ADAPTING RESPONSIBILITIES: AN ETHICAL ANALYSIS OF THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

by

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ABSTRACT

The United Nations Framework Convention on Climate Change is the seminal international agreement that provides a commitment and a corresponding responsibility framework to assist the least developed countries (LDCs) adapt to the adverse effects of climate change. To operationalize these commitments the National Adaptation Programmes of Action was created to assist LDCs implement adaptation projects. This programme has been severely hampered by the limited resources provided by Parties to the Convention. The lack of resources brings into question not only the commitment to adequately fund the program, but also the adequacy of the Convention's framework for assigning responsibility to support the LDCs' climate change adaptation projects. This paper seeks to determine whether the Convention's responsibility framework meets the requirements of the Social Connection Model. This model has the potential to aid stakeholders in determining their responsibility to fund the program and to identify failings by stakeholders to discharge their responsibilities.

Keywords: climate change; adaptation; global health; distributive justice; social responsibility; least developed countries

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1: INTRODUCTION

Scientists from the Intergovernmental Panel on Climate Change (IPCC) (2007) present clear evidence of climate change in recent decades and predict further change through the 21st century. The IPCC (2001) defines climate change as a "statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer)" (p.368). Historical climate records indicate a sustained increase in the global average surface and ocean temperatures, global snow and ice melt, and rising sea levels. On smaller geographical scales, changes in precipitation, wind patterns, and the intensity of cyclones have also been observed (IPCC, 2007). Climate change can occur because of natural climate variability or human activity (IPCC, 2001). The latest IPCC report (2007) states with high confidence, that recent climate change is a result of the burning of fossil fuels and changes in land use which have increased the concentrations of greenhouse gases (GHGs) in the atmosphere. Therefore, human activity is unequivocally a significant force driving recent climate change.

Experts in the field of climate change and health consider it to be one of the greatest global health threats of the century (Costello et al., 2009). Natural systems on all continents are currently affected by climate change and as a result the health of billions of people is at risk (Costello et al., 2009; IPCC, 2007). People living in low-income countries are most vulnerable to adverse effects because the impacts of climate change are expected to be greatest in these regions (IPCC, 2007). The challenges faced by low-

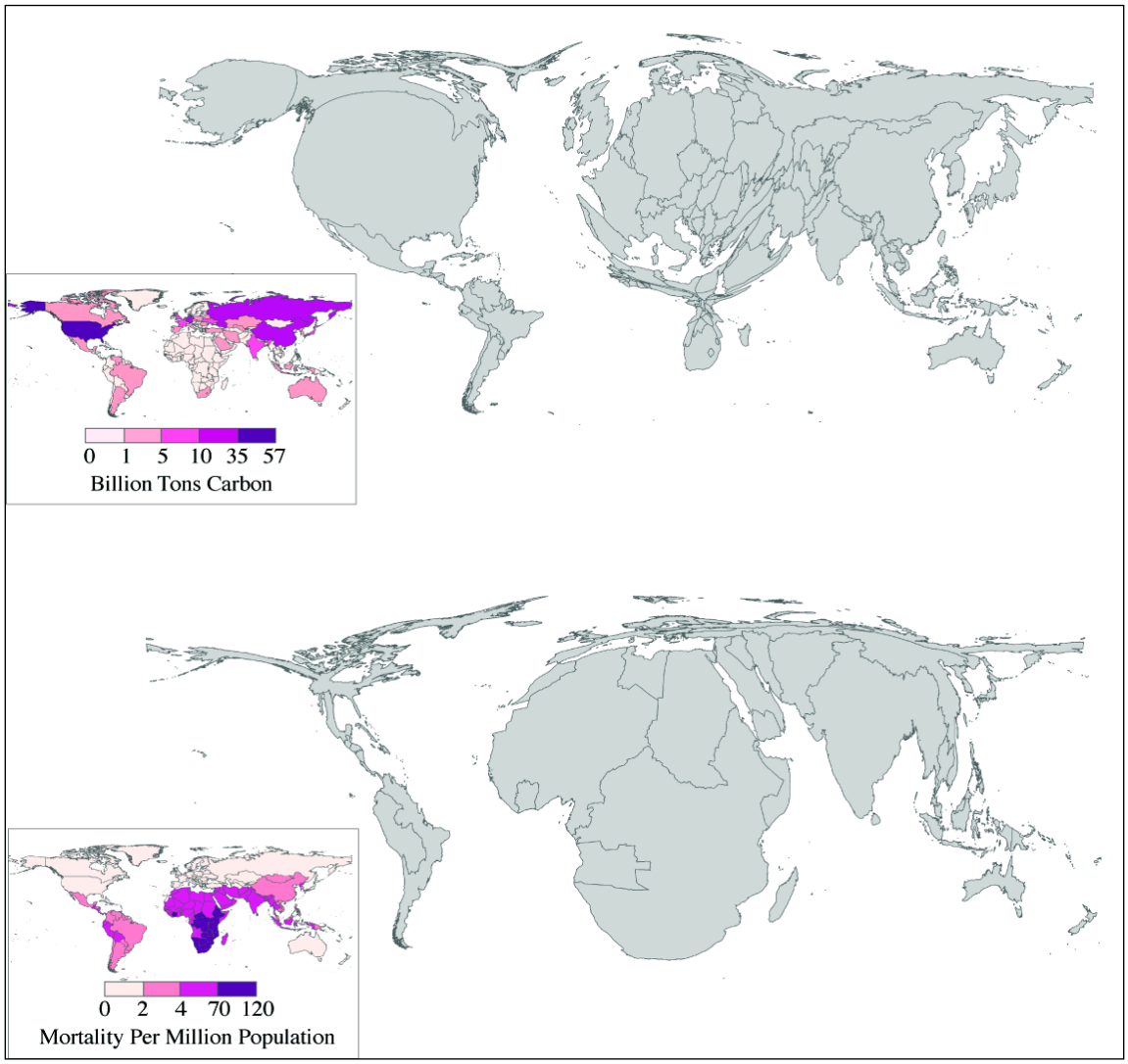
income countries are further compounded by their limited ability to adapt to climate change (Mertz, Halsnaes, & Olesen, 2009).

There are two main population level strategies, mitigation and adaptation, that can reduce the adverse impacts of climate change. Mitigation strategies are designed to reduce “the amount and rate of climate change” and adaptation strategies assist societies to “avoid, prepare for or respond to the detrimental impacts of observed or anticipated climate change” (Fussel, Klein, & Ebi, 2006, p.43). In spite of existing climate change mitigation policies, such as the Kyoto Protocol, there is scientific evidence that climate change will continue to occur and cause significant adverse effects worldwide. This stresses the importance of implementing adaptive strategies to reduce the impact of these adverse effects (McCarthy, Canziani, Leary, Dokken, & White, 2001). Unfortunately, developing countries, especially those classified as least developed, have limited capacity to prepare and implement adaptation projects (Smith, Klein & Huq, 2003).

The challenge of adaptation to climate change in least developed countries (LDCs) is a significant justice issue. The 49 LDCs, who historically and currently contribute the least to anthropogenic climate change, face the greatest adverse effects in areas such as water resources, agriculture, food security and human health (see Figure 1) (Huq, Rahman, Konate, Sokana & Reid, 2003; McCarthy et al., 2001; Paavola & Adger, 2002). In 2000, 25 countries, which include most of the developed nations in the world, accounted for 83% of global emissions, while a group of 140 countries, including all LDCs, contributed only 10% of emissions. In fact, from 1850 to 2002 developed countries emitted an overwhelming 76% of carbon dioxide (CO_2) (Baumert, Herzog &

Pershing, 2005). This situation constitutes a structural injustice, whereby a social process significantly benefits a group of countries while harming another group (Young, 2006). In this case, the social process is the emission of GHGs into the atmosphere, which benefits developed countries by fuelling their economies and livelihoods, while harming the LDCs by placing significant health risks on their populations.

Figure 1: A comparison between the cumulative carbon dioxide emissions per country (1950-2000) and the regional distribution of climate-sensitive health effects (diarrhea, flood-related fatalities, malaria, and malnutrition).



Source: Patz, Gibbs, Foley, Rogers &Smith, 2007

The United Nations Framework Convention on Climate Change (UNFCCC), also referred to as the Convention, entered into force in 1994. It provides a means for countries to collaborate and address challenges associated with climate change (UNFCCC, 2009). Its ultimate objective "is to achieve [a]...stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (UN, 1992, p.4). Secondary to its ultimate objective is the commitment to ensure that the adverse effects of climate change are adequately addressed, especially in LDCs. The Convention is currently the seminal agreement, although not binding, that outlines who is responsible for assisting LDCs reduce the adverse effects of climate change including dangerous health effects.

To ensure commitments under the Convention are realized, the Conference of the Parties (COPs), the governing body of the Convention, hold annual meetings to operationalize the commitments (UN, 1992). At the seventh meeting of the COPs, the Parties agreed to establish a least developed countries work programme to assist LDCs deal with climate change (LEG, GEF & Agencies, 2009). The work programme consists of various initiatives, one of which is the National Adaptation Programmes of Action (NAPA). The purpose of the NAPA is to support LDCs identify, prepare and implement adaption projects to prevent and reduce the adverse effects of climate change (LEG et al., 2009).

Although the NAPA shows promise in curbing the adverse effects of climate change, recent reports indicate that LDCs are struggling to begin implementing adaptation projects. The UNFCCC report, Climate Change: Impacts, Vulnerabilities, and Adaptation

in Developing Countries (2009), highlights the need for more resources to bridge the gap between planning and implementing adaptation projects. Specifically, it states:

> Despite all positive efforts in the assessment of vulnerability and adaptation, the movement from adaptation assessment and planning to implementation is not well developed. At the regional workshop and expert meeting on adaptation [hosted by the UNFCCC in 2006-2007], it was pointed out that, whereas a number of countries have well-developed adaptation plans or are in the process of finalizing them, many more resources are needed for implementation (p.35).

The lack of resources available for the NAPA brings into question the adequacy of the Convention's responsibility framework to determine who should support the LDCs' climate change adaptation programs and to what degree.

The latest COPs, which met in Copenhagen December 7-19, 2009, included discussions on financial support for developing countries (Bodansky, 2010). The three main questions discussed were "how much money, from what sources, and with what governance arrangements?" (Bondansky, 2010, p.7). The discussions culminated with the Copenhagen Accord, a non-binding agreement. The Parties agreed to provide US$10 billion each year from 2010 to 2012, with the goal of increasing the annual support to US$100 billion by 2020 for mitigation and adaptation in developing countries. Even though the Accord answered how much, the International Institute for Environment and Development (IIED) (2010) found that this answer only led to more questions. These questions include, what are the sources of funding, is the funding new and additional (because developing countries are concerned that funding will simply be diverted from other needs), is the funding in the form of grants or loans, how predictable will the funding be, and through which channels will funding be provided? Considering the

number of unanswered questions, it is unclear whether the NAPA will see any of this pledged funding.

There are two dominant models to determine who is responsible for injustice – the liability model and the Social Connection Model. The liability model "assigns responsibility to a particular agent (or agents) whose actions can be shown to be causally connected to the circumstances for which responsibility is sought" (Young, 2006, p.116). Young finds the liability model to be inadequate to determine responsibility for structural injustice because it is dependent on identifying direct interactions between an agent's actions and those harmed. In instances of structural injustice, there are often agents who participate in the social process who are removed from the specific interactions that cause harm. Considering this fact, the liability model's dependency on direct interactions is unable to hold agents who participate in the social processes but are removed from the direct interactions responsible. The Social Connection Model addresses this limitation because it finds agents responsible for structural injustice because they "contribute by their actions to the processes that produce unjust outcomes" (Young, 2006, p.119). It is important to note that Young's Social Connection Model is not meant to replace the liability model but to address its weaknesses when used to assign responsibility for structural injustice (Young, 2006).

The adverse effects of climate change in the LDCs are a form of structural injustice where there are countless agents who contribute by their actions to the social processes (the emission of GHGs) that cause harm (the adverse effects of climate change). The Social Connection Model may be an ideal model to determine who is responsible to assist LDCs adapt to climate change because it considers all who participate by their

actions in the social processes that cause harm. This paper seeks to examine whether the Convention meets the requirements of the Social Connection Model to determine who is responsible and to what degree for the adverse effects of climate change in the LDCs. In addition, it discusses how the Convention's use of the Social Connection Model influences the ability of LDCs to implement their NAPA adaptation projects by ensuring they receive adequate resources and support.

2: BACKGROUND

2.1 Global Climate Change and Health

The climatic system is an integral part of the earth's life-supporting processes. It consists of five components: the atmosphere, the hydrosphere, the cryosphere, the biosphere and the land surface. External forces, such as the sun and human activity, influence the climate's interacting components that provide conditions to support human life (Baede, Ahlonsou, Ding & Schimel, 2001). Since the Industrial Revolution, human activity has had significant impacts on the atmosphere and land. The industrial and domestic burning of fossil fuels and biomass have emitted GHGs, such as CO_2, into the air and subsequently changed the composition of the atmosphere. Over the past 200 years, it is estimated that humans have emitted over 2.3 trillion tons of CO_2. Fifty percent of these emissions occurred between 1974 and 2004 (Baumert et al, 2001). Furthermore, land-use change in the forestry and agriculture industries have altered the properties of the earth and thus increased atmospheric concentration of GHGs, such as methane and nitrous oxide (Baede et al, 2001).

Climate models have been developed to explain the complex relationship between human activity and the climate system. Although climate model results vary, all models indicate that humans have contributed to an increase in global average surface temperature (Baede et al, 2001). It is important to note that as one climate variable changes it prompts a cascade of other climatic transformations. For example, the recent increase in surface temperature has led to the increase of ocean temperatures,

extensive snow and ice melt, and sea level rise (IPCC, 2007). Climate change is expected to continue because of ever increasing GHG emissions and the lag period between historic emissions and their impacts, thereby perpetuating its adverse effects (IPCC, 2007).

Climate change has direct and indirect impacts on human health. The direct impacts are a result of exposure to meteorological conditions, such as heat waves and cyclones, whereas indirect effects involve the mediation of a climate variable through a climate sensitive system. Examples of the latter include impacts on food productivity and an increase in the geographical range and seasonality of malaria. Indirect health impacts of climate change also occur through economic and social disruption, such as extreme weather events disrupting power supply or damaging health care infrastructure (Fussel et al., 2006; Githeko & Woodward, 2003). Climate change currently contributes to premature mortality and morbidity around the world, resulting in an estimated 5.5 million DALYs in 2000. The World Health Organization (WHO), projects a further increase in the global burden of disease due to climate change. Increases in malnutrition, diarrhoeal diseases, cardio-respiratory illnesses, morbidity and mortality from floods and changes in the distribution of malaria are expected (Campbell-Lendrum, Corvalan & Pruss-Ustun, 2003).

Vulnerability to climate change is a function of exposure, sensitivity and adaptive capacity. Exposure is the amount that a system (e.g. population) is exposed to a change in the climate whereas sensitivity is the degree to which climate change affects a system. Adaptive capacity is the ability of a system to adjust to the change in the climate providing the system an opportunity to limit the potential damages (McCarthy et al.,

2001). The three variables – exposure, sensitivity, and adaptive capacity – determine the degree to which a population is vulnerable to the adverse effects of climate change. Climate scientists have concluded that developing countries are most vulnerable to climate change because of their high exposure, high sensitivity and limited adaptive capacity (McCarthy et al., 2001). Developing countries' exposure to climate change is estimated to be high because, for instance, many have large populations that live in low lying regions that are subject to sea level rise. They are more sensitive because they rely heavily on volatile economic sectors, such as agriculture, that are expected to be negatively impacted by climate change and market fluctuations and they have a high number of people living in poverty who are more often than any other socioeconomic class victims of extreme weather events. They have limited adaptive capacity because they have insufficient economic, political and technological resources to adapt to the effects of climate change (Mertz et al, 2009; Smith, Klein, & Huq, 2003; Yohe & Tol, 2001).

2.2 Adaptation to Climate Change

In the past decade, the Convention has given limited attention to adaptation as a method to reduce the adverse effects of climate change (Baer, 2006). Yet, science shows that even with the current mitigation strategies climate change will continue to occur and result in changes to climatic variables that will adversely impact the health of populations (IPCC, 2007). Given that a degree of climate change is inevitable, adaptation is crucial to reduce the projected adverse impacts (Smit & Pilifosova, 2001).

Adaptation is often characterized according to purposefulness and timing as defined in the following:

> Autonomous or spontaneous adaptations are considered to be those that take place – invariably in reactive response (after initial impacts are manifest) to climatic stimuli – as a matter of course, without the directed intervention of public agency... [whereas,] [p]lanned adaptations can be either reactive or anticipatory (undertaken before impacts are apparent) (Smit & Pilifosova, 2001, p. 883).

Today, planned adaptation makes the most sense. It is less costly then last minute spontaneous adaptation and allows more flexibility if climate change is worse than predictions indicate (Smit & Pilifosova, 2001). Furthermore planned adaption encapsulates the idea of the precautionary principle which states, “preventive action should be taken on early warnings even though the nature and magnitude of the risks are not fully understood” (Tickner, 2005, p.865). Therefore, pursuing planned adaptation is more likely to significantly reduce the projected adverse health impacts of climate change in LDCs than reactive adaptation.

The implementation of adaptation strategies in LDCs requires attention to both distributive and procedural justice. This is due to the intertwined nature of the process by which an adaptive strategy is developed and the strategy’s ultimate outcome (Paavola & Adger, 2002). Distributive justice is “how the beneficial and adverse effects of humanly induced climate change and adaptation to climate change impacts are distributed across groups of people” (Paavola & Adger, 2002, p.2). Procedural justice is “how and by whom decisions on adaptive responses are made” (Paavola & Adger, 2002, p.2). Although both distributive and procedural justice are important to consider when planning and implementing adaptation strategies, this paper will concentrate on distributive justice due to the bounds of this research project and the recent concerns raised over the

insufficient availability of resources, both financial and human, for LDCs to implement their NAPA adaptation projects.

There are four central distributive justice dilemmas associated with adaptation: 1) determining responsibility for the impacts of climate change; 2) deciding how responsibility for adaptation should be shared; 3) resolving how funds for adaptation should be distributed among the developing countries; and 4) deciding how consequences of adaptation, both positive and negative, should be distributed among the developing countries (Paavola & Adger, 2002). The central dilemma of distributive justice studied by this paper is determining the responsibility framework for assisting LDCs adapt to climate change, including who is responsible and how that responsibility should be distributed.

2.3 The United Nations Framework Convention on Climate Change

The United Nations (UN) is the international organization ultimately responsible for global security as described in the Charter of the United Nations and Statute of the International Court of Justice. It states, the purpose of the UN is “To maintain international peace and security and to that end: to take effective collective measures for prevention and removal of threats to the peace” (UN, 1945, Article 1, ¶ 1). In 2007, the UN Security Council held a historic debate on energy, security and climate, which “marked the recognition of climate change as a core security issue” (Parry, 2007, ¶ 9). A Congolese representative at the debate highlighted the magnitude of the global security threat by saying, “This will not be the first time people have fought over land, water and

resources, but this time it will be on a scale that dwarfs the conflicts of the past" (Parry, 2007, ¶ 1).

Furthermore, the U.S. Military Advisory Board wrote a report titled, National Security and Threat of Climate Change, which shows how climate change threatens the security of stable and volatile regions (Sullivan et al., 2007). The report goes on to state that climate change is unlike "conventional security threats that involve a single entity acting in specific ways and points in time, climate change has the potential to result in multiple chronic conditions, occurring globally within the same time frame" (Sullivan et al., 2007, p.6). The vulnerable countries that are least able to adapt are expected to be the first to be affected (Parry, 2007). Considering the UN is the organization charged with the responsibility to maintain global security, it has a responsibility to ensure that vulnerable countries, such as the LDCs, have the necessary support to prevent and reduce the adverse effects of climate change because this type of action has the potential to limit climate change's threat to global security.

The United Nations Framework Convention on Climate Change is the seminal agreement that provides a responsibility framework to assist LDCs adapt to climate change. This responsibility framework applies to the NAPA which is considered the first significant commitment worldwide to assist LDCs adapt (LEG, 2009a). However, as mentioned previously, recent reports show that LDCs are struggling to implement their NAPA adaptation projects (see LEG et al., 2009; SBIa, 2008; SBIb, 2008; SBI, 2007). Since the purpose of the NAPA is to assist LDCs address their urgent and immediate needs to adapt, this delay undermines the entire NAPA program.

The NAPA program is designed to assist all 48 LDCs (who are Party to the Convention) adapt to climate change (see list of countries in Appendix A). When the NAPA was established, a least developed countries expert group (LEG) was formed to provide advice on how to prepare and implement the adaptation projects. A least developed countries fund (LDCF) was also created to be the source of funding for the NAPA. The LDCF is operated by the financial mechanism of the Convention, the Global Environment Facility (GEF), and is replenished by voluntary donations by Parties to the Convention (LEG et al., 2009; Mace, 2006).

The NAPA consists of a preparation phase and an implementation phase. The preparation phase is a nine step process that each LDC must follow to develop a NAPA document that includes a list of prioritized adaptation projects with corresponding project profiles (to see the nine steps refer to LEG, 2009a). Upon completion of the document, the LDC submits it to the Convention Secretariat for comments and revisions. After revisions are complete the document is re-submitted for approval. Once the document is approved, the LDC begins the implementation phase for one of the projects on their prioritized list. This phase consists of four steps. First, a project identification form (PIF) is filled out by the LDC and submitted to the GEF. Following PIF approval, the LDC submits a project preparation grant application to receive funding to develop a full project proposal. Then, the LDC completes the proposal and submits it to the GEF for approval, and once approved the proposal must receive the endorsement of the GEF's Chief Executive Officer (CEO). Once all these steps are complete the funding is released to the LDC to begin implementing one of their adaptation projects (LEG et al., 2009; LEG, 2009a, GEF, 2009a).

A recent report by the GEF (2010) outlines the slow progress made by LDCs in their efforts to begin implementing their NAPA adaptation projects. As of April 30, 2010, 44 of the 49 LDCs submitted their NAPA document to the Convention Secretariat. Thirty-eight of the 44 LDCs subsequently submitted PIFs and 33 of the 38 have received approval by the GEF. From the 33, only 16 LDCs have submitted full project proposals that have received the required CEO endorsement and started implementing their adaptation project. Therefore, only a small portion of the adaptation project profiles, all deemed urgent by LDCs, are in the implementation stage after almost a decade since the NAPA was established (see Appendix B).

Through workshops, meeting, and national communications, LDCs have reported three main reasons why so few of them have started implementing adaptation projects – limited human capacity, insufficient guidance and delayed and insufficient funding. They have limited human capacity at the national level to dedicate to their NAPA initiatives to ensure projects are developed and implemented, especially since each adaptation project is submitted individually to the GEF (LEG et al., 2009; SBIa, 2008; SBIb, 2008, SBI, 2007). A report from Malawi, which provides feedback on their NAPA process, states, “LDCs face human capacity constraints since each project requires setting up a new team and ultimately drain[s] expertise from existing activities” (SBIb, 2008, p. 3). Furthermore, LDCs face delays because they are forced to go through lengthy searches to find technical expertise (SBI, 2007). The implementation of adaptation projects is further confounded by insufficient guidance on how to transform adaptation project profiles into implementable adaptation projects. The submission of the PIF, to begin the implementation phase, is one step that has been particularly challenging. The Maldives

attributes this challenge to the reality that there is a “gap in guidance for the preparation of NAPAs from the GEF Implementing Agencies to reflect the differing information requirements in completing the PIF” (SBI, 2008b, p.5). French and Portuguese LDCs reported additional challenges associated with insufficient guidance because some written material published by the LEG and GEF are only available in English (SBI, 2007). LDCs face further difficulty in their effort to begin the implementation phase because of delayed and insufficient funding. For instance, the Maldives state that there are “delays in accessing funds for actual project implementation activities in the country on the ground, after the formal GEF approval at the various stages” (SBI, 2008b, p.4). The Convention’s funding for adaptation is insufficient (UNFCCC, 2007) and the NAPA is not exempt from this. Due to limited funding in the LDCF, several LDCs have had to scale down their adaptation plans because they were notified that the first round of projects was limited to 3.5 million USD (GEF, 2009). The average cost of a NAPA project is 39.5 million USD (LEG, 2009b). These challenges expressed by LDCs show a need for building human capacity within LDCs, providing adequate technical guidance, and increasing financial investment.

Mace (2006) states, “the Convention’s achievement of distributive justice will be measured by its success in seeing that the needs of the most vulnerable Parties are adequately identified and addressed” (p.54). Given the delay in implementing the NAPA adaptation projects the Convention is far from achieving distributive justice. This brings into question whether the Convention’s responsibility framework is adequate to ensure distributive justice is attained.

2.4 Assigning Responsibility: The 'Social Connection Model'

There are several distinct models for assigning responsibility. The most common is the liability model whereby "one assigns responsibility to particular agents whose actions can be shown as causally connected to the circumstances for which responsibility is sought" (Young, 2004, p.368). It is the bedrock of legal systems in many societies. Although the liability model is useful for instances where there is a direct causal link between actors and the actions that cause harm, it is difficult to use it in situations where structural or social processes lead to harm. Structural injustice occurs when a social process systematically harms a group of agents, while at the same time another group of agents benefit from the same social process. The social process often includes many diverse actors that are far removed from the harm making it difficult to demonstrate a clear causal link between the actors' actions and the harm (Young, 2006).

Determining the model of responsibility to decide who should assist LDCs adapt is contentious. A common model discussed in the literature is the "polluter pays" liability model where countries provide a certain level of monetary compensation based on the amount of GHGs they have emitted (Baer, 2006). The governments of developed countries have resisted signing agreements that follow this model to assist LDCs adapt because it is based on causation and there is still significant scientific uncertainty surrounding what adverse effects are a result of anthropogenic climate change versus natural climate change (Baer, 2006). When causality is not clear, it is difficult to determine responsibility using the liability model.

As described previously, anthropogenic climate change is a form of structural injustice. As such, Young's Social Connection Model can be used to determine responsibility for

its adverse effects. The purpose of the Social Connection Model is to provide a framework of responsibility "to refer to the obligations that agents who participate in structural social processes with unjust outcomes have" (Young, 2006, p.118). Instead of depending on clear causal links to determine responsibility, the Social Connection Model states that all actors "who contribute by their actions to the structural process that produce injustice have responsibilities to work to remedy these injustices" (Young, 2006, p.102). There are five main characteristics of the Social Connection Model: not isolating, judging background conditions, more forward-looking than backward-looking, shared responsibility, and discharged only through collective action (see Table 1) (Young, 2006).

Table 1: The features of the Social Connection Model of responsibility

Feature	Definition
Not isolating	"Where there is structural injustice, finding some people guilty of perpetrating specific wrongful actions does not absolve others whose actions contribute to the outcomes from bearing responsibility" (Young, 2006, p.120).
Judging background conditions	"[A] model of responsibility derived from understanding the mediated connection that agents have to structural injustices does not evaluate harm that deviates from the normal and the acceptable; rather, it often brings into question precisely the background conditions that ascriptions of blame and fault assume as normal" (Young, 2006, p.120).
More forward-looking than backward-looking	"The point is not to blame, punish, or seek redress from those who did it, but rather to enjoin those who participate by their actions in the process of collective action to change it" (Young, 2006. P.122).
Shared responsibility	"[A]ll those who contribute by their actions to the structural processes producing injustice share responsibility for such injustice" (Young, 2006, p.122).
Discharged through collective action	"[T]he forward-looking responsibility can be discharged only by joining with others in collective action" (Young, 2006, p.123).

The actions that the various actors should take to remedy the unjust outcomes depend on their position within the structural process. Young (2006) provides four parameters, power, privilege, interest, and collective ability, to determine the degree to which agents are responsible to act. Power is defined as the influence an agent has over the social process that leads to harm, privilege is described as an agent's position within the structures that the social process creates which allows them to have a certain level of autonomy, interest is considered an agent's desire to preserve or transform the social process that creates harm, and collective ability is the capacity of agents to work together to influence the social process (Young, 2006). Given the Convention has been unable to harness sufficient resources and support to ensure the implementation of the NAPA adaptation projects and that climate change is structural injustice, it is important to examine whether the Convention's responsibility framework meets the requirements of the Social Connection Model.

3: METHODS

The Convention and relevant COPs decisions were analyzed according to Young's Social Connection Model. More specifically, the framework of responsibility outlined in the Convention was compared to the five main features of the Social Connection Model and its parameters of reasoning (outlined in Table 1). The Convention was selected as the primary document to be analyzed because it is the seminal international agreement that outlines how Parties should assist LDCs adapt to climate change. It is also the agreement from which the NAPA emerged. Although there are hundreds of COPs decisions, only seven were deemed important to analyze here because they referred in part or in whole to key aspects of the least developed countries work programme. They were identified by consulting important UNFCCC publications as well as the UNFCCC Least Developed Countries Portal list of key decisions. The decisions include Decision 5/CP.7, Decisions 27/CP.7, Decisions 28/CP.7, Decision 8/CP.8, Decision 6/CP.9, Decision 3/CP.11, and Decision 5/CP.14.

Once all documents were identified, they were coded according to the five features and four parameters of reasoning of the Social Connection Model. The coding process involved reviewing the documents for language and themes consistent with the features and parameters. All relevant references to each of these features and parameters were then synthesized to determine their degree of integration in the Convention. These data were then analyzed to conclude whether the Convention's responsibility framework corresponds with the Social Connection Model.

4: FINDINGS

The Convention outlines a responsibility framework that is insufficient to determine responsibility for the commitments to assist LDCs address the adverse effects of climate change. First, the description of responsibility is limited to a vague statement. Second, the Articles that outline the commitments to assist the LDCs lack any reference to who is responsible and to what degree. Finally, the Convention's reference to responsibility is not clearly described as an obligation of justice.

The Convention's approach to responsibility is that all Parties have "common but differentiated responsibilities". This statement appears multiple times including as a Convention principle in Article 3.1: "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." This statement is reiterated in Article 4.1 in relation to a commitment by the Parties to assist the most vulnerable in climate change adaptation and in the preamble of Decision 5/CP.7 that established the least developed countries work programme.

Although "common but differentiated responsibilities" implies that Parties have a responsibility to fulfil commitments under the Convention, it is described in ambiguous terms rendering the Article hard to apply, and in many of the Articles that outline a commitment by the Convention to assist the most vulnerable countries adapt to climate change, there is no reference to which Parties have a responsibility and to what degree

to fulfil these commitments. In addition, the Convention fails to elaborate on the statement that Parties have “common but differentiated responsibilities”, allowing Parties to determine for themselves the meaning of responsibility and thus their own responsibilities under the Convention. Furthermore, by omitting an explanation of this statement, the Convention avoids providing a clear reference to responsibilities as obligations of justice. As a result, the commitments that call Parties to assist LDCs address the adverse effects of climate change (see Article 4.3, 4.4, 4.8 and 4.9) appear as mere appeals for assistance rather than obligations of Parties.

The COPs recognize the need to further elaborate on the Convention’s approach to determine responsibility; however they have yet to do so. At the seventh COPs, the least developed countries work programme was created to enact the commitments to assist LDCs and to ensure this programme received adequate resources, the Parties agreed to develop a burden sharing mechanism (Decision 7/CP.7). As of the Copenhagen Conference in December 2009, the responsibility framework was still not elaborated to ensure that Parties take this responsibility (see Bodansky 2010; IIED, 2010). Consequently, the Convention is currently without a comprehensive responsibility framework that outlines responsibility for the adverse effects of climate change in the LDCs explicitly as an obligation of justice.

Although the Convention’s responsibility framework is limited to a vague statement that fails to clearly define responsibility as an obligation of justice, the Convention still outlines a basic framework that provides guidance for assisting LDCs adapt to climate change. The following sections outline whether the Convention meets the requirements

of the Social Connection Model. Sections 4.1 to 4.5 examine the integration of the five features while section 4.6 describes the integration of the parameters of reasoning.

4.1 Judging Background Conditions

A key feature of the Social Connection Model is judging background conditions. It stresses the importance of bringing into question the background conditions often assumed as normal (Young, 2006). Judging the background conditions that lead to the adverse effects of climate change in LDCs makes it possible to uncover the social processes that create this harm. However, the Convention describes the circumstances in LDCs with broad terms that fail to expose the processes that result in the adverse effects. Article 3.2 and Article 4.4 describe the developing country Parties as being "particularly vulnerable" to the adverse effects of climate change and Article 4.9 says that LDCs have "specific needs and special situations". The use of these ambiguous terms and the failure to provide an explanation of the underlying social processes are indications that the Convention neglects to judge the background conditions that lead to dangerous level of adverse effects in LDCs.

In addition, Decision 27/CP.7 uses broad terms to outline the motive for establishing the NAPA:

> The rationale for developing NAPAs rests on the low adaptive capacity of LDCs, which renders them in need of immediate and urgent support to start adapting to current and projected adverse effects of climate change. Activities proposed through NAPAs would be those whose further delay could increase vulnerability, or lead to increased costs at a later stage.

The reason to create the NAPA also fails to elaborate on terms, such as “adaptive capacity” and “vulnerability”, to describe the circumstances that lead to the adverse effects of climate change in LDCs, which results in important concepts being undefined and unexplained. This approach leaves the social processes that lead to the adverse effects of climate change in LDCs unexplored. Therefore, the Convention does meet the requirements of the Social Connection Model’s feature to judge background conditions.

4.2 More forward-looking than backward-looking

The more forward-looking than backward-looking feature of the Social Connection Model places greater emphasis on the need to “enjoin those who participate by their actions in the process of collective action to change” rather than to blame or punish those who participate in the creation of injustice (Young, 2006, p.122). The Convention uses language that is more forward-looking but at times makes statements that may be interpreted as backward-looking. The Convention calls for collective action by the international community to respond to the current and projected adverse effects of climate change in LDCs. For instance, the Convention’s preamble states the importance of international collaboration by “Acknowledging that the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response”. As seen in the above citation, the Convention enjoins the international community to respond to the adverse effects of climate change in LDCs. The COPs follow suit by creating the least developed countries work programme and calling Parties to provide funding (Decision 5/CP.14).

However, the Convention also uses language that appears to place emphasis on the backward-looking approach, whereby, the developed countries, which are responsible

for most of the historical GHG emissions, are called to take the lead in combating the adverse effects of climate change (Article 3.1). This Article may too be interpreted as consistent with the Social Connection Model based on the parameter of power, where those with power over the social processes that cause harm have a responsibility to remedy the harm. Therefore, Article 3.1 shows how the Convention does not clearly use a more forward-looking than backward-looking approach since it is unclear whether the this Article is motivated by the desire to blame or to facilitate collective action. In summary, although the Convention uses language that is forward-looking, at points it may also be interpreted as backward-looking. As a result, it is unclear whether the Convention meets the requirements of the Social Connection Model of being more forward-looking than backward-looking.

4.3 Shared responsibility

With the forward-looking approach in mind, the shared responsibility feature of the Social Connection Model states that, “All those who contribute by their actions to the structural processes producing injustice share responsibility for such injustice” (Young, 2006, p.122). The Convention fails to clearly meet the requirements of this feature first by failing to explicitly define responsibility as an obligation of justice (see section 4), and second, by being unclear as to whether all who participate by their actions in the social processes that cause harm have responsibility. On numerous occasions, the Convention calls for collective action to address the adverse effects of climate change in LDCs. For instance, the preamble calls for “the widest possible cooperation by all countries and their participation in an effective and appropriate international response” and Article 4.9 urges all Parties to “take full account of the specific needs and special situations of the LDCs”. Meanwhile, Article 3.1 states that, “the developed country Parties should take the

lead in combating climate change and the adverse effects thereof", thereby decreasing the emphasis on collective action as outline in the preamble and Article 4.9.

COPs decisions further highlight this inconsistency. The COPs ask Parties to assist LDCs address the adverse effects of climate change by providing financial support and capacity building resources to the least developed countries work programme. However, more often than not, the COPs ask the developed country Parties (Annex I and Annex II Parties) to contribute financially rather than all Parties, as is evident in the following example where the COP:

> Invites Parties included in Annex II to the Convention to continue contributing to the Least Developed Countries Fund for the implementation of national adaptation programmes of action (Decision 3/CP.11)

The isolation of responsibility to developed countries appears to contradict the shared responsibility approach of the Social Connection Model. As a result, the Convention provides confusing guidance on who is responsible for assisting the LDCs. Considering this and the omission of a clear definition of responsibility as an obligation of justice, the Convention fails to clearly meet the requirements of the shared responsibility feature.

4.4 Not isolating

Not isolating is another key feature of the Social Connection Model. It states that "where there is structural injustice, finding some people guilty of perpetrating specific wrongful actions does not absolve others whose actions contribute to the outcomes from bearing responsibility" (Young, 2006, p. 120). This feature is not clearly represented in the Convention because its responsibility framework does not incorporate an obligation of

justice as stated previously (see Section 4) and the Convention is unclear as to whether all who contribute by their actions are responsible since the developed countries are more often than other Parties identified as bearing responsibility to assist LDCs face the adverse effects of climate change (see section 4.3). The Convention's emphasis on the developed countries' role in assisting LDCs may be interpreted as absolving others of such responsibility. As a result, the Convention, in its coordinated response, may be isolating, which is not consistent with the Social Connection Model.

4.5 Discharged only through collective action

The fifth feature of the Social Connection Model indicates that agents who participate by their actions in the social processes that lead to injustice can be discharged from responsibility only through collective action (Young, 2006). Although the Convention is itself a collective action, whereby all Parties are called to work together and to take responsibility according to their "common but differentiated responsibilities", it is not actually facilitating collective action to remedy the structural injustice experienced by LDCs. The failure by the Convention to provide clear and unambiguous guidance on who is responsible and the use of language consistent with the liability model (that requires clear causal links) may be hindering the ability of the Parties to work collectively to prevent and reduce the adverse effects of climate change in LDCs.

Furthermore, the Convention fails to clearly define the responsibility to assist LDCs as an obligation of justice. Therefore, collective action to address the adverse effects of climate change in LDCs may not be found in efforts to remedy injustice; rather, they are motivated simply by charity. In summary, the Convention provides an opportunity for collective action but so far its responsibility framework has failed to produce such results,

in part because of its failure to adhere to the requirements of a political model of responsibility. Therefore, at this point in time, the Convention falls short of providing Parties with the opportunity to be discharged from responsibility.

4.6 The parameters of reasoning

The Convention provides parameters of reasoning that are designed to help Parties determine the degree to which they should assist LDCs. These parameters are outlined in the Convention's preamble, which states:

> Acknowledging that the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions.

This citation identifies Parties' capabilities and social and economic circumstances as parameters to help the Parties determine to what degree they are responsible to fulfil the commitments outlined in the Convention. However, the Convention fails to provide adequate definitions of these parameters and relate them directly to determining responsibility to assist LDCs face the adverse effects of climate change.

The Social Connection Model proposes its own parameters of reasoning – power, privilege, interest, and collective ability – to determine responsibility (Young, 2006). These parameters are present to varying degrees in the Convention's parameters to help Parties decide how they should fulfil the commitments. The reference to Parties' "respective capabilities and their social and economic situation" refers in part to a country's power and privilege. Power as described by the Social Connection Model, is an

actor's "position within a structural process [that] usually carries with it a specific degree of potential or actual power or influence over the processes that produce the outcome" (Young, 2006, p.127). The above mentioned Convention reference refers to the power that comes from the position a country holds because of the processes that produce GHGs. On the other hand, privilege is present when actors "acquire relative privilege by virtue of structures" (Young, 2006, p.127). For instance, industrialization contributes significantly to climate change while at the same time places countries in privileged social and economic positions. Considering these findings, the Convention's reference to social and economic position incorporates the Social Connection Model's power and privilege parameters.

Interest is an agent's concern for the "maintenance or transformation of structures that produce injustice" (Young, 2006, p.128). The Convention represents this parameter in various forms. Article 3.3 articulates it most clearly by stating, "Efforts to address climate change may be carried out cooperatively by interested Parties". This citation is an example of a broad application of the interest parameter since it relates to all actions to address climate change. This parameter is also present when the Convention asks Parties to assist LDCs. For instance, the COPs "invites Parties to continue contributing to the Least Developed Countries Fund for the implementation of all elements of the least developed countries work programme" (Decision 5/CP.14).The word "invites" frames the contributions as an opportunity to give according to interest which allows interest to be a significant factor in determining whether Parties assist LDCs.

The final parameter is collective ability, the ability of groups to influence a social structure that leads to injustice (Young, 2006). The Convention itself is an effort to

enhance the collective ability of countries to work together to address the adverse effects of climate change by providing an institution as a forum for discussion and agreement. The Convention's emphasis on developed countries to take the lead in addressing the adverse effects in developing countries may also be an example of the use of this parameter because these groups have a significant role in creating the structural injustice of climate change. Although the Convention integrates the Social Connection Model's parameters of reasoning, the parameters are vague and disconnected from the specific commitments to assist LDCs face the adverse effects of climate change. As a result, they do not provide adequate guidance to Parties on how to determine who is responsible and to what degree to assist LDCs.

5: DISCUSSION

A United Nations Convention is an organization that gives countries the opportunity to discuss, negotiate, and come to agreement on solutions for transnational issues. The United Nations Framework Convention on Climate Change is one such organization established for the purpose of providing countries with the opportunity to work together to prevent dangerous climate change and its impacts (UN, 1992). Given the current and projected dangerous adverse effects of climate change in LDCs, the Convention has the opportunity to provide a responsibility framework that enjoins countries together to prevent and reduce this injustice.

The Social Connection Model is a responsibility framework specifically created to remedy structural injustice (Young, 2006). It is able to allocate responsibility when numerous countries contribute to anthropogenic climate change and when there are unclear causal links between countries' GHG emissions and the adverse effects of climate change in LDCs. Therefore, given the Convention offers an international forum to remedy the injustice experienced by LDCs, it should integrate the Social Connection Model.

This review of the Convention shows that it fails to provide a responsibility framework that clearly meets the requirements of the Social Connection Model. The Convention states that Parties have responsibilities to fulfil the commitment to consider the special circumstances in LDCs (see Article 4.9); however, it fails to explain the meaning of this

responsibility. As a result, the Convention allows Parties to interpret the meaning of responsibility themselves; in other words, some Parties may understand this responsibility as an obligation of justice while others may not. If Parties interpret responsibility as an obligation of justice, they may conceive it as being defined by the liability model, the Social Connection Model, a combination of the two, or neither. If it is not in relation to justice, responsibility is synonymous with assistance (also noted by Paavola & Adger, 2006). This is an important distinction because when responsibility is not defined in relation to justice, structural injustice is effectively ignored. This delegitimizes the concerns and interests of the most vulnerable (Paavola & Adger, 2006) and thus risks leaving the needs of LDCs inadequately addressed or neglected (Baer, 2006). The review of the Convention shows how the Convention not only fails to clearly integrate the Social Connection Model, but also does not provide a clear and comprehensive responsibility framework for the adverse effects of climate change in LDCs.

To provide a clear responsibility framework for structural injustice, one must first identify the structural processes that lead to the injustice. Showing the structural processes, brings to light the manner by which agents' actions contribute to injustice and thus proves their responsibility to remedy the harmful effects of their actions. Judging background conditions is a feature of the Social Connection Model that elucidates the structural processes that lead to injustice. The Convention describes with broad terms the background conditions in LDCs that help foster the current and projected adverse effects of climate change but fails to judge these. By only providing descriptions of the conditions, the Convention effectively omits any explanation of how Parties participate by their actions in the structural processes that lead to the dangerous effects of climate

change in LDCs. In other words, the Convention places no clear obligation of justice on the Parties to assist LDCs. Paavola & Adger (2002) also recognizes that the Convention's responsibility framework fails to explicitly address injustice. During the pre-Convention negotiations, legal experts recommended that the Convention include principles on responsibilities for the adverse effects of climate change, and in fact, drafts of the Convention included legal instruments to address the need for adaptation, but Parties discarded these instruments in favour of the ambiguous responsibilities outlined in the current Convention (Verheyen, 2003).

Reviewing the Convention for the Social Connection Model's forward-looking feature also shows how the Convention provides an ambiguous responsibility framework. The forward-looking approach of the Social Connection Model calls for Parties to enjoin together for collective action to remedy the structural injustice (Young, 2006). At first glance, the Convention appears to be forward-looking because the preamble frames the call to assist LDCs with a statement that acknowledges the need for cooperation by all countries. However, when the Convention states that developed countries should take the lead in dealing with the adverse effects of climate change, it is uncertain whether this is decided based on the more backward-looking approach of blame, whereby those who emit the most GHGs have the greatest responsibility, or whether it is based instead on the Social Connection Model's parameter of power, whereby those with the greatest power to change the social process have the greatest responsibility. Considering that it is unclear what approach the Convention uses to determine that developed countries should take the lead, it is difficult to determine whether the Convention is more forward-looking than backward-looking. This finding further highlights the ambiguous nature of the Convention's responsibility framework.

The shared responsibility feature of the Social Connection Model calls for all Parties who contribute to processes that lead to injustice to share responsibility for such injustice. In addition, within this shared approach, parameters of reasoning are used to assist Parties to determine the degree to which they should take responsibility. As recommended by the Social Connection Model, the Convention provides parameters of reasoning such as Parties' social and economic position; however, it never explains these broad terms in relation to taking responsibility for the injustice experienced by LDCs. According to the Social Connection Model, parameters of reasoning are meant to guide Parties in their decisions to take responsibility (Young, 2006), but without providing explanations of what is meant by social and economic positions, the Parties are given little guidance and are left to themselves interpret their own degree of responsibility.

As stated previously, it is unclear why the developed countries are asked to take the lead in dealing with the adverse effects of climate change. As a result, it may appear as though the Convention determines the degree of responsibility for the adverse effects of climate change by the amount of GHGs emitted instead of using the Social Connection Model's parameters of reasoning. This lack of clarity also makes it appear as though the Convention negates shared responsibility because it isolates responsibility to one group of Parties who contribute to the injustice, instead of encouraging all involved Parties to share responsibility. Therefore, the Convention fails to clearly meet the requirements of the Social Connection Model's shared responsibility and not isolating features. The final feature of the Social Connection Model reviewed in the Convention is discharged through collective action. Even though the Convention is itself a collective action, it is failing to effectively facilitate collective action to prevent and reduce the adverse effects

of climate change in LDCs. This means that at this point in time the Convention is not allowing Parties who contribute by their actions to the social processes that cause harm to be discharged from responsibility.

The Convention fails to clearly use Young's Social Connection Model to determine responsibility to prevent or reduce the adverse effects of climate change in LDCs, and instead provides an ambiguous responsibility. Bodansky (1993), in an extensive review of the pre-Convention negotiations and the text of the Convention, finds that "many of the Convention's provisions do not attempt to resolve differences so much as paper them over, either through formulations that preserved the position of all sides, that were deliberately ambiguous, or that deferred issues until the first meeting of the COP" (p.493). Specific research on the Convention's approach to just climate change adaptation also finds it unclear and inadequate (Paavola & Adger, 2006). Bodansky (1993) claims that the ambiguities are constructive because they make agreements possible that set the stage for further discussion. In other words, the Convention only provides a starting point, and after the signing of the Convention, it was expected that more detailed legal agreements would be created to ensure the fulfilment of commitments. However, this research shows that in a decade and a half since the Convention entered into force, it has failed to create a detailed legal instrument that clarifies its approach to determining who is responsible and to what degree to assist LDCs adapt to the adverse effects of climate change.

The ambiguity in the Convention's responsibility framework hinders the cooperation of Parties to address the injustice experienced by LDCs because it creates uncertainty in the minds of the Parties on a contentious topic with high costs. A consequence of this

ambiguous approach to determining responsibility is the under-resourced NAPA program. Recent reviews and reports by the Convention itself are flagging the insufficient support from the Parties to implement the NAPA adaptation projects (see LEG et al., 2009; SBIa, 2008; SBIb, 2008, SBI, 2007) as is apparent in the fact that the United States has chosen not to contribute financially at all (Mace, 2006).

The negotiations that have occurred concerning the Convention's responsibility framework have included proposals consistent with the liability model, whereby the countries that emit more GHGs have more responsibility for the adverse effects (Baer, 2006). However, the liability model approach has proven to be divisive, extending back to the pre-Convention negotiations (Bodansky, 1993), and it continues to be so amongst the Parties because of the complex technical negotiations required for this model to be implemented. For instance, Parties must agree on a process that attributes a country's GHG emissions to current and projected adverse effects (Verheyen, 2003), and determine what adverse effects are a result of anthropogenic and not natural climate change (Verheyen, 2003), when historically, countries should begin being held responsible for their emissions, which gases and sources are included, and who is responsible for emissions that are a result of importing and exporting goods (Baer, 2006). In the past, developed countries have stalled negotiations to settle the complex technical aspects of using the liability model to determine responsibility for the adverse effects of climate change because of the uncertainties mentioned above. For example, they have done this by raising concerns over the scientific uncertainties of differentiating natural from anthropogenic climate change. The developing countries call these actions delaying tactics (Mace, 2006). The developed countries are also reluctant to take responsibility because they have other higher priorities such as their own economic and

political interests (Baer, 2006). Therefore, the liability model is not working effectively to support the LDC climate change adaptation process.

On the other hand, a clear responsibility framework based on unifying principles of justice has the opportunity to enjoin Parties together to work to remedy injustice (Verheyen, 2003). Given the urgent needs of LDCs to adapt to climate change, it is important to find unifying principles of justice that allow Parties to work collectively to prevent and reduce the adverse effects of climate change in LDCs. Integrating the Social Connection Model's justice principles into the Convention's responsibility framework may bridge the divisions between the Parties that have prevented an adequate elaboration of the responsibility framework because, as Young (2006) states, the liability model is insufficient to determine responsibility for structural injustice due to its dependence on identifying direct interactions between an agents actions and those harmed and in instances of structural injustice there are often agents who participate in the social process who are removed from the specific interactions that cause harm. The Social Connection Model addresses this weakness because all agents "who contribute by their actions to the process that produce injustice" are considered to be responsible (Young, 2006, p.102).

Furthermore, determining these direct interactions has delayed the development of the Convention's responsibility framework (see Verheyen, 2003; Baer, 2006). It will also take time for climate scientists to be able to determine the direct interactions and thus make the liability model a viable method to determine responsibility. Accordingly, at this point in time the Social Connection Model is the superior method to determine responsibility because it has the ability to bridge some of the current divisions between Parties that

have stalled the elaboration of the Convention's responsibility framework. Moreover, by bringing Parties closer to an agreement, the necessary resources for LDCs to adapt may be provided earlier than if the negotiations are to wait for climate scientists to map out the direct interactions.

6: RECOMMENDATIONS AND CONCLUSIONS

Given the theoretical and practical challenges associated with using the liability model to determine responsibility for the adverse effects of climate change the Convention should consider using the Social Connection Model of responsibility. It is better suited for determining responsibility for harms that are a result of structural injustice (Young, 2006), such as the negative impacts of climate change in LDCs. The key features of the Social Connection Model are able to circumvent the challenges associated with using the liability model for determining responsibility for structural injustice and as a result have the ability to foment discussion among the Parties to create a comprehensive framework of responsibility which is urgently required because of the pressing need for climate change adaptation in LDCs. It important to note that although the Social Connection Model has the ability to bridge divisions that currently hinder the elaboration of the Convention's responsibility framework, it too may present theoretical and practical challenges. For instance, the parameters of reasoning have yet to be explained in detail and thus to determine responsibility based on the parameters may be challenging.

In order for the Social Connection Model to enjoin the Parties together to take responsibility, the Parties must first understand how their actions contribute to the adverse effects of climate change in LDCs. Judging background conditions is crucial in highlighting how Parties contribute to the social processes that lead to the adverse effects (Young, 2006). Although it is complex, it is necessary to uncover because it shows how Parties have a responsibility to assist LDCs adapt to the adverse effects of climate change. Practically, this means the Convention should move beyond the broad

terms that describe the conditions in LDCs to explanations of how Parties contribute to the current and projected adverse effects of climate change.

Judging background conditions is not meant to determine who is to blame for injustice and seek compensation, rather who is involved in the structural process and therefore should participate in the forward-looking solution (Young, 2006). Efforts to use the liability model to determine responsibility for the adverse effects have been unsuccessful because there is scientific uncertainty in determining the direct interactions between an agent's actions and those harmed. By using more of a forward-looking approach, proving which Parties cause which adverse effects is not necessary because responsibility is not dependent on determining the direct interactions but on whether a Party participates by their actions in creating the conditions that lead to the adverse effects of climate change. For the Convention to be forward-looking, it should not blame Parties but consistently use language that encourages the cooperation of all Parties contributing.

To ensure the Convention considers the structural injustice of climate change, it must define responsibility as an obligation of justice which should be approached by shared responsibility. To determine the degree to which Parties are responsible for the adverse effects in LDCs, it can incorporate the Social Connection Model's parameters of reasoning. Although the Convention provides parameters that resemble those suggested by the Social Connection Model they are expressed as broad terms that are not explained. To ensure Parties are well informed of their responsibilities, the parameters should be elaborated upon. Corresponding to shared responsibility, the Social Connection Model states that if Parties are found guilty of contributing by their actions to

structural injustice others who also contribute are not absolved of their responsibility (Young, 2006). The Convention currently finds the developed country Parties responsible to assist LDCs and fails to include others who contribute. To improve the Convention's responsibility framework, responsibility should not be isolated to a group of Parties but all Parties who contribute.

All Parties should participate in organized negotiations to elaborate on the Convention's current responsibility framework. This dialogue should culminate in a written document, such as a protocol to the Convention, to allow Parties to ratify this agreement. As this paper argues, the agreement should integrate the Social Connection Model because it is capable of unifying all responsible Parties in collective action. With this cooperation, the NAPA would be better resourced and financed, thus providing better support to LDCs in their efforts to adapt. More specifically, LDCs could build human capacity at the national level, and receive required technical guidance and timely and adequate funding to prepare and implement their adaptation projects.

In conclusion, the Social Connection Model has the ability to bridge divisions that currently hinder the elaboration of the Convention's responsibility framework. More specifically, it can help Parties move beyond disagreements to build a clear and comprehensive framework that ensures that LDCs receive timely and adequate resources to implement their NAPA adaptation projects. This would assist LDCs prevent and reduce the current and projected adverse health effects of climate change.

APPENDICES

APPENDIX A: LIST OF LEAST DEVELOPED COUNTRIES

No.	Country	25	Sao Tome and Principe
1	Angola	26	Senegal
2	Benin	27	Sierra Leone
3	Burkino Faso	28	Somalia *
4	Burundi	29	Sudan
5	Central African Republic	30	Togo
6	Chad	31	Uganda
7	Comoros	32	United Republic of Tanzania
8	Democratic Republic of the Congo	33	Zambia
9	Djibouti	34	Afghanistan
10	Equatorial Guinea	35	Bangladesh
11	Eritrea	36	Bhutan
12	Ethiopia	37	Cambodia
13	Gambia	38	Lao People's Democratic Republic
14	Guinea	39	Maldives
15	Guinea-Bissau	40	Myanmar
16	Lesotho	41	Nepal
17	Liberia	42	Timor-Leste
18	Madagascar	43	Yemen
19	Malawi	44	Haiti
20	Mali	45	Kiribati
21	Mauritania	46	Samoa
22	Mozambique	47	Solomon Islands
23	Niger	48	Tuvalu
24	Rwanda	49	Vanuatu

*Not a party under the Convention

(UNFCCC, 2009)

APPENDIX B: THE PROGRESS OF THE NAPA

Least developed countries	NAPA completed	PIFs Approved	CEO Endorsed (Implementing)
Afghanistan	X		
Angola			
Bangladesh	X	X	X
Benin	X	X	X
Bhutan	X	X	X
Burkina Faso	X	X	X
Burundi	X		
Cambodia	X	X	
Cape Verde	X	X	X
Central African Republic	X		
Chad	X		
Comoros	X	X	
Democratic Republic of the Congo	X	X	X
Djibouti	X	X	X (Under review)
Equatorial Guinea*			
Eritrea	X	X	X
Ethiopia	X		
Gambia	X	X	
Guinea	X	X	
Guinea Bissau	X	X	
Haiti	X	X	
Kiribati	X	X	
Lao People's Democratic Republic	X	X	
Lesotho	X	X	
Liberia	X	X	X (Under review)
Madagascar	X		
Malawi	X	X	
Maldives	X	X	X
Mali	X	X	X
Mauritania	X	X	
Mozambique	X		
Myanmar			
Nepal			
Niger	X	X	X
Rwanda	X	X	X
Samoa	X	X	
Sao Tome and Principe	X	X	
Senegal	X		
Sierra Leone	X	X	

Solomon Islands	X		
Somalia*			
Sudan	X	X	X
Timor-Leste			
Togo	X		
Tuvalu	X	X	X
Uganda	X		
United Republic of Tanzania	X	X	
Vanuatu	X	X	
Yemen	X	X	
Zambia	X	X	X

* Equatorial Guinea and Somalia have not agreed to receive funding for their NAPAs

(GEF, 2010)

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