Climate Change and Developing Countries; Examining the Motives for Participation in International Negotiations

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Climate Change and Developing Countries: Examining the Motives for Participation in International Negotiations

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Thesis Abstract

This study explores the link between vulnerability and participation in international negotiations on climate change. Climate change has developed into an urgent, growing problem, as it has caused significant destruction to earth’s biodiversity and societies across the world. However, the international community has yet to formulate a global plan to successfully combat climate change. Therefore, it is imperative to take into account the necessary conditions for countries to be more open to negotiating, as only then can the global community reach a successful, united plan. Moreover, it is vital to establish a global plan in order to secure the health of the planet for future generations and to safeguard the international community which faces a variety of challenges that stem from climate change. The question this thesis seeks to answer is whether developing countries are likely to participate more actively in international and regional negotiations once they actually begin to feel the impacts of climate change. Using a combination of qualitative and quantitative analysis, I detail three cases: Kenya, Qatar and Trinidad and Tobago. The case studies suggest that experiencing considerable vulnerability to climate change has indeed motivated developing countries to become more involved in international and regional negotiations. However, the perception of vulnerability by itself does not mean that a country will be proactive. The securement of financial aid, the desire to attain global or regional prestige and leadership, and international pressure are all factors which are likely to serve as motivation for involvement as well. Kenya’s high involvement is due to its high vulnerability to climate change along with its desire to secure financial aid and achieve regional and global prestige. Similarly, high vulnerability, financial aid and the desire to achieve prestige and regional leadership contributes to Trinidad and Tobago’s high level of involvement. Qatar’s moderate involvement is likely due to the fact that it is ranked much lower in vulnerability to climate change and it has only recently begun to feel the impacts of climate change. Prestige, regional leadership, international pressure and the spread of environmental norms have also motivated Qatar to become more involved.
CHAPTER 1-INTRODUCTION

This study will explore the link between vulnerability and participation in international negotiations on climate change. Focusing on the most recent international climate change negotiations, I will look to see what possible circumstances could motivate developing countries to play a larger role in negotiations. This thesis will review negotiations starting from 2009 to 2013: the 2009 Copenhagen Accord, the 2010 Cancun Agreements, the 2011 Durban outcomes, the 2012 Doha Climate Gateway and a set of decisions agreed at the 2013 conference in Warsaw. Though these negotiations have been underway for some time, an agreement on measures to mitigate the climate change problem has yet to be made.

Global climate change presents one of the most significant threats facing the world today. Major environmental degradation spurred by climate change has occurred in regions and societies across the globe. Scientists have discovered that climate change is the central cause of the destruction of the Earth’s biodiversity. The increasing natural and man-made destruction of the Earth’s environment has produced harmful effects that threaten populations and habitats globally.¹

As concern surrounding Earth’s warming climate grew, the first major international meeting, the World Climate Conference, was set up in 1979 to address the rising concern of climate change. Later on, the United Nations Framework Convention on Climate Change (UNFCCC) was created in 1992. This global treaty was created in an effort for countries to cooperatively consider what they could do to limit average global temperature increases and the resulting climate change. The treaty also served as a means for countries to manage how they would deal with climatic impacts that were foreseeable in the future.²

Soon after, the UNFCCC adopted the Kyoto Protocol in an effort to control greenhouse gas emissions. The Protocol entered into force in 2005 and served as an international agreement which commits its Parties by setting internationally binding emission reduction targets. The Kyoto Protocol was established after a report by the Intergovernmental Panel on Climate Change (IPCC) concluded that anthropogenic emissions of greenhouse gases are very likely responsible for most of the observed increase in globally averaged temperatures since the mid-20th century. Hence, the Protocol's main feature is to instill mandatory targets for greenhouse gas emissions for the world’s leading economies which have accepted it. So far, the world’s leading economies have refused to participate in the agreements, yet are among the world’s highest greenhouse gas emitters. Moreover, developing countries were not obliged to lower greenhouse gas emissions under the agreement so as to not deter their economic development and progress. Since the agreement left out the major players that are in fact contributing to global climate change, cooperation within the international community to reduce greenhouse gas emissions could, at most, achieve only limited success. As a result, the Kyoto Protocol fell short of acting as an effective framework for addressing global warming.

Since 2009, international negotiations have been conducted in an attempt to take up where the Kyoto Protocol left off and move forward with discussing new climate change mitigation efforts. In November 2011, the International Energy Agency warned that the world may be fast approaching a tipping point concerning climate change, and suggested that the next five years will be crucial for greenhouse gas reduction efforts. Humans produce greenhouse

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5 “Kyoto Protocol” United Nations Framework Convention on Climate Change.


gases by burning coal, oil, and natural gas to generate energy for power, heat, industry, and transportation. Deforestation and agricultural activity also yield climate-changing emissions. Avoiding the worst consequences of climate change will require large cuts in global greenhouse gas emissions.8

As high per-capita GDP correlates strongly with high per-capita emissions, and no large country has ever experienced lasting economic growth without simultaneously increasing emissions, it is perhaps not surprising that more than thirty years have passed since the first World Climate Conference and fifteen years have passed since the United Nations Framework Convention on Climate Change (UNFCCC) entered into force. Still, no global plan to reduce emissions has been successfully formulated by the international community. As international negotiations continue, it is apparent that measures to reduce global greenhouse gas emissions will require full international participation and substantial financial cost.

This topic was selected for three reasons: First, the environment is a crucial matter to research, as scientific evidence has revealed that without significant action taken now, the warming climate will continue to unleash harsh threats upon the planet and societies now and in the future. Second, as climate change presents a problem that affects the entire world, it is crucial to investigate the several components that have caused the past failure of collective action among countries in order to find new and improved mechanisms that will promote international collaboration. Third, the international community continues to face several other significant problems which are connected to climate change, and without successful negotiation of climate change mitigation, these problems are very likely to persist.

I have chosen to focus in particular on smaller developing countries because while much attention has been focused on the responsibilities and concerns of developed countries as well as the advanced developing countries, not so much is known about the rest of the world. All nations

8 Ibid.
are suffering from the effect of climate change. My question is: do these smaller countries also feel the urgency of participating fully in climate change negotiations and if so, why?

The subsequent chapters will address the research design and theoretical literature followed by a review of recent international negotiations on climate change, case analysis, and an assessment and conclusion which will communicate my findings.
CHAPTER 2-RESEARCH DESIGN &LITERATURE

Research Design

As opposed to the attention paid to developed and advanced developing countries, little attention has been paid to less advanced developing countries on the issue of climate change and the ongoing international negotiations. There has been a divide in climate change negotiations between developed and advanced developing countries, and the less advanced developing countries have not gained as much attention as their larger counterparts.\(^1\) However, the environmental health of the world depends on all nations. Traditionally, developing countries have been concerned with development rather than the environment, and so it has taken some time for them to come to prioritizing environmental issues. These countries are an important part of the process; most importantly, the majority of these countries have been directly affected by the harmful effects of climate change even though most of them pollute the least. Thus, some of these countries are highly vulnerable and are at great risk of harmful environmental occurrences as the climate continues to change.\(^2\) Moreover, high vulnerability to climate change has prevented these countries from developing to their fullest potential, thus it is in their self-interest to be proactive on environmental matters. For these reasons, it is important to consider the conditions that may enhance their involvement in international negotiations.

“Climate change vulnerability” is a term that will be used to characterize the focus of this study, as all countries are in danger. The definition of climate change vulnerability, taken from

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the Intergovernmental Panel on Climate Change Second Assessment Report, is, “The extent to which climate change may damage or harm a particular system as well as its ability to adapt to new climatic conditions.”

My hypothesis is that only when developing countries actually begin to feel the impacts of climate change are they likely to participate actively in international and regional negotiations. Some of these countries are strategizing as regions, some individually, and almost all have entered into global discussions but some are more active then others. I will attempt to support my hypothesis by examining three types of countries: (1) countries dependent on agricultural exports, because these countries rely largely on arable land and agricultural output for economic stability, but agriculture has been significantly threatened by climate change; (2) hydrocarbon economies, because these countries rely heavily on the utilization of fossil fuels for the production of energy, yet these processes, which emit large amounts of carbon dioxide, are harmful to the environment and have exacerbated climate change; and (3) Small Island Developing States (SIDS), because these countries face inherent challenges to climate change, mainly the danger of significant sea-level rise.

I will select one country from each group to determine what their positions have been on the climate change issue across time as reflected in their involvement in the global talks. The countries selected are Kenya, a country dependent on agricultural exports; Qatar, a hydrocarbon economy; and Trinidad and Tobago, a small island developing state. These countries are at varying levels of development and face a broad range of different problems stemming from climate change. I have declined to choose the really large developing countries, such as China,
India and Brazil because a lot of attention is focused on them and not enough on less advanced developing countries.

I am proposing that their participation in international climate change negotiations is related to the perception of climate change vulnerability, the independent variable included in this study. In general, developing countries like the ones I have selected are beginning to feel the impacts of climate change, and as a result, it is vital for them to be included in international negotiations. Less developed countries like Kenya do not have the economic or financial power to mitigate harsh climatic effects and are lower in economic status compared to the rest of the world. Furthermore, these countries have not yet developed a scientific establishment on the issue of climate change, as compared to richer regions like North America, which can look past the material aspects of development. In some ways, the environment has been seen as a luxury to the developing world, which is still focused heavily on development and is not as focused as developed countries in regards to establishing solid scientific research on the environment.  

Nonetheless, the participation of all developing countries in negotiations is crucial to combating climate change, not only domestically but as a worldwide phenomenon. Thus, my hypothesis rests on one assumption: I assume that developing countries in which people are able to observe the physical destruction of their environment and face the challenges of adapting to new climatic conditions are likely to become proactive in negotiations.

To measure my independent variable, I will use the climate change vulnerability index (CCVI) developed by the global risk advisory firm Maplecroft to measure vulnerability for each country. For my dependent variable, I will review the performance of each country in recent

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international climate change negotiations from 2009 to 2013. This will include negotiations on
the 2009 Copenhagen Accord, the 2010 Cancun Agreements, the 2011 Durban outcomes, the
2012 Doha Climate Gateway and a set of decisions agreed at the 2013 conference in Warsaw.
Also included are any other notable regional negotiations but not the 64th Session of the UN
General Assembly which was devoted to climate change and which was attended by all
countries, with almost all sending high-level delegates. I will determine involvement by
observing the following five categories: (1) how many negotiating sessions did they attend?;
(2) how many delegates did they send to the five main sessions? (I omit the regional sessions
where delegate attendance tends to be high); (3) what was the proportion of high level delegates?
(high-level delegates include presidents, prime ministers, ambassadors, members of parliament,
permanent secretaries and directors of key agencies); (4) the number of times, if any, the country
spoke at these sessions; (5) the number of times, if any, the country presented a unique proposal;
and (6) whether the country led, advocated or sponsored proposals on behalf of other
developing countries. (If so, the country will receive one extra point for each time it did so.)

As I observe the second category, I will take into account two underlying issues: the
large disparity in population size among my case studies and the fact that Qatar, one of the three
countries selected, hosted the 2012 Doha Climate Gateway, one of the five negotiations
discussed. To deal with the first issue, a scale will be created. For each case, I will pick three
other countries which are similar in terms of wealth and population. For these three other
countries, I will average the number of delegates that attended the 2009-2013 climate change
negotiations. I will then compare the average number of delegates to Kenya’s, Qatar’s, and
Trinidad and Tobago’s delegation count and rank their representation as above the average of the
three similar countries, average, or below average. If the delegate count was 25 or more above
the average, I will give the country 10 points; if it was 10-25 above, 8 points; less than 10 above or below average, 5 points; and more than that below average only 2 points. With respect to the level of representation, I will divide the number of high-level delegates by the full delegation to get a percentage. If a country has a percentage of high-level representation between 35-50, I will give it 20 points; if a country has a percentage of high-level representation between 20-34, I will give it 10 points; and if a country has a percentage of high-level representation of 19 and below, I will give it 5 points. Some adjustments will be made if countries score on the cusp.

Additionally, since Qatar hosted the 2012 Doha Climate Gateway, their delegation was inflated at this meeting and thus does not match what would illustrate their normal representation at conferences. To deal with this issue, I will cancel out their actual delegate count at the 2012 Doha Climate Gateway and implement a “dummy” variable, which will be developed by assessing their average delegation count taken at the other four negotiations. In this way, Qatar will be given a number for the Doha conference similar to their delegate count at the other conferences and there will be no disparity in my analysis.

To measure the total country score on participation, a scale will then be devised ranging from 0 to 50. The ceiling of 50 seemed to be appropriate because earlier research suggested that most countries would score well below that. Depending on how many total points each country receives, according to the above categories, scores between 0-10 will receive a D grade, scores between 11-20 will receive a C grade, scores between 21-30 will receive a B grade, scores between 31-40 will receive an A grade, and scores between 41-50 will receive an A plus. The scale can be interpreted as follows: A D grade indicates zero or low participation; a C grade indicates moderately low participation; a B grade indicates moderately high participation; an A grade indicates very high participation; and an A plus indicates exceptional participation. After
analyzing the score, which will give me a sense of the countries’ commitment, I will then enter into a more nuanced qualitative discussion in which I will investigate reasons for performance. I will try to identify whether vulnerability relates to performance, or if there are any other conditions that could motivate developing countries to actively join climate change negotiations.

**Literature Review**

**Climate Change as a Complex Issue**

The issue of uncertainty surrounding climate change is a major theme discussed by scholars, who have found that the warming of the earth’s climate is a “creeping” environmental problem which includes long-term hazards and slow-onset, cumulative processes that ultimately can result in crises or disasters. Since there are enormous time lags in the changing climate, there is a lot of uncertainty surrounding climate change as it is hard to measure and predict. As a result, these challenges make climate change a complex and difficult issue for the international community to manage and collectively act on. With that said, a plethora of literature discusses how the large divide between the developed and the developing world has caused climate change to be a problematic environmental issue for the international community to tackle. The developed world holds the most global political influence and generally has more options when dealing with the effects of climate change. Advanced developing countries are also influential in their own way, but they differ from developed nations in pressing for more gradual concessions. Meanwhile, some small developing nations, which have less say on the issue, face severe impacts of climate change such as deforestation, water poverty, erratic weather patterns, air pollution and vegetation loss.

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7 Ibid, p. 35.
Negotiations on emission reduction among countries are increasingly fraught with difficulty, partly because of arguments about the responsibility for the ongoing temperature rise. The global divide makes it difficult for the international community to negotiate an agreement on climate change mitigation yet reinforces the need for developing countries to participate in negotiations. Scholars discuss the importance of including developing nations in international talks, contending that any attempt to control global CO2 emissions must ultimately include them, as well as all nations.

**Two-level Games: The Domestic and International Level**

Robert Putnam’s two-level game analysis can be used to understand international negotiations on climate change and the ways in which the domestic level is significant to international negotiations. According to Putnam, the two-level game operates between the domestic level and international level. At the domestic level, domestic groups put pressure on governments to adopt favored policies. Domestic coalitions hold great bargaining power and therefore will influence the acceptability of an agreement. When applying this to climate change negotiations, it means that it is vital that the international community considers conditions that will be favorable to the national level so domestic needs of countries are met. Achieving domestic approval is a top priority, as an international agreement cannot move forward if this is not met.

Developing countries are beginning to suffer greatly from climate change. Among these

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countries, the physical environments are visibly damaged by climatic impacts, thus, various domestic sectors are affected such as a country’s rural, agricultural and tourism sectors. Furthermore, as some of these countries do not have the financial means to protect themselves against harsh environmental effects, this further exacerbates the physical and social toll climate change can produce. Putnam’s analysis highlights the significance of fulfilling the needs of domestic parties. His analysis further illustrates that the decision to be proactive in climate change negotiations rests with actors at the domestic level.

**Liberalism, Constructivism and the International Environmental Regime: Fostering Cooperation**

Liberalists tend to see international relations as facilitating cooperation. They believe that states can overcome conflict through the pacifying influence of economic interdependence, international institutions and the spread of liberal democratic political systems.\(^1^1\) In fact, liberalists argue that international organizations, institutions and regimes have a measurable impact on global relations and the behavior of states. Regimes, like the environmental regime, are instances of international cooperation. A regime is defined as “Government arrangements constructed by states to coordinate their expectations and organize aspects of international behavior in various issue areas. Regimes thus comprise a normative element, state practice, and organizational roles.”\(^1^2\)

The environmental regime includes several organizations and international institutions which have a large influence on state behavior and foreign policies with respect to climate


change mitigation. For instance, The United Nations is a major international organization that has been instrumental in developing international legal frameworks for biodiversity conservation and climate change. One of the most influential bodies that have been formed to address climate change is the UN Intergovernmental Panel on Climate Change (IPCC), which was established in 1988 by the UN Environmental Programme (UNEP) and the World Meteorological Organization.\textsuperscript{13} It functioned as a scientific intergovernmental body to provide decision makers with an assessment of the latest scientific research and its policy implications for mitigation and adaptation. The IPCC worked diligently to review the outpouring of findings made by scientists from all around the world and to assess human impact on the environment.\textsuperscript{14} For instance, the IPCC has published five assessments on global warming since 1990.\textsuperscript{15} As of 2014, the IPCC has three Working Groups and a Task Force on National Greenhouse Gas Inventories.\textsuperscript{16} These Working Groups were developed to report on available scientific information on climate change as well as the environmental and socio-economic impacts of climate change over both the short and long term. For each report, the Working Groups have provided new knowledge and improved understanding of the climate processes. In addition, they have developed response strategies and have worked to broaden the scope of their assessment to include information on the technical and economic feasibility of a range of potential adaptation and mitigation strategies.\textsuperscript{17} Overall, The IPCC represents a unique partnership between the scientific community and the world’s governments.\textsuperscript{18}

\textsuperscript{13}“Understanding Climate Change: 22 years of IPCC Assessment” \textit{Intergovernmental Panel on Climate Change (IPCC)} (November, 2010), p. 4.
\textsuperscript{15} IPCC “Understanding Climate Change: 22 years of IPCC Assessment,” p. 5.
\textsuperscript{16} Ibid, p. 1.
\textsuperscript{17} Ibid, pp. 4-6.
\textsuperscript{18} Ibid, p. 2.
Another major institution devoted to environmental issues is the UN General Assembly, which has sponsored major international environmental conferences and has played a vital role in advocating attention to climate change.19 Furthermore, The United Nations Environmental Programme (UNEP), is another intergovernmental organization which has served as an “institutional hub” for the UN’s many environmental initiatives.20 UNEP is not designed to actually develop policy, but rather, to direct negotiation and implementation on environmental issues by providing expertise and knowledge.21 Finally, two international financial institutions, the World Bank and the Global Environmental Facility (GEF), have helped finance various climate change initiatives. While the World Bank has supported sustainable projects,22 the GEF has emerged as a largely independent and primary source of funding for multilateral environmental agreements, which include funding the United Nations Framework Convention on Climate Change (UNFCCC) and its various accords and protocols.23 As liberalists note, the environmental regime centers on policies and agreements linked to climate change mitigation. Several international institutions have contributed significantly to scientific research, holding international conferences and promoting and enforcing international cooperation on climate change mitigation.

Though cooperation can be advanced through international institutions, it is important to note that there are existing barriers to cooperation including the complexity and novelty of the problem itself, which have hindered the adoption of an adequate solution. Nations throughout the world experience a range of various environmental risks, as some experience the worst effects

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20 Ibid, p. 33.
23 Ibid, p. 43.
while others may actually benefit from a warmer climate. Nonetheless, despite these differences and challenges, all nations should share the common interest in avoiding catastrophic effects from climate change; therefore there is an overall aim for the global community to achieve cooperation.24

Neoliberal institutionalism further explains the challenges and benefits of cooperation, as it focuses mainly on how cooperation is achieved in the world. Robert Keohane, a firm advocate of neoliberal institutionalism, has noted under this theory that cooperation is hard to achieve, but, regimes, like the environmental regime and its institutions, could benefit states by incorporating cooperative strategies. Keohane defines cooperation as a process whereby states, “adjust their behavior to the actual or anticipated preferences of others, through a process of policy coordination” 25 Furthermore, according to political scientist John Ruggie, regimes are “a set of mutual expectations, rules and regulations, plans, organizational energies and financial commitments, which have been accepted by a group of states.”26 As illustrated through the environmental regime, neoliberal institutionalism argues that states pursue such policies because it is usually in the best interest of all involved to do so.

The constructivist framework emphasizes the value of beliefs and ideology, and has stressed the role of non-state actors more than other IR approaches. For example, scholars have made note of the role of transnational actors such as NGOs or transnational corporations in changing state beliefs about foreign policy. Such “norm entrepreneurs” are able to influence state behavior through rhetoric or other forms of lobbying, persuasion, and shaming.27 The social

26 Ibid, 57.
construction of the actors’ identities and interests, and of structures such as discourses and norms is at the core of constructivism.\(^\text{28}\) This is reflected in the interests and identities of climate change actors such as the individuals, sub-state actors, states and international organizations which have emerged in climate change negotiations.\(^\text{29}\)

Social scientists have progressively adopted constructivism to understand environmental issues. Constructivists hold that social facts are real because they have material consequences and material consequences are real by virtue of social construction.\(^\text{30}\) Constructivists maintain that the material and ideational are complexly intertwined and interdependent.\(^\text{31}\) Thus, any study of climate change must give value to both. This approach contributes to the understanding of how material realities gain meaning through social interaction. Accordingly, interpretations of climate change are shaped by social and material forces.\(^\text{32}\)

The social construction of climate change in political science, specifically how politics have been incorporated into the science of climate change, is illustrated in recent literature. Through reviewing the history of climate modeling and several scientific controversies, author David Demeritt reveals the implicit social and epistemic commitments implied by its particular practices. The scientific framing of global climate change has reinforced, and has been reinforced, by how technical experts, governments and scientists have managed the issue. For

\(^{29}\) Ibid, p. 7.  
\(^{30}\) Pettenger, p. 6.  
\(^{32}\) Pettenger, p. 6.
example, we can look at how the scientific construction of climate change was developed through the scientific discovery of the harsh effects greenhouse gases have on the atmosphere. Through a constructivist lens, the social definitions of climate change can be examined and seen as a threat or an opportunity. In this respect, the social knowledge of climate change and the existing distrust of the science that surrounds it raises important questions about trust, uncertainty, and expertise.

**Why States Resist or Cooperate**

1. **Realism**

In contrast to liberalists, realists would assert that states interests are defined in terms of power and each state wishes to dominate in the anarchical international system. Under realism, all nations are distrustful and would not normally cooperate because this would be against their top priority of self-interest and goal of power preservation and maximization. Furthermore, under realism, states must constantly ensure that they have sufficient power to defend themselves and advance their material interests necessary for survival. With that said, the past failure of states to collectively act to find a solution to the climate change problem can be illustrated under this theory. Global efforts to reduce the adverse effects of climate change requires countries to reduce greenhouse gas emissions to safe levels and adopt alternative environmentally-friendly technologies. However, the international community has not developed a unified solution regarding global mitigation efforts because reducing capabilities required for climate change

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34 Pettenger, p. 6.


mitigation threatens the economic development of a country, and in turn, disrupts the goal of power maximization. For example, energy and food security are all vital to a country’s survival and makes them feel powerful, thus they will likely want to develop capabilities, such as agricultural and industrial practices, in order to preserve and enhance their economic development. As a result, cooperation is not likely to happen. Furthermore, given the existing distrust of science surrounding the evolution of climate change, there is the notion that states may perceive that implementing efforts to mitigate climate change is a plot to get them to stop developing. In this case, international collaboration is unlikely to occur and the climate change problem will not be resolved.

II. Compliance

The international climate change regime has existing and emerging compliance systems. The literature discusses how international climate change compliance mechanisms are undergoing a period of considerable change and uncertainty as the shape and direction of international climate change obligations are being transformed. This transformation includes a shift towards increased parallelism between developing and developed countries in terms of targets and a more limited range for a Kyoto Protocol-style compliance mechanism. In other words, rather than holding only industrialized countries responsible for meeting targets on emission emitting, a larger range of countries will bear the responsibility to meet emission reduction targets.38

Many small countries are being pressured by the developed nations to adhere to environmental standards. Scholar Jeanne Hey acknowledges the many ways in which dependency influences foreign policy. According to Hey, states that are economically dependent on powerful nations, otherwise known as the core, will either align their foreign policies with

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those of the core or go against them. Hey discusses four categories of behavior between the core and the periphery states that can further explain this idea: compliance, consensus, counter-dependence and compensation. When the periphery, or the weaker state, shapes its foreign policies against the requests of the core state, the periphery can face a lot of military or economic sanctions from the core state as a result. Thus, it is likely that the periphery will seek to align themselves with the core state to avoid punishment.39

Hey cites Bruce Moon to explain that through compliance and consensus, the foreign policy outcomes of dependent states will be aligned with the preferences of the core. Under compliance, the dependent state will consider the core’s wishes regarding foreign policy decisions in order to be rewarded or not to be punished.40 Furthermore, the core’s economic authority can be used to achieve a particular foreign policy behavior from the dependent nation. Executing this strategy depends on the level of autonomy of the periphery state. Analysts have looked at two political perspectives in assessing the relationship between domestic and foreign policy. The first includes the application of an elite attitudinal approach to assess values and ideologies of decision makers, while the second looks at the domestic, state, class, and social and external forces to help explain the level of autonomy in determining a state’s potential of counter-dependency policy-making.41

Hey’s work can be applied to the conduct of dependent states in the context of climate change. As illustrated in past climate change negotiations, the powerful influence that developed countries have exerted on small developing countries has influenced their behavior in

40 Ibid, p. 548.
some instances. Dependent countries have agreed to international climate change agreements in order to be rewarded with financial support and to avoid punishment, and they also at times have been pressured to join these agreements by more powerful countries.

There are benefits as well: research suggests that through international assistance, the economic and social conditions in developing countries can be strengthened, which in turn can influence and improve domestic policymaking on climate change mitigation. In particular, countries can largely benefit from programs that are developed to encourage and train communities in engaging in sustainability practices. These programs can also educate citizens and enforce capacity building to improve policies in climate change mitigation and to reduce economic vulnerability.

In the next chapter, I will provide some background on the five major conferences on climate change which are the focus on this thesis.

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CHAPTER 3—BACKGROUND ON INTERNATIONAL NEGOTIATIONS, 2009-2013

The 2009 Copenhagen Accord

In an effort to strengthen the global response to climate change, a United Nations conference known as the Copenhagen Summit was held in Copenhagen, Denmark in December, 2009. The Kyoto Protocol—an international agreement which went into force in 2005 which commits its Parties by setting internationally binding emission reduction targets\(^1\)—failed in many respects to properly combat and mitigate climate change on a global scale.\(^2\) As a result, the United Nations Framework Convention on Climate Change (UNFCCC)—an international treaty established in 1992 to limit average global temperature increases and the resulting climate change\(^3\)—held the Copenhagen Summit with the aim of providing legal and political direction with respect to the future of the international climate regime after 2012.

According to the UNFCCC, the Summit was held in accordance with the 2007 Bali Roadmap, which was adopted at the UNFCCC’s 2007 conference on climate change in Bali, Indonesia. The Bali Roadmap consists of several decisions that represent the many paths needed to reach a secure climate future, including deforestation and forest management, technology for developing countries, the establishment of an Adaptation Fund Board and a review of the financial mechanism.\(^4\) The Bali Road Map includes the Bali Action Plan, which plotted the course for a new negotiating process intended to tackle climate change by 2009. Core elements of the Bali Action Plan include the long-term goal for mitigation, adaptation, finance,

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technology, forests and measurement, reporting and verification.\(^5\)

The Copenhagen Accord called for limits on temperature increases to two degrees Celsius above preindustrial levels on the “basis of equity and in the context of sustainable development” and for “deep cuts in global emissions” and the peaking of global and national emissions.\(^6\) Furthermore, according to the Center for Climate and Energy Solutions, the main features of the Copenhagen Accord include, “A process for countries to enter their specific mitigation pledges by January 31, 2010; broad terms for the reporting and verification of countries’ actions; a collective commitment by developed countries for $30 billion in ‘new and additional’ resources in 2010-2012 to help developing countries reduce emissions; preserve forests and a goal of mobilizing $100 billion a year in public and private finance by 2020 to address developing county needs.”\(^7\) The accord also called for the establishment of a Copenhagen Green Climate Fund, a mechanism to transfer money to better assist developing countries in climate change mitigation, a High Level Panel to examine ways of meeting the 2020 finance goal, a new Technology Mechanism, and a mechanism to channel incentives for reduced deforestation.”\(^8\)

The Copenhagen Summit failed in many ways, particularly from a legal and political perspective. The provisions of the accord did not give a specific time frame for the limit of the global temperature increase to two degrees Celsius. Furthermore, the accord did not specify which countries must cut emissions nor did it specify by when. Thus, this left developed nations free to continue emitting, as there were no set time-bound targets for emission reductions from industrialized countries. Because the accord rested on a voluntary and domestic target for emission reduction, it lacked powerful rules and procedures for the international community to

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\(^7\) Dringer “Summary: Copenhagen Climate Summit.”

\(^8\) Ibid.
adopt to mitigate climate change.\textsuperscript{9}

The divide between the developed and the developing world was apparent at the Summit. Developing countries did not receive what they wanted in terms of financial assistance and developed countries did not agree to binding mitigation commitments. Thus, developing countries were forced to settle for what developed countries were offering, since they would only acquire the funding if they were to agree with the accord. This meant that if they were to not agree with the accord, they would not receive any funding for climate change mitigation. This put developing countries in a problematic position, as they felt that none of these options truly worked to their benefit to assist them in adapting and alleviating the harsh climatic conditions that they were experiencing. Furthermore, developing countries were put under significant amount of economic and external political pressure to endorse the accord. As a result, they decided to join partly because they wanted to get what they could out of the funding in order to alleviate the dire climatic impacts they were facing. Overall, the Accord failed to significantly protect developing countries from climate change. The Summit left these countries questioning the prospects for significant further progress within an international U.N. negotiation process.\textsuperscript{10}

\textbf{The 2010 Cancun Agreements}

The Cancun Agreements, reached on December 11 in Cancun, Mexico, at the 2010 United Nations Climate Change Conference, were a set of significant decisions made by the international community to address the long-term challenge of climate change collectively and comprehensively over time and to take concrete action to speed up the global response. The agreements established objectives for reducing human-generated greenhouse gas emissions over time to keep the global average temperature rise below two degrees Celsius and encouraged the participation of all countries in reducing these emissions, in accordance with each country’s

\textsuperscript{9} Ibid.
\textsuperscript{10} Ibid.
different responsibilities and capabilities to do so. In addition, the agreements aimed to mobilize the development and transfer of clean technology to boost efforts to address climate change and provide for scaled-up funds in the short and long term to enable developing countries to take greater and effective action.\(^{11}\)

Unlike the Copenhagen Accord, the Agreements particularly aimed to assist vulnerable countries in adapting to the inevitable impacts of climate change, as well as to protect the world’s forests and build up global capacity, especially in developing countries, to meet the overall challenge.\(^{12}\) Although the Cancun Conference did produce voluntary commitments from the most important developed and developing nations, these commitments left at the very minimum “a five gigatonne gap between emissions levels that will only be achieved if there is full compliance with the voluntary emissions reductions and what is necessary to prevent a two degrees Celsius rise.”\(^{13}\)

Most participants in the conference acknowledged that these provisions were not enough to combat climate change. Although the accord required developed countries to submit and implement mitigation actions, it did not suggest a cumulative quantitative mitigation goal. This left developing countries unhappy for the most part.\(^{14}\) Moreover, its provision to limit the temperature to two degrees Celsius did not sit well with small-island developing countries as groups like the Alliance of Small Island States (AOSIS) had been advocating for a limit of 1.5 degrees Celsius,\(^{15}\) after most scientists believed that even a two degrees Celsius temperature rise

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\(^{12}\) Ibid.


\(^{15}\) “Statement by the Honourable Dr. Roodal Moonilal on the Occasion of the High-Level Segment of the 16th Conference of the Parties to the UNFCCC” *United Nations Framework Convention on Climate Change*, (December
could cause very dangerous climate change. However, it was an amount that had been adopted as the ultimate goal of the UNFCCC.\textsuperscript{16}

**The 2011 Durban Outcomes**

According to the Doha Carbon and Energy Forum 2013, a Briefing Paper on climate change, the Durban negotiations resulted in the establishment of a second commitment period under the Kyoto Protocol from 2013 to 2020. At Durban, South Africa, parties agreed to negotiate a global agreement that would replace the Kyoto Protocol and be agreed upon by 2015 and executed in 2020. Other significant outcomes from Durban included “the decision for long-term cooperative action under the Convention that sought to operationalize decisions taken in Cancun in the areas of climate finance, transparency and reporting, the periodic review, adaptation, technology, reducing emissions from deforestation and forest degradation (REDD) and agreement on the operationalization of the Green Climate Fund and the Technology Mechanism.”\textsuperscript{17}

However, according to Donald Brown, an author and critic of the Copenhagen Accord, the agreement to cooperate on a new binding legal instrument was only a commitment to negotiate an agreement, about which almost none of the major issues had been settled, coupled with the fact that the new agreement is not likely to become effective until 2020. Brown opposed the Durban deal, emphasizing that it failed to put into place national greenhouse gas emissions reduction commitments that will prevent catastrophic climate change, did not allocate national commitments on the basis of equity, nor provide a just response to the needs of the most

8, 2010), p. 3. 
https://unfccc.int/files/meetings/cop_16/statements/application/pdf/101208_cop16_hls_trinidad_tobago.pdf


vulnerable to climate change to take necessary adaptation steps.\(^\text{18}\)

Although the Durban agreement managed to create a Green Climate Fund to serve as a financial mechanism to manage adaptation funding, it failed to identify dedicated sources of funding to implement an adaptation agenda that is based upon “mandatory” contributions to “new,” “predictable,” and “additional” sources of funding. With that said, developed countries failed to fulfill the ethical standards for sufficient funding for adaptation programs needed in more vulnerable developing countries.\(^\text{19}\)

**The 2012 Doha Climate Gateway**

At the 2012 UN Climate Change Conference in Doha, Qatar, countries adopted The Doha Climate Gateway to represent a new commitment period under the Kyoto Protocol. Countries at Doha agreed on an agenda to adopt a universal climate agreement by 2015 and agreed on a “track to raise necessary determination to respond to climate change with an aim to establish legal force applicable to all countries starting in 2020.”\(^\text{20}\) Furthermore, according to the United Nations Environment Program (UNEP)—a United Nations agency formed in 1972 which acts as “the voice for the environment within the United Nations system”\(^\text{21}\)—developed countries at Doha aimed to support developing countries by agreeing on ways and means to deliver scaled-up climate finance and technology to them beyond 2013. They also established a web-based registry for governments to record developing country mitigation actions that seek recognition or financial support. In addition, they created a new work program for developing countries to build capacity through climate change education and training, and established new market mechanisms.


\(^{19}\) Ibid. p. 317.


outside of the UNFCCC, such as nationally-administered or bilateral offset programs to help meet their mitigation targets.\footnote{\textit{Doha Climate Conference Opens Gateway to Greater Ambition and Action on Climate Change}, \textit{United Nations Environment Programme (UNEP) News Centre}, (December 9, 2012), http://www.unep.org/newscentre/default.aspx?DocumentID=270&ArticleID=9353.}

At Doha, governments further clarified ways to measure deforestation, and to ensure that efforts to fight deforestation are supported. They also looked at ways to support the effectiveness and environmental integrity of projects under the Kyoto Protocol's Clean Development Mechanism, which includes carbon capture and storage, an option for reducing atmospheric emissions of CO2 from human activities.\footnote{\textit{Doha Climate Conference Opens Gateway to Greater Ambition and Action on Climate Change}, \textit{United Nations Environment Programme (UNEP) News Centre}, (December 9, 2012), http://www.unep.org/newscentre/default.aspx?DocumentID=270&ArticleID=9353.} Moreover, countries embarked on work to enable the development and transfer of technologies to help developing countries adapt and curb their emissions.\footnote{\textit{Ibid.}}

In response to the 2012 Doha Climate Gateway, developing countries called for compensation, also known as “loss and damage” from high emitting developed countries for future climate change impacts in their countries.\footnote{\textit{Ibid.}} Led by the government of Bangladesh, developing countries created the “Loss and Damage in Vulnerable Countries Initiative,” in 2012, which was a report that laid out evidence of the then current relationships between climatic stressors, societal impacts, responses and outstanding loss and damage.\footnote{“Doha Carbon and Energy Forum 2013 Briefing Paper Climate Change,” \textit{The Brookings Institution}, p. 14.} This was significant as it highlighted how societies in developing countries are forced to deal with and manage the negative impacts of climate change, and further stressed the need for financial compensation from developed countries in this respect.\footnote{Koko Warner et Al. “Evidence from the frontlines of climate change: Loss and damage to communities despite coping and adaptation,” \textit{United Nations University Institute for Environment and Human Security (UNU-EHS)}, Bonn, Policy Report No.9, (2012). p. 10.}

Although the Doha Climate Gateway focused more on establishing initiatives to fulfill
the needs of developing countries, the Doha conference still only established limited progress in advancing international talks on climate change and failed to set more ambitious goals for reducing greenhouse gas emissions. That failure was seen as contributing to increasing the risk of a rise in average global temperatures by two degrees Celsius by the end of this century. Moreover, the UN Environment Programme (UNEP), in their 2012 Emissions Gap Report, stressed that “if the world does not accelerate action on climate change, total greenhouse gas emissions could rise to 58 gigatonnes by 2020 (compared to 40 gigatonnes in 2000), far above the level scientists say would likely keep temperature rises below 2 degrees Celsius.”

Furthermore, studies by the World Bank indicate that even with these commitments and pledges fully implemented, there is approximately a 20 percent possibility that temperature increases would top 4 degrees Celsius by the end of this century, which could trigger a cascade of catastrophic climatic changes including extreme heat-waves, declining global food stocks and rising sea levels, which could severely affect hundreds of millions of people, especially those in developing countries which are the most vulnerable.

The 2013 Conference in Warsaw

As described by the UNFCCC, governments convened at the Warsaw Climate Change Conference in 2013, where they united in developing key decisions to further advance the Durban Platform, the Green Climate Fund and Long-Term Finance and the Warsaw Framework for Reducing Emissions from Deforestation and Forest Degradation (REDD), which are a set of decisions on ways to reduce these emissions. A rulebook for reducing emissions from deforestation and forest degradation was agreed on, together with measures to boost forest

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29 Ibid.
preservation and the establishment of a results-based payment system to promote forest protection. The Green Climate Fund planned to be a major channel of financing for developing world action, as it aimed to support projects, policies, activities and programs in developing countries.  

Additionally, after much prior deliberation on the issue, governments agreed to form the Warsaw International Mechanism for Loss and Damage to address loss and damage caused by long-term climate change impacts in developing countries. Specifically, the mechanism aimed to facilitate the exchange of information and best practices for dealing with climate change-induced losses and damages, as well as strengthen action and support, including by facilitating the mobilization of finance. In turn, developing countries, under the UNFCCC, finalized a comprehensive set of plans to deal with climate change impacts, which aimed to better evaluate the immediate impacts of climate change and help enable them to determine the support and actions they require to become more resistant and prepared.

At the Warsaw Conference, governments acknowledged the limited time to keep warming to a maximum of under two degrees Celsius. The urgency for the reduction in global greenhouse gas emissions by the second half of this century was apparent. To achieve the reduction in greenhouse gas emissions, governments agreed that it was critical that action must be carried out and coordinated quickly at all levels, which included the international, domestic, business and finance. For this reason, the Warsaw Conference provided a showcase for climate action by business, cities, regions and civil society. Yet, although it was apparent that the world had the necessary tools to succeed in combating climate change, it was clear at Warsaw that the tensions between the developed, the advanced developing and the developing world still stood as

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32 Ibid.
33 Ibid.
a major barrier that prevented the international community to reach a successful solution.

On the one hand, although the Conference made much progress, developing countries—once again—found themselves leaving quite unsatisfied with the outcomes. Countries had agreed a year earlier to address “loss and damage” in Warsaw, and the issue took on new importance when Typhoon Haiyan struck the Philippines just days before the Warsaw conference. Small-island states and other particularly vulnerable developing countries that had grouped together on the climate change negotiations had pressed for years for greater attention to “loss and damage” resulting from extreme events and slow-onset impacts such as sea-level rise. As parties planned to reach a decision in Warsaw on “institutional arrangements” addressing loss and damage, Typhoon Haiyan put the issue front and center.34

Developed countries, specifically the United States and the European Union, opposed the “loss and damage” mechanism. This opposition riled developing countries, and the Conference took a turn for the worse. At one point, the Conference neared collapse after developing countries walked out.35 Even after exhausting hours of deliberation, the “loss and damage” mechanism fell well short of what developing countries wanted. Parties established a new forum to provide information and expertise, and to consider further steps, but neither advanced developing or developed countries made any promise of additional funding.36

As part of the Copenhagen and Cancun agreements, developed countries pledged $30 billion in climate finance from 2010 through 2012 (known as the “fast start” period) and to mobilize $100 billion a year in public and private finance for developing countries by 2020. However, at Warsaw, developed countries refused to set a quantified interim goal for ramping up climate finance, even though developing countries, concerned by a lack of progress in ramping

36 Nineteenth Session of the Conference of the Parties to the UNFCCC-COP 19.
up finance, made an attempt to push for an interim goal of $70 billion by 2016.\textsuperscript{37}

The Warsaw round ended with decisions on historical responsibility and emission reductions pushed off to the future. Like past conferences, parties ruled out binding emission targets for any nation. At Warsaw, it was apparent that still, no real progress had been made and time was running out. It has been evident that advanced developing and developed nations have consistently taken positions based upon national economic interest rather than assisting developing countries. However, to prevent a catastrophic temperature increase by the end of the century, more action needs to be taken.\textsuperscript{38}

The outcomes of these negotiations have both reflected and exacerbated the tensions between groups that have been formed in response to climate change, such as the small-island states among the developing countries, advanced developing countries such as China and India, and the developed world. The priorities of developing countries have not significantly been considered by the advanced developing and developed world. As a result, no clear solution has been established to assist developing countries; thus they have been left extremely unsatisfied throughout these negotiations. Nonetheless, all groups will have to coordinate more together to develop solutions before it is too late.\textsuperscript{39}

\begin{flushleft}
\textsuperscript{37} Ibid.
\textsuperscript{39} Ibid.
\end{flushleft}
Climate Change in Kenya

Figure 4.1: Map of Kenya


Kenya, a country located in East Africa, has a diverse geography and climate. While the southeast part of Kenya borders the Indian Ocean with warm tropical beaches, Kenya’s Kilimanjaro Mountains hold year-round snow. Other regions include desert, grasslands and forests. Kenya's climate is as varied as the land areas; the evenings in the Central Highlands can be frigid while coastal areas are usually hot and humid. Typically, there are two rainy seasons; the long rains in March-May, and the short rains in September-October.¹

There are approximately forty-two million people living in Kenya (July 2013 est.) ² According to The Environmental Defence Fund (EDF) — an environmental advocacy group composed of scientists, economists, attorneys and other professionals who aim to preserve the environment — climate change has had a severe impact on Africa, as more intense rainfall and

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droughts have occurred due to the speeding up of the cycling of water between the ocean, atmosphere and land, which is all associated with global warming. Extreme weather events and the overall increase in temperature throughout the years has harmed rural regions like Kenya, as this region has been particularly vulnerable to the effects of global warming.

The United Nations Development Program’s climate change country profile on Kenya shows that Kenya’s mean annual temperature has increased by one degree Celsius since 1960. According to a report made by the Food and Agricultural Organization (FAO), warming in Kenya is expected to accelerate with temperatures rising by nearly three degrees Celsius by 2050. Along with the temperature rising, sea-levels have also risen and are expected to rise 0.3 meters in the near future. As a result, Mombasa — Kenya’s second largest city and a prime tourism spot located on Kenya’s east coast — is particularly threatened by the great likelihood of flooding. This could lead to serious problems such as land being submerged, damaging erosion, biodiversity loss, the relocation of homes and a weakened tourism sector, all of which would be unfavorable to Kenya’s economy.

Additionally, the climate has had a critical effect on Mount Kenya, Kenya’s highest mountain. The reduction in cold temperatures has depleted the mountain’s glaciers, which are a vital natural resource of fresh water for the city. The recent prolonged and severe droughts and flooding (See Figure 4.2) have resulted from the changing climate as well. With that said,

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Kenya’s trends in temperature, sea levels, rainfall and extreme climatic events all point to clear evidence of climate change.

Figure 4.2: Kenya’s Erratic Rainfall Trends, 1969-2009.

(The India-Pacific Index is a measure of temperature and precipitation over the Indian and western Pacific Ocean).

Kenya’s Vulnerability to Climate Change

The Climate Change Vulnerability Index (CCVI), developed by the global risk advisory firm Maplecroft, identifies climate-related risks to a country’s population, business and government. According to Maplecroft, the CCVI evaluates three factors to come to its findings: a country’s exposure to extreme climate-related events, including sea level rise and future changes in temperature, precipitation and specific humidity; the sensitivity of populations, in terms of health, education, agricultural dependence and available infrastructure; and the adaptive capacity of countries to combat the impacts of climate change, which encompasses research and development, economic factors, resource security and the effectiveness of government.9

The CCVI has used this evaluation to measure Kenya’s vulnerability to climate change,

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and has ranked Kenya as highly vulnerable to climate change in the years from 2009 to 2013. The following two figures (See Figure 4.3 and Figure 4.4) are global maps, produced by Maplecroft, which illustrate the high vulnerability to climate change which Kenya and its people face compared to the rest of the world.

Figure 4.3: Kenya’s High CCV, 2011.

As I describe in detail in the following sections, Kenya has faced reduced agricultural production, the worsening of food security, an increased incidence of both flooding and drought, and the spread of diseases and scarce land and water resources due to climate change. Furthermore, the destruction of African forests has caused an increase in CO2 emissions, which has further exacerbated global warming. ¹⁰ As Kenya is a developing country where its people traditionally rely heavily on its climate, geography and natural resources to make a living,

the changing climate has hampered the country from prospering, which in turn has contributed to its inability to acquire the adequate funding needed to properly mitigate and adapt to climate change.\textsuperscript{11}

\textbf{I. Economy, Poverty and Development}

Throughout recent years, there has been a substantial number of Kenyans living in poverty, with about fifty percent of them in 2010 living below the poverty line.\textsuperscript{12} According to the CIA World Fact Book, Kenya’s unemployment rate is high at around forty percent.\textsuperscript{13} Charles C. Mutai and Samuel O. Ochola have noted that extreme weather events have serious economic implications in Kenya, as the increase in frequency and intensity of floods and droughts over the last decade have caused damage to property and loss of life, reduced business opportunities and increased the cost of doing business. The poor, who make up the majority of people living in Kenya, have little protection against extreme climatic events. They have few resource reserves, poor housing and depend on natural resources for their livelihoods.\textsuperscript{14} Rural poverty in Kenya is also strongly linked to environmental concerns, especially poor water management, soil erosion, declining soil fertility and land degradation. Climate change is one of the major challenges facing the Kenyan economy, as it has dwindled its resource base and has contributed to declining agricultural yields.\textsuperscript{15} Moreover, according to the World Bank, Kenya is classified as a low income country, with a GDP at $44.10 billion (2013).\textsuperscript{16} Additionally, the effects of climate change have threatened Kenya's tourism industry, a key source of Kenya’s revenue.\textsuperscript{17}

\begin{itemize}
\item[I.] Ibid. p. 24.
\end{itemize}
Furthermore, climate change has contributed to Kenya’s chronic budget deficits, inflationary pressures and sharp currency depreciations. Additionally, although low global food and fuel prices and monetary interventions provided by Kenya’s Central Bank have provided some relief for the country following 2012, it is apparent that climate change has taken a significant toll on Kenya’s economy and in order for the economy to improve, measures to mitigate climate change must be implemented.

II. Desertification

Desertification — the process by which an area becomes a desert — happens from the depletion of plant life and land degradation. Desertification, which has stemmed from global warming, has presented a major economic barrier to Kenya’s development. Erratic weather patterns, such as severe droughts and flooding, have resulted in major land degradation and poor land use throughout Kenya. The exploitation of Kenya’s forests has further contributed to desertification as well. As rural communities make up the majority of Kenya, desertification has been widespread and has severely threatened the livelihoods of farmers and their families who typically make a living off of growing and selling their crops and livestock.

III. Food Security

The level of food insecurity in sub-Saharan Africa, the region where Kenya is located, has been very high. In this region, more than 150,000 deaths resulted from climate change scenarios like global warming. For example, severe droughts which occurred in 2010 and 2011 resulted in four million people requiring food assistance. Climate change has posed the greatest

20 Larry West. “Global Warming - Global Warming Leads to 150,000 Deaths Every Year.” Environmental Issues - News and Information about the Environment. (November 27, 2011).
threat to agriculture and food security, especially in poor agriculture-based countries like Kenya. Most of the small scale farmers who produce food for subsistence as well as income generation are unable to meet their basic food needs daily. The most affected members of the population are women and children, who are more often poorer, and whose daily activities include farming, fishing, and herding, among others. These groups depend mostly on water, and even where irrigated agriculture is practiced, Kenya’s natural water resources have been drying up in the recent past as a result of climate change.²²

Changes in Kenya’s agro-ecological conditions, attributable to climate change, affect food production. Lands in low latitude areas have lost their agricultural suitability, which has caused a decrease in food availability and production. Moreover, because global warming is expected to be a long-standing issue, food insecurity will likely be a frequent occurrence and a long term issue a well. Food insecurity will also contribute to a reduction of wild ecosystems, animal death and biodiversity loss.²³ (See Figure 4.5).

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²³ Ibid.
Food security and rural livelihoods are inherently linked to water availability and use. As a result of climate change, Kenya has faced challenges in water provision with erratic weather patterns in the past few years causing droughts and water shortages. Kenya has a limited renewable water supply and is classified as a water scarce country with only 15 percent of its available water resources developed. As of 2012, access to safe water supplies throughout Kenya is 59 percent and access to improved sanitation is 32 percent. Household access to safe water is essential for maintaining a healthy population and ensuring food security.


water, notably in rural areas, has remained low. Despite improvements after 2012, only 70.5 percent of urban households and 49.2 percent of rural households have had access to safe water, thus, there is still an unmet need in rural and urban areas for both clean water and sanitation.26

IV. Health

Due to the water shortage and food insecurity brought on by climate change in Kenya, the health of millions of Kenyans have been compromised. In particular, women and young children are at great risk, as water contamination has greatly threatened proper and safe maternal care. For instance, hospitals in Kenya like the Kakamega Provincial District General Hospital have to collect buckets of water which are then provided to its patients. The water is polluted with bacteria, viruses and parasites and many patients develop different diseases such as typhoid, malaria and cholera as a result. Waterborne diseases are the leading cause of death in African children under the age of five, and since the hospitals in Kenya lack a sufficient supply of clean water, women who give birth are likely to develop waterborne diseases and hundreds of newborns and infants die as a result. 27

People in Kenya often go hungry, as erratic weather patterns prevent farmers from properly growing crops and they are unable to sell livestock. Children suffer and die from malnutrition and disease, and of those who survive, half are stunted physically or mentally. Climate change has exacerbated the inadequate and unprotected water and food supplies, which has led to problems such as poor sanitation and hygiene, overcrowding, and limited availability of resources. As a result, diseases like Cholera, remain a major public health problem that causes substantial morbidity and mortality in Kenya.28 Moreover, the lack of food and fresh

water sources often gives rise to a vicious cycle in which infectious diseases lead or contribute to aggravated hunger, making communities more susceptible to these diseases, which may further lead to reductions in labor productivity, thereby increasing poverty, morbidity and mortality.

As my hypothesis states that only when developing countries actually begin to feel the impacts of climate change are they likely to participate actively in international and regional negotiations, it is indeed evident that Kenya, a developing country, has been highly vulnerable to the effects brought on by the changing environment. The following section will review Kenya’s approach to climate change and its participation in the recent international climate change negotiations. Then, through quantitative analysis, I will determine involvement by examining a set of factors, which include (1) how many negotiations they attended and attendance at other relevant sessions; (2) the number of people in the Kenya’s delegation and proportion of high-level delegates; (3) the number of times, if any, Kenya spoke at these sessions; (4) the number of times, if any, Kenya presented a proposal; and (5) if Kenya led, advocated, or sponsored on behalf of other developing countries. Ultimately, I will investigate whether or not climate change vulnerability was a direct motivator for high participation in the climate change negotiations, or if there were any other conditions that affected participation.

**Kenya’s Approach to Climate Change**

Since 1965, Kenya has been involved in efforts aimed at addressing the environment and problems associated with it. As illustrated in its Sessional Paper No. 10 of 1965, the Kenyan government had acknowledged concern over economic growth and development and that environmental preservation was crucial in determining use of its land and natural resources.²⁹ In
the years leading up to 2009, Kenya had made attempts to achieve sustainable development, as illustrated by Kenya’s Poverty Reduction Strategy Paper (PRSP); The Economic Recovery Strategy for Wealth and Employment Creation (ERS); and Kenya’s Development Blueprint Vision 2030. Furthermore, the new Constitution of Kenya and relevant amendments that have been incorporated over the years have reinforced the policy and legal basis of sustainable development in Kenya.\(^{30}\) One of the most significant displays of Kenya’s commitment includes its joining and ratification of three international treaties, the United Nations Framework Convention on Climate Change (UNFCCC), whose aim is to cooperatively consider actions to limit average global temperature increases and the resulting climate change, and to cope with whatever impacts which were, by then, inevitable; the United Nations Convention on Biological Diversity (UNCBD) and the UN Convention to Combat Desertification (UNCCD).\(^{31}\)

Kenya has displayed a consistent record on environmental issues. In 1994, it asked for the United Nations Environment Programme (UNEP) — a UN organization created in 1972 which serves as a voice for the environment within the UN system — to be located in Nairobi. The Kenyan delegation at the time, led by former ambassador Joseph Odero-Jowi and the then Foreign Minister Njoroge Mungai, embarked on a major pursuit to secure UNEP for Nairobi. However, Kenya was met with a negative international response, as the UN, which had never headquartered its agencies in the developing world, was reluctant to locate UNEP in Nairobi. Angry with the UN’s members’ cold response, the Kenyan delegation criticized the UN for not acting as a true global organization, and continued to press for UNEP’s establishment in Nairobi.\(^{32}\)


\(^{31}\) Ibid. p. 1.

As Kenya publicly expressed their discontent with the UN system, Odero-Jowi, Kenya’s then ambassador to the UN in New York, named the situation "unjust" and immediately called for New York, Geneva, London and Vienna to withdraw from bidding to host UNEP. Meanwhile, Mungai successfully pushed other African states to have a common stand on hosting the new body in Africa. After Mungai came to an agreement with other African states, he delivered a speech in which he emphasized that no UN headquarters had yet been established in Asia, South America, Africa, or Eastern Europe."\(^{33}\)

Mungai’s speech, along with the lobbying of a powerful delegation provided by Kenya, convinced several African, Caribbean, and other non-African countries thereafter to side with Nairobi as the pick for UNEP’s headquarters. This was a major achievement for Kenya, Africa and the developing world as a whole, as the United Nations General Assembly had mandated UNEP to provide leadership in addressing issues surrounding climate change in the African region.\(^{34}\) The successful establishment of UNEP in Nairobi, along with Kenya’s strong efforts and interest in environmental matters, are a clear indication that Kenya was extremely driven to be involved long before the 2009-2013 negotiations took place. However, as Kenya has become more vulnerable to climate change in recent years, (recall that Maplecroft ranks the country very high on climate change vulnerability), it has become even more interested in international climate change negotiations to combat environmental deterioration and to secure a safer and more sustainable future. Furthermore, Kenya has established itself as a central country in Africa, speaking on behalf of all countries within the continent about environmental matters.

\(^{33}\) Ibid.
Kenya’s Role in the Negotiations: Delegate Representation

Kenya had a total number of 372 delegates and 72 high-level delegates at the five climate change negotiations from 2009-2013, (not including other relevant sessions). By looking at the Average Number of Delegates (AND) from Tanzania, Sudan and Myanmar at these negotiations, which are similar countries in terms of population and wealth, I have compared Kenya’s Delegation Count (DC) to the AND to see how Kenya ranks in terms of its representation at the negotiations (See Table 4.1). Tanzania sent 250 delegates, Sudan sent 126 delegates, and Myanmar sent 15 delegates. As the Table illustrates, the AND of Tanzania, Sudan and Myanmar is 130. According to the benchmark, since Kenya’s DC is 372 delegates, which is well above the AND+25, Kenya ranks above the average representation and has earned 10 points as a result.

Table 4.1: Points for Delegate Representation in 2009-2013 Climate Change Negotiations

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<th>Benchmark:</th>
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<tr>
<td>DC is 25+ AND=country has above average representation (10 Points)</td>
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<td>DC is 10-25 more than AND=(8 points)</td>
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<td>DC is AND +/- 10= country has average representation (5 Points)</td>
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<td>DC is less than AND-10= country has below average representation (2 Points)</td>
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| Average Number of Delegates (AND): 130 | Kenya’s Total Delegate Count (DC): 372 | Benchmark: DC greater than AND+25 | Points Earned: 10 |

In order to determine overall involvement, I have added the ten points earned for Kenya’s delegate representation in Table 4.2 on the following page.
Kenya’s Role in the Negotiations: Determining Involvement

Table 4.2: Determining Involvement

| Number of times for Attendance at Negotiations: 5 | Number of Points for Delegate Representation at Negotiations: 10 points | Number of High-Level Delegates: 72 (19.4%)-8 points | Number of times Kenya Spoke: 8 | Number of times Kenya Presented a Proposal: 8 | Did Kenya Lead, Advocate or Sponsor for Other Developing Countries? Yes=3 | Number of Points: 43 |

* Kenya’s high-level delegation percentage is just below the range for countries scoring ten points. Its score has been modified to reflect this. To see the scale of percentage ranges and points, refer to chapter 2.

| 41-50 points | A+ grade |
| 31-40 points | A grade |
| 21-30 points | B grade |
| 11-20 points | C grade |
| 0-10 points | D grade |

Table 4.2 represents an assessment of Kenya’s involvement in the recent climate change negotiations. According to the table above, Kenya received a total of 43 points, which gives it an A plus level grade exemplifying exceptional participation. Kenya attended all five negotiations and attended one other special session in Africa, the 2009 Pan-African Summit, to get a combined score of six. As previously noted, Kenya received 10 points for its delegate representation as a result of its 372-member delegation, which ranks well above the average representation when compared to similar countries. Kenya also received eight points for sending 72 high-level delegates. Furthermore, during the various negotiations, Kenya spoke eight times, presented a proposal eight times, and advocated on behalf of other countries. Thus, in reference to the analysis, Kenya has been very highly proactive and greatly committed throughout all of the negotiations.

Through Kenya’s high attendance at all five negotiations and one other African session, along with its 372-member delegation and a total of 72 high-level delegates, Kenya established a
powerful platform to deliver its requests and negotiate with other countries in a strong and influential manner. Kenya’s high-level delegation included: Kenya’s then President Mwai Kibaki, who attended the 2009 Pan-African Summit and the 2009 Copenhagen Summit; Prime Minister Raila Odinga, who attended the 2009 Copenhagen Summit and the 2010 Cancun Conference; and Kenya's Permanent Secretary in the Ministry of Environment and Mineral Resources, Ali Mohammed, who attended the 2011 Durban Conference and the 2012 Doha Climate Gateway. In addition, attending the Copenhagen Summit were: John Michuki, Kenya’s Minister for Environment and Natural Resources; Dr. Noah Wekesa, Minister of Forestry and Wildlife; Moses Wetangula, Minister of Foreign Affairs and Mr. Kiraitu Murungi, Minister of Energy.35

I. Proposals

Throughout the negotiations, Kenya put forward several significant proposals about achieving worldwide sustainable development. Kenya's Permanent Secretary in the Ministry of Environment and Mineral Resources, Ali Mohammad and Prime Minister Raila Odinga, along with the rest of Kenya’s delegation, presented eight statements/proposals that stood out:

(1) At the 2011 Cancun negotiations, Kenya requested $100 billion a year until 2020 and $30 billion in fast-track financing to be made available from 2010 to 2012. Kenya asked for half of the fast-track financing to go to grants and adaptation.36

(2) At the 2012 Durban negotiations, Kenya proposed for developed country parties to adopt a 2nd commitment period of the Kyoto Protocol covering the period 2013-2017 with ambitious quantifiable targets without any conditionality’s.37

(3) Also at Durban, Kenya urged for similar and comparable targets of a 2nd commitment period of the Kyoto Protocol to be taken by developed countries that are not parties to the Kyoto Protocol.38

(4) At the 2012 Doha Climate Gateway, Kenya acknowledged the uncertainty of financial support between the end of the fast start finance period of 2012. Thus, Kenya demanded that a financing target and a process toward the realization of $100 billion must be agreed in Doha.39

(5) Also at Doha, Kenya submitted a proposal for advancing the goal of gender balance, in which it supported improvement in the participation of women in the UNFCCC negotiations and in the representation of parties established pursuant to the Convention of the Kyoto Protocol.40

(6) In the months leading up to the Warsaw talks, Kenya created a Readiness Preparation Proposal (R-PP), which outlined the process by which the Government of Kenya would develop its national strategy for participating in an evolving international mechanism for reducing emissions from deforestation and forest degradation, conserving and enhancing stocks and sustainably managing forests (REDD+).41 (REDD alone refers to reducing emissions from deforestation and forest degradation in developing countries).42 At Warsaw, Kenya used this framework to press for the facilitation of the implementation of REDD+ activities in developing countries.43

(7) At the Warsaw talks, Kenya requested for direct access to the Green Climate Fund, reiterated key principles on climate financing and called for the continuation of funding to support ambitious climate action in developing countries.44

(8) Also at the Warsaw talks, Kenya called for the establishment of an international mechanism for loss and damage associated with climate change in developing countries.45

38 Ibid.
45 Ibid.
II. An Advocate for Other Countries

In the several speeches, proposals and presentations that Kenya gave at the negotiations, Kenya advocated not only for itself but also for other poorer developing countries that were vulnerable and did not have the financial means to properly combat climate change. Kenya’s strong advocacy at the negotiations is summarized below in Table 4.3.

Table 4.3: Kenya’s Support for Other Developing Nations

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009 Pan-African Summit</td>
<td>Kenya’s President Kibaki, on behalf of the African Union, urged developing countries to come together to agree on creating an international framework to deliver at Copenhagen that would be in the best interest of Africa and other poor nations, as some of them had been hit the worst by climate change.46</td>
</tr>
<tr>
<td>2009 Copenhagen Summit</td>
<td>President Kibaki delivered a powerful speech when he addressed the high-level segment of the United Nations Framework Convention on Climate Change Conference (UNFCCC). He reaffirmed Kenya’s commitment to environmental conservation and emphasize the need to address the issue of climate change along with the consequences Africa faced such as poverty, access to energy, and food security.47</td>
</tr>
<tr>
<td>2010 Cancun Conference</td>
<td>Kenya’s Prime Minister Raila Odinga announced a new partnership with France, known as the Global Partnership on Clean Energy, which would assist all countries in Africa and the most climate vulnerable countries. The partnership aims to create a common framework to mobilize financing for generation, distribution and connectivity of renewable energy, enough to raise electricity by 100% by 2030.48</td>
</tr>
<tr>
<td>2011 Durban Conference</td>
<td>Kenya’s Permanent Secretary in the Ministry of Environment and Mineral Resources Ali Mohammed, on behalf of the African Group, urged the international community to accelerate the process towards a new climate treaty to replace the Kyoto Protocol, which would be based on compelling scientific evidence on rising temperatures and their impact on vulnerable nations.49</td>
</tr>
</tbody>
</table>

2012 Doha Climate Gateway

Before the Doha conference, Ali Mohammed spoke on behalf of developing countries to elaborate their common position that included the desire for a new climate treaty, financing and new technologies to help them make the transition to cleaner, “green” economic practices. He called for all nations to address climate change in order to achieve sustainable development and states that Africa, small island developing states and least developed countries continue to suffer most from the effects of climate change.50

2013 Warsaw Talks

Kenya’s delegation, on behalf of the African Group, engaged the global community on negotiations relating to climate change adaptation measures and reiterated its concern over the lack of funding from richer countries needed for adaptation in poorer, developing countries.51

As illustrated in the Table 4.3, Kenya advocated for at least three groups (Africa, least developed countries and small island developing states, giving it three extra points. Its high-level delegation joined with regional groups in Africa such as the African Group and the African Union to promote greater environmental protection in Africa. Kenya also collaborated with the Conference of African Heads of State and Government on Climate Change (CAHOSCC) and the African Ministers (a group of Ministers from 53 countries in Africa, including Kenya) at the conferences to negotiate key matters that would be most beneficial to Africa in respect to climate change.52

In addition, the African Group, with Kenya fully participating, took the opportunity at the Warsaw Conference to meet with important leaders to discuss ideas about how the continent could shift towards a more low-carbon future. Specifically, they met with UN Secretary General Ban Ki-Moon to discuss plans concerning how Africa could implement sustainable development

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within its major cities. UN Secretary General Ban Ki-Moon emphasized the important role cities play in the urgent response to global climate change, and Kenya played a significant role in the discussion as its capital, Nairobi, is a city that has engaged in plans to transform its urban planning, home building and transportation to meet sustainable objectives for the future.53

**Reasons for Kenya’s Good Performance**

**Vulnerability and Performance**

It is proposed here that there is a positive link between Kenya’s vulnerability to climate change and its performance in the climate change negotiations. In Maplecroft’s CCVI, (See Figure 4.3), Kenya’s level of vulnerability to climate change was classified as “very high” between 2009 and 2013, as climate change had taken a toll on Kenya’s economic, agricultural, health, and food and water sectors. Moreover, Kenya’s officials, such as parliament member David Koech, who served as chairman of the Pan-African Parliamentarians' Network on Climate Change, cited the country’s vulnerability to the changing environment as a firm reason to be committed to environmental affairs. At the Pan-African Summit, which was a meeting held by African delegates in the months leading up to the 2009 Copenhagen Summit, Koech specifically stated that Africans were calling for global action on climate change mitigation because they continued to experience the harsh reality of an unfriendly climate. Speaking to the other delegates, Koech stated,

> Look at the animals that we lost the other day because of drought. Look at our lakes, they are drying up. Look at our rivers, they are drying up. All of us are really feeling the effect, and therefore the need to sign. But we must ensure that the developed world also comes to support us in this endeavor.54


54 “African Leaders Meet to Create Unified Climate Stance” *VOA News.*
In view of this vulnerability, President Kibaki urged African delegates at the Pan-African Summit to use their capacity as political leaders to accept the challenge to combat climate change. He stated,

I am aware that the path to a greener world is not easy but we must soldier on. We must take aggressive initiatives to provide for the reduction of greenhouse gases and domestication of international and regional conventions and protocol on climate change.  

Kenya’s high vulnerability to climate change prompted the country to become even more active in environmental issues than it already had been since the 1970s when it became the headquarters of UNEP.

**Other Factors:**

**Aid and Performance**

As previously discussed, Kenya is a low income country. We also noted that climate change has affected its ability to grow the economy, thus it is to be expected that Kenya would need aid to assist it with countering climate change. Kenya has consistently asked for aid for itself and others. Table 4.4 gives examples of aid that Kenya has received to combat climate change. These projects have helped to improve various sectors in Kenya that have been negatively affected by climate change and as a result have assisted in the country’s overall development.

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### Table 4.4: Aid to Kenya to Counter Climate Change, 2008-2013.

<table>
<thead>
<tr>
<th>Donor/Fund</th>
<th>Sector</th>
<th>Program/Project</th>
<th>Themes/Description</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Climate Change Fund (SCCF), World Bank, &amp; UNDP</td>
<td>Agriculture</td>
<td>Kenya: Adaptation to Climate Change in Arid Lands (KACCAL)&lt;sup&gt;56&lt;/sup&gt;</td>
<td>Adaptation</td>
<td>$6.5 million</td>
</tr>
<tr>
<td>Multi-Donor, World Bank as Administrator</td>
<td>Agriculture</td>
<td>Forest Carbon Partnership Facility (FCPF)&lt;sup&gt;57&lt;/sup&gt;</td>
<td>REDD</td>
<td>$3.4 million</td>
</tr>
<tr>
<td>International Finance Corporation (IFC)</td>
<td>Energy</td>
<td>Climate Change Investment Program for Africa (SIDA)&lt;sup&gt;58&lt;/sup&gt;</td>
<td>Advisory Services and Investment in Renewable Energy</td>
<td>$100 million over 5 years</td>
</tr>
<tr>
<td>Nordic Development Fund (NDF)</td>
<td>Multiple</td>
<td>Climate Change Facility</td>
<td>Innovative climate change projects</td>
<td>€2 million</td>
</tr>
<tr>
<td>Spain (Main) &amp; Denmark, Norway.</td>
<td>Energy</td>
<td>Connection of a new wind power project in Kenya’s Lake Turkana region to the national grid.</td>
<td>Provides clean and affordable energy and enhanced energy diversification all while saving 16,000,000 tons of CO2 emissions.</td>
<td>€115 million</td>
</tr>
<tr>
<td>Spain (Main) &amp; Denmark, Norway.</td>
<td>Infrastructure</td>
<td>Connection of Kenya’s landlocked Great Rift Valley Region to the rest of the country.</td>
<td>Provides improved infrastructure linked to the wind farm, including a road, fiber-optic cable and electrification.</td>
<td>€115 million</td>
</tr>
<tr>
<td>France-The Agence Francaise de Developement (AFD).</td>
<td>Water &amp; Sanitation</td>
<td>Improvement of Kenya’s water supply and sanitation services as part of the Millennium Cities Initiative—a project of Columbia University’s Earth Institute.</td>
<td>Public-private partnerships were developed to increase water and sanitation coverage in Kenya’s informal settlements of Nyalenda and Manyatta.</td>
<td>$20 million</td>
</tr>
</tbody>
</table>

Sources: Norrington-Davis and Thornton (2011); The African Development Bank Group (2013); and Blaustein (2010).

In addition, according to the Organization for Economic Cooperation and Development (OECD), Kenya has received a large amount of development assistance (ODA) from developed countries for environmental projects in recent years (See Table 4.5).

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<sup>56</sup> The Adaptation to Climate Change in Arid and Semi-Arid Lands Project (KACCAL) works to improve the ability of participating districts and communities in the arid and semi-arid lands to plan and implement climate change adaptation measures.

<sup>57</sup> The Forest Partnership Carbon Facility (FCPF) is a global partnership of governments, businesses, civil society, and Indigenous Peoples focused on reducing emissions from deforestation and forest degradation, forest carbon stock conservation, the sustainable management of forests, and the enhancement of forest carbon stocks in developing countries (activities commonly referred to as REDD+).

<sup>58</sup> The Swedish International Development Cooperation Agency (SIDA), is a government agency working on behalf of the Swedish parliament and government, with the mission to reduce poverty in the world.
Table 4.5: ODA to Kenya for the Environment

<table>
<thead>
<tr>
<th>Allocation</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Policy &amp; Administrative Management</td>
<td>$5.5 M.</td>
<td>$4 M.</td>
<td>$4.6 M.</td>
<td>$4.2 M.</td>
<td>$600,000</td>
<td>$18.9 M.</td>
</tr>
<tr>
<td>Environmental Education &amp; Training</td>
<td></td>
<td></td>
<td>$100,000</td>
<td></td>
<td></td>
<td>$100,000</td>
</tr>
<tr>
<td>Environmental Research</td>
<td></td>
<td></td>
<td>$300,000</td>
<td></td>
<td>$100,000</td>
<td>$400,000</td>
</tr>
</tbody>
</table>

Available at: www.stats.oecd.org

As illustrated in Table 4.4, Kenya was able to secure a substantial amount of funding from the international community for various domestic protocols (in the forms of policy, administrative management, research, education, and training) in order to be better equipped to handle environmental issues. Thus, seeing how funding for environmental issues was a major necessity, it is likely that the securement of environmental assistance was a factor besides vulnerability that could explain Kenya’s high level of participation in the climate change negotiations.

_Prestige and Performance_

The funding illustrated in the tables above greatly benefits Kenya’s drive to increase its economic influence in the region. Given its continuous efforts to secure funding for the region and for developing countries, it is likely that Kenya has been seeking to achieve a strong political influence throughout Africa and gain prestige within the international community on the issue of the environment. This was first demonstrated through its bid to secure the headquarters of the United Nations Environmental Program (UNEP) in Nairobi. Since then, Kenya has cemented its leadership through its active involvement throughout the negotiations on climate change.
**Assessment**

Overall, two things stand out. First, Kenya scores very well on participation in the climate change negotiations. Second, Kenya has pushed for financial aid both for developing countries as a whole and for its own domestic projects. Since Kenya has not had the adequate financial means to combat the harsh effects of climate change, it does not want to miss out on the potential funding for development and climate change mitigation and adaption that could come out of the negotiations. In addition, Kenya’s desire for prestige and political influence within the East African region and the international community are two factors, aside from its own vulnerability to climate change, that have motivated Kenya to be active in environmental negotiations. As discussed, Kenya wants to be seen as a leader in environmental matters.
CHAPTER 5: CASE STUDY-QATAR

Climate Change in Qatar

Qatar, a small peninsula located in the Middle East, has a population of 2.1 million and borders the Persian Gulf and Saudi Arabia. It is made up mostly of flat, barren desert, and has arid and mild winters and very hot, humid summers. Climate change in recent years has threatened Qatar’s environment, agriculture and health in many ways. For example, desertification, a process of land degradation exacerbated by climate change, consumes the country and droughts have resulted in limited access to very few natural fresh water resources. However, though Qatar has faced environmental concerns, it has rapidly achieved prosperity and economic, human, and social development. Qatar has advanced from position 57 to 34 out of 179 countries in the United Nations Human Development Index in less than a decade.

Figure 5.1: Map of Qatar

Source- West and Mustafa Al-Mulla (2013).

While climate change has affected various sectors of the country, such as Qatar’s environment and natural resource base, its booming economy has helped to prevent significant environmental vulnerability. Due to the exploitation of large oil and gas fields since the 1940s, Qatar has profited and relied heavily on oil and gas reserves, which has substantially contributed to its expanding economy. As a result of Qatar’s economic boom, it has been able to expand and rely heavily on alternative technologies to combat environmental concerns. For example, Qatar has relied heavily on desalination, which is the process of filtering water from the sea, streams and other water bases and converting it to fresh water.

According to Scientific American, although desalination is a practical technology used to access clean, available water, it does pose long-term negative environmental risks. For instance, desalination burns many more fossil fuels compared with the equivalent amount of fresh water that is obtained from fresh water bodies. As such, the very proliferation of desalination plants around the world — approximately 13,000 which already supply fresh water in 120 nations, primarily in the Middle East — is both a reaction to and one of the many contributors to global warming. In addition, not only has climate change threatened Qatar’s marine environment, which is at risk of warming and acidification, but the proliferation of desalination in Qatar and elsewhere could take a further destructive toll on ocean biodiversity and could damage marine ecosystems. Through the process of desalination, pipes essentially vacuum up and inadvertently kill millions of microbial organisms that constitute the base layer of the marine food chain. Furthermore for every gallon of freshwater produced, another gallon of twice as concentrated salt water must be disposed of, which creates a lasting salty muck that can considerably harm marine ecosystems.

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Human activity in Qatar has threatened the environment and there is the likelihood of greater climate change in years to come. Qatar is one of the highest energy consumers of the world and its carbon emissions per capita are the highest in the world, three times as high as the United States. Qatar’s energy usage is very high, as fuel combusted during the production of energy and energy-related products accounts for 67 percent of Qatar’s total CO2 emissions. Citizens are provided with free electricity and free water, but, as already mentioned, these are produced by the energy-intensive activity of desalinating seawater. Moreover, energy demand is rising by 7 percent a year to run the desalinators and air conditioners that maintain life in the desert and the natural gas production equipment that funds it.

As of 2011, Qatar’s rate of CO2 emissions from the consumption of energy was estimated to be at 64.46 million. CO2 emissions stem from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring (See Figure 5.2). Furthermore, the Brookings Doha Center, which has undertaken research on the socio-economic and geopolitical issues facing the broader Middle East, created a briefing paper on the Doha Carbon and Energy Forum 2013. The Doha and Energy Forum 2013 was a conference in Qatar that served as a premier platform for country officials and international experts to discuss carbon dioxide emissions, carbon abatement solutions, alternative energy, energy efficiency, and new technology in the

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country. According to the briefing paper, Qatar has and must continue to take steps to reduce carbon emissions and find alternative green technologies, such as implementing solar and renewable energy sources to preserve the environment.

Figure 5.2: CO2 Emissions from Qatar

Qatar’s Vulnerability to Climate Change

While Qatar is not characterized by Maplecroft’s Climate Change Vulnerability Index (CCVI) as highly vulnerable to climate change—it is considered to be at “low risk” between the years of 2009-2013 (See Chapter 4-Figure 4.3)—Qatar has faced pressing questions from the international community related to the challenge of developing a sustainable future. Qatar relies heavily on its large oil and gas reserves to fuel its economy. However, Qatar’s rapid development has put the country at a crossroads; its rich fossil fuel resources have created both economic opportunities as well as difficult environmental challenges.

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I. Economy

Qatar is one of the richest countries in the Middle East and in the world. Possessing more than 15 percent of the world's proven gas reserves, Qatar has ambitions to become a global energy giant.\textsuperscript{14} With a Gross Domestic Product (GDP) per capita of more than $180,000, according to the World Bank (See Figure 5.3), Qatar has prospered in the last several years with continued high real GDP growth. Despite the global financial crisis in 2009, Qatar has continued to maintain steady economic growth. GDP is driven largely by changes in oil prices and by investment in the energy sector.\textsuperscript{15} Qatar has a Gross National Income (GNI) per capita of $85,550 (2013).\textsuperscript{16} Qatar’s economic policy is focused on developing its non-associated natural gas reserves and increasing private and foreign investment in non-energy sectors. However, oil and gas still account for more than 50 percent of GDP, roughly 85 percent of export earnings, and 50 percent of government revenues.\textsuperscript{17}

Oil and gas have made Qatar the world's highest per-capita income country and the country with the lowest unemployment, which is less than 1 percent. Proved oil reserves in excess of 25 billion barrels should enable continued output at current levels for about 57 years. Qatar's proved reserves of natural gas exceed 25 trillion cubic meters, about 13 percent of the world total and third largest in the world.\textsuperscript{18}

\textsuperscript{16}“Qatar | Data.” \textit{The World Bank}, accessed on October 15, 2014, \url{http://data.worldbank.org/country/qatar}.
\textsuperscript{17}“The World Factbook,” \textit{Central Intelligence Agency}.
\textsuperscript{18}Ibid.
II. Desertification

Climate change has contributed to the growing rate of desertification in Qatar, which has been widespread. Desertification in the Arab region remains a serious problem, as major hazards are sand encroachment, salinity and erosion of cropland, and the frequent occurrence of sand storms. Re-occurring droughts, which stem from climate change, have been the most serious natural disaster that has affected the Arab region. In addition, droughts are one of the main causes of desertification and desert encroachment when accompanied by inappropriate resource practices. It is also projected that climate change will exacerbate drought implications and negative impacts on the economies of Arab countries.19

III. Agriculture and Food security

With no rivers, one of the world's lowest levels of rainfall, and a harsh desert environment, Qatar's agricultural resources are very limited. The country has a land area of 11,590 square kilometers, of which only 1.1 percent is arable. Qatar's population has also

increased 300 percent, from 500,000 people in 1995 to 2 million people in 2014. With an expanding population, an unfavorable climate and a decline of natural resources, it is apparent that Qatar’s domestic agricultural production needs improvement and Qatar needs to preserve its reserves of food and water.\textsuperscript{20}

Although Qatar has been working to improve its agriculture sector through the implementation of new technologies, Qatar imports 90 percent of its food, and there is still a serious concern that food availability may be jeopardized by declines in global agricultural productivity.\textsuperscript{21} Furthermore, as illustrated in Figure 5.4 on the following page, Maplecroft categorized Qatar at an “extreme risk” in regards to water availability and it was ranked 2\textsuperscript{nd} in the world in water stress in 2012.\textsuperscript{22} While Qatar has had the financial means to combat these grievances, average temperatures are only expected to rise, which may increase the chances of severe droughts and soil evaporation rates in the future. Moreover, the change in rainfall amount and patterns will be erratic and precipitation will increase in high latitudes. Equally, extreme precipitation events are predicted to increase as well, and there will be higher soil erosion rates and lower soil moisture. Overall, projected global warming will be extremely harmful to Qatar’s crop production, agriculture yields and food security.\textsuperscript{23}

\begin{itemize}
\item \textsuperscript{21} Doha News Team, “‘Doha News.’ (June 30, 2013), \textit{Doha News}, accessed on October 9, 2014. \url{http://dohanews.co/they-hassad-food-are-doing-some-revolutionary/}.
\item \textsuperscript{22} “Maplecroft | Unsustainable Water Use Threatens Agriculture, Business and Populations Global Study.” \textit{Maplecroft Global Risk Analytics} (May 10, 2012), \url{https://maplecroft.com/portfolio/new-analysis/2012/05/10/unsustainable-water-use-threatens-agriculture-business-and-populations-china-india-pakistan-south-africa-and-usa-global-study/}.
\end{itemize}
IV. Health

Increasing temperatures, changes in the distribution and behavior of diseases, and concentrations of air pollutants stemming from climate change have posed major health risks to the people living in Qatar. Many suffer and die from non-communicable diseases, such as cardiovascular diseases, hypertension, diabetes and cancer, and the sharp rise in poor air quality has posed serious risks for some, especially those with heart problems and asthma as well as the elderly and the very young.24 According to The World Health Organization (WHO), data from 2012 indicates that the air in Doha, the capital of Qatar, is some of the most polluted in the world. Research concluded that Doha had the 12th highest average levels (93 ug/m3) of

Particulate Matter (PM) 2.5 – small and fine particles, which are particularly dangerous to the health of those living there. Al Wakrah, another city in Qatar, had average levels (85 ug/m3) of PM2.5, which ranked 25th on the same list.25

Moreover, in 2011, the Qatar Statistics Authority reported that more than double the amount of the PM10 air pollutant was present in Doha (See Figure 5.6), which is another air pollutant that is hazardous to one’s health. The concentration of particles in the air ranged from 105 to 185 micrograms per cubic meter at various spots around Doha. The annual recommended limit is 50.

Figure 5.5: Air Quality in Doha, Qatar in 2011

The deteriorating air quality has jeopardized the health of all people living in Qatar. When the polluted air is inhaled, it could potentially damage internal organs, which could lead to lung disease and other respiratory issues. PM2.5 particles can penetrate the respiratory tract, and increase the risk of respiratory infections, lung cancer, heart disease and stroke. According to the US Environment Protection Agency, these particles – which you often cannot see with the naked

eye – are made up of heavy metals and toxic organic compounds, and their sources are usually car exhausts, smelting plants and the burning of organic materials.

Qatar has seen pollution increase over the past several years, with one government report citing the sand and dust created by the manufacturing industry and the soaring number of construction projects, as well as increasing road congestion, as the main issues. Moreover, potential future climatic events could cause related deaths, injuries, infectious diseases, and stress. According to Nadim Farajalla, from the American University of Beirut in a paper on the Impact of Climate Change on the Arab World, other health related disorders, stemming from climate change, may arise in Qatar, including sensitive and infectious diseases such as malaria, dengue fever, yellow fever, and encephalitis.

According to the World Health Organization (WHO), Qatar possesses high quality health care, even by the standards of the industrialized countries. Life expectancy has risen sharply as health care provision has improved. However, there is a need to strengthen Qatar’s health system, as a lack of clarity exists between different stakeholders regarding health policy analysis, strategic health planning, priority-setting, and coordination for monitoring and assessing health risks such as those which stem from climate change. Furthermore, the World Bank notes that as climate change continues, the national health ministries in Arab countries would benefit in addressing the health effects of climate change by employing and authorizing climate change specialists to help guarantee the sustainability of governmental efforts to adopt climate change adaptation strategies.

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26 Victoria Scott, “WHO: Doha Ranked Among the World’s Most Polluted Cities.”
28 Ibid.
Qatar’s Approach to Climate Change

Although Qatar attended negotiations on the environment as early as 1992, at the UN Conference on Environment and Development (UNCED), (also known as the Earth Summit) in Rio, Brazil, its presence in the international climate change negotiations was rather minor up until 2011. In that year, Qatar’s representatives first spoke out at the 2011 United Nations High-Level Meeting of the General Assembly to Address Desertification, Land Degradation and Drought in the Context of Sustainable Development and Poverty Eradication. Nassir Abdulaziz Al-Nasser, who was President of the United Nations General Assembly and former permanent representative of Qatar to the UN, spoke at the meeting, where he publicly acknowledged the threat of climate change to the Middle East and East Africa. He spoke about the drastic effects of climate change on these two regions, which included extreme droughts and the food crisis, noting that, “The economic, social and human cost of desertification is tremendous. This is the most severe food crisis in the world today.”\(^{31}\) Urging an intensive global response, Nassir Abdulaziz Al-Nasser called on States to take immediate, decisive action to address the impact of climate change.\(^{32}\)

In the context of sustainable development, it may be important to mention that Qatar is a member of the Organization of the Petroleum Exporting Countries (OPEC), which is a permanent intergovernmental organization of 12 oil-exporting developing nations. Oil producing nations are high carbon emitters, and are under international pressure to reduce their emissions. Although Qatar did not attend all of the climate change negotiations, OPEC was represented at the Earth Summit in Rio, Brazil as well as negotiations in Copenhagen, Cancun, Durban, Doha and Warsaw. OPEC countries have tended to resist demands for emissions reduction.


\(^{32}\)Ibid.
Qatar is a member of the “Great Green Wall Initiative,” a pan-African proposal to “green” the continent from west to east in order to battle land desertification. At the national level, food security is also a major issue. A master plan was developed in 2008 by His Highness Sheikh Hamad bin Khalifa Al Thani, the Emir of the State of Qatar at the time, to ensure that Qatar would develop a state of food security by 2025. Part of this reform was a plan, known as the Qatar National Food Security Programme (QNFSP), which Qatar implemented to reform the energy, water, agriculture, and food sectors of Qatar. According to the QNFSP, Qatar recognized that its farming system needed to be upgraded so a stable water supply could be available. The Programme also outlined the need for efficient and advanced technologies to minimize the waste of food and water and to increase productivity.\textsuperscript{33} Extending its approval externally, Qatar urged the creation of the “Global Dryland Alliance,” a 2012 initiative which aimed at tackling food insecurity. The QNFSP noted that countries like Qatar, which faced the challenge of food insecurity, wanted to take collective actions to improve prevention of and response to food security crises. This included investing heavily in new food security solutions.\textsuperscript{34}

In the lead up to the 2012 Doha Climate Gateway, Qatari nationals and visitors to Doha, brought together by their common concern for the environment, took to the city to march for sustainability. The procession, which was organized by Doha Oasis—a grassroot organization from Qatar which focuses on the environment and health through awareness, actions and community outreach\textsuperscript{35}— received praise from Fahad Bin Mohammed Al-Attiya, chairman of the Qatar National Food Security Programme, for demonstrating Qatar’s national commitment to


\textsuperscript{35}“Doha Oasis.” Doha Oasis, accessed on October 10, 2014, \url{http://www.dohaoasis.org/about.php}. 70
the environment. At a time when Qatar was growing rapidly economically, both the march and Qatar’s hosting of the Doha Climate Gateway illustrated Qatar’s heightened commitment to protecting the environment as well as its ability to raise awareness of environmental sustainability throughout the Middle East.36

Also at this time, representatives from the Qatari government, Qatar Petroleum, and the World Bank, signed an Administrative Agreement for Qatar’s participation in phase 4 of the Global Gas Flaring Reduction (GGFR) partnership, an initiative which covers the period between 2013 to 2015 and aims to reduce the flaring of gas associated with oil and gas production in an effort to improve Qatar’s energy efficiency and reduce GHG emissions.37 This includes implementing a number of gas flaring reduction projects in various oil fields and mega gas plants in the country. While the oil and gas production in Qatar has increased fourfold, Qatar has been able to halve gas flaring. It flared nine cubic meters of gas per barrel of oil equivalent (boe) produced in 2000, as compared to just 1.1 m3 per boe in 2011.38 Additionally, Qatar’s permanent constitution, which was ratified in 2004 and came into effect in June 2005,39 had already made this commitment, stating that “The State shall preserve the environment and its natural balance in order to achieve comprehensive and sustainable development for all generations.”40

38 Ibid.
40 Ibid. p. 34.
Qatar’s Role in the Negotiations: Delegate Representation

Qatar’s total number of delegates (266) and high-level delegation (80) is inflated by the fact that Qatar hosted the 2012 Doha Climate Gateway. As a result, I have given Qatar a dummy variable for this conference (32), which is equivalent to the average number of Qatar’s delegates at the other four conferences. For this conference the number of high-level delegates was also changed to an average of the four conferences. Therefore, Qatar has a new total number of 160 delegates and 30 high-level delegates at the five climate change negotiations from 2009-2013.

By looking at the Average Number of Delegates (AND) from Singapore, Norway and Switzerland at these negotiations, which are similar countries in terms of population and wealth, I have compared Qatar’s Delegation Count (DC) to the AND to see how Qatar ranks in terms of its representation at the negotiations (See Table 5.1). Singapore sent 208 delegates, Norway sent 320 delegates, and Switzerland sent 141 delegates. As the Table illustrates, the AND of Singapore, Norway and Switzerland is 223. According to the benchmark, since Qatar’s DC is 160 delegates, which is less than the AND-10, Qatar ranks below the average representation and has earned two points as a result.

Table 5.1: Points for Delegate Representation in 2009-2013 Climate Change Negotiations

<table>
<thead>
<tr>
<th>Benchmark:</th>
<th>Points Earned: 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC is 25+ AND=country has above average representation (10 Points)</td>
<td></td>
</tr>
<tr>
<td>DC is 10-25 more than AND=(8 points)</td>
<td></td>
</tr>
<tr>
<td>DC is AND +/- 10= country has average representation (5 Points)</td>
<td></td>
</tr>
<tr>
<td>DC is less than AND-10= country has below average representation (2 Points)</td>
<td></td>
</tr>
</tbody>
</table>

| Average Number of Delegates (AND): 223 | Qatar’s Total Delegate Count (DC):160 | Benchmark: DC less than AND-10 | Points Earned: 2 |
In order to determine overall involvement, I have included the two points earned for Qatar’s delegate representation in Table 6.2 below.

**Qatar’s Role in the Negotiations: Determining Involvement**

**Table 6.2: Determining Involvement**

<table>
<thead>
<tr>
<th>Number of times for Attendance at Negotiations: 5</th>
<th>Number of Points for Delegate Representation at Negotiations: 2 points</th>
<th>Number of High-Level Delegates: 32 (20%)- *10 points</th>
<th>Number of times Qatar Spoke: 7</th>
<th>Number of times Qatar Presented a Proposal: 3</th>
<th>Did Qatar Lead, Advocate or Sponsor for Other Developing Countries? Yes= 4 points</th>
<th><strong>Total Amount of Points:</strong> 32</th>
</tr>
</thead>
</table>

*To see the scale of percentage ranges and points, refer to chapter 2.

| 41-50 points | A+ grade |
| 31-40 points | A grade |
| 21-30 points | B grade |
| 11-20 points | C grade |
| 0-10 points | D grade |

As shown in Table 6.2, Qatar attended all five negotiations on climate change and one special session, the 2011 United Nations High-Level Meeting of the General Assembly to Address Desertification, Land Degradation and Drought, to get a combined score of six points. As previously noted, with the dummy variable assigned, Qatar received two points for its delegate representation as a result of its 160-member delegation and it received 10 points for sending 32 high-level delegates. As a result, Qatar ranks below the average representation when compared to similar countries. Qatar’s high-level delegation included: The Emir of Qatar, Sheikh Hamad Bin Khalifa Al Thani; Abdullah Bin Hamad Al-Attiyah, the President of the conference and Deputy Prime Minister of Qatar at the time; and His Excellency Dr. Mohammed bin Saleh
Al-Sada, Minister of Energy and Industry and Chairman & Managing Director of Qatar Petroleum. Qatar spoke seven times, presented three proposals, and led and advocated on behalf of other developing countries. In total, Qatar received 32 points, or a low A grade, which indicates moderately high participation. This grade reflects the fact that as a whole, Qatar—a hydro-carbon economy—has only recently shown interest in becoming involved in environmental matters. As climate change poses serious risks for the future, Qatar has recently begun to take the dangers of climate change more seriously. As already described, the country has started to implement green technologies to strengthen sustainability efforts and has prioritized the environment as a chief concern.

I. Proposals

At the Doha Climate Gateway and the Warsaw talks, Qatar presented three proposals/statements that stood out:

(1) At Doha, Qatar proposed to extend the Kyoto Protocol until 2020. The Kyoto Protocol obliged 35 industrialized nations to cut GHG emissions by an average of at least 5.2 percent below 1992 levels during the period from 2008 to 2012. Within this proposal, Qatar also offered possible ways to meet developing countries demands for a new mechanism, including insurance, to help them confront losses and damage caused by the increase in sea levels and storms linked to climate change.

(2) At Doha, Qatar, with Saudi Arabia, Bahrain and the United Arab Emirates (UAE), submitted plans for economic diversification which served as nationally appropriate mitigation actions and highlighted Qatar’s efforts to reduce GHG emissions and adopt renewable energy within the Middle East.

(3) At Doha, Qatar called upon developed countries to fulfill their international obligations in regards to extending assistance to developing countries.44

II. An Advocate for Other Countries

As previously mentioned, at the 2011 United Nations High-Level Meeting of the General Assembly to Address Desertification, Land Degradation and Drought in the Context of Sustainable Development and Poverty Eradication, Nassir Abdulaziz Al-Nasser advocated for both the Middle East and East Africa, pointing out that the regions were experiencing its worst drought in 60 years. He said that in the past three months alone, famine had claimed the lives of tens of thousands of Somali children under the age of five and forced people from their communities. He further stressed that major policy interventions in sustainable land-management strategies would be needed to alleviate these challenges, such as moving towards an ambitious quantitative target. In addition, he insisted that policies and technologies must be designed to promote the sustainable use of resources and foreseeable financial support for domestic efforts.45 Furthermore, at the 2011 Durban Conference, Qatar expressed its eagerness to support the endeavors of developing countries, including Small Island Developing States (SIDS), in adapting to the inevitable effects of climate change.46

At the 2012 Doha Climate Gateway, Qatar represented the Middle East in its quest to embark on environmental efforts. It also drew international attention to what the Middle East could do for climate change mitigation and environmental sustainability within the region and on a global scale. Although Qatar is one of the world’s highest energy users per capita, the country wanted the international community to know that it has taken concrete steps

to limit its waste and create a sustainable future, and the conference demonstrated the country’s commitment to fulfilling these goals.47

In terms of supporting developing countries, Qatar, through the GGFR partnership, agreed to assist other developing countries with gas flaring reduction by improving their gas infrastructure and gas markets, as a way to expand access to cleaner electricity and cooking fuels.48 Qatar has also been a member of the Adaptation fund, which provides finance for adaption projects and programs to developing countries that are particularly vulnerable to the adverse effects of climate change.49 Overall, I gave Qatar 4 points for advocating for the Middle East, Africa, developing countries, and small island developing states.

**Reasons for Performance**

**Vulnerability and Performance**

Given the fact that Qatar ranks relatively low on Maplecroft’s CCVI, (See Chapter 4-Figure 4.3), why would Qatar take even a moderately active role in the negotiations? Of course, Qatar has realized that climate change vulnerability is happening. Qatar is beginning to be involved because they are becoming more vulnerable and its involvement since 2012 indicates that it wants to be more active in the future. In addition, Qatar can see that other countries are becoming more vulnerable, particularly its regional neighbors, such as the United Arab Emirates, which has also begun to experience similar challenges to its water resources and dryland ecosystems as a result of climate change.50

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48 Ibid.
Other Factors:

Aid and Performance

Although Qatar is beginning to face environmental challenges that need to be properly resolved, such as achieving water security, reducing carbon emissions, and increasing energy efficiency, Qatar is a very wealthy country and has had the financial means to combat climate change issues. As previously mentioned, Qatar is classified by the World Bank as a high-income country. Thus, its participation in the recent climate change negotiations was not a result of its desire for outside financial aid for environmental assistance. As opposed to some low income countries like Kenya, which regularly advocated for outside financial assistance for environmental mitigation and adaptation (as discussed in Chapter 4), Qatar has not needed outside financial aid for environmental assistance. In fact, as a financially stable country, Qatar has assisted other developing countries by providing finance for climate change mitigation and adaptation. As previously discussed, this has been evidenced through its GFFR partnership and its membership in the Adaptation fund. Furthermore, throughout the negotiations, Qatar did not communicate to parties that funding was a chief concern. Instead, Qatar’s stance centered more on its domestic objectives, which included evaluating the severity of climate change risks, reducing its carbon footprint, and putting appropriate policy and governing frameworks in place to deal with expected changes from climate change. Overall, financial aid for the environment was not an issue for Qatar and therefore it had no effect on its level of performance.

Prestige and Regional Leadership

In the recent years, Qatar has frequently and successfully applied to host international

conferences and events. According to Guido Steinberg, Qatar showed interest in hosting the climate change negotiation not necessarily because of concern about climate issues, but for the purpose of raising its international profile.\textsuperscript{53} Qatar has had aspirations to be a regional leader. Tamim bin Khalifa al-Thani, Emir of Qatar, has promoted Qatar in the region, and one way to increase Qatar’s prominence is by holding conferences, taking initiatives and attempting to insert Qatar into as many regional and international power structures as possible.\textsuperscript{54}

With that said, Qatar’s quest to become a regional leader has largely included its ambitions to become a front-runner in the environmental sphere. For example, as previously mentioned, Qatar joined in the GGFR partnership with the World Bank in 2009. Notably, it was the first member of the regional grouping, the Gulf Cooperation Council (GCC), to join the GGFR.\textsuperscript{55} Kuwait and Iraq later joined the partnership and followed in Qatar’s lead to join the global efforts to reduce flaring and increase the utilization of associated gas for power generation and other potential uses.\textsuperscript{56} Moreover, Qatar’s National Development Strategy 2011-2016 outlines a plan for Qatar to emerge as a regional or global leader in environmental technologies and applications. According to this plan, Qatar’s strategy for improved environmental management involves working towards seven outcomes:

- Cleaner water and sustainable use;
- Cleaner air and effective climate change responses;
- Reduced waste, more recycling and more efficient use;
- Nature and natural heritage conservation, protection and sustainable management;
- More sustainable urbanization and a healthier living environment;
- An increasingly environmentally aware

population; improved governance and *regional and international cooperation*.\(^\text{57}\) (My emphasis).

**International Pressure to Reduce Emissions**

In addition to the factors above, Qatar has had to deal with international pressure. International concern to combat global warming has grown over the past years. This is evident in the global Non-Governmental Organizations (NGOs) and international institutions that have been formed in an effort to combat climate change. In addition, due to the increasing environmental challenges that countries around the world have faced, there has been an emergence of a general public awareness regarding global action to address environmental issues.\(^\text{58}\) In order to mitigate climate change, countries must reduce carbon emissions. Qatar—one of the largest emitters in the world—has faced great international pressure in recent years from both developed and developing countries to reduce carbon emissions and implement safer, greener technologies. For instance, after the 2009 Copenhagen Summit, developed countries like the United States urged other industrializing nations like Qatar to reduce GHG emissions.\(^\text{59}\) In addition, throughout all of the negotiations, other developing countries have been consistently pressing for wealthier nations to reduce GHG emissions. Also, after Qatar had been picked to host the 2012 U.N. Climate Summit, it came under intense public criticism for its high CO2 emissions. As a result, countries were wary about Qatar hosting a climate conference.\(^\text{60}\)

Qatar has also faced pressure from global institutions such as United Nations as well as environmental NGOs like CAN International, a global network of over seven hundred NGOs.

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For example, just days before the 2012 Doha conference, the United Nations Environment Program (UNEP) released an emissions gap report, which was conducted by fifty-five scientists from more than twenty countries. The report showed that greenhouse gas (GHG) levels were around 14 percent above what they need to be in 2020. UNEP further stressed that “Action to combat climate change needs to be urgently scaled up if the world is to have any chance of keeping the temperature rise below two degrees Celsius.” As a result, during the Doha Climate Gateway, Qatar and President of the Conference, His Excellency Abdullah bin Hamad Al-Attiyah, faced criticism and pressure from environmental NGOs to cut down emissions. Wael Hmaidan, Director of CAN International, stated, “Qatar and the COP president have yet to prove their leadership on the issue. This week, it is up to the president to prove to the world he takes climate change seriously. The best way would be to make a pledge for an emission reduction target for 2020.” Overall, Qatar, a country seen as controversial in respect to preserving the environment, has faced great international pressure to reduce emissions throughout the years. As a result, international pressure may have prompted it to be proactive in some of the recent international climate change negotiations.

**Spread of Norms**

Because Qatar’s vulnerability to climate change has remained low, it is likely that Qatar’s active role in the negotiations and its desire to host the 2012 Climate Gateway in Doha was primarily driven by the spread of environmental norms throughout the international community. As climate change has grown to be a major international issue, governments throughout the world have united to come together, as demonstrated in the several international climate change

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negotiations, to collectively act and form ideas, objectives and solutions to tackle the threats of climate change. Thus, this new global outlook on climate change and the universal need to pay more attention to preserving the environment have been translated into environmental beliefs and norms that have been reinforced through the international community. Overall, the global consensus, mutual support and action in respect to the environment have been reinforced through the international negotiations. Thus, it is likely that Qatar’s participation can be explained by a case of solidarity.

**Assessment**

Some developing countries were not satisfied with the outcomes of the Doha Climate Gateway and the later Warsaw Talks. In regards to the former, some developing countries believed that the aftermath of the Doha Climate Gateway brought no substantial progress on ambitious international goals, nor did parties move meaningfully toward a new international agreement which must be negotiated by 2015. In this respect, reactions to the Doha Climate Gateway were mixed; while some parties were pleased with the results, others were not satisfied with the fact that countries had not agreed to speed up efforts to do more. Poorer developing countries simply felt that developed and advanced developing countries had not done enough to implement concrete climate protection goals. Specifically, they felt that industrialized countries like Qatar kept delaying these aims. In turn, poorer, developing countries were left deprived of substantial assistance. At the Doha Climate Gateway, advanced developing and developed countries did not meet the demands of poorer, developing countries which had requested a clear time-table for a promised tenfold increase in aid to $100 billion a year by 2020. Instead, the United States, Europe and other developed nations agreed to put off decisions to 2013.63

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63 “Update 2- Weak Plan to Save Kyoto, Pushes Climate Talks to Brink” Reuters News Agency, (December 8, 2012).
Furthermore, while Qatar was expected to steer 194 countries towards a new goal to reduce GHGs at the Doha Climate Gateway, it was difficult to ignore the fact that Qatar itself has been a gulf nation that has depended largely on oil and gas, and thus has significantly contributed to the problem.64

On the other hand, Qatar’s contributions to climate change were well received by United Nations Secretary General Ban Ki Moon, who praised Qatar and congratulated the Qatari government for its successful role in hosting the conference.65 Rachel Kyte, the World Bank’s Vice President for Sustainable Development also acknowledged Qatar’s efforts, stating, “Qatar’s support and concrete contributions to minimizing emissions from gas flaring are critical actions to help limit global warming.”66 She referred to the will of the GGFR partnership to reduce GHG emissions, noting that Qatar’s efforts had helped to reduce gas flaring by 20 percent, from 172 billion cubic meters (bcm) in 2005 to 140 bcm in 2011, and the cut had prevented some 274 million tons of CO2 emissions.67

Overall, Qatar’s performance in the context of the climate change negotiations has been somewhat mixed. However, it has had a positive effect on its neighbors. For example, the United Arab Emirates has begun to adopt similar policies in terms of implementing renewable energy and they have begun to understand the significant role oil and gas can play as a passage to a low-carbon, sustainable future. Furthermore, it is evident that momentum has gathered within the region to embrace renewable energy and invest in clean energy targets.68

64 “Qatar Hosts Climate Summit Amid Criticism.” _Aljazeera English News_, (November 25, 2012).
CHAPTER 6: CASE STUDY-TRINIDAD AND TOBAGO

Climate Change in Trinidad and Tobago

The Republic of Trinidad and Tobago is an archipelagic state in the southern Caribbean, lying northeast of Venezuela, South America and south of Grenada in the Lesser Antilles. It shares maritime boundaries with Barbados to the northeast and Guyana to the southeast¹ (see Figure 6.1). The country occupies an area of 5,128 square kilometers with a population of 1.3 million people.² The island of Trinidad is the larger and more populous of the two main islands; Tobago is much smaller, comprising about six percent of the total area and four percent of the population.³

Figure 6.1: Map of Trinidad and Tobago

Trinidad and Tobago experiences two relatively distinct seasonal climatic types: (1) Tropical Maritime, which occurs from January to May with warm days and cool nights with

³ “Second National Communication” Government of the Republic of Trinidad and Tobago, p.6.
relatively low rainfall, and (2) Modified Moist Equatorial, which occurs from June to December with hot, humid temperatures and increased rainfall. Tobago, located north of the two islands, experiences more of a dry season while Trinidad experiences a wetter one.4

According to the United Nations, the Caribbean has experienced some warming over past decades, as evidenced by increasing average annual maximum and minimum temperatures. The numbers of days with very hot temperatures are increasing, while the number of days and nights with very cold temperatures are decreasing. In addition, the average five-day rainfall has increased while the number of consecutive dry days have decreased.5 As illustrated in Figure 6.2, Trinidad and Tobago’s average high temperatures have increased greatly over time.6

Figure 6.2: Mean of Daily High Temperature in Trinidad and Tobago.

![Graph showing temperature changes](http://berkeleyearth.lbl.gov/regions/trinidad-and-tobago)

Source: Berkeley Earth, 2014.

**Trinidad and Tobago’s Vulnerability to Climate Change**

As Trinidad and Tobago is part of the Small Island Developing States (SIDS) of the Caribbean sub-region, the threat of climate change is even more severe as compared to other nations due to the biophysical and socio-economic characteristics of these countries which make

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4 Ibid.
them especially vulnerable to these impacts. This is a result of the geographic location of many SIDS countries, which are located in the hurricane belt.7

According to the 2012 Climate Change Vulnerability Index (CCVI) produced by Maplecroft, (See Chapter 4-Figure 4.3), Trinidad and Tobago’s vulnerability to climate change is characterized as “high risk.” However, according to Trinidad and Tobago’s country profile, given the country’s relatively advanced industrial base and smaller reliance on tourism as a source of revenue, it could be said it is better placed to adapt to climate change than many of its Caribbean neighbors.8 Nonetheless, as identified by the government, Trinidad and Tobago’s coastal and marine resources, freshwater resources, forestry, land use and biodiversity are the most vulnerable areas to the impacts of climate change. Human health and human settlements are other vulnerable sectors as well. In addition, sensitive ecosystems, the agricultural and economic sectors, and sea-levels will continue to be negatively impacted by climate change. 9 These issues will be discussed in further detail in the following section.

I. Economy

According to the Central Intelligence Agency (CIA), Trinidad and Tobago is the largest producer of oil and gas in the Caribbean and its economy is dependent on its energy supplies. The oil and gas sector contributes 46 percent of the nation’s $27.14 billion GDP (2013 est.) and the poverty rate is below 17 percent.10 The per capita income of the country is approximately US$18,864 per year.11 As the Inter-American Development Bank notes, Trinidad and

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8 “Trinidad and Tobago Country Profile” Adaptation learning Mechanism.
9 Ibid.
11 “Trinidad and Tobago Country Profile,” Adaptation Learning Mechanism.
Tobago is largely reliant on producing oil and gas to fuel its economy, and as a result, it is a high greenhouse gas (GHG) emissions emitter. Thus, the country is presented with growing challenges of developing sustainability while ensuring economic growth. In response to these challenges, Trinidad and Tobago’s government has recognized the potential to take part in substantial greenhouse gas emissions reductions as part of its response to climate change and has identified the financial requirements to effectively address climate change issues and the importance of developing the policy framework to shift to a low carbon development path.\textsuperscript{12}

\textbf{II. Sea-level}

Significant sea-level rise is projected to occur in Trinidad and Tobago, which will cause increased flooding, soil erosion, and loss of coastline and coastal amenities such as human settlements, wetlands, related ecosystem goods and services and coastal agricultural lands due to soil salinization.\textsuperscript{13} Furthermore, sea-level rise threatens a significant amount of the country’s biodiversity, as wetlands form the habitations of a diverse set of highly vulnerable species of plants and animals. As over ninety percent of the wetlands are less than five meters in elevation, these areas are very vulnerable to the effects of sea level rise.\textsuperscript{14}

\textbf{III. Agriculture}

Trinidad and Tobago’s agricultural sector is very vulnerable to changes in precipitation which stem from climate change. The Intergovernmental Panel on Climate Change (IPCC) mentions three consequences for Trinidad and Tobago’s agricultural sector: (1) Global warming will likely cause decreased crop yields and increased aridity of soils and decreased crop

\textsuperscript{12}“Trinidad and Tobago Will Integrate Climate Change to Its Development Agenda with IDB Loan,” Inter-American Development Bank, (2011).
\textsuperscript{13}“National Climate Change Policy” Environmental Management Authority, (July 2011) p. 9.
\textsuperscript{14}“Trinidad and Tobago Country Profile,” Adaptation Learning Mechanism.
yields; (2) less irrigation water availability; and (3) the projected increase in sea level will likely destroy coastal areas and soils which will lead to decreased crop yields and limit the availability of land for agricultural production. In turn, these effects will cause a reduction in agricultural productivity and competitiveness, which will reduce economic opportunities for agricultural profit and investment.\textsuperscript{15}

\textit{IV. Water}

Climate change has led to significant impacts on Trinidad and Tobago’s water supply. The government has noted that “While around 92 percent of the population has access to drinking water, water supply is only regularly available to around 26 percent.”\textsuperscript{16} The remainder of those supplied only receive water on a limited weekly schedule.\textsuperscript{17} Furthermore, water-related diseases that have arisen as a result of climate change have had a damaging impact on the population. The government stated that, “Despite a high life expectancy (approaching 70 years) and a low infant mortality rate (2.4 per 1,000 births) [in Trinidad and Tobago], water-related diseases are still widespread and figure among the leading causes of mortality, which is indicative of low water and sanitation service levels.”\textsuperscript{18} Furthermore, the government describes the projected effects from climate change on the water sector:

The projected decrease in precipitation and increase in temperature coupled with increasing demand for water are likely to place significant stresses on the water sector, making it especially vulnerable to the impacts of climate change. Specifically, likely increases in evaporation and evapo-transpiration as well as reduced precipitation will affect groundwater recharge rates. Coastal aquifers and reservoirs located in coastal areas will be susceptible to salt-water intrusion and inundation.\textsuperscript{19}

\textsuperscript{15}“National Climate Change Policy,” p. 8.
\textsuperscript{17}Ibid.
\textsuperscript{18}Ibid. pp. 69-70.
\textsuperscript{19}Ibid. p. 66.
V. **Health**

Climate change has had a significant impact on health and will continue to do so in the future. The effects are summarized in Table 6.3 below:

**Table 6.3: Climate Change Effects on Health in Trinidad and Tobago**

<table>
<thead>
<tr>
<th>Short Term</th>
<th>Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Increased death/injuries from heat waves.</td>
<td>- Psychological Effects (anxiety, depression and stress.)</td>
</tr>
<tr>
<td>- Direct injury or death from flooding, landslides and hurricanes.</td>
<td>- Increase in coronary diseases from decreased quality of life and resulting increased stress.</td>
</tr>
<tr>
<td>- Increase in hunger and malnutrition from crop failure and increased food prices.</td>
<td>- Trauma from permanent loss of homes from inundation through sea-level rise or increased seasonal flooding and landslides.</td>
</tr>
<tr>
<td>- Increase in respiratory illnesses and mortality due to increased dust and ground-level ozone.</td>
<td>- Physical conditions resulting from disease, water-scarcity and loss of food and shelter.</td>
</tr>
<tr>
<td>- Increase in water-borne and vector-borne diseases, such as dengue fever (high risk).</td>
<td></td>
</tr>
</tbody>
</table>


VI. **Sensitive Ecosystems**

As climate change will cause the increase in sea surface temperature, there will be a significant loss of natural coastal defenses and ecosystems such as coral reefs and fisheries. Moreover, the Caroni Basin area, located between the northern mountain range and the central range of Trinidad and Tobago, is considered to be highly vulnerable to climate change for the following three reasons: first, it is the most densely populated area of the country and has a significant concentration of biodiversity; second, the area is already under threat from poor land-use practices, including deforestation of the northern range that has caused flooding in the lower areas of the Basin, as well as siltation and a decline in water resources; third, increased carbon dioxide in the atmosphere dissolves in the ocean and results in a lower seawater pH which can be detrimental to the abundant fisheries that are in the country.\(^{20}\)

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\(^{20}\) “Trinidad and Tobago Country Profile,” *Adaptation Learning Mechanism.*

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Trinidad and Tobago’s Approach to Climate Change

According to its representatives, the Republic of Trinidad and Tobago, as a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, has been committed to mitigating climate change. It is a part of the Alliance of Small Island States (AOSIS), which was formed in 1990 to represent the interests of SIDS in the international climate change negotiations. Furthermore, the country has recognized that as a SIDS, it is evident that it will be severely impacted by the adverse effects of climate change as a result of its inherent characteristics such as small land space, limited technical and technological capacity and limited financial capacity.

Trinidad and Tobago first attended the UN Conference on Environment and Development (UNCED), also known as the Earth Summit, held in Rio de Janeiro, Brazil in 1992. At the Conference, the special case of small islands and coastal areas was highlighted in Agenda 21, which is a plan of action for sustainable development that was adopted by the international community. As an essential outcome of the conference, Agenda 21 called for a future global conference on the sustainable development of SIDS.

Two years later, in 1994, the UN Global Conference on the Sustainable Development of SIDS was held in Barbados. The Conference, which Trinidad and Tobago attended, adopted the Barbados Programme of Action for the Sustainable Development of SIDS (BPOA), a 14-point program that identifies priority areas and specific actions necessary for addressing the special

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challenges faced by SIDS. The BPOA specifically highlights how the small size of small-island developing states means that development and environment are closely interrelated and interdependent. It also emphasized the special challenges and constraints that cause significant hindrance to the socio-economic development of SIDS, including small size and geographic isolation that prevent economies of scale. The Conference reaffirmed the principles and commitments to sustainable development embodied in Agenda 21 and translated these into specific policies, actions and measures to be taken at the national, regional and international levels.

Trinidad and Tobago had recognized early on that when the UN discussed the environment, the vulnerability of SIDS was not included. It wasn’t until the 1994 Barbados Program of Action that the special needs of SIDS were really globally recognized. Trinidad and Tobago, a more powerful small island developing as compared to its Caribbean neighbors, emerged as a country that was eager to take on efforts to promote the idea that SIDS should be treated differently. In particular, as the BPOA highlighted the fact that SIDS face issues of economic vulnerability and poverty, Trinidad and Tobago played a large role thereafter—as demonstrated in its involvement in the recent climate change negotiations—in promoting the idea that climate change poses unique challenges to the socio-economic development of SIDS, and as a result, the international community would have to pay special attention to SIDS in the environmental agenda so that they can achieve sustainable development.

The government of Trinidad and Tobago has also begun to develop domestic initiatives

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27 “Barbados Programme of Action (BPOA) | SIDSnet: Small Island Developing States Network.”
28 Ibid.
pertaining to climate change, such as outlined in the First National Communication to the UNFCCC in 2001 and a Second National Communication in 2008. While the First National Communication focuses on national circumstances, details the national inventory of GHGs, and provides statements on vulnerability and adaptation strategies, technology needs, and capacity building and research, the Second National Communication builds upon the first and additionally includes mitigation options, a collection and analysis of national inventory of GHGs, and recommendations for proper data collection and sharing, technology needs, and capacity building.

According to the Second Communication, since the initial National Communication was created, significant national policy developments have been carried out by the government of Trinidad and Tobago, including the 2006 National Environmental Policy (NEP), (A first NEP was laid in Parliament in 1998), the 2011 National Forest Policy and the 2011 National Climate Change Policy. While the National Forest Policy works to guide the sustainable management of Trinidad and Tobago’s natural forestry and wildlife resources in an effort to mitigate climate change and build climate resilience, the National Environment Policy and the Climate Change Policy serve as administrative and legislative frameworks for environmental management policy guidance in order to pursue a low-carbon development path. A major objective under this agenda has been to shift the economy away from its dependence on non-renewable resources and move towards implementing alternative, renewable energy sources. Trinidad and Tobago’s Manifesto 2010, its Medium Term Policy Framework (MTPF 2011-2014), and its 2012

31 Ibid. pp. 2-3.
Sustainability Report demonstrate this aim. Additional evidence of this is illustrated through the development of a Solar Industrial Development Plan and the National Wind Resource Assessment Programme, which serve to promote the expansion and use of renewable energy resources and energy efficiency.

**Trinidad and Tobago’s Role in the Negotiations: Delegate Representation**

Trinidad and Tobago had a total number of 31 delegates and 11 high-level delegates at the five climate change negotiations from 2009-2013, (not including other relevant sessions). By looking at the Average Number of Delegates (AND) from Uruguay, Jamaica and the Maldives at these negotiations, which are similar countries in terms of population and wealth, I have compared Trinidad and Tobago’s Delegation Count (DC) to the AND to see how Trinidad and Tobago ranks in terms of its representation at the negotiations (See Table 6.1). Uruguay sent 51 delegates, Jamaica sent 32 delegates and the Maldives sent 77 delegates. As the Table illustrates, the AND of Uruguay, Jamaica, and the Maldives is 53. According to the benchmark, since Trinidad and Tobago’s DC is 31 delegates, which is more than ten points below average, Trinidad and Tobago ranks as having a below average representation and has earned two points as a result.

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Table 6.1: Points for Delegate Representation in 2009-2013 Climate Change Negotiations

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</tr>
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<td></td>
</tr>
</tbody>
</table>

Average Number of Delegates (AND): 53  Total Delegate Count (DC): 31  Benchmark: DC is less than AND-10

In order to determine overall involvement, I have added the two points earned for Trinidad and Tobago’s delegate representation in Table 6.2 below.

Trinidad and Tobago’s Role in the Negotiations: Determining Involvement

Table 6.2: Determining Involvement

<table>
<thead>
<tr>
<th>Number of times for Attendance at Negotiations: 5</th>
<th>Number of Points for Delegate Representation at Negotiations: 2 points</th>
<th>Number of high-level delegates: 11 (35.5%)-*15 points</th>
<th>Number of times Trinidad and Tobago Spoke: 6</th>
<th>Number of times Trinidad and Tobago Presented a Proposal: 7</th>
<th>Did Trinidad and Tobago Lead, Advocate or Sponsor for Other Developing Countries? Yes= 3 points</th>
<th>Total Amount of Points: 41</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

*Trinidad and Tobago’s high-level delegation percentage is just above the range for countries scoring twenty points. Its score has been modified to reflect this. To see the scale of percentage ranges and points, refer to chapter 2.

<table>
<thead>
<tr>
<th>Points Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>41-50 points</td>
<td>A+ grade</td>
</tr>
<tr>
<td>31-40 points</td>
<td>A grade</td>
</tr>
<tr>
<td>21-30 points</td>
<td>B grade</td>
</tr>
<tr>
<td>11-20 points</td>
<td>C grade</td>
</tr>
<tr>
<td>0-10 points</td>
<td>D grade</td>
</tr>
</tbody>
</table>
According to Table 6.2, Trinidad and Tobago received a total of 41 points, or a low A plus level grade which illustrates exceptional participation in the climate change negotiations. In regards to the number of negotiations Trinidad and Tobago attended, it attended all five negotiations. In addition, it attended three special sessions: the 2013 opening of the second session of the Ad Hoc Working Group on the Durban Platform for Enhanced Action; the 2013 51st Commission for Social Development Session; and the 2013 bilateral climate change talks with the European Union. Taken together, Trinidad and Tobago’s score for attendance is 8.

As previously noted, Trinidad and Tobago received 2 points for its delegate representation as a result of its 31-member delegation, which ranks below the average level of representation when compared to other similar countries. Trinidad and Tobago also received 15 points for sending 11 high-level delegates. The delegation spoke six times, presented a proposal/statement seven times, and advocated for other countries to receive 3 extra points. Thus, in reference to the analysis, Trinidad and Tobago has been highly proactive and committed throughout all of the negotiations.

Trinidad and Tobago used the negotiations as an opportunity to speak on behalf of small island developing states, emphasize its high vulnerability to climate change, and communicate to parties its ideas, needs and requests in respect to combating climate change. Some of Trinidad and Tobago’s notable high-level delegates included the following four key officials: (1) Dr. Roodal Moonilal, Minister of Housing and the Environment and chair of the Commonwealth, who attended the 2010 Cancun Conference; (2) Ramona Ramdial, Minister of State in the Ministry of the Environment and Water Resources, who attended the 2012 Doha Climate Gateway; (3) Charles Eden, Ambassador and Deputy Permanent Representative of Trinidad and Tobago to the United Nations, who attended the 2013 51st Commission for Social Development, and (4) Kishan Kumarsingh, Head of Multilateral Environmental Agreements at the Ministry of the Environment, who attended all five negotiations.
I. Proposals

Trinidad and Tobago, together with the Alliance of Small Island States (AOSIS), of which Trinidad and Tobago is a member, presented seven statements/proposals that stood out:

(1) At Copenhagen, Trinidad and Tobago proposed to limit temperature increases to below 1.5 degrees Celsius.  

(2) At Cancun, Trinidad and Tobago urged the rejection of the use of per capita emissions or any other metric as any basis for defining the obligations of countries to reduce their emissions, as they felt this method was unfair to small, energy-producing countries like Trinidad and Tobago. Instead, they felt absolute emissions provided a more just method and called for an agreement on meaningful mitigation actions by all countries and the historical responsibility of developed countries.

(3) Also at Cancun, Trinidad and Tobago called for immediate action on adaptation, REDD, technology transfer, and the provision of financial resources.

(4) Furthermore, at Cancun, Trinidad and Tobago requested positive consideration of Carbon Capture and Storage (CCS) technology, a technological solution which captures CO2 before it enters the atmosphere and stores it in suitable sinks for an extended period of time in order to mitigate emissions.

(5) At Durban, Trinidad and Tobago called for the increase in the global share of renewables in energy supply, noting that increasing from roughly 10% at present to 15% by 2020 has the potential to significantly reduce the ‘ambition gap’.

(6) At Doha, Trinidad and Tobago requested clarity that the appropriate scope and scale of financial resources, technology transfer and capacity building will be available for developing country Nationally Appropriate Mitigation Actions (NAMAs).

(7) Also at Doha, Trinidad and Tobago called for significant emission reduction targets for developed countries, including more ambitious (NAMAs) by developing countries, with the goal to define an ambitious yet practically feasible and achievable GHG reduction objective in the near future.

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35 Statement made by the Honourable Doctor Roodal Moonilal, p. 3.

36 Ibid.

37 Ibid.


40 According to the UNFCCC, “NAMAs refer to any action that reduces emissions in developing countries and is prepared under the umbrella of a national governmental initiative. They can be policies directed at transformational change within an economic sector, or actions across sectors for a broader national focus. NAMAs are supported and enabled by technology, financing, and capacity-building and are aimed at achieving a reduction in emissions relative to ‘business as usual’ emissions in 2020.”

II. An Advocate for Other Countries

As presented in the following table (See Table 6.2), Trinidad and Tobago’s high-level delegation participated at the negotiations to not only advocate for itself but also for other developing countries that were vulnerable to climate change.

Table 6.2:

| 2010 Cancun Negotiation | On behalf of AOSIS, Trinidad and Tobago urged for immediate action on adaptation, reducing emissions from deforestation in developing countries, loss and damage, technology transfer, and the provision of financial resources.  

2013 Bilateral Talks With the European Union | On behalf of other developing countries, Trinidad and Tobago urged parties to use the upcoming Warsaw talks as an opportunity to reach a legally binding agreement that would be applicable to all, so that developing countries would not continue to suffer the worst from climate change.  

The 2013 Warsaw Talks | T&T’s Kishan Kumarsingh, Head of Multilateral Environmental Agreements at Ministry of the Environment, represented all developing countries by being appointed to co-chair at the Ad Hoc Working Group on the Durban Platform for Enhanced Action.  

The 51st Commission for Social Development, 2013 | Eden Charles, the representative of T&T, spoke on behalf of the Caribbean Community (CARICOM) to reiterate its position that climate change was one of the principal challenges impeding efforts by SIDS to achieve their social development objectives. He pointed out that small islands could have their entire economies destroyed by a single weather event, which would worsen poverty, increase unemployment and destroy infrastructure. He also said that CARICOM Governments and institutions were continuing to develop strategies to help the region's people overcome social development challenges, highlighting that those efforts were obstructed by the failure of some development partners to live up to internationally agreed goals and objectives.  

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42 Statement by the Honourable Doctor Roodal Moonilal, (2010), p.3.  
Thus, it is evident that throughout the recent climate change negotiations Trinidad and Tobago spoke for SIDS (AOSIS) as well as for CARICOM and developing countries as a whole (three points earned).

**Reasons for Trinidad and Tobago’s Good Performance**

**Vulnerability and Performance**

As identified by Maplecroft’s CCVI, (See Chapter 4-Table 4.3), Trinidad and Tobago is highly vulnerable to climate change, and so it is likely that its high participation in the climate change negotiations could be attributed to its high vulnerability rate. This is shown through the fact that throughout the negotiations, Trinidad and Tobago emphasized its high vulnerability and stressed the need for the international community to put forward greater action in order to reduce harmful environmental effects. For instance, in 2013, at the opening of the second session of the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP), AOSIS delivered a statement citing the countries’ high vulnerability to climate change, and expressed concern over future climate change effects, such as stronger and more deadly tropical cyclones, prolonged droughts, biodiversity loss, and acceleration in sea level rise. Furthermore, as previously noted, Trinidad and Tobago, together with AOSIS, stressed that parties must achieve an ADP agreement that ultimately decreases CO2 concentrations to safe levels in order to limit warming to below 1.5 degrees by the end of the century.46

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Other Factors:

Aid and Performance

Trinidad and Tobago has also been focused on gaining technical and financial support for climate change mitigation. While they said that they are fully committed to reducing GHGs and have implemented domestic adaptation programs and projects, they have stressed the need for technological and financial support from developed country partners in order to enhance their ability to address climate change issues. In fact, the country has secured funding, including loans from the World Bank and the Global Environment Facility (See Table 6.3) for adaptation programs and projects to be implemented in Trinidad and Tobago’s various sectors. While some loans have been secured for implementing sustainable development into Trinidad and Tobago’s ecosystem restoration, other loans have been secured for improving the energy sector and mainstreaming adaptation to climate change into a sustainable development agenda in Trinidad and Tobago and other Caribbean countries.

Table 6.3: Environmental Assistance to Trinidad and Tobago and the Caribbean Region. (2003-Present)

<table>
<thead>
<tr>
<th>Funder/Partner</th>
<th>Program</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>The World Bank/Global Environment</td>
<td>Nariva Ecosystem Restoration and Carbon Sequestration: Trinidad &amp; Tobago</td>
<td>Restore and conserve the Nariva wetlands, through the recognition of the services it provides as a carbon sink and a biodiverse ecosystem.</td>
<td>$4.60 million</td>
</tr>
<tr>
<td>Facility (GEF)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GEF</td>
<td>Energy for Sustainable Development in the Caribbean. (2010-Ongoing.)</td>
<td>Transfer and implement energy efficiency policies and instruments to the Caribbean countries to enable cost effective greenhouse gas emission reductions of 20 to 50 percent in the coming decades.</td>
<td>$11.3 million</td>
</tr>
<tr>
<td>GEF</td>
<td>Mainstreaming Adaptation to Climate Change: Caribbean Community (MACC)</td>
<td>Build regional capacity to collect and analyze data; build in-country capacity to formulate and analyze adaptation policy options and finalize sectoral adaptation strategies for participating countries; build capacity in</td>
<td>$10.95 million</td>
</tr>
</tbody>
</table>
Sources: Global Environment Facility (2012); the World Bank (2014); and Adaptation Learning Mechanism (2009).

**Prestige and Performance**

Trinidad and Tobago played a significant role in the founding of AOSIS, as it wanted to create a unified group which would play a key role in the negotiations. Additionally, as climate change will be a long term problem, Trinidad and Tobago got involved in the negotiations because the government saw it as an opportunity to get on board early and bring small island states together.

As Trinidad and Tobago is a wealthier small-island developing state, it has held a more powerful position as compared to its Caribbean neighbors. In this respect, Trinidad and Tobago could participate more in the climate change negotiations and serve as a spokesperson for the region. According to Ghallagher, it used the negotiations as an opportunity to demonstrate innovation, resilience and leadership on the issue. Also, since it had the financial means to adopt newer environmental technologies, such as carbon capture and storage, it assumed that other developing countries within the Caribbean and elsewhere could follow suit. Ultimately, Trinidad and Tobago did not want to compromise the interests of vulnerable small island

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developing states, and given the fact that the negotiations were resulting in limited progress and stalemates, Trinidad and Tobago specifically attended the negotiations out of self-interest. The country used the talks as an opportunity to focus on the needs of itself and other small-island developing states.

**Assessment**

Trinidad and Tobago’s high participation in the recent international climate change negotiations is likely due to the recognition of its high vulnerability to climate change, as my hypothesis proposes. The country says it has recognized the need to take action in fighting climate change and has developed domestic policies to counter environmental threats. However, despite its high level of participation, the country does have high emissions and has “excused” itself by asking for the non-use of per capita measures. Trinidad and Tobago’s high attendance can also be attributed to the need for outside assistance for climate change mitigation and adaptation.

In addition, although small island developing states like Trinidad and Tobago are very vulnerable to the effects of climate change, as they face threats such as significant sea-level rise, loss of agricultural lands and biodiversity loss, the concerns of these countries were buried in the environmental agenda. As previously mentioned, it wasn’t until the 1994 Barbados Programme of Action for the Sustainable Development of Small Island Developing States that the needs of these countries were globally recognized. A direct connection between environmentalism and sustainable development came out of this program, as nations agreed that in order to counter poverty and economic vulnerability in small island developing states, sustainable development was necessary. Furthermore, Trinidad and Tobago recognized early on that when the United Nations initially discussed the environment, the vulnerability of SIDS was not acknowledged. As
a result, Trinidad and Tobago took it upon themselves to promote the needs of SIDS at the negotiations and emphasized that these countries would have to be treated differently. To this end, Trinidad and Tobago has played a significant role in unifying small island states and serving as an environmental leader in its region.
CHAPTER 7: CONCLUSION

In this study, I have explored the link between vulnerability and participation in international negotiations on climate change. I have chosen this topic due to the important and urgent nature of the climate change problem. Climate change has caused significant destruction to societies across the world and earth’s biodiversity. Furthermore, it continues to be a growing problem and no global plan to successfully combat climate change has been formulated by the international community. Moving forward, as the world continues to be plagued by climate change, it is imperative to take into account the necessary conditions for countries to be more open to negotiating, as only then will the global community be one step closer to achieving a successful united plan. Finally, it is vital to establish a global plan so the international community does not continue to face a variety of challenges which stem from climate change as well as to secure the health of the planet for future generations.

In this thesis, I hypothesized that only when developing countries are able to observe the physical destruction of their environment and face challenges to adapt to new climatic conditions are they likely to become proactive in negotiations. I chose three developing countries for case study analysis: Kenya, Qatar, and Trinidad and Tobago. Kenya is large but economically disadvantaged, and extremely vulnerable as it faces major adverse impacts from climate change. It has been very active in environmental issues with respect to climate change negotiations and it has played an important role among African states. Qatar, a very wealthy but tiny nation, is ranked much lower in vulnerability although it is beginning to feel negative environmental impacts. As a hydro-carbon economy, it has been under pressure to reduce its carbon emissions. Until recently, it has not been very active in climate change negotiations but in 2012 it hosted the Doha Climate Gateway. Trinidad and Tobago is also small in size, an island, a hydro-carbon
economy, and highly vulnerable as it faces adverse impacts of climate change.

The cases conform to the hypothesis: Kenya and Trinidad and Tobago both ranked as highly vulnerable on Maplecroft’s climate change vulnerability index and have been active in negotiations. Qatar has begun to see the effects of the changing climate and has started to get involved. However, the perception of vulnerability by itself does not mean that a country will be proactive. I found that countries might have been enticed by the prospect of financial aid as well. Although this was difficult to prove, Kenya’s constant plea for aid suggested that this was very crucial. Trinidad and Tobago also wanted aid to deal with the problem of small island developing states. More important to Qatar, however, was the international pressure it has faced to reduce emissions. Qatar has also been influenced to participate by the spread of environmental norms and the desire for inclusion. All three countries selected also seemed to be interested in prestige. This is particularly so for Kenya and Qatar. Both are playing important regional roles. This was less in the case for Trinidad and Tobago, although it did seem to want to lead small island developing states to some degree.

Taken altogether, my findings reveal that along with feeling the impacts of climate change, other factors, such as financial aid for environmental assistance and sustainable development, self-interest, the spread of environmental norms, international pressure, and the desire for prestige and political leadership are all significant influences that are likely to play a part in motivating developing countries to be more proactive in climate change negotiations. Given the severity of climate change and the projection that it is likely to worsen, threats stemming from climate change will likely spread and become more prioritized by the international community. Thus, future studies should examine the motivations of a wide variety of states in becoming more involved in climate change negotiations.
Bibliography


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