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Risk Perceptions of Climate Change in International Environmental Negotiations

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RISK PERCEPTIONS OF CLIMATE CHANGE IN INTERNATIONAL ENVIRONMENTAL NEGOTIATIONS

by

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ABSTRACT

Climate change poses an unprecedented risk to global human security and future generations. Yet actions to mitigate or adapt to the changing climate system vary greatly among countries and their constituencies. Despite mounting evidence detailing the economic, social, and ecological risks of climate change, many scholars agree that the greatest threats associated with climate change involve delaying or ignoring necessary action. Using theorizing of "risk society" from Ulrich Beck and others, this thesis examines how countries, environmental non-governmental organizations (NGOs), and business interests construct the risk of climate change and how their respective discourses conflict in international environmental negotiations. This research uses computer-assisted qualitative data analysis to explore statements submitted by each of these constituencies to the sixteenth Conference of the Parties (COP) for the United Nations Framework Convention on Climate Change (UNFCCC) in 2010. Analysis of these texts identifies climate change discourse as crisis or opportunity, in addition to discourses of development, environmentalism, and rights or responsibilities to provide us a better understanding of how we perceive and respond to ecological risk.

For Lee and Isabel

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LIST OF ACRONYMS (or) ABBREVIATIONS

AR	Assessment Report
BINGO	Business And Industry Non-Governmental Organization
CAN	Climate Action Network
CEE	Countries of Central and Eastern Europe
COP	Conference of the Parties
EIG	Environmental Integrity Group
ENGO	Environmental Non-Governmental Organization
EU	European Union
G77	Group of 77
GCC	Global Climate Coalition
GHG	Greenhouse gas emissions
GRULAC	Group of Latin American and Caribbean Countries
IGO	Intergovernmental Organization
IPCC	Intergovernmental Panel on Climate Change
IPO	Indigenous Peoples Organization
IRGC	International Risk Governance Council
LDC	Least Developed Country
LGMA	Local Governments And Municipal Authorities
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-operation and Development
OPEC	Organization of Petroleum Exporting Countries
RINGO	Research and Independent Non-governmental Organization

SBSTA	Subsidiary Body for Scientific and Technological Advice
SIDS	Small Island Developing States
TUNGO	Trade Unions Non-governmental Organization
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
WEOG	Western Europe and Others Group
YOUNGO	Youth Non-governmental Organization

CHAPTER 1 INTRODUCTION

Climate change is the most persistent threat to global stability of this century. Its impacts are felt worldwide – from rising sea levels to more extreme weather conditions. While climate change poses an unprecedented risk to human security and future generations, our actions to mitigate and adapt to (or ignore) these documented adverse impacts of climate change vary greatly among countries and their constituencies. Despite mounting evidence detailing the economic, social, and ecological risks of climate change (Intergovernmental Panel on Climate Change [IPCC], 2014; Stern, 2006; Gosling et al., 2011) many "experts agree that the greatest risk associated with climate change is pretending that the problem does not exist, or that it does not require our immediate attention and action" (Mills, 2012, p. 67).

This thesis asks whether explanations for such divergent responses to climate change could lie in analyzing risk perceptions, which influence our orientation and actions toward these global hazards (Beck, Block, Tyfield & Zhang, 2013; Leiserowitz, 2006; O'Connor, Bord & Fisher, 1999; Welsh, 1996; Wood & Vedlitz, 2007). Indeed, German sociologist Ulrich Beck assumed "risk leads a dubious, insidious, would-be, allusive existence: it is existent and non-existent, present and absent, doubtful and suspect" (2009, p. 188). For Beck (2009), risk became "the central way of constituting and organizing society" as we moved toward modernity (p. 160). Equally, for many environmental scholars, risk has offered an ontological framework for studying social processes, cultural attitudes, and policymaking related to climate change. That is because risk does not standalone; it is a socially constructed phenomena linked to

governance and discourse (Beck, 2010a; Rothe, 2011; Thompson & Rayner, 2000). As such, “risk issues are defined in the public sphere by the contest of contending forces” (McGuigan, 2006, p. 215).

This thesis contains six chapters, the first of which gives an overview of the paper’s structure. Chapter 2 provides a literature review on construction and perception of risk as it relates to environmental issues. Chapter 3 offers background on the United Nations Framework Convention on Climate Change (UNFCCC), which this thesis argues is one of the best arenas to study risk perceptions of climate change. In its 23-year history, the UNFCCC has established a legitimate international regime through numerous formal and informal negotiations to implement transnational agreements aimed at mitigating or adapting to the risks of climate change (Huang, 2009). Together with hundreds of non-governmental organizations (NGOs), the UNFCCC involves nearly 200 countries meeting annually to “cooperatively consider what they could do to limit average global temperature increases and the resulting climate change, and to cope with whatever impacts were, by then, inevitable” (United Nations Framework Convention on Climate Change [UNFCCC], 2013). Chapter 4 provides a discussion of the methodology utilized to examine documents submitted from UNFCCC constituencies – countries and NGOs – during the Conference of the Parties (COP) 16 in 2010. Through discourse analysis of these high-level statements and submissions from these constituencies in 2010, this thesis seeks to identify the risk perceptions of countries and other key stakeholders in environmental negotiations aimed at curbing the threats associated with climate change. Chapter 5 offers an analysis of the findings from my computer-assisted data qualitative analysis of these documents to the UNFCCC

from countries and NGOs, and Chapter 6 concludes with a discussion of what we can learn from studying climate change risk perceptions.

1.1 Risk Society

Although the concepts of loss and damage associated with climate change hazards are widely discussed, they are not clearly defined under the UNFCCC (Surminski, Lopez, Birkmann, & Welle, 2012). In addition, “no comprehensive risk assessment model for climate change loss and damage exists” (Surminski et al., 2012, p. 3). Without such models, it is difficult for decision makers to understand capacity needs, identify gaps, enhance action, or reduce vulnerability in their home countries. Thus, stakeholders often rely on risk perceptions to help inform their intentions. Beck famously argued that risk is a key aspect of late modernity, and our responses to risk change over time (Bristow & Fitzgerald, 2011). Countries have developed a variety of coping mechanisms to confront the risks that have evolved from industrialization and modernization, according to Beck (Rothe 2011). But climate change has exceeded the limits of national risk-management institutions, prompting a new risk society that must “transcend the boundaries of national states and thus open up a window of opportunity for a more cooperative international order to evolve” (Rothe, 2011, p. 332).

Beck’s work offers a conceptual starting point from which to examine questions about contemporary environmental risk (Bulkeley, 2001). Yet, in this thesis, his theorizing is supplemented with that of Rothe (2011) and Webb (2011) who also explore the political impacts of different risk framing on global climate governance and the role of countries and NGOs, as well as theories on the social amplification of risk by

Kasperson et al. (1988). Additionally, this chapter reviews literature on the role of science in risk assessment and climate policy and explores the paradoxically democratizing and disproportionate effects of climate change – that is, while adverse impacts are seen worldwide, some places and peoples are suffering more than others (Beck, 2010b; Bulkeley, 2001; Huang, 2009). Closely linked to the inequity of climate change impacts are public perceptions of risk that guide norms of responsibility and accountability associated in responding to these hazards (Harris & Symons, 2010). This thesis also reviews past studies of public perception of the risks associated with climate change.

1.1.1 Competing Interests

As a "community of danger" coming together, Beck (2001) believed the United Nations (UN) could collectively address climate change risks and take more effective action than individual countries alone. Also critical to Beck's theorizing of reflexive modernity is that participation in the UNFCCC is not limited to countries: in recent years, there has been a dramatic increase in non-governmental organizations (NGOs) attending and influencing the negotiations (Betsill & Corell, 2001; Betsill & Corell, 2008; Cabré, 2011; Lund, 2012; Schroeder & Lovell, 2012; Steffek & Nanz, 2008). Among the most active and influential of these organizations are environmental NGOs – dubbed ENGOs – and business and industry NGOs (BINGOs) (Betsill & Corell, 2008; Lund, 2012). Each nation and NGO grouping are permitted to submit high-level statements and opinions on COP decisions and strategies related to climate financing and adaptation, or other issues of negotiation. This research draws from these statements

and written opinions presented in 2010 prior to and during the Conference of the Parties (COP) 16, held in Cancún, Mexico.

The UNFCCC has played a critical role by "catalyzing climate action at various levels of governance, building an institutional infrastructure, facilitating learning and enhancing trust among parties, and generally keeping climate change on the international policy agenda" (Moncel & van Asselt, 2012, p. 163). While Chapter 3 reviews several of the recent cited successes of the UNFCCC – the Cancún Agreements and Durban Platform for Enhanced Action – this chapter also explores the UNFCCC's failure to pass a binding resolution in Copenhagen and the challenges inherent to climate negotiations as they relate to politics, economy, equity, and process (Streck, 2012). As Cronin (2002) points out: "The UN is an organization of, by, and for independent sovereign states, yet it is also a semi independent actor staffed with a semi autonomous civil service" (p. 54). Borne (2010) says this assessment leads to "two faces of the UN" – one that involves nations pursuing their own interests, and the other a single entity searching for multilateral agreement (p. 34). This chapter explores those competing interests in their construction of risk.

Yet countries are not the only actors with prominent influence at the UNFCCC. The number of observer organizations – non-governmental groups – has outnumbered delegates at a majority of COP meetings, and many national delegations also admit NGO, municipal, or business representatives into their delegations, raising that number even further (Schroeder & Lovell, 2012). In addition to energizing the negotiations with side-events, demonstrations, and media attention, NGOs provide much-needed technical expertise and leadership (Burleson & Wu, 2011; O'Brien, Hayward, & Berkes,

2009; Steffek & Nanz, 2008; Tully, 2005). Chapter 3 also reviews the history and relationship between NGO access and influence in international negotiations, with particular attention to ENGOs and BINGOs.

While ENGOs, such as the Climate Action Network (CAN), have maintained fairly consistent framing of the urgency for international action to mitigate and adapt to climate change, business groups have struggled with conflicting, and sometimes, incoherent messaging. Tully (2005) notes that companies that stood to lose most, at least in the short term, such as fossil fuel corporations, have been among the loudest and most influential in the UNFCCC since its beginning. Yet with the growth of alternative and lower-emissions energy sectors, these fossil fuel companies no longer reflect the private sector at negotiations and prevent this constituency from acting as a cohesive bloc (Tully, 2005). This later section examines these business groups' changing perceptions of risk as it relates to their economic interests.

1.2 Climate Change Discourse

The articulation or framing of an environmental problem – be it climate change, pollution, or biodiversity loss – shapes if and how that problem is addressed (Feindt & Oels, 2005). As such, a discursive perspective allows us to understand how the natural world is "produced" through environmental policymaking and planning (Feindt & Oels, 2005, p. 163). Utilizing discourse analysis with about 150 UNFCCC documents allowed me to explore whether the statements and policy positions were about climate change (its risks and adverse effects) or about the nature of power in response to this threat. With the computer-assisted data analysis software MAXQDA, I was able to upload my

data and apply open coding to pull out themes from the documents. From these codes, I discovered risk discourse of crisis and survival, while at the same time multiple instances of framing climate change as an opportunity and a development conflict. Several discursive themes suggested how these countries and NGOs perceived the risks of climate change in larger contexts of global development, economic growth, and social equity, and how these perceptions influenced their discursive responses to environmental hazards.

1.2.1 Predicted Findings

Prior to coding my dataset, I hypothesized several findings for the three UNFCCC constituencies based upon my literature review. I predicted that countries, as the largest constituency, would have the greatest variation of risk discourse, with those most at risk or already suffering from climate change impacts, such as Small Island Developing States (SIDS) and Least Developed Countries (LDCs), citing the most frequent discourse of risk and danger associated with environmental change. Based upon a growing literature of climate security and security culture (Trombetta, 2008), I hypothesized that many countries would articulate ecological issues as national security risks to elevate a perception of concern and urgency to respond. I also assumed that a majority of countries would characterize climate change as a dangerous risk, with the exception of rapidly emerging economies such as China, India, and Brazil, as well as oil-producing nations belonging to the Organization of the Petroleum Exporting Countries (OPEC). Instead, I predicted these countries would attempt to minimize the

impacts of climate change and scientific evidence for environmental changes in their high-level statements to maintain their development and economic interests.

Additionally, I hypothesized that unlike the OPEC nations and those with rapidly emerging economies, the environmental groups would provide the most aggressive discourse of climate change as dangerous risk in their high-level statements and submissions to the COP. I anticipated I would find imagery and framing of climate change as a risk, threat, or struggle in every submission (and was surprised to find that not the case, as is further described in Chapter 5). In line with Beck's theorizing of the rise of subpolitical actors approaching reflexive modernity, I also hypothesized that these environmental groups would seek to work beyond the international climate regime and the state for solutions to the climate crisis. I hypothesized that these groups would clash with business interests, which I predicted would either dispute the validity of climate change or would downplay its impacts as problems that would or could happen in the distant future, not the present.

CHAPTER 2 LITERATURE REVIEW

More than 100 countries have now accepted a 2-degree Celsius limit for global-mean temperature rise to avoid "dangerous climate change" through a combination of mitigation and adaptation practices (Gosling et al., 2011, p. 444). This non-binding agreement of the 2009 Copenhagen Accord was heralded as a symbolic step forward, "albeit a small one towards a global climate change architecture"[1] (The Climate Group, 2010, p. 11). But what does avoiding "dangerous climate change" mean, and how do we characterize the risk that the world faces from rising greenhouse gas (GHG) emissions? When the UNFCCC was charged with the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system," it left this concept ambiguous (United Nations, 1992). Indeed, Risbey (2006) calls the term "dangerous anthropogenic interference" a "placeholder for the UNFCCC by effectively signaling to the broader community the notion that climate change can be dangerous at some level" and "policy measures can be used to try to prevent greenhouse gas concentrations from reaching dangerous levels" (p. 527).

In 1999, the chairman of the Intergovernmental Panel on Climate Change (IPCC) said it was no longer a question if the Earth's climate would change, but rather when, where, and by how much (Watson, 1999). Amidst confusion over the uncertainty of climate change's effects also lies misunderstanding of which regions could possibly

[1] European Union (EU) member states appeared divided in their interpretations of the outcome of COP 15. This quote comes from German Chancellor Angela Merkel; while the Swedish EU Presidency called the Copenhagen Accord "a disaster."

benefit from warmer temperatures and changing weather patterns and which would suffer greater fates.

The concept of risk, then, becomes critical to our understanding of “dangerous climate change” and our framing of what it means for society. Turnheim and Tezcan (2009) employ the definition of risk offered by the International Risk Governance Council (IRGC):

> Risk is understood as ‘an uncertain consequence of an event or an activity with respect to something that humans value.’ It always refers to a combination of two things: ‘the likelihood or change of potential consequences and the severity of consequences of human activities, natural events or a combination of both.’ (p. 518)

Kane and Shogren (2000) contend that risk frameworks acknowledge peoples’ decisions to routinely act and react to risk, generally through an investment of resources and self-assurance of future wellbeing. Kasperson et al. (1988) differentiate between the technical concept of risk and risk perceptions as the product of intuitive biases and cultural values. But how is risk constructed? And how does it affect attitudes toward climate change?

2.1 Creating a Society of Risk

For Beck (2001), risk is socially constructed and evolves over time. Indeed, Beck (1997) argued, modern environmental risks are the result of humans’ activity:

> Whether we think of the ozone hole or toxins in the air and food, whether we recall the consequences of genetic engineering or human genetic research, the

> picture is the same everywhere: nature has been changed, designed and endangered by human activity. One expression of this distinction is that today we no longer fear nature, but rather what we are inflicting on it. (p. 21)

Beck and Giddens called these self-imposed threats to society "manufactured uncertainties" – the result of nature becoming more industrialized and concern over unrealized attempts to control it (Beck, 1997, p. 23). People have always been subject to risk, but Giddens observed that "modern 'risk societies' generate 'manufactured risks,' such as those associated with pollution, new illnesses and crime, which are the result of the modernization process itself and are marked by a high level of human agency" (Deere-Birkbeck, 2009, p. 1177). Beck argued these new risks resulted from our transition from first to second modernity, wherein society initially was centered on the state and was concerned with controlling industrialization's relatively predictable side effects and distribution of "social goods" (Bristow & Fitzgerald, 2011). Yet industrialization eventually gave rise to a second modernity, focused less on the role of states and characterized by concern over the distribution of "social bads" resulting from the unpredictability and uncertainty of a growing number of global risks (Bristow & Fitzgerald, 2011).

The causes of climate change, then, lie deep within modernity, and they are side effects of modernization (Bulkeley, 2001). While these risks are produced in modernity, their unpredictable nature means that they cannot be comprehended or managed within the modern era's existing structures (Bulkeley, 2001). Because of this, Beck argued that a process of reflexivity would arise – a division between traditional state institutions of accountability and control and a "subpolitical realm," beyond the political systems of

states, which would grow in power and influence (Bulkeley, 2001). This process is represented in Figure 1 below and described by Bulkeley (2001):

> From this morass of evolving ideas, three key points concerning the political possibilities of contemporary risk emerge: first, that the politics of risk society are not conducted only, or primarily, through the formal political system; second, that in light of risk society, the formal political system is weakened; third, that it is within subpolitics that conflicts of accountability will be resolved or ignored. (p. 434).

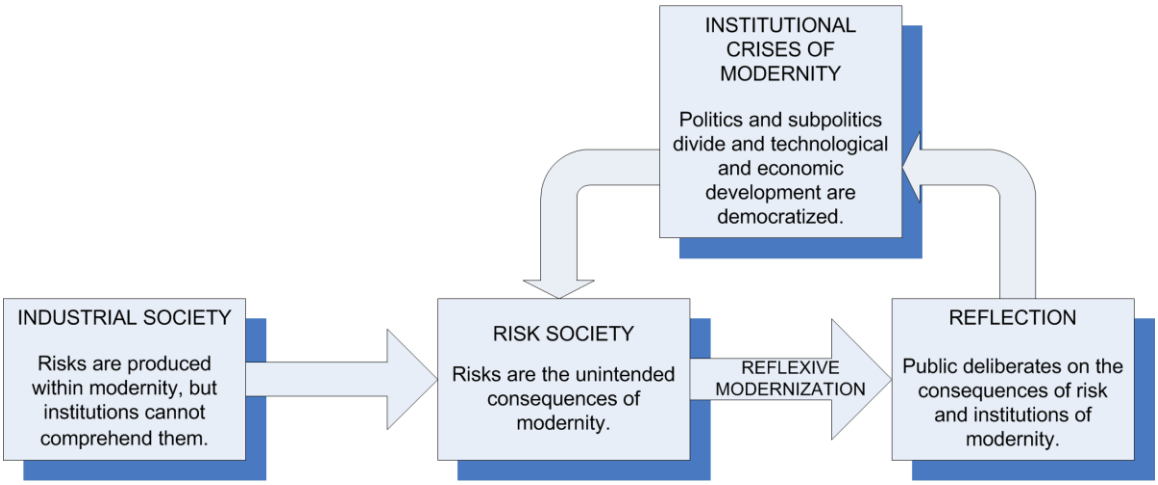

Figure 1: Risk society and reflexive modernity, adapted from Bulkeley (2001)

Risk society ultimately refers to a society that has integrated the notion of risk and organizes itself in response to the perception of such threats (Beck, 1992). Borne (2010) says such a society is "defined by the distribution of hazards, scientific ambiguity, and the opening up of governance processes to wider sectors of society" (p. 30). Indeed, Beck has argued that the transnational threat of climate change has comopolitanized society – creating a new type of community that is not so much formed

through face-to-face encounters, but rather though living and struggling with shared experiences. Pushing for cosmopolitan theory as transformative social theory, Beck, Blok, Tyfield, and Zhang (2013) suggested that cooperative political action and community-building are only made possible by the perceived "globality of risk" that allows opportunities for national and transnational actors to work together in new ways (p. 6). The UN is one example of this, Beck (2001) argued, because it brings together "communities of danger" that involve subpolitical actors at all different scales, as well as countries (p. 47). Citing the growing involvement of NGOs in climate negotiations, Beck et al. (2013) believed these "grassroots environmentalist communities [would] establish themselves as agents of cosmopolitization, seeking to hold powerful economic and political actors accountable to emerging shared norms" (p. 18).

Still, Beck's optimistic assertions of reflexive modernity's outcomes have yet to be proven. Bulkeley (2001) argued that the "prevalence of economic considerations" in international environmental negotiations suggest that Beck's conceptualization of risk society is "too narrow, and that the relations of production [remain] central to the politics of risk" (p. 439). Rather than Beck's proposed transition toward cosmopolitanism, environmental negotiations today remain stymied by "status-quo" political structures and economic self-interest, despite the growing network of new, legitimate actors at the table. Such is the view propagated by anti-reflexivists, whom McCright and Dunlap (2010) characterized as political conservatives attempting to protect the "industrial capitalist order of simple modernization" by blocking both impact science and environmental social movements – both traits of reflexive modernization. By misrepresenting climate research and creating their own anti-environmental think tanks,

these anti-reflexive forces have helped suppress scientific results, stall progressive policymaking, and manipulate media biases in environmental reporting.[2]

Despite challenges to the empirical validity's of Beck's thesis (Mythen, 2007; Pidgeon & Butler, 2009), his contributions have offered thought-provoking reflections on the construction of risk in the modern age. Mythen (2007) called Beck's thesis a "bold but imperfect master narrative" (p. 807). Indeed, Beck's greatest contribution may be his assertion that risk is not isolated from society. As Hulme (2009) rightly stated, climate change is not only altering the physical world, but the idea of climate change also is transforming our social worlds. Consequently, material climate change is nothing more than a change in the physical parameters of the Earth's atmosphere, Rothe (2011) concluded. But when we define its ontological status and its perceivable harm to humans, it is one of the greatest risks of our time.

Consistent with Beck's theorizing of the relationship between risk and society, Kasperson et al. (1988) explained the construction of risk through their social amplification framework "integrating the technical analysis of risk and the cultural, social, and individual response structures that shape the public perception of risk" (p. 178). As such, risk events – environmental or otherwise – interact with our psychological and social processes in ways that can either amplify or attenuate public perception of the risk and related behavior (Ibid.). At the same time that attenuation of risks allows people to cope with the multitude of risks and events they encounter daily, "it also may lead to potentially serious adverse consequences from underestimation and

[2] See McCright and Dunlap (2010) for further analysis and evidence of anti-environmentalists misrepresenting and manipulating climate change research results.

underresponse" (Kasperson et al., 1988, p. 178), confounding conventional risk analysis and assessment.

2.2 The Science of Climate Risk

The role of science remains critical to constructing and responding to climate change risks. Beck (1992) wrote that "risk consciousness is neither a traditional or lay person's consciousness, but is essentially determined by and oriented to science" (p. 72). Yet even Beck warned about a clash of expert knowledge in the face of global risks that would render science unreliable:

> Science has been transformed from a source of security into a source of reflexive insecurity…Experts can never provide anything but more or less uncertain knowledge and information on the probabilities of events; they cannot answer the question as to whether a risk is still acceptable or not. (p. 23)

Since the 1970s, people, particularly in the West, have become progressively disenchanted with the failure of such expert systems to effectively contain and deflect these growing risks (Mythen, 2007). Climate science has always acknowledged complex uncertainty in its predictive models (Oppenheimer, 2005). And until recently, even the world's foremost expert body on climate change science, the IPCC, avoided overt risk-based predictions (Pidgeon & Butler, 2009). As early as 2001, the IPCC assessments used narrative-based scenarios for describing future uncertainties; while the 2007 4th Assessment Report (AR4) and 2014 5th Assessment Report (AR5) summaries provide more explicit probability expressions ("virtually certain," "extremely likely," "very high confidence," etc.) to explain evidence for a variety of adverse climate

change impacts. Risk characterization, thus, involves “collecting and summarizing all relevant evidence necessary for making an informed choice on tolerability or acceptability of the risk in question and suggesting potential options for dealing with the risk from a scientific perspective” (Turnheim & Tezcan, 2009, p. 523). Article 4.1 of the UNFCCC recognizes the role that scientific evidence plays in monitoring, mitigating, and adapting to climate change, when it tells parties to:

> Promote and cooperate in scientific, technological, technical, socio-economic and other research, systematic observation and development of data archives related to the climate system and intended to further the understanding and to reduce and eliminate the remaining uncertainties regarding the causes, effects, magnitude and timing of climate change and the economic and social consequences of various response strategies. (UN, 1992, Art. 4.1.g)

Within the UNFCCC, the creation of the Subsidiary Body for Scientific and Technological Advice (SBSTA) to assist the COP in its agreement brokerage and decisions drafting further institutionalized the role of science in the international climate regime (Turnheim & Tezcan, 2009).

2.2.1 Politicizing Risk

At this point, it is worth noting the difference between risk and uncertainty, which Knight (1921) distinguished as estimates based upon random events that have known probabilities derived from past occurrences (risk), versus random events with unknown probabilities that cannot be quantified (uncertainty). Indeed, there is concern among the scientific community in the inherent uncertainty of climate change modeling (Gosling et

al., 2011). Adger, Huq, Brown, Conway, and Hulme (2003) argued that “quantifying this uncertainty has been the subject of the greatest efforts among climate scientists, teasing out how much is due to our inability to model precisely…and how much is due to our inability to foresee” (p. 184). Instead, uncertainty has been recast into a growing field of risk assessment, predominantly defined by experts whom Power (2007) characterizes as part of a rapidly increasing “risk industry” that converts scientific uncertainty into measurable and probabilistic risk (Clarke, 1999; Webb, 2011). The significant uncertainties over the likely distribution and timing of climate change impacts mean that attempts to frame or set boundaries around what is considered relevant are ultimately controversial (Webb, 2011). Because of these knowledge gaps, risk is constructed alongside social values and political priorities of global climate change.

Rather than simply reporting evidence, Webb (2011) argued that risk assessments might shape our use of knowledge with the potential to mold behavior. If that is the case, science has “become politicized and drawn into policy formation” (Eden, 1996, p. 189). As such, risk has become embedded into broader political rationalities with dueling perceptions on global climate governance (Rothe, 2011). Hansen (2007) even characterized this politicization as “scientific reticence,” where scientists would anticipate likely government reactions to evidence of incalculable climate change risks and manage evidence in ways that would avoid major disruption to policy agendas or enable easier assimilation into existing bureaucracies (Webb, 2011). For Kane and Shogren (2000), constructing climate risk is as much about weighing economic factors as it is about scientific evidence. To this claim, Murphy and Murphy (2012) cite a trend toward economically attractive framing and solutions of climate

change, particularly from countries with significant economic dependence on fossil fuel. That is because they claim “cultural values shape whether scientific findings of risk lead to concern, denial, or apathy, and hence to changes in practices or their continuation” (Murphy & Murphy, 2012, p. 248).

One result of politicizing risk is conflicting discourses on the dangers of climate change. In analyzing 100 newspaper articles in the United States and Germany and 20 speeches given during the UN Summit on Climate Change in New York in 2009 and the UNFCCC COP 15 in Copenhagen that same year, Rothe (2011) found that “conceptual vocabulary of the climate discourse is used by actors with different subject positions to promote different risk storylines for the sake of political argumentation” (p. 335). In other words, our risk construction of climate change is rather fragmented and multidimensional. Still, despite this evidence for diverse framings of these threats, scholars point to an emerging global awareness of the risk of climate change. And many cite the coming together of transnational parties in the framework of the UNFCCC as a major institutional step toward dealing with the problem of climate change at a global level. Indeed, Evans and Steven (2008) claim that the role of scientific institutions, with rallying support by the IPCC, has institutionalized the connection between climate scientists and the international community, contributed to aligning high-level perspectives of the risks and problems of climate change and has helped bring together governments, civil society, and businesses. The next section examines who has been included in the framing of these risks and their solutions.

2.3 Climate Change Inequities

Climate change risks pose a paradox. They are simultaneously democratizing and hierarchical, said Beck (2010a), who argued like many that “climate change exacerbates existing inequalities of poor and rich, center and periphery” (p. 175). But their global nature and growing threat ensures that even the wealthiest and most powerful will not avoid impacts. Beck called this the “boomerang effect,” wherein developed countries (whose actions ultimately created such risks) would also experience damage from changing climate patterns, albeit at a delayed rate compared with developing countries. That is because the impacts of climate change are not evenly distributed, often with people exposed to the most immediate and worse of the impacts also the least able to cope with these risks (Adger et al., 2003; Beck, 2010a; Deere-Birkbeck, 2009; Paavola & Adger, 2006; Yamin, 2005).

The IPCC has consistently asserted that the impacts of climate change will disproportionately fall on developing countries and their poorest, most vulnerable citizens (Pachauri, 2004; Yamin, 2005). These are nations that typically have low per capita GHG emissions and consequently minimal responsibility for causing climate change (Harris & Symons, 2010). As such, the costs of climate change are unfairly distributed, both among countries and in time (Hale, 2010). Curiously, some have even suggested that countries might benefit from climate change and ecological crises, which is further explored in the next chapter. Beck (2010b) offered the example of Russia because of its large reserves of fossil fuels and warmer temperatures that would allow it to expand agriculture in Siberia.

Still, like risk, the concept of vulnerability is socially constructed. Vulnerability is influenced by institutional and economic dynamics, and the vulnerability of a system to climate change depends upon its exposure and ability or opportunity to adapt to change (Adger et al., 2003). Indeed, Beck (2010a) said social vulnerability has become a crucial element in his analysis of world risk society:

> Social processes and conditions produce an unequal exposure to hardly definable risks, and the resulting inequalities must largely be seen as an expression and product of power relations in the national and global context. (p. 171)

Ultimately, societal vulnerability to risks associated with climate change may exacerbate other ongoing social and economic challenges, particularly for those who remain dependent upon resources that are sensitive to climate change (Adger et al., 2003; Deere-Birkbeck, 2009). Like a vicious cycle, that vulnerability to climate change is likely to further reinforce these inequalities on the global stage. In its 2015 listing of countries at risk from climate change, global risk analytics company Maplecroft ranked 32 of 198 countries assessed at "extreme risk." This listing, illustrated in Tables 1 and 2, shows that nearly all of the top 10 countries at extreme risk also are listed among the UNFCCC's Least Developed Countries (LDCs), with the exception of Nigeria and the Philippines.[3]

[3] Nigeria and the Philippines belong to the Group of 77 (G77) made of about 130 developing countries generally working together to establish common negotiating positions. While LDCs continue to prioritize adaptation financing, key G77 countries – Brazil, China and India – are demanding a pledge-and-review-based approach. See Evans (2013) for further analysis of these divergent views on financing, development and the climate regime.

Table 1: Climate Change Environmental Risk Atlas 2015: Top 10 countries at extreme risk, adapted from Maplecroft (2014)

Rank	Country	Category
1	Bangladesh	Extreme
2	Sierra Leone	Extreme
3	South Sudan	Extreme
3	Nigeria	Extreme
5	Chad	Extreme
6	Haiti	Extreme
7	Ethiopia	Extreme
8	Philippines	Extreme
9	Central African Republic	Extreme
9	Eritrea	Extreme

Table 2: Least Developed Countries as defined by the UNFCCC

	Country	Date of Inclusion		Country	Date of Inclusion
1	Afghanistan	1971	25	Madagascar	1991
2	Angola	1994	26	Malawi	1971
3	Bangladesh	1975	27	Mali	1971
4	Benin	1971	28	Mauritania	1986
5	Bhutan	1971	29	Mozambique	1988
6	Burkina Faso	1971	30	Myanmar	1987
7	Burundi	1971	31	Nepal	1971
8	Cambodia	1991	32	Niger	1971
9	Central African Republic	1975	33	Rwanda	1971
10	Chad	1971	34	Sao Tome and Principe	1982
11	Comoros	1977	35	Senegal	2000
12	Dem. Rep of the Congo	1991	36	Sierra Leone	1982
13	Djibouti	1982	37	Solomon Islands	1991
14	Equatorial Guinea	1982	38	Somalia	1971
15	Eritrea	1994	39	South Sudan	2012

	Country	Date of Inclusion		Country	Date of Inclusion
16	Ethiopia	1971	40	Sudan	1971
17	Gambia	1975	41	Timor-Leste	2003
18	Guinea	1971	42	Togo	1982
19	Guinea-Bissau	1981	43	Tuvalu	1986
20	Haiti	1971	44	Uganda	1971
21	Kiribati	1986	45	United Rep. of Tanzania	1971
22	Lao People's Dem. Republic	1971	46	Vanuatu	1985
23	Lesotho	1971	47	Yemen	1971
24	Liberia	1990	48	Zambia	1991

2.3.1 Climate Justice

A growing literature of climate justice explores the inequities caused by environmental risks, often positioning this dialogue between the countries of the global North and South. Huang (2009) rightly stated that despite growing awareness for action on climate change, there is substantial divergence between the developed North and developing South on how to approach these risks. These differences are not simply varying perspectives, but rather result from substantial conflicts of interest between the North and South in matters of socioeconomic development (Huang, 2009). Simply put, fast-developing countries of the South do not intend to hinder their efforts toward industrialization or modernization despite a rise in GHG emissions. Neither China nor India, as example, will agree to an international approach that constrains their economic development (Beck, 2010b). Huang (2009) added that these countries also assert a need for the North to shoulder the major responsibility in mitigating climate change

because of their “lion’s share in energy consumption” and emissions from their own industrialization (p. 435). Beck (2010a) further explained this dichotomy:

> The 900 million people privileged by the grace of birth in the west are responsible for 86 per cent of world consumption; they use 58 per cent of its energy supplies and have 79 per cent of world income at their disposal as well as 74 per cent of all telephone connections. The poorest 1.2 billion, one-fifth of the world’s population are responsible for 1.3 per cent of world consumption, use 4 percent of its energy supplies and have 1.5 per cent of all telephone connections. (p. 167)

Ultimately, this disproportionality raises profound questions of fairness and responsibility. Do these major GHG emitters of the North have a special obligation to assist the developing South both in adapting to climate change and meeting their socioeconomic needs? Paavola and Adger (2006) framed these justice dilemmas in three questions: 1) What is the responsibility of developed countries for climate change impacts; 2) How much should developed countries give assistance to developing countries for adapting to climate change; and 3) How should the burden be distributed among developed countries? Deep divisions in the UNFCCC still exist over the extent to which developed countries should assist developing countries to adapt (Paavola & Adger, 2006). One argument against assistance claims responsibility cannot be established because climate change impacts cannot be traced to the specific actions or actors who caused them (Paavola & Adger, 2006). Yet, a recently released historical emissions study found that just 90 companies (fossil fuel and cement producers) have produced almost two-thirds of the GHG emissions since the industrial age began

(Heede, 2014). The study also noted that while current climate change is driven by historical emissions, “the parties responsible for the dominant sources of historical emissions are not necessarily the same as those responsible for the dominant share of current emissions” (Heede, 2014, p. 229). What role, then, should historical emissions play in contemporary discussions of climate change assistance? The UNFCCC does not overlook questions of responsibility and states that the impacts of climate change will be felt unevenly among countries. Its text refers to “common but differentiated responsibilities and respective capacities” (UN, 1992, Art. 3.1). It also acknowledges the need to take into account “differences in these Parties’ [Annex 1] starting points and approaches, economic structures and resources bases” (UN, 1992, Art. 4.2c). Still, crucial gaps remain, as the regime does not determine how much assistance should be made to developing countries and how the North should share the burden of assistance, and who should be held accountable for emissions over what timeframe (Paavola & Adger, 2006; Heede, 2014).

Among the most-cited vulnerable nations in international environmental negotiations are the small island states, which often suffer a combination of geographical, social and economic inequities related to climate change. Specifically the countries of Tuvalu, the Marshall Islands, the Maldives, and Kiribati have caught the attention of the IPCC, which characterizes their unique vulnerability to climate change due to small physical size, limited natural resources, relative isolation, proneness to natural disasters, and poorly developed infrastructure (Cameron, 2011). Yet Adger, Barnett, Chapin, and Ellemor (2011) also noted the potential negative cultural and nonmaterial impacts of climate change that are not as easily summarized in economic

terms. While metrics have been developed to assess the market costs, human lives lost, distributional affects, changes to quality of life, and people displaced, they do not address what level of loss is acceptable or fair (Adger et al., 2011). And they do not take into account the value of traditional ecological knowledge, for which many of these communities have utilized to adapt to their changing environments. The climate change risks and framing specific to small island states will be examined in later chapters. Ultimately, these communities represent the major climate justice concerns in the fight against climate change on the international stage.

2.4 Public Risk Perceptions

It is no surprise that public support or opposition to climate policies are greatly influenced by public perceptions of risk and the dangers of global climate change (Leiserowitz, 2006). As example, Slovic (2000) cited research that found peoples' perceptions are influenced not only by scientific and technical descriptions of danger, but also by a number of social and psychological factors, including affect and emotion, trust, values, world views, and personal experiences – dimensions of risk perception that rarely are explored in public opinion polls. Yet, Thompson and Rayner (2000) have argued that these public perceptions must be included in the assessment of risks. Most theorists have assumed that decision-making about risk is essentially a cognitive activity (Leiserowitz, 2006) – but not one that generally can be swayed simply by providing more detailed and accurate information to correct misconceptions or alleviate fears (O'Connor, Bord, & Fisher, 1999). Kempton, Boster, and Hartley (1995) discovered that Americans had already assimilated information on climate change into pre-existing

mental models of stratospheric ozone depletion and the ozone hole. As such, they mistakenly believed that banning aerosol spray cans could solve climate change. Wood and Vedlitz (2007) asserted that individuals generally lack the time, cognitive skill and resources to correctly interpret information, and thus engage in what Herbert Simon called “satisficing,” or processing information through a filter of past assessments and ideology. The result is often misconstrued and contradictory perceptions of climate change risks and policies. For example, Leiserowitz’s found that “Americans expressed moderate levels of concern about [climate change]” and “strongly supported national regulation of carbon dioxide as a pollutant,” while at the same time opposing increases in energy business and gasoline taxes (2006, p. 56). Leiserowitz’s findings differ from Slovic’s earlier research employing a psychometric paradigm; he found that people tended to view current risk levels as unacceptably high for most activities (Slovic, 1987). From this, he noted that “the gap between perceived and desired risk levels suggests that people are not satisfied with the way that market and other regulatory mechanisms have balanced risks and benefits” (Slovic, 1987, p. 283).

To that end, O’Connor et al. (1999) cited the complexities among peoples’ risk perceptions of climate change. They are neither “‘nonbelievers’ who will take no initiatives themselves and oppose all government efforts, nor are they ‘believers’ who promise both to make personal efforts and to vote for every government proposal that promises to address climate change” (p. 461). Most people relate to climate change through their personal experiences, while failing to take larger public values and global views into consideration. This cognitive balance between short- and long-term needs is problematic for risk communication, said Lorenzoni and Pidgeon (2006), whose

research on public views of climate change in the United States and Europe concluded climate change was of secondary concern to peoples' everyday lives. For those whom climate change is not an immediate concern, Nisbet (2009) offered issue framing as shortcuts for defining the risks of climate change. Several of those frames are detailed in Table 3 below.

Table 3: Typology of climate change frames, adapted from Nisbet (2009)

Frame	Defines climate change issues as…
Scientific and technical uncertainty	A debate over what is known versus unknown; a matter of expert understanding or consensus versus hype or alarmism
Morality and ethics	A matter of right and wrong; respect or disrespect for thresholds, limits or boundaries
Economic development and opportunity	An economic investment; market benefit or risk; a point of local, national or global competitiveness
Pandora's box/Frankenstein's monster	A need for precaution or action in face of possible catastrophe or out-of-control consequences; fatalism with no way to avoid the chosen path
A battle to overcome	A struggle or fight that must be won; combat against an enemy
Social progress	A means of improving quality of life; alternative interpretation as a way of being in harmony with nature as opposed to mastering it

Nisbet (2009) argued that this framing strategy was critical in creating public perception and understanding of the climate change problem, and in framing our responses to it. Further discussion of climate change framing is addressed in later sections on discourse and this thesis' methodology.

CHAPTER 3 BACKGROUND

Since 1992, the UNFCCC has played a vital role in addressing climate change. Hilde (2012) credits the UNFCCC with successfully promoting global awareness of the issues, generating normative obligations toward tackling these ecological risks and acting as a clearing house for research and information, as well as an intermediary for large-scale financing. Negotiating solutions to climate change arguably are the most complicated challenges our international community faces today; and while the UNFCCC sets direction and defines many of the tools and mechanisms needed, “it does not provide any clear strategy on how to solve the climate crisis” (Streck, 2012, p. 52). Its three pillars – shared vision, accountability in action, and assisting developing countries in combating climate change – have produced numerous commitments toward financing and emissions reduction (Streck, 2012), many of which are outlined below in Table 4, which is based upon the UNFCCC’s own listed accomplishments. Even so, the UNFCCC has yet to achieve a comprehensive, binding solution. Still, this transnational climate regime does offer an international political, economic, and social network from which to examine global risk perceptions among key constituencies. And, it offers an arena in which to test Beck’s theory of risk society and the rise of reflexive modernity to address these new global hazards, such as climate change.

Table 4: Major UNFCCC agreements from 2007-2011

Key Steps	COP Year	Significant Actions
Bali Action Plan	2007	Divided into five main categories: shared vision, mitigation, adaptation, technology, and financing. Refers to a long-term vision for action on climate change, including a long-term goal for emission reductions.
Copenhagen Accord	2009	Endorses the continuation of the Kyoto Protocol and recognizes the increase in global temperature should be below 2-degrees Celsius. Agrees that developing countries should slow growth in emissions through mitigation actions. Establishes a Green Climate Fund to support developing countries' mitigation. Encourages countries to set emission reduction targets.
Cancun Agreements	2010	Establishes clear goals and schedule for reducing human-generated GHG emissions to keep global average temperature rise below 2-degrees Celsius. Mobilizes the development and transfer of clean technology to boost efforts address climate change. Set up the Green Climate Fund to provide support to developing countries to assist them in mitigation and adaptation plans.
Durban Outcomes	2011	Establishes a second commitment period of the Kyoto Protocol, where developed countries commit to GHG cuts and accounting rules. Launches a new platform of negotiations under the Convention to deliver a new and universal GHG reduction protocol with legal force by 2015 for the period beyond 2020.

While this thesis does not seek to analyze the legitimacy and governance of the UNFCCC, it is worth noting criticisms of its effectiveness and ability to adequately tackle such issues of international importance. To that end, Huang (2009) stated:

> Its mammoth size and lack of strong leadership has substantially constrained its effectiveness, making it virtually toothless in terms of implementation as well as decisionmaking. Despite marathon programs, most of the meetings of the

> COP…appeared more symbolic than substantial, and the agreements achieved through exhausting negotiations are hardly abiding. (p. 438)

While such criticism is certainly debatable, there is no denying that the UNFCCC has yet to meet the goal it set for itself – no matter how insurmountable it may seem at times. The UNFCCC's primary agents are the countries that negotiate each year toward mitigation and adaptation plans for the impacts of climate change. These parties – as they are called – are responsible for taking the appropriate actions and measures related to their commitments (Turnheim & Tezcan, 2010). Article 4 of the Convention states that each of the Annex I parties (industrialized countries and those with economies in transition[4]) should "coordinate as appropriate with such other Parties, relevant economic and administrative instruments developed to achieve the objective of the Convention" and shall "identify and periodically review its own policies and practices" (UN, 1992, art. 4.2.e). As such, parties are self- and peer-reviewed with respect to their actions and given the freedom to achieve a common goal (Turnheim & Tezcan, 2010). Within this arena, Beck argued that the risks associated with climate change should pave the way toward more cosmopolitan world politics. While it certainly has drawn countries together on an international stage, there also is great evidence that we are still very far apart.

Borne (2010) suggested that is because the UN has two faces: "one as a collection of the world's nations pursuing their own narrow interests within a multilateral environment, and the other an entity in its own right" (p. 34). Together, these competing

[4] The UNFCCC defines Annex I countries as industrialized countries that were members of the OECD (Organization for Economic Co-operation and Development) in 1992, plus countries with economies in transition, including the Russian Federation, the Baltic States and several Central and Eastern European States.

forces make up a dynamic body – almost like a living system – “permeated by a myriad of flows that converge internally and are subsequently radiated outwards again towards wider society” (Borne, 2010, p. 34). As such, Strong (2003) viewed the UN as an arena of ideologies and values and forum for discussion and negotiations, rather than a “place of operations” (p. 117). Still, it is a forum with “two-level norms,” said Hilde (2012), who found that parties to the UNFCCC shared “basic norms regarding climate change,” but would still revert to national self-interest at the negotiating table (p. 894). To explain this, Hilde drew from Robert Putnam’s theory of “two-level games” – where countries negotiating on the international stage also are negotiating within their own borders with domestic governing bodies and economic interests. The result often produces great tension among parties, whose leaders superficially agree upon general norms of the Convention, but differ when negotiations are incompatible with a country’s domestication of those norms. Depledge (2005) stated this more clearly when observing strong tendency for competition over cooperation among negotiating parties:

> This is partly the result of the high political stakes of climate change, including concerns over national economic interests and competitiveness, as well as the long time horizon of the problem, which has led to a focus on short-term costs rather than on the benefits that would accrue in the future. The tendency to competitiveness is also a product of the North-South divide to the negotiations where the imperative of global cooperation struggles against a history of mistrust and differing perceptions of the problem. (p. 32)

Figure 2 below illustrates the various UNFCCC party groupings in which countries tend to organize themselves in the international climate regime, generally due

to similar negotiating positions toward climate change and common socioeconomic conditions. Yet Evans (2013) noted these groupings may have further diverged in recent years, particularly among the emerging economies of the Group of 77 and the LDCs of the global South, with new political and economic leaders such as China, Brazil, and India shaping their own domestic and development policies.

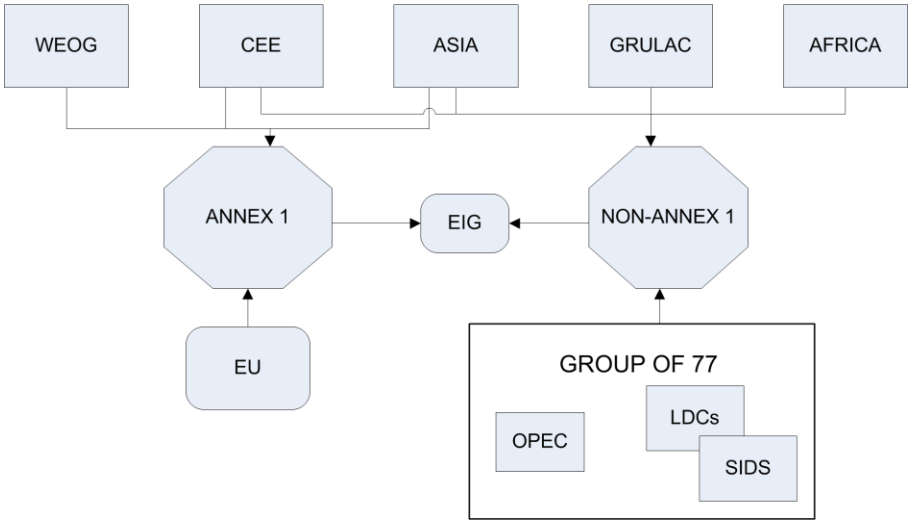

Figure 2: Illustration of UNFCCC country groupings, adapted from Depledge (2005)

Much also has been written about the neoliberal bias of UNFCCC negotiations, whose contemporary risk approaches tend to align more closely with political norms and rationalities of affluent Western democracies than those of other nations (Pidgeon & Butler, 2009). From the sheer numbers of parties and structure of these groups outlined in Figure 2, this should come as no surprise. Yet, it will be further examined during this paper's analysis of risk discourses in the selected UNFCCC documents in the following chapters.

3.1 Non-State Actors on the International Stage

Countries are not the only actors involved in these international negotiations. In recent years, there has been a dramatic increase in the number of non-state actors attending the COP – added to the near-universal participation of countries (Schroeder & Lovell, 2012). Nearly 1,400 non-governmental and intergovernmental organizations (IGOs) had observer status under the UNFCCC at COP 15 in Copenhagen in 2009 (Schroeder & Lovell, 2012). Today, the number of NGOs admitted to the UNFCCC is just under 1,600 – with another 100 IGOs – as observer organizations. The number of observers has almost always outnumbered party delegates at COP meetings, as illustrated in Figure 3, and many national parties also admit representatives from NGOs, cities, and businesses into their delegations, increasing their numbers even further. From 1995 to 2004, about 25 percent of national delegations at the COP incorporated NGO activists (Kruse, 2012).

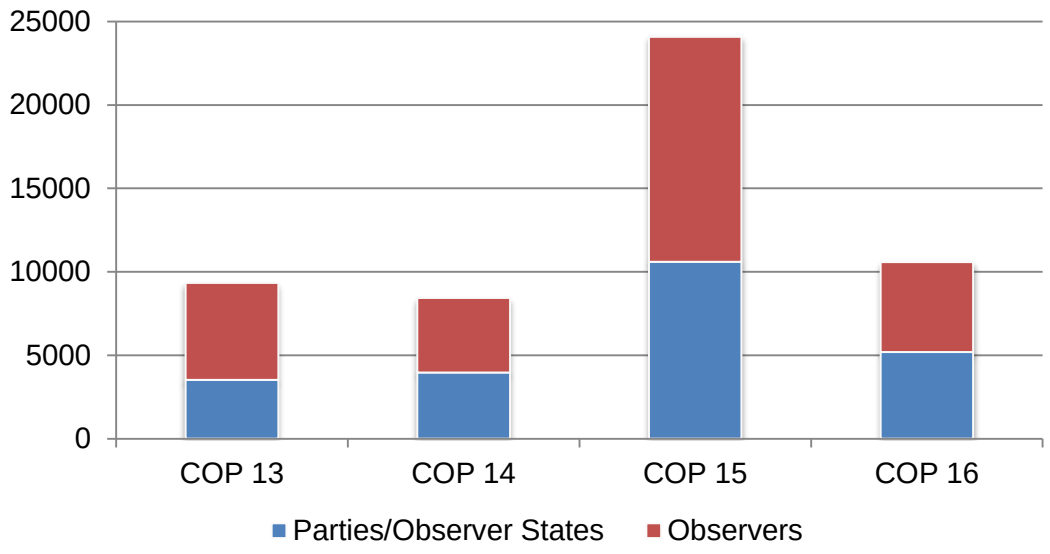

Figure 3: Numbers of parties and observers attending COP, 2007-2010 (UNFCCC, 2015)

As such, Betsill and Corell (2008) noted that the UNFCCC involves a “myriad [of] actors representing a diversity of interests” – akin to an environmental mega-conference (p. 2). Within the official delegation process, NGOs are allowed to participate by observing the negotiations, accessing official documents, addressing party delegation leaders during plenary sessions, and distributing information and material to negotiators (Depledge, 2005). To date, it has been difficult to assess the influence that NGOs have on the international negotiations. Betsill and Corell (2001) have characterized their activities as “indirect strategies” – “developing and using informal relationships with state delegates, lurking in the corridors” and “even searching trash cans and copy machines in hopes of retrieving documents being worked on behind closed doors” (p. 70).

In spite of these less-than-glorious activities, the rise of these non-state actors arguably follows Beck’s thesis on world risk society and a kind of cosmopolitan disturbance of existing political order. Beck et al. (2013) described it as such:

> The order of the nation-state(s) is being disturbed, undermined and redefined, reimagined by the intervention and incorporation of human rights, NGOs, climate experts…With climate change, the nationally excluded ‘Other’ is in our midst; and national resources and jurisdictions have no answers to the cosmopolitan challenges that it raises. (p. 5)

Of the UNFCCC’s nine recognized non-state constituencies, outlined in Table 5, this paper focuses the bulk of its analysis on the two largest UNFCCC civil society constituencies, ENGOs and BINGOs, while recognizing that many of the other constituencies – indigenous peoples groups (IPOs), farmers, women and gender and

youth (deemed YOUNGO by the UNFCCC) – also identify with environmental interests, and even the developing South. For the purposes of this thesis, groups from the Women and Gender, IPO, YOUNGO and Farmers' constituencies, whose statements and submissions closely align (and even were co-submitted) with ENGOs, also will be included in the dataset of ENGO documents described in Chapter 4. A complete breakdown of these non-state groups is illustrated in Figure 4, with ENGOs and then BINGOs making up the largest non-state constituencies.

Table 5: UNFCCC non-state constituencies (UNFCCC, 2015)

Name	Constituency Group	Year Formalized
BINGO	Business and Industry	Pre-1994
ENGO	Environmental	Pre-1994
LGMA	Local Government and Municipal Authorities	1995
IPO	Indigenous Peoples	2001
RINGO	Research and Independent	2003
TUNGO	Trade Union	2008
Farmers	Farmers and Agricultural	2014
Women and Gender	Women and Gender	2009
YOUNGO	Youth	2009

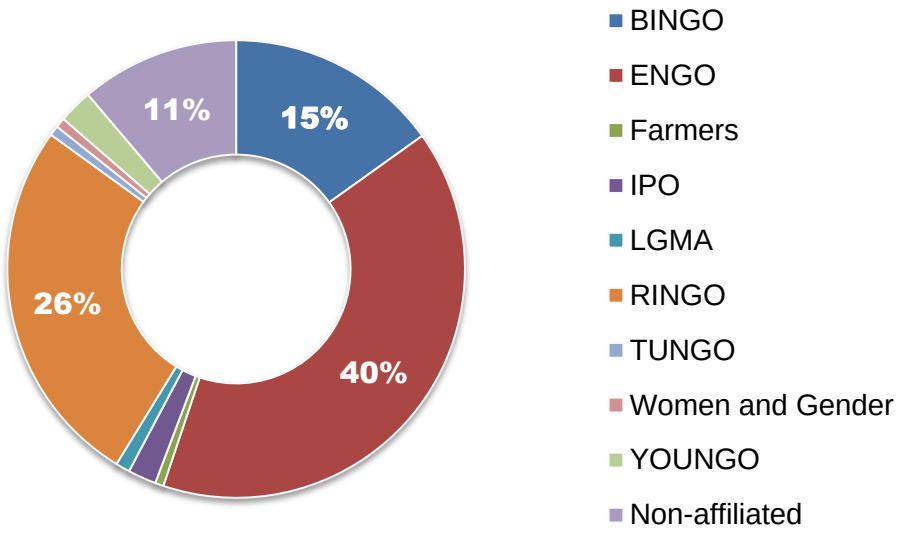

Figure 4: Illustration of NGO participant percentages, 2013 (UNFCCC, 2015)

In its statement about UNFCCC participation, YOUNGO says, “As youths, the future is ours. Yet, actions today jeopardize the very world we will have [to] live in,” according to the constituency’s website, YouthClimate.org. Such vulnerable groups – youths, women and indigenous peoples – have long been marginalized and often excluded from making decisions on the public management of climate risks (Adger, 2003). Through participation in the Convention, those most vulnerable have gained a voice and formal ability to hold governments accountable for their stated positions and resulting actions (Cameron, 2011; Deere-Birkbeck, 2009), embodying Beck’s theorizing of the rise of subpolitical actors influencing the state and status-quo institutions. In particular, scholars have paid special attention to small island states and the growing number of environmental NGOs supporting their efforts to generate awareness and mitigate or adapt to climate change. While environmental groups from industrialized countries often use small island nations as the “poster child” for the climate change

crisis, their efforts can sometimes be at odds with the nation's government, or even its people. Cameron (2011) has labeled these competing metadiscourses in the governance of these islands – as civic environmentalism is aimed at "saving" the islands and their inhabitants, these groups are competing with localized neoliberal governmentalities also negotiating at the global scale. Farbotko and Lazrus (2012) also have criticized the incongruences of international ENGOs and small island states, even if their goals overlap. At question is Western groups' framing of small island peoples as victim-commodities of climate change while pursuing environmental activities concerned with combatting the climate crisis (Farbotko & Lazrus, 2012). Yet these are not the only NGO interests whose actions are at odds.

3.2 Business Interests in Environmental Negotiations

Civil society at the UNFCCC represents organizations of every size – from the grassroots peoples' movements of the global South to the world's largest corporations. This section explores the evolving relationship that business organizations have had with the Convention. Despite their grouping in one of the larger NGO constituency – BINGOs – these industries do not present an entirely unified front, with subgroupings of agricultural, alternative energy, and fossil fuel interests seeking diverse solutions to the climate crisis (Fernandes & Girard, 2011). Not surprisingly, the private sector is a leading player in plans proposed in the international climate regime, largely driven by market mechanisms and economic interests. For Hale (2010), the growing power of transnational businesses and their ability to lay constraints on the actions of national governments, are features of our global economy. Business interests propagate a

dominating discourse, Lund (2012) argued, “which assumes the compatibility of economic growth and environmental protection” (p. 5).

While BINGOs’ participation in the negotiations has been more turbulent than their ENGO counterparts (Tully, 2005), their structural advantages seem to have resulted in larger influence (Lund, 2012). For one, Tully (2005) argued that national or trade-specific industry groups have enjoyed close working relationships with state delegations. Not only valued for their technical knowledge to help shape what is technologically and economically feasible, BINGOs possess structural power over policymakers considering what broad economic impacts their proposals would have (Falkner, 2010). Because economic interests primarily drive governments, Orsini (2012) argued, business organizations can affect significant influence in negotiation outcomes. That same influence could be asserted over these groups’ shaping of climate change risk and discourse:

> By portraying the issue from a certain angle, highlighting some aspects, and shadowing others, industry actors attempt to influence how the society perceives the issue and how the political authorities respond to it. (Schlichting, 2013, p. 294)

Figure 5 illustrates the numerous channels of influence BINGOs employ at the UNFCCC. Direct lobbying has been cited as one of the most successful tactics – with one of the more active lobbyists inside the UN, the World Business Council for Sustainable Development, representing 200 of the biggest global companies whose combined worth is $7 trillion annually (Fernandes & Girard, 2011). Another organization, the Global Climate Coalition (GCC), a now-defunct industry group of fossil fuel interests,

advised the Saudi Arabian, Kuwaiti and Russian governments to obstruct political deliberations and weaken the language of scientific reports (Tully, 2005). Business and corporate interests, consequently, have made an effort to build hegemonic coalitions of actors (countries and NGOs) with the ability to establish norms that can structure the regime in particular ways (Levy, 2005). This Gramscian approach illustrates how international environmental agreements are negotiated: “even the most powerful states [or groups] are generally unable to impose a particular agreement on the international community, though the may be able to block or delay for some time” (Levy, 2005, p. 75).

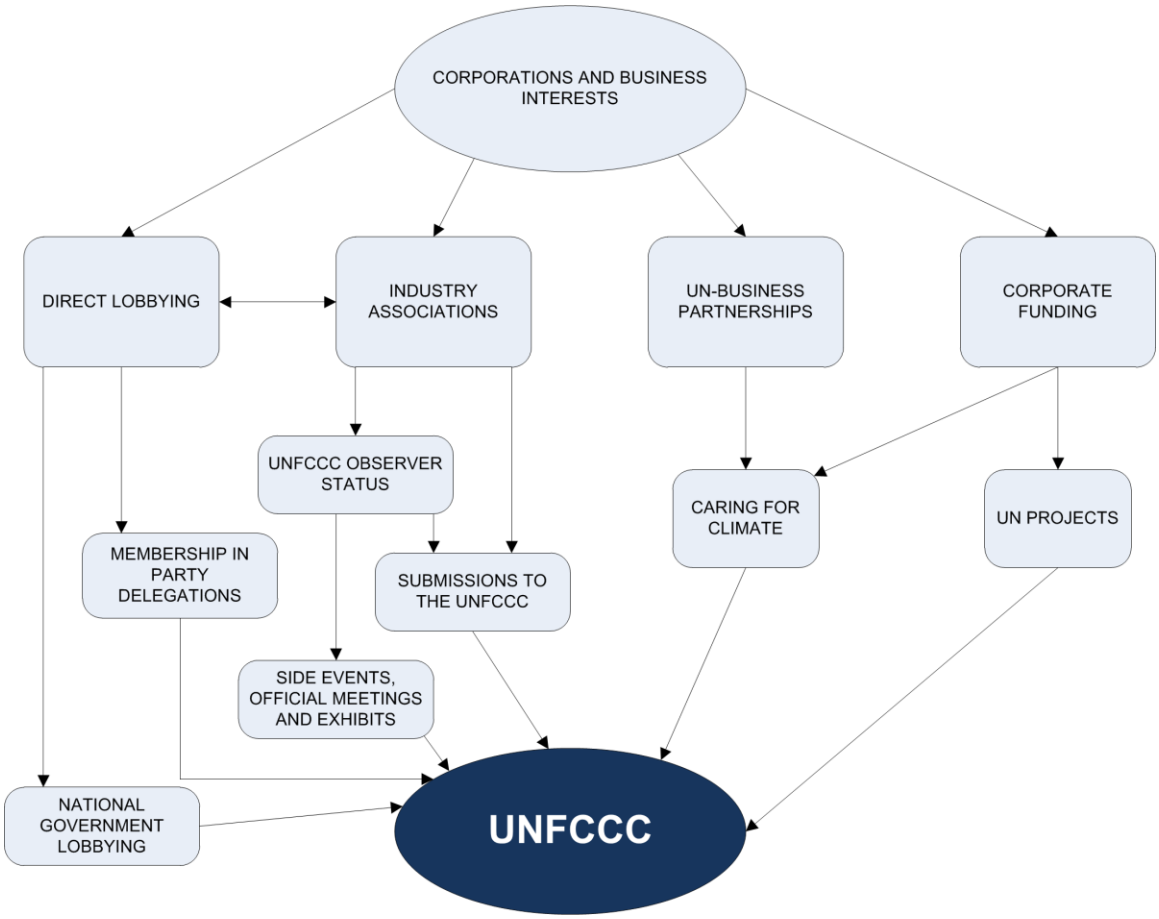

Figure 5: BINGO channels of influence, adapted from Fernandes and Girard, 2011

Known for its outspoken and controversial stance on climate change, the GCC no longer represents international business interests at the UNFCCC. And some leading oil firms publically (at least) have taken a more conciliatory stance from when the UNFCCC was first established. Falkner (2010) cited British Petroleum's American subsidiary's withdrawal from the GCC in 1996, signaling a rift within the fossil fuel sector. Since then, Tully (2005) has cited the growing inconsistency of business messages about climate change risks:

> The companies that stand to lose the most – at least in the short term – have from the beginning been the most prominent and influential business voices in the climate negotiations…However, the fossil fuel sector is unrepresentative of the private sector generally…Since the business community is not homogeneous it may be unable to marshal coherent or uniform recommendations. (pp. 23-24)

Similarly, Schlichting (2013) found in her longitudinal study of industrial climate change communication that corporations' strategic framing of the environment has greatly changed from 1990 to 2010. Indeed, international business interests have shifted from questioning the science of climate change to portraying themselves as industrial leaders, thus influencing international dialogue:

> The automobile industry, for example, [now] promotes carbon-free electric vehicles… and conventional energy corporations cast themselves as 'Green Energy Generator of the Year.' (Schlichting, 2013, p. 494)

Levy (2005) attributed this shift in perspectives to "changing competitive dynamics, the evolution of new organizations supportive of a proactive industry role, and the diffusion of 'win-win' discourse articulating the consonance of environmental

and business interests" (p. 74). Still, BINGOs today do represent a constituency of stakeholders with widely diverging views on climate change – from so-called "gray" businesses that oppose GHG emissions regulations to "green" businesses, which see climate mitigation and adaptation as an opportunity (de Sépibus, 2012). Indeed, a global business coalition launched in 2007, Caring for Climate, includes in its leadership platform the serious risks of damage from climate change and the opportunity for businesses of all sizes to take an active and leading role in developing and deploying low-carbon technologies (Fernandes & Girard, 2011). Akin to theories of ecological modernization, climate change is more often framed as an opportunity in recent years – one that also aligns with dominant norms of sustainable development. A 2008 study from the Carbon Trust reported that "tackling climate change could create opportunities for a company to increase its value up to 80% if it is well positioned and proactive" (p. 3). Conversely, companies whose strategies remain "business-as-usual" could threaten up to 65 percent of their value (p. 5). The BINGOs that submitted statements to the UNFCCC in 2010 will be examined in Chapter 4 for similar perceptions.

CHAPTER 4 METHODOLOGY & DATA

International negotiations and institutions such as the UNFCCC have provided an arena in which countries and subpolitical organizations have "inter-subjectively come to some understandings about what norms concerning global warming mean" (Paterson, 1996, p. 129). Through these processes – this creation of norms – the risks of climate change also have been constructed and contested, with each party bringing its own perspective to the proverbial table. This chapter explores research on environmental discourse and the analytical approaches that help examine the documents that make up the scope of this thesis. As such, critical environmental discourse theories and thinkers will be reviewed, along with recent technologies that assist in qualitative data analysis of this kind.

Environmental discourse involves numerous sub-topics, such as toxic substances, biodiversity, air quality and climate change, and encompasses diverse ways of talking and thinking about the environment (Feindt & Oels, 2005). Indeed, Dryzek (2005) points to four dominant modern environmental discourses covering these issues in his seminal work, "The Politics of the Earth": survivalism, sustainability, environmental problem-solving, and green radicalism. These discourses, Dryzek (2005) said, offer a "shared way of apprehending the world…[they] construct meanings and relationships, helping to define common sense and legitimate knowledge" (p. 9). More importantly, though, they provide the framing and articulation of a problem that shapes if and how it is handled (Feindt & Oels, 2005). Consequently, a discursive approach allows us to understand how the natural world is "produced" through environmental

policymaking and planning (Feindt & Oels, 2005, p. 163). Environmental discourse certainly has shifted over the years with the concept of risk becoming more prominent during the 1980s and especially after the Chernobyl and Bhopal incidents (Feindt & Oels, 2005). In his own environmental discourse analysis, Rothe (2011) found competing storylines of climate change risk while studying UNFCCC documents and related reports that shifted from 2007 to 2009. The concept of "climate change as war" was much more prominent in later years, Rothe reported, with "numerous expressions in the material that depict climate change as an enemy or an attack, as a criminal offender or as a threat" (2011, p. 337). These perspectives were then adopted by "discourse coalitions," whose acceptance and propagation of such storylines further fueled its use.

4.1 Discursive Approach

While researchers have used many different notions of discourse, sometimes with competing definitions, this thesis defines discourse not simply as a "communicative exchange, but a complex entity that extends into the realms of ideology, strategy, language, and practice, and is shaped by the relations between power and knowledge" (Sharp & Richardson, 2001, p. 195). By extension, policy discourse on environmental issues such as climate change could be thought of as "the bundle of exchanges that give shape through metaphors and practices to a particular policy-making process or debate" (Sharp & Richardson, 2001, p. 195). These discourses, then, have an existence beyond the text and reflect the perceptions, power relations and intentions of the various actors. Stated broadly, discourse analysis relates texts to social practices found

within particular discourses, which could include institutions, norms, knowledge systems, social practice, and language (Livesey, 2002).

The discursive approach applied in this thesis draws upon the discourse-theoretical perspectives of Foucault and Hajer, whose work highlights how "language has the capacity to make politics, to create signs and symbols that shift power balances, to render events harmless or, on the contrary, to create political conflict" (Hajer & Versteeg, 2005, p. 179). This thesis heavily aligns its methodology and analysis with Foucault's view that "different systems of meaning or discourses compete for influence in society and, consequently, that structural changes in society can be conceptualized as shifts in the relative influence of different discourses" (Sharp & Richardson, 2001, p. 196). In this sense, "meaning-making is an inherently political process," in which the first step is framing an issue so that it can be addressed by political policy-making (Waitt, Farbotko, & Criddle, 2012, p. 37). Like Foucault, Hajer assumed language was not a "neutral messenger of given interests and preferences," but rather it influenced their formation (Feindt & Oels, 2005, p. 166). But Hajer differs from Foucault in his emphasis on actor coalitions. In his discursive approach, actors position themselves in the realm of a given discourse and try to shape it (Hajer & Versteeg, 2005). Akin to Hajer, Carolan and Bell (2003) believed that the knowledge we attach to ourselves also locates us discursively in a specific network or coalition. Ultimately, they argue:

> We build coalitions; we engage in collective action; we speak up, together, in a loud voice. And if we are loud enough and cogent enough, the result is…a discursive movement where the existing social relations of knowledge become contested, resulting in the possibility of new social relations of truth, and thus

> new social relations of trust. How these ‘moments’ are handled and resolved can therefore lead to new patters of power/knowledge/identity. (Carolan & Bell, 2003, p. 232)

The UNFCCC, its constituencies, and debates over climate change provide an ideal platform to test such theories, specifically as it relates to the construction of risk.

4.1.1 Potential Research Bias

Before further exploring climate change discourse and this thesis’ methodology and data, it is important to detail potential research bias in this work – and those efforts to eliminate it. Sharp and Richardson (2001) noted that the process of selecting the discourses that are to be the framework for any research project are subjective and reflect the researcher’s interests and preoccupations. Cheek (2008) also observed that researchers of are in a position to impose meanings on another’s text, and their research itself can be another product of discourse.

In 2010, I was selected as one of about 20 delegates to attend the UNFCCC COP 16 negotiations in Cancún, Mexico, with the U.S.-based sustainable development youth NGO SustainUS. During that time, I volunteered as the NGO’s media and communications coordinator and worked with more than a dozen NGO communications colleagues in the months leading up to, during and after COP 16. In this role, I assisted in writing statements and press releases related to youth-issues and perspectives on climate change and the negotiations.

I came into this research with respect for the critical role that discourse and framing can have on shaping risk perceptions of environmental issues. Working with my

YOUNGO and ENGO colleagues during this time, especially those who wrote opinions and briefs submitted to the UNFCCC prior to the COP, provided insight into the complex decision-making process of how to present the risks of climate change to the international community. To aid in eliminating potential bias, I did not include in my dataset any documents that I could have been involved in creating. This led me to select only high-level statements and opinions that were written and presented to the COP, as opposed to position papers and supplemental materials distributed during the negotiations. I did not play a role in any of the YOUNGO or Youth Climate submissions that are part of my data for this research. Additionally, I elected to rely solely on written submissions, as opposed to interviews with constituency or party leaders – several of whom from the YOUNGO and ENGO constituencies I have developed professional relationships and friendships with since COP 16.

Just as my experiences have helped shape my personal views on international environmental negotiations, they also have helped to inform my academic understanding of the UNFCCC, its role and impact on the global stage. As someone who helped to shape communication about climate change for youth, I have witnessed first-hand how discourse is closely embedded with power and ideology and its use in international regimes, such as the UNFCCC.

4.1.2 Limitations of the Study

Like all research, this thesis has certain limitations in both its study and application of risk perception of climate change at international environmental negotiations. For one, the dataset is limited to only high-level statements and opinions

submitted to the UNFCCC for COP 16, as described in the following section. Indeed, many other texts and narratives are typically available during COPs, including but not limited to media coverage; position papers authored by countries' delegations and NGOs or other observers; internal memorandums and newsletters produced by the UNFCCC Secretariat's office; and the negotiating texts themselves. Resource and time constraints, coupled with the decision detailed above to not include position papers and verbal interviews with stakeholders, have limited my dataset in this thesis.

Additionally, this thesis takes a discursive approach to examine documents affiliated with a single COP during a fixed time period. A more comprehensive study of risk perceptions and evolving responses to climate change would include a time-series study, analyzing discourse and climate change framing over a set number of years and relating it to negotiated outcomes of climate governance on the international stage. Such a study would ultimately provide us with a more complete understanding of how we perceive and respond to ecological risk.

4.2 Data Selection & Analysis

Within the above-stated framework of discourse analysis, texts were sourced from the UNFCCC website (http://unfccc.int), which provides a database of documents for the Convention, all of its subsidiary bodies and ad hoc working groups. Within this portal is the ability to pull submissions from parties (countries) and observer organizations (NGOs) for each COP. All of the party and observer organization submissions for COP 16 were downloaded and characterized as one of the three constituencies for this research project – countries, ENGOs (to include YOUNGO,

indigenous, farmers and women's groups) or BINGOs. To be included in the sample, the document had to be primarily written in English (at least 85 percent of content) – one of six official UN languages. About a dozen countries' submissions were not included in this study because they were in Spanish; another dozen were in French; and another half dozen were in Arabic.

The resulting sample of documents for this research (described in Appendix A) included either high-level statements – those verbally delivered to the COP plenary from the submitted script – or written submissions for consideration on specific UNFCCC negotiating issues, such as the clean development mechanism, standardized GHG emissions baselines, or adaptation funds. In total, this included high-level statements and submissions from 110 countries, 22 ENGOs and 13 BINGOs. Countries were also marked according to their UNFCCC party groupings, such as G-77, Annex I, OPEC, SIDS, and LDCs, as these groupings typically are used to present substantive interests of the parties in climate negotiations. Together, these documents represent a range of perspectives on climate change, its impacts, and necessary actions.

4.2.1 Data Analysis & Coding

Once the data sample was collected, I employed a computer-assisted method to extract the most important topics of this discourse. Rather than using a frequency and proximity analysis of key words and text population to explore discursive themes, I employed an open coding process (akin to Charmaz's (2014) grounded theory approach) to identify categorizations, actions, and naming as related to climate change and environmental risk. This coding process allowed me to examine not only words

associated with constituencies' risk perceptions of climate change but also to assess the language in the context of each document, providing further insight into political and structural forces, as well as cultural and social values. These code classifications (described in Appendix B) in the sample documents were marked within the MAXQDA software platform, which helped me quantify and analyze the codes, as discussed in the following chapter. While I developed the various code classifications from the reading of each text, they were informed and reinforced by the literature review related to climate change discourse. Only when the open coding process was complete, did I calculate word frequencies from my key discursive themes for each constituency dataset.

Stemming from my research question of how these three UNFCCC constituencies perceive risk, I paid particular attention to how each actor and/or coalition characterized climate change. From open coding, these categorizations took on several sub-codes, including characterizations of climate change as a dangerous and imminent threat, a battle or fight and a challenge that could be "tackled" or "solved," in addition to spatial imagery depicting either urgency or future concern. Rothe (2011) found similar themes in his analysis of documents (speeches and news articles) that discursively framed climate change as risk, with a focus on the future:

> Climate change in most depictions is not an actual threat but one that lies in the future. This is expressed by spatial and motional metaphors. The climate *threat* thus lies *in front of us*; we are quickly moving toward it. In this respect the Earth is sometimes described as a *vehicle* driven by humanity. Politicians in this narrative have the obligation to steer the vehicle safety so as to avoid the catastrophic threat. (p. 338)

The underlying assumption is that responding to climate change is a choice (and the “right one” can still be made), embodied by norms of responsibility and optimism that the climate crisis can be overcome. Closely related is imagery of climate change as a battle or a war that can be won through the utilization of new technologies and international collaboration. In his research, Rothe (2011) described this as “the metaphorical concept of climate change being a *race* or *contest* between the heating Earth and humanity or single nation states” (p. 338). Semantically, the UNFCCC seeks to qualify the degree of human interaction with the climate system that is dangerous, while these types of narratives and metaphors attach labels of risk and threat to climate change itself (Methmann & Rothe, 2012). Consequently, the initial human activities that have caused climate change are concealed through imagery and framing of climate change as dangerous; whereas “climate change mutates from a process rooted in human activity to a *dangerous Other*” that must be destroyed (Methmann & Rothe, 2012, p. 328). In addition, Hulme (2008) cites similar imagery of control, mastery, or conquering climate change that seem almost utopian or brash in his discourse studies on environmental risk.

When compared with my initial hypotheses for each constituency, the results were surprising. Climate change was characterized as a threat throughout the documents; but it was more often framed as an opportunity for either global cooperation or economic growth. In his opening statement to the COP 15 plenary, former UN Secretary-General Kofi Annan said, “Climate change threatens the entire human family. Yet it also provides an opportunity to come together and forge a collective response to a global problem” (cited in Methmann & Rothe, 2012, p. 329). These themes of universal

collaboration and partnerships among countries, industry, and community were frequent in my coding, as well; but so was imagery of prosperity and economic opportunity stemming from the climate crisis. Business interests, unlike in my hypothesis, did not debunk the science or risk of climate change, but rather sought greater involvement in the climate regime, often positioning themselves as experts and innovators for the future. Murphy and Murphy (2012) and Livesey (2002) cited similar themes in their own discourse analyses – a competition between proponents of business-as-usual versus actors championing a green economy. The same was true for documents in this study, many of which presented themes of "eco-innovation" or "sustainable economic growth" as pathways to future, more environmentally friendly development or technologies that could halt or adapt to impacts of climate change. Even ENGOs, which I predicted would frame climate change as a grave threat or battle for survival, also employed discourse of opportunity to shape a new future.

One prediction that did align closely with my results, however, was that countries most at risk or those already suffering the greatest the impacts of climate change more often framed environmental changes as dangerous or a struggle. Another frequent theme and imagery in these documents and studies of related climate change discourse involved labeling vulnerable populations as "climate refugees" or "victims." In their research of global narratives of climate change in Tuvalu, Farbotko and Lazrus (2012), they discovered that climate vulnerable populations, such as those on this small island nation, were often depicted as victims and used as evidence of the climate crisis. Additionally, they found that dominant global narratives, such as climate refugee discourse, "can entrench vulnerable communities in inequitable power relations,

redirecting their fate from their hands" (Farbotko & Lazrus, 2012, p. 382). Cameron (2011) shared equal concern for supposing the fate of small island nations was doomed in Western environmental discourse. Following Foucault, Farbotko and Lazrus (2012) asserted:

> Representations of climate refugees, like any other representations, are neither static nor innocent. According to Foucault, they are vehicles for power, characterized by fluid, ongoing claims of inclusion and exclusion, dependent on the interests of those engaged in them. (p. 383)

As such, particular attention is paid to climate change discourses of vulnerability and victimization and discussed in the next chapter, in addition to a discussion of which constituencies were more likely to frame climate change risk as an opportunity rather than a threat.

CHAPTER 5 DISCUSSION

Despite rhetoric of action and urgency in the struggle with environmental climate change, the language of risk in the dataset is not as frequent as discourse of responsibility and development. Rather than apocalyptic imagery often employed to describe future impacts of global climate change (Methmann & Rothe, 2012), a majority of high-level statements and submissions by countries and NGOs, regardless of constituency, more often cited an opportunity to pursue sustainable growth in the face of a changing climate than a fight for survival. Still, those who most identified with the risks of climate change, either through examples of extreme weather or rising sea level, were leaders from countries that the UNFCCC and IPCC already characterized as the most vulnerable and suffering adverse impacts of climate change – the SIDS and many African countries.

This chapter offers both a summative analysis to interpret latent underlying content meaning (Neuendorf, 2001) and a detailed discursive analysis that explores the most prominent framing and themes that simultaneously shape and reflect climate risk rationale. As stated in the previous section, I employed open coding so as to organically discover and identify discursive patterns in the documents, as outlined in Appendix B. Once my coding was complete, I calculated word frequency through MAXQDA for each constituency – countries, ENGOs, and BINGOs – to quantify key words identified in my codes (categorizations, actions, and naming related to climate change and environmental risk). Table 6 provides this breakdown of non-trivial word frequency for countries' high-level statements, reporting usage of the words "action" or "actions" about

10 times greater than the word “crisis.” This finding – a call for “action” – was nearly universal in countries’ high-level statements. Indeed, it was almost equally matched by rhetoric of disapproval with past failures of the international climate regime – a theme that will be discussed in the following section. Consequently, a clear risk perception that climate change impacts must be addressed does exist; but its conflicts continue to lie in countries’ failure to agree on preventative measures or necessary actions (Huang, 2009; Rothe, 2011).

Table 6: Countries’ word frequency, with percentage of overall words as a measure of constituency dataset

Word(s)	Frequency	Percentage
Action(s)	242	0.39%
Economic/Economies/ Economy	168	0.27%
Impact(s)	135	0.21%
Future	127	0.20%
Vulnerable/Vulnerability	118	0.18%
Responsibility/Responsible/ Responsibilities	117	0.19%
Challenge(s)	113	0.18%
Technology	94	0.15%
Sustainable	87	0.14%
Political	62	0.10%
Urgency/Urgent	56	0.09%
Science/Scientific	49	0.08%
Threat(s)	43	0.07%
Risk(s)	39	0.06%
Opportunity	37	0.06%
Survival	25	0.04%
Crisis	24	0.04%

In each of the three word frequency tables in this section, climate change was more often characterized as a "challenge" than a "risk," and only among countries' high-level statements (the largest of the three constituencies) is the frequency of "risk" nearly equal to that of "opportunity." In his research on risk communication, Hampel (2006) suggested risk implies a scientific and evidence-based approach and a "different conceptualization of the problem," generally with an interactive element (p. 5). Of the countries that characterized climate change as "risk" or "crisis" (as outlined in Table 6), about a quarter were SIDS, while fewer than five were Annex I countries. In this discourse arena, Micronesia made its intentions clear:

> …if we in governments continue to deal with climate change merely as a challenge instead of a crisis we are certain to dance around this crisis until it is too late to overcome it.

Micronesia's statement aligns with the work of Lorenzoni and Pidgeon (2006), whose climate change perception research found that individuals related to climate change through personal experiences and knowledge, and the most salient discourses about climate change were connected with peoples' locality.

A major focus for NGO submissions and statements is the inclusion of new voices into the climate change regime, akin to Beck's emergence of subpolitics and counter-conducts (Pieck, 2013) that develop from risk society. Table 7 reports the high frequency of calls for "participation" of civil society in ENGOs' submissions to the UNFCCC. Often these references were linked to the need for shared knowledge

resources of climate change among the world's population and a "right" to join in international climate change discourse and action. The statement from the International Federation of Medical Students' Association to the UNFCCC illustrates this discourse:

> Climate Change is widely recognized as the biggest global health threat of the 21st century, and the world in which today's children are growing up in is changing. It is only fair that children and young people, who hold the biggest stake in our shared future, are empowered to take positive action…Youth empowerment and education is a key part of the fight against climate change.

Table 7: ENGOs' word frequencies, with percentage of overall words as a measure of constituency dataset

Word(s)	Frequency	Percentage
Participation	263	0.95%
Information/Knowledge/ Awareness/Education	198	0.72%
Development/Developing/ Developed	144	0.53%
Public	140	0.51%
Action(s)	100	0.36%
Right(s)	79	0.29%
Youth	48	0.17%
Opportunity/Opportunities	30	0.11%
Challenge(s)	24	0.09%
Risk(s)	19	0.07%
Threat(s)/Threaten	16	0.06%

Table 8 reports BINGOs' frequent concerns with countries' development paths – another theme that will be addressed in the following section – and abundant

technology as discourse, consistent with Dryzek's environmental problem-solving taxonomy. Nippon Keidanren, or the Japan Business Federation, cites corporations' critical role in "green" development and technology as the solution to climate change in its submission to the UNFCCC:

> Industries play key roles to realize global low-carbon society as the source of technology and innovation. To tackle climate change, especially in the long run, it is imperative that they disseminate and make maximum use of existing technologies and develop innovative technologies.

This discourse is both prosaic and reformist – assuming a status quo of economic growth and industrialization, but one that Tuler (1998) said is undergoing "some pragmatic adjustment" (p. 66). These findings are consistent with Schlichting's application of framing theory to industries' climate change communication strategies from 1990 to 2010 – from scientific uncertainty and negative socioeconomic consequences to industrial leadership and technological salvation. Indeed, Lund (2012) identified industries' growing utilization of technological innovation and expertise in climate change discourse. Table 8 below illustrates BINGOs' use of "expertise" more frequently than "opportunity." Also of note, are BINGOs' desire to take an even greater role in "international cooperation on climate change," as this constituency's high-level statement indicates, along with assertions of a "critical [need] to develop enhanced channels [in the UNFCCC regime] to benefit from the expertise and know-how of

business." Risk and threat framing are only used to assert BINGOs' necessary involvement in the negotiations.

Table 8: BINGOs' word frequencies, with percentage of overall words as a measure of constituency dataset

Word(s)	Frequency	Percentage
Development/Developing/ Developed	168	0.98%
Technology	114	0.67%
Business(es)	108	0.63%
Private	92	0.48%
Environmental/Environment	37	0.21%
Expertise	28	0.16%
Opportunity/Opportunities	20	0.12%
Economic/Economies	18	0.11%
Challenge(s)	17	0.09%
Risk(s)	8	0.05%
Threat	1	0.01%

This last table, Table 9, shows a comparison of the three UNFCCC constituencies' top five non-trivial word frequencies, of which the words "risk," "challenge," and "danger" are not included.

Table 9: Comparison of constituencies' top five non-trivial word frequencies, in order of frequency

Countries	ENGOs	BINGOs
Action(s)	Participation	Development/ Developing/ Developed
Economic/Economies/ Economy	Information/Knowledge/ Awareness/Education	Technology
Impact(s)	Development/Developing/ Developed	Business(es)
Future	Public	Private
Vulnerable/ Vulnerability	Action(s)	Environmental/ Environment

5.1 Discursive Themes

Three discursive themes emerge from the discourse identified in the documents: an opportunity to shape the future; a continuation of the battle between North and South; and dissatisfaction with the current climate change regime. Consistent with the theories of Foucault and Hajer, these discourses give meaning to social and physical phenomena (Feindt & Oels, 2005), while reflecting each actor or actor coalitions' power relations and cultural values. Within these discursive themes lie struggles of development, human rights, morality, and accountability, all of which are discussed below:

5.1.1 Climate Change Opportunities

In 2014, Canadian activist and critic of globalization Naomi Klein told *The Atlantic* that climate change should be perceived as an opportunity to dramatically reinvent our economic and social structures to tackle deeper issues of global sustainability, inequity

and political fairness[5]. In other words, the climate crisis presents a chance for the world collectively to question how it grows, how it distributes goods, and how we can work together to shape our future. This reformist stance is certainly consistent with Beck's theorizing of reflexive modernity, and it is apparent in many of the UNFCCC statements, particularly from ENGOs and non-Annex I countries. Several examples of this discourse are below:

> We now have the opportunity to transform current paradigms, [and prevent further damage] by reducing inequalities, enhancing human rights and agreeing collectively on a comprehensive approach to combat climate change and save ecosystem integrity and humanity's future. (Women and Gender Constituency, 2010)

> Today the whole world community is striving for green growth, the countries are discussing opportunities of the economic development by avoiding damage to environment…to a new paradigm of development. (Kazakhstan, 2010)

> We must now inject a new economic logic where it is more beneficial for nations and communities to keep the trees up, than to chop them down. (Indonesia, 2010)

[5] See Shaban (2014) for full interview.

> It is high time for mankind to adopt new models of development and divorce from business as usual in order to protect life on Earth…however this may be taxing and difficult now, we strongly believe that it is worth the sacrifices and it is surmountable by applying the finest technologies the best innovative brains have already produced. (Eritrea, 2010)

While Eritrea, an LDC member, offered the only mention in the dataset of sacrificing status quo or dominant paradigms for a new model of development, each of the examples above utilizes climate change impacts or future risks as a catalyst to explore how we can respond differently to address international economic and social issues. These statements also are similar in their dependence on technology or innovation as a means to deliver such changes, typical of ecological modernization discourse (Huber, 2004). Yet the above examples differ greatly from ecological modernization theories favoring market-driven approaches toward "green" growth – best represented by statements from Annex I parties and nations with emerging economies:

> … in industry, politics and society, we now see climate policy as an opportunity and a challenge, not as a threat…Because when we talk about fighting climate change, we are always also talking about economic growth and development. So the transformation is actually a growth strategy. (Germany, 2010)

> Ecology and economies are not a contradiction in terms…The economy, primarily the private sector, has an interest in investing, if we create the

> necessary incentives, ensure technology transfers and if new, environmentally-friendly goods are affordable for consumers. (Switzerland, 2010)
>
> India will not only be amongst the fastest growing economies in the world as measured by GDP – Gross Domestic Product – but will also be amongst the most responsible in ensuring a high rate of growth of the *real* GDP – *Green* Domestic Product. (India, 2010)
>
> Brazil has shown that economic growth, social justice and environmental protection is not just compatible but represent a development strategy. (Brazil, 2010)

Consistent with Huber's ecological modernization theory, these nations reject the idea that development would degrade environmental conditions. Instead, climate change forces us to "work together to turn this challenge into opportunities for economic growth through the advancement of green technologies and energy solutions," as Annex I nation-state Malta suggested in its statement. Acquiring and applying these new solutions also implies that countries could leapfrog technologically and institutionally, as inferred in the statements from those with rapidly emerging economies. Climate change for these countries presents an opportunity for economic growth, which in this discourse outweighs risk.

5.1.2 The Battle Between North and South

Another closely linked development discourse prominent in these documents was clear conflict between the roles and responsibilities of developed versus developing countries, or North versus South in addressing the risks of climate change. In the examples below from global South countries and an ENGO, developed countries are perceived at fault for blocking solutions to current and future climate change impacts for which they bear responsibility:

> The developed countries have before them once more the opportunity to make a choice in favor of making commitments that entail true meaning instead of continuing to cling to the selfish practices that have led the world into this dangerous situation. (Cuba, 2010)

> We do not have any more time for lengthy delaying tactics; annex 1 countries need to demonstrate real leadership in this important area now! (Zambia, 2010)

> Barbados continues to believe that narrow self interests will eventually give way to our collective sense of humanity and fairness, to ensure a sustainable path for current and future generations. (Barbados, 2010)

> The continued over-occupation by the rich of the remaining atmospheric space and the failure to accept responsibility for deep emission reductions consistence

with science and equity is indeed a travesty of justice. (Friends of the Earth, 2010)

These examples evoke notions of fairness and justice, which frequently arose in the dataset when addressing the Southern countries' rights – whether it is a right to develop (as evidence in Trinidad and Tobago's statement below) or a right to survive (as in the Philippines and Botswana's statements below). Rather than evoking rights discourse, the global North was more apt to call for a tempered solution that sought compromise among all parties (as in the statements from the United Kingdom and Italy below):

> We believe that equity issues need to be defined…on the rights of all countries to develop sustainably and not at the expense of others. (Trinidad and Tobago, 2010)

> Vulnerable countries such as the Philippines should not be made to feel like we are the defendants in this TRIAL FOR HUMAN SURVIVAL. (Philippines, 2010)

> We live with compromises but bearing in mind that you are asking us to compromise our existence for the sake of our shared common space to which we bear no responsibility to the carbon dioxide emissions that threaten the rich and poor. (Botswana, 2010)

> The answer has to be a compromise. We cannot do everything here. But we can make progress on mitigation, deforestation, adaptation, finance, reporting and more. And restore momentum to the global process. Concrete steps to the treaty we want. (United Kingdom, 2010)

> In this negotiation, we know that pitching our ambitions too high and too soon could backfire, and prevent us from reaching the crucial, yet attainable results we need. (Italy, 2010)

The statements from Trinidad and Tobago, the Philippines, and Botswana recognize the agency of vulnerable populations, and their demands for the global North to assume responsibility for addressing climate change impacts. While the global North was more apt to characterize the negotiations as a long-term compromise ("The new climate deal may not satisfy all," the Czech Republic said in its high-level statement), strong discourse of responsibility was still prominent among these nations:

> We owe it to them – and to all other citizens of this world to whom climate change is already now a fact of life – to end this week with a set of decisions. (European Union, 2010)

> As a developed nation New Zealand has a responsibility to assist our Pacific Island neighbours who are vulnerable to the impacts of climate change. (New Zealand, 2010)

This framing of self-responsibility, though, was not unique to global North countries. Indeed, the global South invoked rights discourse and morality to address environmental risks – and in at least one instance debunked the role of victim (akin to the findings of Farbotko & Lazrus, 2012) to take action against climate change:

> The most vulnerable countries must own up the fact that crying a victim will not stop their farm land from drying or the sea level from rising. We too have a role for the damages to our Climate, through destruction of our forests. And the world is demanding the spirit of self-help. (Kenya, 2010)

> We, therefore, have a moral obligation to save humanity from doom. (Solomon Islands, 2010)

These discourses of obligation illustrate the collective responsibility shared by countries to tackle the climate crisis, which many countries cited in their UNFCCC statements.

5.1.3 Criticism of Climate Regime

Iterations of morality and responsibility were not only apparent in the context of development and collaboration in addressing climate change risks, but also in frustrations with UNFCCC governance (also in Huang, 2009; Webb, 2007; Bulkeley, 2001). Prevalent in this discursive theme are calls for action – the more frequently cited words in countries' high-level statements. In the statements below, the risks of climate

change are pitted against international governance, structural policymaking, and proceedings:

> …we don't have the privilege to be unnecessarily bogged down on phrases and words to be inserted or deleted in the negotiated text. We must act with utmost urgency and due diligence to save lives of millions and their precious civilizations. (Nepal, 2010)

> We were extremely disappointed with the outcome of Copenhagen. It is a tragedy to think that over a 110 heads of state could not unite to tackle climate change in a meaningful way. (Tuvalu, 2010)

> All eyes are upon us…The time for action is now. Let us 'stop the talk and walk the walk.' We must get the job done for our planet; we must get the job done [for] our children. (Belize, 2010)

> The gravity of the crisis has escaped us. It has become lost in a fog of scientific, economic, and technical jargon. Without bold action, it will be left to our children to come up with the words to convey the tragedy of losing our homelands when it did not have to be this way. (SIDS, 2010)

These statements reflect the risk of inaction in the fight against climate change, while criticizing the structural forces enacted to address these ills. Huang (2009),

McNamara and Gibson (2009), and Paavola and Adger (2006) reported consistent growing frustrations from the most vulnerable nations – SIDS and many in the global South – which are forced to simultaneously battle climate change risks on the ground while making little headway toward solutions on the international stage. These statements also are reflective of the hegemony of climate negotiations, and bias toward the global capitalist system.[6] Pidgeon and Butler (2009) found that contemporary risk approaches aligned with dominant political rationalities in Western nations, but had limited effectiveness in delivering aggressive climate policy aims for the international community. In many ways, these risks of stalled action or preferential treatment toward Annex I nations are as perceivably damaging as the risks of the future climate change impacts. Interestingly, the United States does not mention the risks of climate change in its high-level statement; instead focusing on the actions it has taken since Copenhagen to operationalize what "our leaders agreed last year." Global economic leader China, on the other hand, declared itself a "victim to global climate change" and stated "the international community must enhance cooperation to tackle it."

This discursive theme of criticizing the UNFCC also represents a population of environmental activists and supporters who have lost faith in the multilateral negotiations. Bump (2012), who called the annual climate change conferences "pointless," also described them this way:

> They are good for providing an excuse for the well-heeled to tour the world every winter, but they are fruitless in terms of adopting remedies for global warming and obviously ineffective in curtailing greenhouse gas pollution.

[6] For an analysis of Western bias in international theory, see Young (2014).

Indeed, this discursive theme was most prevalent among ENGOs, as illustrated in these examples:

> The world has not forgotten that for two decades we have failed to reach an agreement that would accelerate firm actions to address and combat climate change…The world is watching and you must not forget that you have the privilege of representing us. You have been sent to listen and act to do the right thing for the planet and its future. (Climate Action Network, 2010)

> Representatives of Indigenous Peoples from all over the world attending this climate conference collectively express our dismay and severe disappointment over the lack of political will and good faith negotiations to truly and effectively combat climate change. (IPO, 2010)

> To be young and aware today is to see your elders – from doctors and scientists to lawyers and bankers – telling us that we're in the final countdown, with the risk or runaway climate change mounting with everyday we run business as usual… to be young and aware today is to be confused. To wonder why you can stand in front of us and both call for change, and refuse to change. (YOUNGO, 2010)

It is not surprising that ENGOs, SIDS, and developing nations were the most vocal in the urgency of addressing climate change and most critical of these efforts to date. Paavola and Adger (2006) found that the most vulnerable typically had the least voice in

the international climate regime, while also suffering (or are projected to suffer, in the case of future generations) the most from these environmental risks; so these constituencies' cries for participation, for future generations, and for action resounded in each of their high-level statements and submissions. In this set of documents, then, it is not the risk of climate change and its damaging impacts that these nations and groups fear most, but rather the risk of nations and world leaders not taking action to mitigate or adapt to them.

CHAPTER 6 CONCLUSION

This thesis has sought a better understanding of risk perceptions of climate change in international negotiations. Drawing upon theorizing of risk society from Beck and others, this thesis began with an examination of how risk is constructed and asked whether explanations for such divergent responses to climate change could lie in analyzing risk perceptions, because these perceptions influence our orientation and actions toward environmental hazards. Like Beck, this thesis asserted that risk does not standalone; it is socially constructed and evolves over time. Consistent with Beck (2010a), Rothe (2011), and Thompson and Rayner (2000), this thesis argued that risk is different from hazard, and from uncertainty; it is derived from perceptions embedded within broader political discourses. As such, perceptions of ecological risk vary from country and constituency without singular or universal definitions of "dangerous climate change." Of course, many countries and civil society groups claim in varying degrees to already be impacted by climate change, through extreme weather events, changing agricultural practices, or other adaptation methods and technologies. Indeed, this thesis found that nearly every actor (at every level) admitted to facing environmental changes to some extent; where they differed was in their framing of climate change as a crisis or opportunity, as best fit their dominant political and social discourse.

6.1 Risk on an International Stage

With its submissions from countries and civil society constituencies, the UNFCCC provides a comprehensive arena in which to study climate change risk

perceptions. That is because the UNFCCC in many ways already embodies what Beck and others consider a product of risk society, in which a transnational body of actors – along with subpolitical actors outside the state – have come together to collectively address a global risk that they cannot individually confront. Climate change has exceeded the limits of national risk-management institutions, prompting a new risk society that must "transcend the boundaries of national states and thus open up a window of opportunity for a more cooperative international order to evolve" (Rothe, 2011, p. 332).

The documents analyzed in this thesis, however, do not universally offer evidence of more cooperative international order. In fact, they often show countries' and non-state constituencies' divergent reactions and responses to the problem. Reflecting the cultural, political, economic, and social values from constituencies across the international community, these statements also offer much more than risk perceptions of climate change. They provide substantial evidence that climate change is not simply an environmental question, but rather one of economic, political, and social norms. Perceptions and responses to climate change are embedded within countries' or actor coalitions' discourses of governance, modernization, environmentalism, and rights or responsibilities. While nations and civil society appear united in the belief that climate change implies at least some threat to existing ways of life, these constituencies differ in their responses to such environmental risk. Ultimately, this thesis found evidence for Hilde's (2012) claim that the UNFCCC is a forum with "two-level norms": despite some "basic norms regarding climate change," countries still revert to national self-interest at the negotiating table (p.894).

Using discourse analysis of high-level statements and submissions from 110 countries and 35 NGOs (environmental- and industry-focused), this thesis found that nations and civil society perceived the risks of climate change in larger contexts of their own development, economic growth, and social equity. Non-trivial words such as "action," "opportunity," "rights," and "future" were more frequently cited than "threat," "risk," or "survival." For some, the risks of climate change presented an opportunity; for others, an illustration of the continued dominance of the global North; and for even others, a reason to act locally for the sake of future generations rather than wait for international cooperation. How each constituency perceived climate change was also a reflection of how they perceived themselves – a victim, an expert, a leader, or a protector.

In analyzing risk perceptions of climate change, this thesis sought to provide some understanding for the different actions and responses of varying countries and key non-state constituencies to our changing environment. While this study of risk perceptions did not offer a comprehensive critique of the legitimacy of international climate governance, several of its findings hint at the limitations of the current regime in responding to global environmental crises. Like risk, the emergence of the world's environmental regime is socially derived. Lipschutz (1996) called international climate governance "a reaction to certain processes of social transformation at work upon human civilization and its constituent societies" (p. 1). Changing our response to the climate crisis also would entail changing our perceptions. Or, as Lipschutz (1996) described, changing "how we conceptualized global environmental change":

> As often as not, damage to the environment is described in terms of its *physical* characteristics – the declining numbers of a particular species, the loss of so many inches of soil, the presence of so much pollution in air or water, the increase in average global temperature or the decrease in stratospheric ozone concentrations – with the implication that policy should focus on the things that can be counted instead of the things that count. (p. 4)

Several LDCs and SIDS echoed this sentiment in their high-level statements to the COP 16, citing environmental damages in terms of inequitable and unsustainable development, a loss of culture or way of life, and even damage to a sentient "Nature" or "Mother Earth" from climate change. Others, such as Samoa, feared the impact of inaction on future generations: "Individually and jointly we must make tough and bold decisions to ensure that we cannot continue to develop in a manner that transfers to future generations a debt they cannot pay and did not ask to inherit."

Yet, for most countries – the primary actors in the climate regime – such solutions continue to be difficult to accomplish. That is because states remain highly resistant to imposing on themselves any "enforceable obligation" that would alter their social or economic norms or institutions "in a serious way" (Lipschutz, 1996, p. 39). Achieving such a shift would mean that governments must embrace a new "political will" that "requires a convergence of interests among contesting groups and elites" (Lipschutz, 1996, 29).

6.2 Change Beyond the State

The UNFCCC certainly has provided a first step toward addressing the global problems of climate change by bringing parties together to collectively work on environmental issues. But its current approach to climate change has diverged from its original objective and principles – primarily to achieve stable atmospheric GHG concentrations based on precaution and equity (Sagara, 2009). Indeed, Audrey Meyer, director of the Global Commons Institute, a London-based think tank for global climate solutions, described the limitations of the UNFCCC's current negotiations:

> The main problem of the present approach is that parties [countries] are still negotiating what they perceive as their own interests or their own group interests. We all know that we must come together into a unified reckoning, but there seems to be an inability to come to order within the limits that now constrain us all. (Sagara, 2009).

Consequently, the impetus and answer to achieve environmental accord may lie beyond the state system. The rise of subpolitical groups is critical to Beck's theorizing of reflexive modernity, in which non-state actors begin to operate outside of, or beyond, state lines to address issues of global risk. This thesis provided evidence that this process is underway, yet far from achieving what Beck had envisioned. Today's UNFCCC regime offers examples of subpolitical activity with the increasing number of NGOs participating in the negotiations. Indeed, such groups were critical in formulating language for the first environmental agreements and alliances for presentation at the 1992 Earth Summit (Lipschutz, 1996). Yet Lipschutz (1996) has simultaneously cited growing evidence for a "revolving door" among government, industry, and NGOs without

a clear separating of funding sources or agendas (p. 51). Earlier in this thesis, I cited Schroeder and Lovell's (2012) finding that many national delegations also admit NGO, municipal, or business representatives into their delegations, further blurring barriers between state and non-state interests. Such collaboration between state and non-state actors is necessary to reach certain aims within existing structures. The question is whether these groups collectively can effect legitimate institutional change and a shifting of norms to achieve a comprehensive binding solution to the climate crisis.

Throughout much of the world, Wapner (1996) said NGOs and community-based organizations "have traditionally served as conduits for government policy" and "have been unofficial arms of the government" (p. 106). But for those groups that do not, the effects have been transformative:

> They can take control of their own lives and environments and no longer fall easy prey to national or international pressures. Furthermore, the effects of their efforts can fan out to the larger dynamics of international politics. (p. 106)

As such, Wapner (1996) cited groups as diverse as Indian activists resisting dam development to Greenpeace's non-violent actions "bearing witness" to harp seal killings and nuclear testing off the coast of Canada and the U.S. Pacific Northwest as impacting national and international policies because of their actions (p. 50). Several of the ENGOs analyzed in this paper, particularly the youth-focused movements, have achieved similar results, including Project Survival, an international youth journalism network producing video and photo documentaries on survival and ingenuity in the face

of climate change.[7] Like its environmental NGO counterparts, Project Survival seeks to garner greater awareness of the climate crisis through a growing network of global media that ultimately will help to educate and influence new perceptions of the risks of climate change to sway national and international opinion and action. Such examples reflect Wapner's (1996) idea that "states do not hold monopolies over the instruments that govern human affairs but rather that nonstate forms of governance exist and can be used to effect widespread change" (p. 7). Such civic activism is a form of governance, Wapner (1996) argued, because it provides a way to create conditions to direct and order others' activities.

Ultimately, today's climate governance might best align with Ken Booth's metaphor for the changing nature of global politics – the "international system which is now developing…is of an egg-box containing the shells of sovereignty; but alongside it a global community omelette is cooking" (as cited in Lipschutz, 1996, p. 52). Invigorating the climate change debate and influencing perceptions is not a top-down approach. Indeed, answering the question of who rules climate change governance is a multi-faceted one. Much of the regime's implementation will take place at the regional and local levels, "in the places where people live, not where their laws are made" (Lipschutz, 1996, p. 250). For a climate regime to be successful, it must function as a global institution with governance at the local, regional, national, and international stages, changing perception at every level.

[7] This group, whose work is available at http://projectsurvivalmedia.org, uses visual media of climate change to encourage action and change perceptions about climate change, akin to Greenpeace's practice of "bearing witness" to link moral sensitivities with political responsibility (Wapner, 1996, p. 50).

APPENDIX A: LISTING OF SAMPLE DOCUMENTS

Countries High-Level Statements to COP 16

Nation/Regional Groups	Language	Annex I	Annex II	Non Annex I	LCD	Party Groupings 1	Party Groupings 2	Party Groupings 3	Party Groupings 4
Afghanistan	EN			Y	Y	Asia-Pacific Group	G-77		-
Albania	EN			Y		Eastern European			
Algeria	EN			Y		OPEC	G-77		
Alliance of Small Island States (AOSIS)	EN								
Argentina	SP			Y		GRULAC	G-77		
Australia	EN	Y	Y			Umbrella	WEOG		
Austria	EN	Y	Y			European Union	WEOG		
Bangladesh	EN			Y	Y	Asia-Pacific Group		G-77	
Barbados	EN			Y		GRULAC	AOSIS	G-77	
Belize	EN			Y		GRULAC	AOSIS	G-77	
Bhutan	EN			Y	Y	Asia-Pacific Group	G-77		
Bosnia and Herzegovina	EN			Y		Eastern European	G-77		
Botswana	EN			Y		African Group	G-77		
Brazil	EN			Y		GRULAC	G-77		
Brunei Darussalam	EN			Y		Asia-Pacific Group	G-77		
Canada	EN	Y	Y			Umbrella	WEOG		
China	EN			Y		Asia-Pacific Group	G-77		

Nation/Regional Groups	Language	Annex I	Annex II	Non Annex I	LCD	Party Groupings 1	Party Groupings 2	Party Groupings 3	Party Groupings 4
Croatia	EN	Y				Eastern European			
Cuba	EN			Y		GRULAC	AOSIS	G-77	
Cyprus	EN	Y				Asia-Pacific Group	European Union		
Czech Republic	EN	Y				Eastern European	European Union		
Denmark	EN	Y	Y			European Union	WEOG		
Dominica	EN			Y		GRULAC	AOSIS	G-77	
Eritrea	EN			Y	Y	African Group			
Estonia	EN	Y				Eastern European	European Union		
European Union	EN	Y	Y						
Fiji	EN			Y		Asia-Pacific Group	AOSIS	G-77	SIDS
Finland	EN	Y	Y			European Union	WEOG		
Gambia	EN			Y	Y	African Group	G-77		
Georgia	EN/SP			Y		Eastern European			
Germany	EN	Y	Y			European Union	WEOG		
Ghana	EN			Y		African Group	G-77		
Greece	EN	Y	Y			European Union	WEOG		
Group of 77 and China	EN								
Guyana	EN			Y		GRULAC	AOSIS	G-77	
Iceland	EN	Y	Y			WEOG			

Nation/Regional Groups	Language	Annex I	Annex II	Non Annex I	LCD	Party Groupings 1	Party Groupings 2	Party Groupings 3	Party Groupings 4
India	EN			Y		Asia-Pacific Group	G-77		
Indonesia	EN			Y		Asia-Pacific Group	G-77		
Iran	EN			Y		OPEC	Asia-Pacific Group	G-77	
Ireland	EN	Y	Y			European Union	WEOG		
Israel	EN			Y		WEOG			
Italy	EN	Y	Y			European Union			
Jamaica	EN			Y		GRULAC	AOSIS	G-77	
Japan	EN	Y	Y			Umbrella	Asia-Pacific Group		
Kazakhstan	EN			Y		Asia-Pacific Group			
Kenya	EN			Y		African Group	G-77		
Lao	EN			Y	Y	Asia-Pacific Group			
Latin American and Caribbean Group (GRULAC)	EN								
Least Developed Countries Group	EN								
Lebannon	EN			Y		Asia-Pacific Group	G-77		
Lesotho	EN			Y	Y	African Group	G-77		
Liberia	EN			Y	Y	African Group	G-77		
Liechtenstein	EN	Y				Environmental Integrity Group	WEOG		

Nation/Regional Groups	Language	Annex I	Annex II	Non Annex I	LCD	Party Groupings 1	Party Groupings 2	Party Groupings 3	Party Groupings 4
Macedonia	EN					Eastern European			
Malawi	EN			Y	Y	African Group	G-77		
Malaysia	EN			Y		Asia-Pacific Group	G-77		
Maldives	EN			Y		Asia-Pacific Group	AOSIS	G-77	
Malta	EN	Y				European Union	WEOG		
Marshall Islands	EN			Y		Asia-Pacific Group	AOSIS	G-77	SIDS
Mauritius	EN			Y		African Group	AOSIS	G-77	
Micronesia	EN			Y		Asia-Pacific Group	AOSIS	G-77	SIDS
Mongolia	EN			Y		Asia-Pacific Group	G-77		
Montenegro	EN			Y		Eastern European			
Mozambique	EN			Y	Y	African Group	G-77		
Namibia	EN			Y		African Group	G-77		
Nepal	EN			Y	Y	Asia-Pacific Group	G-77		
Netherlands	EN	Y	Y			European Union	WEOG		
New Zealand	EN	Y	Y			Umbrella	WEOG		
Nigeria	EN			Y		African Group	OPEC	G-77	
Norway	EN	Y	Y			Umbrella	WEOG		
Pacific Small Island Developing States	EN								

Nation/Regional Groups	Language	Annex I	Annex II	Non Annex I	LCD	Party Groupings 1	Party Groupings 2	Party Groupings 3	Party Groupings 4
Pakistan	EN			Y		Asia-Pacific Group	G-77		
Palestine	EN			Y		G-77			
Philippines	EN			Y		Asia-Pacific Group	G-77		
Poland	EN	Y				Eastern European	European Union		
Portugal	EN	Y	Y			European Union	WEOG		
Republic of Palau	EN			Y		Asia-Pacific Group	AOSIS	SIDS	
Republic of Suriname	EN			Y		GRULAC	AOSIS	G-77	
Romania	EN	Y				Eastern European	European Union		
Russia	EN	Y				Umbrella	Eastern European		
Rwanda	EN			Y	Y	African Group	G-77		
Samoa	EN			Y	Y	Asia-Pacific Group	AOSIS	G-77	SIDS
Saudi Arabia	EN			Y		Asia-Pacific Group	OPEC		
Seychelles	EN			Y		African Group	AOSIS	G-77	
Sierra Leone	EN			Y	Y	African Group	G-77		
Singapore	EN			Y		Asia-Pacific Group	AOSIS	G-77	
Slovakia	EN	Y				Eastern European	European Union		
Slovenia	EN	Y				Eastern European	European Union		

Nation/Regional Groups	Language	Annex I	Annex II	Non Annex I	LCD	Party Groupings 1	Party Groupings 2	Party Groupings 3	Party Groupings 4
Solomon Islands	EN			Y	Y	Asia-Pacific Group	AOSIS	G-77	SIDS
Somalia	EN			Y	Y	African Group	G-77		
South Africa	EN			Y		African Group	G-77		
South Korea	EN			Y		Environmental Integrity Group	Asia-Pacific Group		
Sri Lanka	EN			Y		Asia-Pacific Group	G-77		
Sweden	EN	Y	Y			European Union	WEOG		
Switzerland	EN	Y	Y			Environmental Integrity Group	WEOG		
Tajikistan	EN			Y		Asia-Pacific Group	G-77		
Tanzania	EN				Y	African Group	G-77		
Thailand	EN			Y		Asia-Pacific Group	G-77		
Timor Leste	EN			Y	Y	Asia-Pacific Group	AOSIS	G-77	
Trinidad and Tobago	EN			Y		GRULAC	AOSIS	G-77	
Turkey	EN	Y	Y			Asia-Pacific Group	WEOG		
Tuvalu	EN			Y	Y	Asia-Pacific Group	AOSIS	SIDS	
Uganda	EN			Y	Y	African Group	G-77		
Ukraine	EN	Y				Umbrella	Eastern European		
United Arab Emirates	EN			Y		Asia-Pacific Group	OPEC	G-77	

Nation/Regional Groups	Language	Annex I	Annex II	Non Annex I	LCD	Party Groupings 1	Party Groupings 2	Party Groupings 3	Party Groupings 4
United Kingdom and Northern Ireland	EN	Y	Y			European Union	WEOG		
United States	EN	Y	Y			Umbrella	WEOG		
Vanuatu	EN			Y	Y	Asia-Pacific Group	AOSIS	G-77	SIDS
Vietnam	EN			Y		Asia-Pacific Group	G-77		
Zambia	EN			Y	Y	African Group	G-77		
Zimbabwe	EN			Y		African Group	G-77		

NGO Submissions to COP 16

Date	Organization(s)	Topic	ENGO/BINGO
August 20 2010	Clean Energy Nepal (CEN); Energy Crossroads (EC); European Youth Forum (YFJ); Federation of Young European Greens (FYEG); International Federation of Liberal Youth (IFLRY); International Federation of Medical Students Association (IFMSA); International Forestry Student Association (IFSA); Jeunes Volontaires pour l'Environnement (JVE); Service Civil International (SCI); SustainUS; UK Youth Climate Coalition (UKYCC); World Association of Girl Guides and Girl Scouts (WAGGGS)	Enhance engagement of observer organizations	ENGO (youth)
August 16 2010	Corporación Grupo Tayrona	New Delhi Work Programme; Article 6	ENGO (youth)
August 16 2010	European Youth Forum (YFJ) and World Association of Girl Guides and Girl Scouts (WAGGGS)	New Delhi Work Programme; Article 6	ENGO (youth)
August 27 2010	International Federation of Medical Students' Associations	New Delhi Work Programme; Article 6	ENGO (youth)
August 20 2010	United Kingdom Youth Climate Coalition (UKYCCC) on behalf of YOUNGO	New Delhi Work Programme; Article 6	ENGO (youth)
August 2010	YOUNGO	New Delhi Work Programme; Article 6	ENGO (youth)
August 15 2010	Climate Action Network International (CAN)	Enhance engagement of observer organizations	ENGO
August 16 2010	Climate Action Network International (CAN)	Clean development mechanism	ENGO
August 16 2010	Climate Action Network International (CAN)	Nairobi Work Programme	ENGO
March 22 2010	Climate Action Network International (CAN)	Standardized baselines	ENGO
March 22 2010	Climate Action Network International (CAN)	Adaptation Fund under Kyoto	ENGO
August 18 2010	Friends of the Earth International (FOEI)	Enhance engagement of observer organizations	ENGO
August 16 2010	GenderCC - Women for Climate Justice	Nairobi Work Programme	ENGO

Date	Organization(s)	Topic	ENGO/BINGO
September 9 2010	GenderCC-Women for Climate Justice (GenderCC) on behalf of Life e.V.; Women in Europe for a Common Future (WECF); Women's Environment and Development Organisation (WEDO)	Enhance engagement of observer organizations	ENGO
August 16 2010	Global Witness on behalf of the Ecosystems Climate Alliance	Enhance engagement of observer organizations	ENGO
August 31 2010	Joint submission by Climate Action Network-International Secretariat (ENGO Focal Point); International Federation of Agricultural Producers (Farmers Focal Point); ICLEI-Local Governments for Sustainability (LGMA Focal point); GenderCC (Women and Gender Focal Point); Service Civil International (YOUNGO Focal Point)	Enhance engagement of observer organizations	ENGO
August 16 2010	Life e.V. and GenderCC-Women for Climate Justice	New Delhi Work Programme; Article 6	ENGO
August 16 2010	WWF International	Enhance engagement of observer organizations	ENGO
September 1 2010	Business Council for Sustainable Energy (BCSE); Carbon Markets & Investors Association (CMIA); Global Wind Energy Council (GWEC); International Council for Sustainable Energy (ICSE); International Emissions Trading Association (IETA)	Enhance engagement of observer organizations	BINGO
August 16 2010	Carbon Markets and Investors Association	Clean development mechanism	BINGO
March 23 2010	Climate Action Reserve	Standardized baselines	BINGO
March 22 2010	EURELECTRIC	Standardized baselines	BINGO
August 12 2010	Federation of Electric Power Companies of Japan (FEPC)	Enhance engagement of observer organizations	BINGO
March 22 2010	Global Wind Energy Council	Standardized baselines	BINGO
August 16 2010	International Chamber of Commercie (ICC)	Enhance engagement of observer organizations	BINGO
March 23 2010	International Emissions Trading Association	Standardized baselines	BINGO
August 16 2010	Keidanren	Enhance engagement of observer organizations	BINGO

Date	Organization(s)	Topic	ENGO/BINGO
March 22 2010	Transport Research Foundation	Standardized baselines	BINGO
August 16 2010	World Business Council for Sustainable Development (WBCSD)	Enhance engagement of observer organizations	BINGO

NGO High-Level Statements to COP 16

Organization(s)	ENGO/BINGO
BINGO (on behalf of constituency)	BINGO
International Trade Union Confederation	BINGO
YOUNGO (on behalf of constituency)	ENGO
International Indigenous Peoples' Forum on Climate Change	ENGO
Farmers (on behalf of constituency)	ENGO
ICAE (on behalf of Women and Gender)	ENGO
Friends of the Earth	ENGO
Climate Action Network International	ENGO

APPENDIX B: CODE CLASSIFICATIONS AND DEFINITIONS

MAXQDA CODE CLASSIFICATIONS & DEFINITIONS

Climate Change Characterizations – This code includes any characterizations of climate change in the selected documents. Specific sub-codes cover climate change characterizations as (a) a crisis; (b) dangerous and/or destructive; (c) adverse impacts and/or effects; (d) catastrophic; (e) a battle or fight; (f) a challenge; (g) a risk; (h) a "tipping point;" (i) a threat; and (j) irreversible or unavoidable.

Damage from Climate Change – Examples include descriptions of physical damage associated with climate change, to include flooding, human death, sea level rise and other destructive outcomes associated with increased weather activity.

Controlling Climate Change – Examples include "tackling" or "solving" climate change. Sub-codes involve language of (a) avoiding climate change; (b) reversing the impacts of climate change; and (c) utilizing technology as a tool against climate change impacts.

Time – Coded examples involve language that refers to a time element related to climate change, particularly a sense of urgency to address climate change impacts. Additional references include a countdown to act.

Call for Action – Often closely related to the "Time" code, this code involves language depicting a need to act or for action from the parties of the UNFCCC process or as a reaction to climate change impacts.

Collaboration – Examples include language of collaboration or working together to address the impacts of climate change, whether as part of the UNFCCC process or beyond.

Responsibility and/or Accountability – This code marks language associated with those having a responsibility to respond to climate change impacts. This code was often found in the context of developed versus developing countries and those who had the least impact on the climate suffering the worst impacts. Sub-codes include references to (a) human-made or anthropogenic and (b) morality, as a moral obligation to respond to climate change.

Risk Management and/or Prevention – Examples involve language of resilience and adaptation to the risks associated with climate change. This code is separate from other descriptions of climate change throughout the documents, as specific adaptive action or measures toward resilience must be included in this classification.

Failure at UNFCCC – This code includes references in the documents to perceived shortcomings of the UNFCCC process and a failure of the parties to act.

Victimization – Examples include using the word “victims” to describe anyone who suffers due to climate change impacts.

Opportunity – This code captures the language of opportunity, future or optimism in the selected documents. It often is in reference to action at the UNFCCC but also revolves on language associate with growth. As such, a sub-code involves economic growth.

Mother Earth or Nature – This code includes references to “Mother Earth” or nature as sentient.

Science – This code involves references to the science of climate change and scientific findings or predictions. A sub-code captures language of skepticism toward science.

Choices and Decisions – This code is closely tied to “Call for Action” and involves references to choices or decisions as actions that one can take against climate change.

It implies that climate change and its affects are not foregone conclusions, and that parties have the ability to take action, but it must be through choice and active decision-making.

Future Generations – This code marks any mention of future generations or children and grandchildren in the selected documents.

Survival – This code includes language of survival as related to the impacts of climate change and the UNFCCC process the selected documents.

Vulnerability – This code covers any language of being vulnerable or populations defined as vulnerable in reference to the impacts of climate change; often a characterization of nations in the selected documents.

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