treaties,

using reflexive law to differentiate state responsibilities, introducing differentiation criteria specifically for adaptation and reviewing the application and implementation of the CBDR principle.

First, the analysis in chapter 4 shows that it would be valuable if the scope of adaptation was defined. While it can be concluded that the CBDR principle is applied to adaptation in the climate treaties, the value of this is limited because the adaptation provisions themselves do not comprehensively address the problem. Currently, aspects such as long term adaptation measures and prioritisation of assistance are missing in the commitments. A key limitation is that, technically, adaptation is not easy to define as it has wide ranging implications. Adaptation can mean, for example, macro measures such as poverty reduction, micro level measures such as building dykes, and regional, local and international capacity building. This involves legal systems at different levels. Moreover, there is not full scientific understanding of adaptation. Climate change adds urgency to existing problems and to implementing existing commitments. This includes aspects such as biodiversity loss, disaster management and international development. These aspects are being addressed by activities outside the climate regime under other agreements. [1] It could be valuable, therefore, to determine which adaptation aspects the climate regime should specifically address in a post 2012 agreement.

Determining this would involve consideration of the role of the international community in adaptation, the role of international law and establishing which international regimes are already dealing with adaptation. We need to address what the climate change regime can provide—is it knowledge sharing, capacity building and financial support, or something more? In addition, how can the international community provide this support? Should it be, for example, through a staged approach of short to long-term measures, or a narrow scope which becomes progressively broader? By defining the scope of adaptation in the climate treaties, the problem of implementing adaptation commitments would be addressed and the application of CBDR could become clearer. In turn, if the climate change regime has a clear scope of activities, the financial costs could be more accurately assessed and financial mechanisms to comprehensively fund these projects could be established. In addition, the CBDR principle has a role in shaping the scope of adaptation. The principle of CBDR brings the social and ethical considerations to the climate debate, which is primarily an ecological problem. It asks what can the international community reasonably do to tackle climate change in our social structure? And, in light of this, how should we differentiate the responsibilities given the large inequality in the system? The CBDR principle will be the legal basis for differentiating and redistributing burdens for adaptation in a post 2012 agreement.

A second recommendation can be offered on the method of differentiating and redistributing burdens. Currently, the approach of creating a division in the Annex of the UNFCCC between developed and developing states lacks flexibility. The purpose of the CBDR principle is to apply a temporary positive discrimination to certain countries. When these countries are on an equal level, the principle would no longer apply. However, by establishing into treaty law a list of countries that are developed

[1] E. Levina, *Adaptation to Climate Change: International Agreements for Local Needs*, OECD, 2007, p.6.

and another that are developing, a degree of permanence is implied. It is a burdensome process to renegotiate how a country should be classified and international treaties are not designed to be frequently changed. It could be valuable to use reflexive law[2] whereby categories are created on the basis of a number of equity factors. Countries would then be classified according to these and move to different differentiation levels when their relevant differences/equity levels change.

This leads to a third recommendation on forming the categories. There is substantial discussion on how the country differentiation can be reformed in the post 2012 climate change regime for mitigation.[3] These include proposals for graduating through categories as emissions grow and further classification of developing countries based on emission levels. However, there has been little discussion on differentiation for adaptation.[4] To some extent, the differentiation will be the same, yet simply reversed. Countries that take on the highest emission cuts based on capacity and historical contribution will also be the most responsible to providing adaptation assistance. Least developing countries, on the other hand, which are the least responsible for mitigation and require substantial help with sustainable development, will also require the greatest assistance with adaptation. However, it is unlikely that differentiation as understood for mitigation will be exactly applicable to adaptation. India, for example, is extremely vulnerable to the impacts of climate change, yet also has rapidly growing emissions and is likely to take on mitigation targets in a post 2012 agreement. Furthermore, the Inuit in North America, for example, face major changes to their livelihoods and health. It would be valuable, therefore, to differentiate categories specifically for adaptation, based on equity factors such as vulnerability and capacity to respond.

Differentiating on this basis would indicate how to prioritise adaptation assistance to the most needy. One challenge to agreeing on differentiation for adaptation is the difficulty of dealing with individual needs when international law is based on interstate relationships. This could be an area where international human rights could assist. In human rights law, individuals have the opportunity to bring a specific matter before a special court or a special commission of the human rights treaties.[5] A further difficulty will be measuring and comparing the social impacts of climate change. Should a country that will be flooded receive greater priority over one that is in a drought? Moreover, how do you quantify losses such as not being able to live on a

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[2] See G. Teubner, 'Substantive and Reflexive Elements in Modern Law', 1983 *Law & Society Review*, no. 2, pp. 239-285.

[3] A. Torvanger *et al*., 'Criteria for Evaluation of Burden Sharing Rules in International Climate Policy', 2002 *International Environmental Agreements: Politics, Law and Economics*, no. 2, pp. 221-235; A. Torvanger *et al*., 'An evaluation of pre-Kyoto differentiation proposals for national greenhouse gas abatement targets', 2004 *International Environmental Agreements: Politics, Law and Economics,* no. 4, pp. 65–91; A. Halvorssen, 'Common, but Differentiated Commitments in the Future Climate Change Regime : Amending the Kyoto Protocol to Include Annex C Mitigation Fund', 2007 *Colorado Journal of International Environmental Law and Policy*, no. 18, pp. 247-265; T. Honkonen, 'The Principle of Common But Differentiated Responsibility in Post 2012 Climate Negotiations', 2009 *Review of European Community and International Environmental Law*, no. 18, pp. 257-267.

[4] On sharing the costs of adaptation see R. Dellink *et al*., *Common but Differentiated Responsibilities for Adaptation Financing: An Assessment of the Contributions of Countries*, Institute for Environmental Studies (IVM) Working Paper, VU Amsterdam, 2009.

5 For an examination of the individual complaint procedures and their value see O. Andrysek, 'Gaps in International Protection and the Potential for Redress through Individual Complaint Procedures', 1997 *International Journal of Refugee Law*, no. 3, pp. 392-414.

small island state and what is appropriate compensation? The CBDR principle helps determine responsibility but it does not indicate what the compensation should be. In this respect, other fairness principle will have to be applied alongside the CBDR principle.

As a final recommendation, it could be valuable to introduce a review process for the CBDR principle. It was concluded that the CBDR principle is a temporary and flexible principle. It applies until countries are on a level playing field and it is flexible to changing circumstances and equity dimensions, such as the shift in emphasis from historical to future responsibility. At the same time, law is traditionally designed to be predictable and clear in order to achieve legitimacy. It could be useful, therefore, to evaluate the interpretation and implementation of the CBDR principle in the climate change regime. This could be undertaken by an independent body, similar to the review process in the international human rights regime, [6] and be based on state reports to the COP, giving practical relevance. The review would reveal the equity dimensions that are given greater emphasis in the climate change regime and the areas where there are incompatible or inconsistent equity approaches. It could also identify changing interpretations of the CBDR principle, such as in the case of the EU. By reviewing the CBDR principle, the process could be a less controversial way of addressing equity. Equity is a critical issue in climate change and important for getting all parties to agree on action. However, the lack of discussion in the UNFCCC, the IPCC reports and at the COPs shows that countries are unwilling to discuss the subject as it is politically difficult. Reviewing the mechanism for conveying equity could be way to overcome this. In the long term it could facilitate greater implementation of the climate change treaties.

Overall, it can be concluded that the principles of equity and CBDR are one part of the legal response to international adaptation. They provide a way to debate the social and ethical dimensions of adaptation. The outcomes will have to be balanced against other factors such as the ecological and economic aspects. As adaptation is becoming an ever more important aspect of global climate change, the CBDR principle is very relevant. The principle will convey many of the equity dimensions and tensions. International law and the CBDR principle cannot resolve all equity problems in the climate change treaties. However, it can offer a valuable tool to incorporate some of these aspects and ensure equity is always a factor in the decision making process. This is a significant contribution and will play a part in shaping the post 2012 climate change agreement.

[6] R. Cook *et al*. 'Accommodating Human Values in the Climate Regime', p.31.

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