April | 2015

Climate-Induced Migrants, International Law, and Human Rights

An Assessment

Written By: Abdikarim Ali, M.A. in Public & International Affairs, & B.Soc.SC with Honors in Conflict Studies and Human Rights,
Supervisor: Dr. Nicholas Rivers

Graduate School of Public and International Affairs, University of Ottawa

AKNOWLEDGEMENTS

With the utmost respect, I would like to thank my Supervisor Dr. Nicholas Rivers, for his guidance, encouragement, and dedication to ensuring the production of a strong research paper.

I would like to thank the University of Ottawa, the Faculty of Graduate and Post-Doctoral Studies, the past and present Administration and Administrative Staff of the Graduate School of Public and International Affairs, my second reader Dr. Michael Williams, and my professional internship supervisor Dr. Daniel Livermore.

Special thanks to my family and close friends who have been an integral support system throughout the years.

I would like to give the warmest and most heartfelt thank you to my loving, wise, and noble mother Ms. Saga Dhore who taught me the extreme importance and value of perseverance, hard work, and compassion.

Lastly I would like to thank the vibrant, beautiful, and dignified people of Bangladesh, and the Small Island and Developing States of the Maldives, Tuvalu and Kiribati, who share their plight with the world in search of solutions and progress.

TABLE OF CONTENTS

LIST OF ACRONYMS

AR – Assessment Report for the IPCC
BARC – Bangladesh Agricultural Research Council
CBACC-CF – Community Based Adaption to Climate Change Through Coastal Afforestation in Bangladesh Project
CoP – Conference of Parties
ECOSOC – The United Nations Economic Social Council
GEF – The Global Environment Facility
GEF-LDCF – The Global Environment Facility's Least Developed Countries Fund
GFMD – The Global Forum on Migration and Development
GoB – The Government of Bangladesh
GoM – The Government of the Maldives
GoK – The Government of Kiribati
GoT – The Government of Tuvalu
IASC – The Inter-Agency Standing Committee Task Force on Climate Change
ICE – The Inventory of Conflict and Environment
IDP – Internally Displaced Person
IFRC – The International Federation of the Red Cross
IOM – The International Organization for Migration
IPCC – The Intergovernmental Panel on Climate Change
IRO – The International Refugee Organization
LDCF – The Least Developed Countries Fund
NAPA – National Adaption Programme of Action
RCP – Representative Concentration Pathways
SIDS – Small Island and Developing States
SLR – Sea Level Rise
UDR – The Universal Declaration of Human Rights
UN – The United Nations
UNDP – The United Nations Development Programme
UNEP – The United Nations Environment Programme
UNGA – The United Nations General Assembly
UNHCR – The United Nations High Commissioner for Refugees
UNPG – The United Nations Pacific Group
UNRRA – The United Nations Relief and Rehabilitation Administration
UNSC – The United Nations Security Council
UNFCCC – The United Nations Framework Convention on Climate Change
UNU-EHS – The United Nations University Institute for Environment and Human Security
WB – The World Bank

ABSTRACT

As the planet's ocean and seawaters continue to rise, coastal land becomes inundated, staple crops are destroyed by salinity intrusion, ecosystems are decimated or altered due to salt toxicity, and human populations are forcibly displaced.[i] The resulting displaced persons, safely referred to as climate-induced migrants, either become internally displaced persons (IDP's) within their borders or cross international borders as a means of survival.[ii] Legally these migrants fall outside the rigid framework of the International Legal Regime for the protection of refugees. Unfortunately the plight of these climate-induced migrants is not aligned with the scope and definition of the 1951 United Nations Convention on the Status of Refugees and the 1967 Protocol Relating to the Status of Refugees.[iii] On the international political stage, state actors continue to block any tangible attempts to politically recognize and address the issue of climate-induced migration, which is often directly associated with emissions reduction obligations by the Global South.[iv] Despite the political aversion to fully accepting and addressing climate induced migration, up to an including the re-assessment of the definition of a refugee, the international community continues to discuss the question of migration and climate change. On the agenda of the United Nations Framework Convention on Climate Change (UNFCC) and other related meetings occurring on the margins of the UNFCCC's Conference of Parties (CoP) discussions, is the issue of climate change and migration.[v] In light of this growing political momentum and the willingness of key stakeholders to discuss climate change and migration, this paper will aim to determine potential opportunities the international community and key stakeholders can pursue, in order to develop lasting solutions on the issue of climate change and migration, while assessing the need for greater international legal protection for climate-induced migrants, and more robust climate change adaption assistance for their home states.

1. Introduction: An Emerging Global Challenge

The Intergovernmental Governmental Panel on Climate Change (IPCC) deems the warming of the planet to be unequivocal, referencing scientific reports that identify increases in global average air, and ocean temperatures, and the melting of ice and snow leading to increased sea levels.[vi] Increasing sea levels, especially in disaster prone zones and small island states has led to a rise in water borne illnesses, the destruction of infrastructure and economies, increased soil salinity, and the displacement of coastal populations. Many of these displaced people are often forced to relocate within their respective states and are referred to as internally displaced persons (IDP's), but an unfortunate few are forced to relocate to a different country, because their states often lack the capacity to assist them. These displaced persons, fall under a new category of migrants, titled climate-induced migrants. Among the greatest of challenges for climate-induced migrants is the dilemma of legal recognition and adequate protection under international law.[vii] Many climate-induced migrants flee horrendous living situations in IDP camps within their borders, in search of a better life in a neighboring state.[viii] They often face deplorable treatment and in most cases have little or no legal recognition and or protection under international law. As a result climate-induced migrants are often sent back to their country of origin, if possible, where they continue to be displaced but are instead IDP's.[ix] Fortunately the issue of climate change and migration continues to appear on the agendas of key forums from the meetings of the Post-2015 Sustainable Development Goals to the United Nations Framework Convention on Climate Change's (UNFCCC) Conference of Parties (CoP) meetings. From the United Nations General Assembly to the United Nations Security Council, member states plagued by climate change continue to raise their concerns and push for consensus on addressing the management of climate change and climate-induced migration.

With this growing political momentum in mind, characterized by the willingness of international stakeholders to allow the issue of climate change and migration to be included in the agenda's of their meetings, what opportunities can the international community and relevant interlocutors pursue in efforts to develop sustainable solutions for the emerging human rights and migration challenges posed by climate-induced migration, while bolstering the protection of these migrants and assisting origin states with climate change adaption? Firstly, this paper will discuss the environmental and human impacts of sea level rise on the increasing population of climate-induced migrants. Through the assessment of Bangladesh and the following Small Island and Developing States (SIDS): the Maldives, Tuvalu, and Kiribati, as case study examples. Secondly, this paper will assess the current and ongoing momentum of policy discussions at the international political level on climate change. Thirdly, this paper will demonstrate the inadequacies of the current international legal regime for the protection of refugees, with regards to protecting the human rights of climate-induced migrants. This paper will conclude with new policy considerations that aim to guide global migration policy stakeholders, towards the development of sustainable solutions for the climate change and migration dilemma. These policy considerations will underscore the need for greater international political discussion and inter-state dialogue on climate change and migration, while emphasizing the need for more robust international legal protections for climate induced migrants, by employing both historical and scientific evidence of the environmental and human impacts of sea level rise, in Bangladesh and the following SIDS: the Maldives, Tuvalu, and Kiribati. The policy considerations will be crafted for global governance stakeholders, such as the United Nations General Assembly, the United Nations High Commissioner for Refugees, and other closely affiliated migration-focused organizations, such as the IOM.

Amidst the varied international examples of the climate-induced migrant dilemma, are two profound cases that provide both domestic and international insights. The first case is that of Bangladesh, a disaster prone state faced with ongoing SLR, climate-induced migration, and growing migration tensions with neighboring India. Assessing the situation in Bangladesh will help identify the domestic challenges and underlying causes of climate-induced IDP's and the possibility of domestic adaption to SLR. This case will also shed light on the international challenges stemming the cross-border migration of Bangladeshi climate-induced migrants, while analyzing the international legal recognition problem for these migrants. The second case assesses the SIDS, which are at risk of being submerged under ocean waters, if sea levels continue to rise at the increments predicted by the 2007 IPCC Report.[x] The small island states offer a unique insight into the legal challenges surrounding climate-induced migrant recognition, in the event of mass migration from these island states, if and when the islands are fully submerged by seawaters, or become uninhabitable. If such a scenario becomes a reality, in accordance with the 2007 IPCC Report, the citizens of these small island states must seek permanent refuge in another state. This raises fundamentally vital questions such as, to whom does the duty or responsibility of aiding, assisting, and or naturalizing climate-induced migrants from the Maldives, Tuvalu, and Kiribati fall?

2. Sea Level Rise: An Impacts Assessment

2.1 Explaining Sea Level Rise

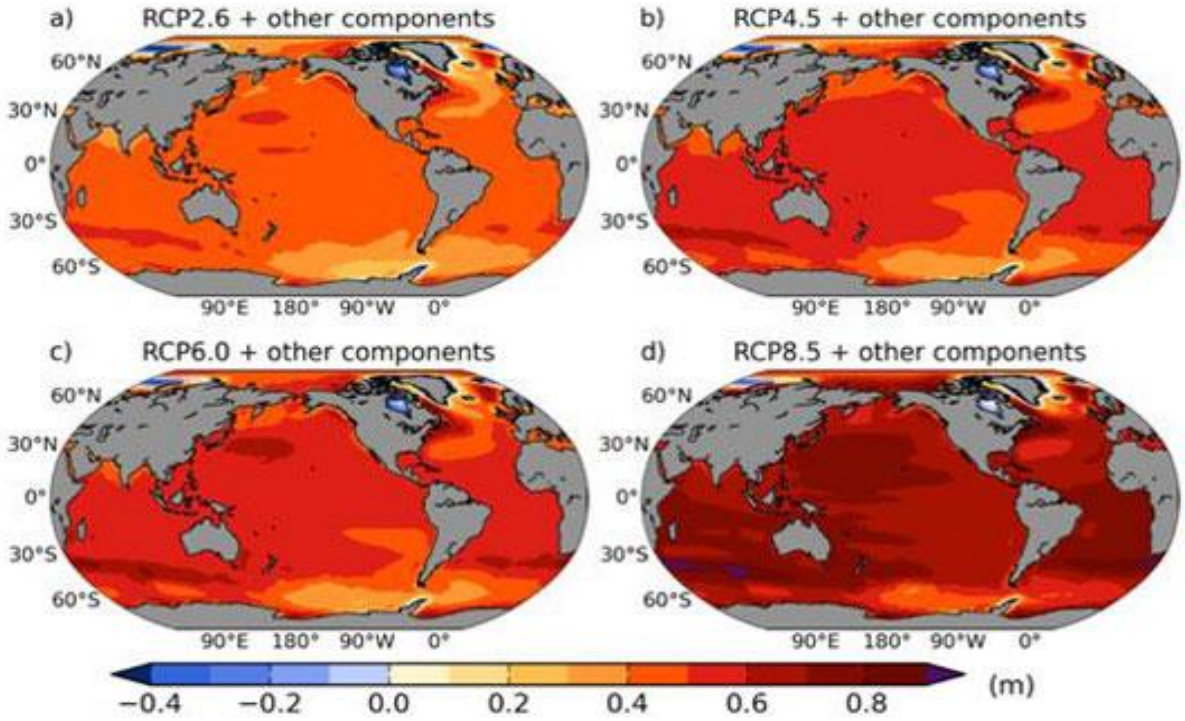
The gradual warming of the earth's surface, caused by human induced pollution, such as carbon pollution has led to a wide array of climate change impacts.[xi] The Intergovernmental Panel on Climate Change (IPCC) identifies two key events that result from climate change, which are 1) changes in human livelihoods or quality of life and 2) physical land/sea and environment changes that impact flora and fauna.[xii] The Physical Science Basis section of the Fourth Assessment Report (AR4) compiled by the IPCC stresses the impacts of climate change on ocean, land, sea, and freshwater resources.[xiii] According the IPCC Fourth Assessment Report, sea level rise (SLR) is a key threat due to its notable impact on human health, physical geography, freshwater resources, and human security.[xiv]

The Intergovernmental Panel on Climate Change defines sea level rise as a long-term change in worldwide sea levels.[xv] The IPCC Fourth Assessment Report identifies two main phenomena that contribute to sea level rise which are a) thermal expansion and b) the melting of glaciers.[xvi] The first phenomenon assessed by the report is thermal expansion, which describes the increase in volume and the decrease in density of ocean waters as they gradually warm.[xvii] In light of the scientifically proven inverse relationship between density and temperature, as the ocean begins to warm the density of ocean waters decrease, allowing the water to expand and eventually increasing ocean/sea levels.[xviii] Recent IPCC near-global ocean temperature data sets illustrate that roughly one quarter of the observed sea level rise specifically between the years 1963 and 2003, was due to thermal expansion.[xix]

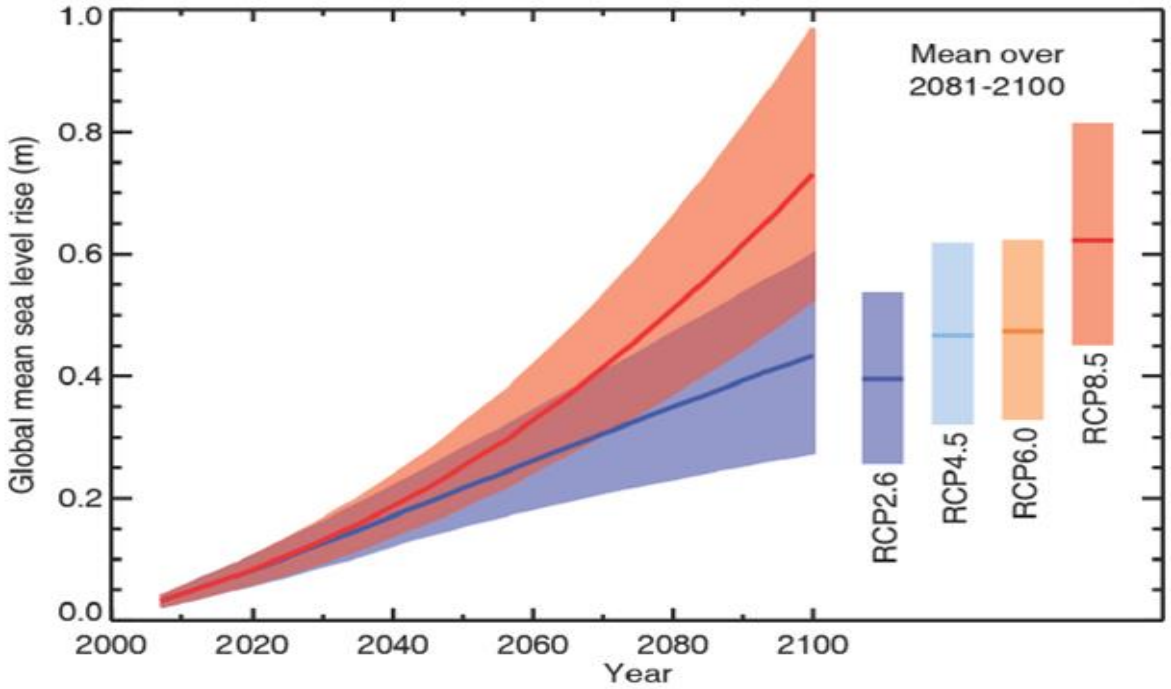
The second phenomenon assessed by the report, is melting ice (glaciers, ice sheets, or snow caps). The IPCC stresses that the degree of increase in sea levels will depend heavily on the

type of melting ice, and will vary in terms of impacts depending on whether the melting ice is a glacier, land ice, ice sheet, or an ice cap.[xx] R. Warwick and J. Oerlemans authors of Sea Level Rise, state that geomorphological estimations over the last 100 years report that most valley glaciers have retreated, which is indicative of a global trend of glacial retreat since the last Little Ice Age.[xxi] The authors claim that this consistent glacial retreat is predominantly due to the warming of the planet.[xxii] The 2007 Fourth Assessment Report illustrates that further melting of the ice caps and glaciers on the margins of Greenland and the Antarctic Peninsula would increase current sea levels by 0.5mm/per year.[xxiii] The IPCC reports that both thermal expansion and melting ice (glaciers, ice sheets, or snow caps) each individually contribute to about 50% of global sea level rise as a whole, but note that some uncertainties still remain regarding their estimates.[xxiv]

2.2 Global Warming & Current and Future Sea Level Rise Projections



xxv



xxvi

The Intergovernmental Panel on Climate Change (IPCC) notes in its Fifth Assessment Report (AR5), that global temperatures are predicted to increase within the range of 2.6°C to 4.8°C from the year 2081-2100.[xxvii] The IPCC based its projections on the findings of Representative Concentration Pathway 8.5 (RCP 8.5).[xxviii] AR5 reports that the confidence in global mean SLR projections has increased since AR4, due to the greater consensus on the use of process-based models with observations and the tracking of ice sheet dynamical changes.[xxix] AR5 reports that global mean SLR for 2081-2100 relative to the years 1986-2005, will range from 0.26 to 0.55m for RCP 2.6, 0.32 to 0.63m for RCP 4.5 and 0.33 to 0.63m in RCP 6.0, and 0.45 to 0.82 in RCP 8.5.[xxx] AR5 reports the increase of sea level rise between 1901 and 2010 as 0.19m, and from 1993 to 2010 as 0.0032m.[xxxi] AR5 employs the findings of RCP 8.5 to determine SLR from 2081-2100, which found that the projected cumulative SLR would range from 0.52m to 0.98m by the year 2100, and a total of 8-16mm from 2081-2100.[xxxii] Going a step further, AR5 reports that SLR beyond 2100 will likely occur at less than 1 m by the year 2300.[xxxiii] The IPCC AR5 report quantifies the percentage contribution of thermal expansion to SLR as roughly between 30-55% of the global mean SLR, while glacial melt as contributed between 15-35% in the twenty first century.[xxxiv] AR5 stresses that the non-uniform nature of SLR, which will likely rise roughly more than 95% of the planet's oceans by the end of the twenty first century.[xxxv]

2.3 The Impacts of Sea Level Rise

The impacts of sea level rise can be categorized into three key areas *human impacts*, *physical geography impacts*, and *resource scarcity exacerbation*.[xxxvi] The *human impacts* of sea level rise are illustrated by the 2007 Fourth Assessment Report, which conducted a future outcomes analysis per continent and region. With respect to sea level rise, the report identifies

Southeast Asia and small islands as the areas most susceptible to mortality as a result of flooding.[xxxvii] In Southeast Asia the Fourth Assessment Report states that endemic morbidity and mortality, as a result of diarrhoeal disease will be prevalent as consequence of increased flooding.[xxxviii] With regards to *physical geography impacts,* the report sheds light on areas of concern that range from region to region. In Europe, sea level rise will mean an increased susceptibility to inland flash floods, more frequent coastal flooding, and erosion.[xxxix] Northern Europe may experience an increase in potential winter flooding, causing ground instability. In Asia, glacial melt in the Himalaya Mountains will increase potential flooding and rock avalanches.[xl] Mega delta regions in Southeast Asia will experience an increase in flooding and coastal inundation.[xli] In the small islands sea level rise will intensify inundation, storm surges, erosion of beaches and other coastal hazards.[xlii] R*esource scarcity exacerbation* caused by sea level rise also varies from region to region.[xliii] In South America, the warming of sea surface temperatures will have adverse affects on Mesoamerican Coral reefs and shift the location of south-east Pacific fish stocks.[xliv] In small islands coral bleaching and the erosion of beaches will directly impact local resources, such as fishing.[xlv] The paper will focus on the environmental, and human impacts of sea level rise in Bangladesh, and the following SIDS: Maldives, Kiribati, and Tuvalu.

2.4 Case Study: Sea Level Rise and Bangladesh

According to the IPCC Bangladesh is among the worst affected states by sea level rise. Located in South-East Asia it is often referred to as a disaster prone nation due to its susceptibility to various natural disasters such as storm surges and flash floods.[xlvi] The United Nations Development Programme, reports that a 0.1m increase in sea levels will inundate and

submerge 2, 500 square kilometers of coastal land beneath seawaters, which totals up to 2% of the nation's total landmass.[xlvii] While at 0.3 m roughly 8 000 square kilometers of land will be submerged under seawaters. Bangladesh is surrounded by two major rivers, which are the Ganges and Brahmaputra and borders the Bay of Bengal to the south.[xlviii] While blessed with immense agricultural capacity due to its monsoon climate and a multiplicity of rivers, Bangladesh is also cursed with re-occurring natural disasters.[xlix] The country's close proximity to three bodies of water and it's monsoon climate make it even more susceptible then most states in the region to natural disasters. These events which range from flash floods to storm surges not only devastate the environment, but also further stress already dire living standards in Bangladesh.[l]

Hossain and Hossain of the Bangladeshi Institute of Forestry and Environmental Science claim that the history of Bangladesh is characterized by natural disasters that have challenged and in most situations ravaged local populations over the course of a millennia.[li] Corroborating this claim are Dasgupta et al authors of Cyclones in a Changing Climate: The Case of Bangladesh, who claim that between the years 1877 and 1995 Bangladesh endured 154 cyclones.[lii] These cyclones consist of 43 severe cyclonic storms, 43 standard cyclonic storms, and 68 tropical depressions.[liii] The Bangladesh Climate Change and Action plan 2009 reports that the country will face a severe cyclonic storm every three years due to climate change, while the IPCC recognizes Asian mega deltas and deltas, as area most vulnerable to the impacts of rising sea levels.[liv] Given that the Ganges-Brahmaputra delta is home to the highest concentration of people, in an Asian deltaic area, it is therefore the most susceptible to sea level rise. There are several notable human and environmental impacts that arise from SLR in this region, considering that Bangladesh borders the Ganges River to the south, and that the Brahmaputra passes through the mainland.

2.4.1 The Environmental Impacts of Sea Level Rise in Bangladesh

The United Nations Development Programme (UNDP) stresses the detrimental effect of salinity intrusion, which describes the flowing and mixing of saltwater with freshwater reserves, either above ground or underground.[lv] Due to the inability of soil to withstand the toxicity, acidity, and salinity of ocean waters, SLR directly reduces the agricultural capacity of Bangladesh.[lvi] The Bangladesh Agricultural Research Council (BARC) reports an annual net loss of 4420 million kilograms of wheat per year resulting from soil degradation, caused by salinity intrusion. This capacity loss according to BARC can be quantified as a monetary loss of $587 million, per annum.[lvii] The UNDP warns that a 3mm SLR rate as indicated by the IPCC AR4 report will reduce total rice production in Bangladesh by 500 million kilograms, as a direct consequence of salinity intrusion and soil degradation.[lviii] Salinity intrusion not only destroys soil and crops but also robs tens of thousands of people of their livelihoods, states Dr. Tasneem Siddiqui of the University of Dhaka. She asserts that such a great loss in agricultural capacity will only make Bangladesh even more dependent on foreign aid.[lix]

SLR in Bangladesh will also lead will also lead to land inundation. SLR will lead to 17, 000 square kilometers of coastal land being submerged beneath seawaters. The IPCC AR4 reports that a 1.5 meter rise in sea levels will submerge roughly 22, 000 square kilometers of coastal land and devastate 18 million coastal inhabitants.[lx] The authors Kont et al identify three types of shores as most vulnerable to the harmful effects of salinity intrusion, erosion, and land inundation and they are shoaly, silty, and sandy.[lxi] Bangladeshi shores are primarily either shoaly or sandy. The UNDP forecasts that a potential 1m rise in sea levels would erode sandy beaches by roughly 100m-500m.[lxii] Hossein & Hossein, claim that salinity intrusion will also destroy the

detailed network of mangrove trees that act as coastal binders or stabilizers for the Bangladeshi coast.[lxiii]

Among the greatest consequences of SLR and salinity intrusion in Bangladesh is the loss of the Sundarbans, which will occur at 1m SLR state Hossein & Hossein. Spread across three districts and covering roughly 6, 500 square kilometers, the Sundarbans is the world's largest, and most intricate mangrove forest and is located in southwestern Bangladesh.[lxiv] The Sundari, are a distinct mangrove species that are native to the Sundarbans. These rare mangrove trees are constantly plagued by a top-dying disease that is caused by increased salinity in the water and soil of the Sundarbans. Hossein & Hossein assert that salinity intrusion in this fragile forest ecosystem will not only alter the soil and water but will also change the natural habitat of the Sundarbans altogether.[lxv] Such a change will not only affect the Sundari, but all other flora, fauna, and aquatic life that currently thrive in this ecosystem. Salinity intrusion in the Sundarbans will alter the salt levels in the Mangrove forest water bodies, and will allow other aquatic organisms to move inward.[lxvi] The inward movement of salt-water aquatic organisms into the Sundarbans is indicative of the degree of salinity intrusion, and the rate of unnatural change in the ecosystem. The invasion of salt-water organisms will inevitably create a toxic environment for native organisms and alter the aquatic ecosystem of the Sunderbans.[lxvii] Home to the roughly 362 endangered Royal Bengal tigers, the Sundarbans are integral in ensuring that this rare and dying species does not go extinct.[lxviii]

2.4.2 The Human Impacts of Sea Level Rise in Bangladesh

This section illustrates the human impacts and stresses caused by sea level rise in Bangladesh. The human impacts explored in this section will identify the main health and resource stresses caused by climate change that lead to climate-induced migration in Bangladesh.

2.4.2.1 The Vulnerable Group

Hossein & Hossein identify a coastal population of 35.1 million Bangladeshis living on the coast of Bangladesh. This group represents 28% of the total population of Bangladesh.[lxix] Hossein & Hossein claim that the population density is greater in the interior coast, and far exceeds the density of the exterior coast. The authors identify the total number of coastal households as 6.8 million, out of the total population of Bangladesh, which is 35.1 million.[lxx] They indicate that of the total number of coastal inhabitants, roughly 52% are very poor.[lxxi] The Fourth Assessment Report (AR4) forecast warns that a SLR of 1 meter will adversely impact or forcibly displace 15 million individuals residing in coastal areas in Bangladesh.

2.4.2.2 Reduced Food Supply

Among the greatest impacts of SLR for the people of Bangladesh is the threat posed to food security within the country and the environmental consequences of salinity intrusion on the economic well being of many coastal inhabitants. Employing the arguments of the author Dalby, Hossein & Hossein shed light on a new category of people, the "ecosystem people."[lxxii] This

concept describes local populations that survive and ensure that their basic needs are effectively met by their own physical labour via the harvesting of various foods and land cultivation.[lxxiii] Dalby refers to "ecosystem people" as environmental refugees that are displaced as a result of climate-induced disasters.[lxxiv] Hossein & Hossein report that a 0.45 m of SLR, will lead to the displacement of roughly 5.5 million coastal inhabitants of the Ganges delta in Bangladesh. Not only will such an event cause significant land inundation and submergence but will also compel coastal inhabitants to migrate into the already over populated interior, out of necessity.[lxxv] Hossein & Hossein identify three fundamental threats to basic security (housing, clothing) and food security. **1)** SLR would lead to agricultural lowland flooding, land inundation, and increased salinity of soil due to salinity intrusion, which leads to a crop reduction and an overall decrease in the food supply.[lxxvi] An increase in SLR will reduce the overall yield of rice crops by 0.2 million metric tons. **2)** A further increase in SLR will exacerbate poverty and reduce the purchasing capacity of the average Bangladeshi.[lxxvii] **3)** A rise in sea levels will displace roughly 14.8 million Bangladeshis and submerge or inundate 29, 846 square kilometers of coastal land beneath seawaters, which inevitably leaves these migrants both homeless and landless.[lxxviii]

2.4.2.3 Bangladeshi Migration to India

Hossein & Hossein claim that further SLR in Bangladesh, may lead to mass migration within the Ganges-Brahmaputra deltaic region. Such large-scale migration will eventually place a strain on already stressed relations between Bangladesh and India, who are currently managing already mounting resource tensions.[lxxix] Authors Nishat and Faisal 2000, shed light on the existent long standing disputes between Bangladesh and India on water distribution in the Ganges

River, border security, and refugees.[lxxx] Hossein & Hossein claim that any mass migration of climate refugees from Bangladesh to India may encourage some individuals to incite group conflicts. Architesh Panda author of Climate Induced Migration from Bangladesh to India: Issues and Challenges notes that migration from Bangladesh to India is not a new phenomenon and has been occurring since the early twentieth century due to a variety of reasons from economic worries to Hindu uncertainty in a predominantly Muslim nation.[lxxxi] However, Panda highlighted the dire nature of the environmental situation in Bangladesh, given the increasing scarcity of resources due to environmental degradation, coupled with population growth, and exacerbated by reoccurring natural disasters.[lxxxii] With the environmental situation as such, Panda notes that climate-induced migration to India from Bangladesh may increase going forward, given that Bangladeshi migrants share linguistic and cultural similarities to Indians living in the West Bengal province.[lxxxiii] They identify SLR as not only a human security concern but also a direct threat to the national security of Bangladesh.[lxxxiv]

2.4.2.4 The Spread Vector Borne Diseases

SLR related diseases remain the leading cause of death in Bangladesh to date, with respect to climate change.[lxxxv] The 2007 United Nations Development Programme report identifies 1) diarrhoeal disease and 2) cholera as the key sources of human mortality rates in Bangladesh and as a direct consequence of SLR.[lxxxvi] Bangladesh has a history of cholera, which is prevalent due to the country's disaster prone environment and geography. Sarwar & Khan authors of Sea Level Rise- A Threat to the Coast of Bangladesh, claim that a) salinity intrusion caused by SLR and b) increased water density together form a fertile breeding ground for cholera

bacteria and germs.[lxxxvii] As SLR continues, and floods various coastal locations, the cholera disease continues to travel and spread in the water itself.[lxxxviii] The UNDP identifies SLR as a human security, flood, and health risk.[lxxxix] The 2000 World Bank report recognizes accelerated flooding caused by SLR, as a principle cause of diarrhoeal disease.[xc]

2.5 Coping with Sea Level Rise in Bangladesh: Assessing Adaption

This section describes the National Adaption Programme of Action of the Government of Bangladesh, and identifies current adaptation activities in Bangladesh. This section supports the final policy options and the proposed recommendation by shedding light on the official policies and current efforts of local and international climate change adaption stakeholders in Bangladesh.

2.5.1 National Adaption Policies and Action Plans

In 2005, the Government of Bangladesh (GoB) in alignment with its obligation under the United Nations Framework Convention on Climate Change (UNFCCC) developed a National Adaption Program of Action (NAPA).[xci] The GoB NAPA identifies the following fifteen priority projects: 1) coastal afforestation, 2) providing drinking water to coastal communities, 3) land-water zoning for water management institutions, 4) climate change adaption information disemniation to vulnerable communities, 5) developing a flood shelter and information assistance centre, 6) mainstreaming climate change adaption with existing policies and programmes across various sectors, 7) inclusion of climate change into education curriculums, 8) enhancing infrastructure resliance to climate change, 9) developing eco-specific adaptive knowledge, 10)

promotion of research on drought, flood, and saline tolerance, 11) promoting salt resistant crop use, 12) adaption to new agricultural systems in areas prone to flash flooding, 13) promoting new and diversified fish culture practices, 14) promoting adaption to the use of salt tolerant fish in coastal areas, 15) exploring options for insurance to cope with enhanced climatic disasters.[xcii]

2.5.2 Current and Active National Adaption Programmes and Projects

The United Nations Development Programme (UNDP) reports in its Community Based Adaption to Climate Change Through Coastal Afforestation in Bangladesh Project report (CBACC-CF Project), that the Government of Bangladesh (GoB) seeks to develop and apply an adaption programme in the five coastal districts most impacted by climate change, to reduce their vulnerability to the affect of SLR.[xciii] Dhaka will strive to introduce new forms of income generation and will bolster the resilience of coastal communities to the effects of climate change, in partnership with the UNDP. The strategy utilized by the joint UNDP and GoB task force will be community-based adaption, which was named the Forest, Fish, and Fruit (FFF) model.[xciv] This model aims to develop a green shield around the most vulnerable communities in Bangladesh by encouraging the planting of productive and protective vegetation with an elevated mound and a ditch like structure, which will host fish nursery ponds.[xcv] The UNDP CBACC-CF-Report states that 14, 350 households as having benefitted from the FFF model and have managed to protect their natural capital despite the effects of climate change.[xcvi] The Global Environment Facility's Least Developed Countries Fund (GEF-LDCF) funded this project, which is in line with it aim to increase local government and community resilience to climate change.[xcvii]

2.6 Case Study: Sea Level Rise and Small Island States (the Maldives, Tuvalu, and Kiribati)

The Maldives is comprised of 1, 190 tropical islands that together form one of many archipelagos in the Indian Ocean.[xcviii] The Ministry of Environment of the Maldives reports that the population of the capital Male alone is roughly 104, 403, and his home to one third of the total population of archipelago. Sea level rise in the Maldives is currently occurring at 1.7mm per year.[xcix] The Maldivian Ministry of Environment warns that a maximum sea level rise of 7 mm per year will cause SLR to be 70cm above mean sea levels by the year 2050, and this phenomenon will become an annual event after the year 2050.[c] Maxine Burkett of the East West Centre, and author of In Search of Refuge, reports that in the year 2025, portions of Male will most inevitably become flooded as a result of SLR.[ci] The Republic of the Maldives in its Strategic National Action Plan for Disaster Risk Reduction and Climate Change Adaption 2010-2020, underscores the urgent need for a disaster preparedness plan. Although the 199 inhabited islands do not suffer from frequent natural disasters, a disaster preparedness plan is crucial in preparing the Maldives for what it refers to as significant future disasters.[cii] The report identifies the Eastern sector of the Northern and Central Islands as highly susceptible to tsunamis, while the Northern Islands are highly vulnerable to storm surges and cyclones.[ciii] The most notable vulnerability resulting from climate change in the Maldives is sea-level-rise. The National Action Plan notes that 80% of the Maldivian islands are below the 1 meter above sea level threshold for safety, which proves challenging given the flat topography of the islands, with the largest island spanning up to 5 kilometers wide.[civ]

Fewer in number than the Maldivian islands, Tuvalu, a south-west Pacific nation, consists of nine relatively tiny islands, which span 1, 000 kilometers from north to south and have a total landmass of 26 square kilometers.[cv] Located in the midst of a coral atoll spanning 7 kilometers

long and 400 meters wide, Tuvalu's capital Funafuti is populated by 4000 people, of the island nation's 11, 000 total inhabitants.[cvi] The International Federation of the Red Cross (IFRC) reports the total population density for Tuvalu as 378.9 individuals per square kilometer, and ranks the Pacific island state as among the world's most densely populated nations, surpassing both Japan and India.[cvii] Given that the highest point in Tuvalu is only 4.5 meters above sea level, The IFRC warns that further SLR would have dangerous impacts on Tuvalu.[cviii] The IFRC also notes that in the event of a storm surge or tsunami that there exist no safe zones, high enough to avoid the impending devastation caused by fast moving winds and flooding.[cix]

The Republic of Kiribati consists of three distinct groups of islands, which are the Gilbert, Phoenix, and Line Islands.[cx] All three of the island groups, straddle both the Equator and the International Date Line. The Gilbert Islands span a total latitudinal distance of 700 kilometers north of the equator and lie to the West of the International Date Line.[cxi] These islands house the capital of Kiribati, South Tarawa, and are both fully occupied and customarily owned.[cxii] The Phoenix Islands consist of eight islands altogether, and cover a total latitudinal distance of 200 to 600 kilometers south of the Equator and lie to the east of the International Date Line. The Line Islands represent the final group of Kiribati islands and are dispersed across 2, 000 kilometers of ocean waters, and are 500 kilometers north of the Equator, and comprise half of the total land of the entire Republic of Kiribati.[cxiii] The South Pacific Regional Environment Programme identifies the higher latitudinal zones to the north and south of Kiribati, as most susceptible to more severe cyclonic activity and increased storm surges.[cxiv] The United Nations Pacific Group (UNPG) reports the total population of Kiribati as 110, 000, and indicates that nearly half the entire population resides in the South Tarawa alone[cxv]. The UNPG, highlights the potentially enormous challenges of relocating populations from South Tarawa elsewhere, in the face of potential

disaster, given the lack of available space.[cxvi] The small island states presented above, all provide crucial insights into the adverse impacts of sea level rise on human life, the environment, ecosystems, and unique flora and fauna in all three islands.

2.6.1 The Environmental Impacts of Sea Level Rise in the Small Island States

In 2001 the United Nations published the First National Communication of the Republic of the Maldives to the United Nations Framework Convention on Climate Change. The document outlined the four major environmental impacts of SLR in the Maldives, which are land inundation, coastal erosion, coral bleaching, and water scarcity.[cxvii] The Maldives is most disadvantaged by its physical composition, which is predominantly coral limestone, making the islands more indefensible to the effects of SLR, than other small island states.[cxviii] The islands are at risk of inundation from rising ground waters, as well as overtopping dune ridges, and face future devastation if seawaters continue to rise in accordance with the IPCC predictions. The report notes that 80% of the Maldivian islands are less than 1 meter above sea level, and that none of the islands are even close 3 meters above sea level.[cxix] Further addressing the issue of limited space in the Maldives and the relatively small size of the Maldivian islands, the report finds that 50% of currently inhabited areas and 45% tourist resorts are threatened and directly impacted by beach erosion if sea levels continue to rise.[cxx] The Maldivian Ministry of Planning, Human Resources and Environment, indicates that several of the islands are already suffering from freshwater salination, general salinity intrusion, and reduced natural and agricultural vegetation capacity.[cxxi] The Centre for Tropical Coastal Management Studies at University of Newcastle upon Tyne, warned that 0.5 and 1-meter sea level rise by 2030, in accordance with

IPCC predictions, would exceed beyond the ability of coral reefs in the Maldives to grow with rising waters. The Centre indicates that such an event would slowly increase the height of the waves that currently impinge on the islands shores, and cause potentially problematic impacts.[cxxii] The IPCC report notes that any increase in sea levels from 50 centimeters to 1 meter could exacerbate beach erosion, inundation, flooding, land loss, and would transform some islands in the Maldives into sandbars, causing an overall reduction in dry and habitable land.[cxxiii]

The Tuvaluan Minister of Finance and Economic Planning Lagitupu Tuilimu, referenced scientists predictions regarding the impacts of sea level rise in Tuvalu, and stressed that in fifty years the Tuvaluan islands will be completely submerged.[cxxiv] Storm surges and cyclones continue to increase in frequency, and pose a threat to Tuvalu's delicate ecosystem.[cxxv] Given the Tuvaluan islands lack of a continental shelf the effects of storm surges and cyclones are often exacerbated. The islands have to date, endured a loss of 3 meters of beach front, which is further exacerbated by increasing storm surges that continue to threaten Tuvaluan land mass and trees.[cxxvi] Access to freshwater remains limited due to salt-water incursion, resulting from storm surge activity, and local pollution.[cxxvii] This remains a key challenge for Tuvalu, which relies heavily on rainwater for consumption. Salinity intrusion resulting from sea level rise, has already devastated 6 of the 8 Tuvaluan island's communal crop gardens and coral bleaching has already depleted artisanal fisheries.[cxxviii] Rising sea levels and ocean temperatures are also threatening sea grass beds, mangrove trees, and other coastal and aquatic ecosystems, and directly impact the Tuvaluan islands ability to meet the needs of its population in terms of sustenance.[cxxix] Agriculture on the islands is also directly impacted by salinity intrusion, which is already adversely impacting the production of the traditional staples, Taro and Giant Taro (Pulaka), in Tuvalu.[cxxx]

Analyzing the environmental impacts of SLR in Kiribati, the Inventory of Conflict and Environment (ICE), references the World Bank claim, that by the year 2050 Tarawa will be 54% inundated to the south and roughly 80% to the north.[cxxxi] The ICE assessment notes that salinity intrusion into freshwater ponds is already killing both coconut trees and milkfish in Kiribati.[cxxxii] The South Pacific Environment Programme reports that salinity intrusion has not affected coconut trees but is already threatening subsistence crops such as paw paw, baibai, the commercial production of copra, and breadfruit.[cxxxiii] The first known and reported instances of ground water contamination due to SLR, was in the late 1970's.[cxxxiv] Much like the Maldives, Kiribati is also comprised of coral atolls, which are currently threatened by the growing force of impinging tides, as well as increasing water salinity and temperatures.[cxxxv] A clearly visible sign of the impacts of SLR is the devastated plant life in Tarawa.[cxxxvi] The ICE reports that dead and dying palm trees decorate Tarawa's coastlines, and that increasing salinity in Kiribati's soil continues to negatively impact agricultural crops.[cxxxvii]

2.6.2 The Human Impacts of Sea Level Rise in the Small Island States

This section illustrates the human impacts and stresses caused by sea level rise in the following SIDS: the Maldives, Tuvalu, and Kiribati. The human impacts explored in this section will identify the main health and resource stresses caused by climate change that lead to climate-induced migration in the Maldives, Tuvalu, and Kiribati.

2.6.2.1 Reduced Freshwater and Food Supply

Salinity intrusion resulting from sea level rise continues to threaten human security in the Maldives, Tuvalu, and Kiribati, causing a reduction in drinkable freshwater, and staple food crops.[cxxxviii] The Commonwealth Secretariat Report on the Maldives, stresses that further increases in ocean and sea temperatures will negatively impact the Maldivian fishing industry, by altering tuna migration patterns and reducing fish stocks in the long run. The Secretariat also notes that rising temperatures will also reduce bait fish stocks as coral reefs become bleached and symbiotic algae begin to die off.[cxxxix] On the issue of agricultural yield and or production capacity, the Secretariat stresses the damaging impact of groundwater salination on staple/subsistence crops such Taro.[cxl] The Commonwealth funded report also identifies salination as the root cause of the mango tree dye off, in several of the islands and groundwater salination continues to threaten freshwater dependent vegetation and other deeply rooted trees in the Maldives.[cxli]

In Tuvalu groundwater salination resulting from sea level rise is also depleting the agricultural production of Taro or pulaka. coconuts, panadanus fruit, and bananas. Drinkable freshwater is also decreasing in its availability across the Tuvaluan islands.[cxlii] In a report for the United Nations Secretary General, the Tuvaluan government referenced IPCC forecasts for coral bleaching, which predict yearly bleaching and coral die off.[cxliii] The government of Tuvalu identifies coral die off as a key reason for further reductions in Tuvaluan fish stocks.[cxliv] A reduced fish stock will strain the health of the Tuvaluan population, given that fish is a key source of protein for the small island state.[cxlv]

Local populations in Kiribati are reporting an overall reduction in agricultural crop production.[cxlvi] Staple/subsistence crops such as Taro and other forms of traditional vegetation are

also quickly dying off, due to increasing water salinity.[cxlvii] According to the Ministry of Fisheries and Marine Resource Development, Kiribati has the highest rate of ciguatera and other forms of fish poisoning directly linked to warming ocean waters resulting from climate change.[cxlviii] The Ministry has also reports that the quantities of ciguatoxic fish (fish with ciguatoxin, caused by ciguatera poisoning) continue to increase, in the reef areas surrounding Kiribati. This proves particularly alarming, given that local populations in Kiribati, similar to their counterparts in the Maldives and Tuvalu, depend on fish as a staple food and a key source of protein.[cxlix]

2.6.2.2 Human Health Impacts

Among the greatest challenges faced by small-island states, as a result of sea level rise are flash flooding, storm surges, and the increase in vector borne diseases.[cl] According to the report published by the Maldivian Ministry of Housing, Transport, and Environment for the Maldives Partnership Forum, there are four key areas of health concern, in the Maldives.[cli] 1) Mental stress and anxiety stemming from the uncertainty and destructive nature of likely storm surges are creating a strain on the psychological well being of the islanders.[clii] 2) An increase in the prevalence of water borne illnesses such as diarrhoael disease resulting from an inability to access fresh water and sanitation, has led to an a greater morbidity of adults and children, who often suffer from acute gastroenteritis.[cliii] The Ministry also warns that cholera and other water borne illnesses could make a return to the Maldivian islands, so long as water contamination exacerbated by sea level rise continues. 3) The prevalence of vector borne disease exacerbated by sea level rise is becoming a notable problem.[cliv] The Ministry reports the re-emergence of scrub typhus, malaria, dengue, and chikungunya, the latter of which is a rare viral fever that was first

diagnosed in 2006. 4) Malnutrition is a growing issue in the Maldives and is ravaging the child population in the islands, especially those residing in the atolls.[clv] The combination of malnutrition and diarrhoael disease, places Maldivian children at greater risk of morbidity.[clvi]

In Tuvalu, the National Adaption Programme of Action compiled with the United Nations Framework Convention on Climate Change in mind, identifies pooling waters resulting from flooding, as an ideal breeding ground for vector borne diseases, that thrive in contaminated waters often mixed with septic waste.[clvii] Similar to the case of the Maldives, Tuvalu faces the risk of an increase in the prevalence of dengue fever and malaria, caused by sea level rise and septic pollution.[clviii] The World Bank in its study of Tarawa and the impacts of climate change on Kiribati, reports that diarrhoael disease could be exacerbated by further sea level rise and that increased contamination of coastal waters may lead to yet another cholera outbreak in Tarawa.[clix] A joint study for the International Journal of Environmental Research and Public Health warns that overcrowding in urban areas and the increased contamination of groundwater due to septic mixing and salinity intrusion will further exacerbate the cases of typhoid fever, dengue, and other waterborne illnesses in Kiribati.[clx] The Bank flags malnutrition as a key area of concern given that the reduction in available subsistence crops, and fish as a result of ciguatera poisoning.[clxi] This lethal combination will likely increase mortality in Kiribati.[clxii]

2.7 Coping with Sea Level Rise in the SIDS: Assessing Adaption

This section describes the National Adaption Programme of Action of the Governments of the following SIDS: the Maldives, Tuvalu, and Kiribati, and identifies current adaptation activities in Bangladesh. This section supports the final policy options and the proposed recommendation by shedding light on the official policies and current efforts of local and international climate change adaption stakeholders in the Maldives, Tuvalu, and Kiribati.

2.7.1 Adaption Policies

The Government of the Maldives (GoM), in its Initial National Communication to the United Nations Framework Convention on Climate Change (UNFCCC) in 2001 titled the National Adaption Programme of Action (NAPA), formally proposed twelve high-priority mitigation and adaption projects, that required external funding given Male's lacking financial capacity.[clxiii] There 12 projects are: 1) the integration of future climate change scenarios in the safer island strategy, 2) coastal protection of safer islands, 3) coastal protection of Male international airport, 4) develop appropriate technologies and improving storage facilities for freshwater, 5) developing appropriate wastewater treatment technologies, 6) increasing the resilience of local food production, 7) improving the health status of the population by preventing and managing vector-borne diseases, 8) developing sustainable building designs to aid island communities, 9) investigating alternative live bait management to reduce fishery sector vulnerabilities to climate change, 10) developing coastal protection measures, 11) increasing the resilience of coral reefs to climate change, and 12) developing flood control measures for vulnerable islands.[clxiv] The Government of Tuvalu (GoT), under the auspices of the UNFCCC

formulated its NAPA, which aims to enhance community livelihood and promote sustainable development by reducing the adverse effects of climate change.[clxv] The GoT NAPA will focus on the following seven priority projects: 1) increasing the resilience of coastal areas and settlements to the effects of climate change, 2) increasing subsistence growth and salt-resistance crop growth, 3) developing adaption strategies to frequent water shortages by improving water conservation techniques and water collection accessories, 4) strengthen community health through control of vector borne disease, 5) strengthening community based conservation programmes of highly vulnerable near-shore marine ecosystems 6) adaption to near-shore coastal shellfish and the promotion of coral reef ecosystem productivity, and 7) strengthening community disaster preparedness and response potential.[clxvi] In alignment with its obligations under the UNFCCC, the Government of Kiribati (GoK) also developed a NAPA.[clxvii] The GoK's NAPA will focus on the following eleven projects: 1) water resource adaption, 2) well improvement, 3) coastal zone resilience enhancement, 5) improving environmental climate change information and monitoring, 6) project management institutional strengthening for NAPA, 7) upgrading meteorological services, 8) agricultural food crop development, 9) coral reef restoration monitoring and stock enhancement, 10) upgrading and enhancing the resistance of coastal defenses and causeways, and 11) greater participation of the GoK in regional and international forums on climate change.[clxviii]

2.7.2 Current and Active Adaption Programmes and Projects

The UNDP notes that the frequency of discrete adaption strategy projects in the Maldives is quite low, relative to other South-East Asian nations, while all current initiatives directly address the priority targets indicated in the NAPA.[clxix] To support Male's efforts, the European

Union in partnership with the World Bank established a Climate Trust Fund in December 2009, to facilitate policy formulation and integration, and was funded by the European Commission, Germany, Australia, Norway, Sweden, the United States, the Least Development Countries Fund (LDCF), and France. [clxx] In response to the GoT's development of its NAPA, UNDP officially signed an agreement to continue its partnership with Tuvalu on the achievement of the climate adaption goals set in the NAPA.[clxxi] This joint initiative between the UNDP and the GoT, will be funded $4.2 million by the LDCF and the Global Environment Facility (GEF). The GoT will utilize this funding to address two key sectors, which are coastal fisheries and disaster risk management.[clxxii] The World Bank in efforts to aid the GoK in its climate adaptation efforts has sponsored and co-funded with the GEF, LDCF, and Japan, the Kiribati Adaption Programme (KAP).[clxxiii] This programme began in 2003 and will end in 2016. KAP is overseen by the Office of the president of the World Bank (WB) in partnership with the GoK, and strives to reduce Kiribati's vulnerability to climate change through initiatives such as water supply management, coastal management protection measures (mangrove re-plantation), and population settlement planning to reduce risks.[clxxiv]

3. Defining Climate-Induced, Migrants & IDP's

The modern day father of the climate migrant movement, Mr. Essam El-Hinnawi of the United Nations Environment Programme (UNEP) first coined the term environmental refugee and produced the most widely referenced term to describe climate-induced migrants.[clxxv] He defines environmental refugees as, "people who are forced to leave their traditional habitat temporarily or permanently because of a marked environmental disruption (natural or human induced) that jeopardizes their existence and seriously threatens their quality of life.[clxxvi] Hinnawi further defines an "environmental disruption" as any physical, chemical, or biological changes in an ecosystem (or resource base), that renders it temporarily or permanently unsuitable to support human life.[clxxvii] The International Organization for Migration (IOM) employs the term environmental migrants, to describe individuals who flee their habitual homes for compelling reasons, such as sudden and progressive changes in the environment that adversely impacts their lives and living conditions.[clxxviii] Environmental migrants include individuals who are forced to relocate both within their own borders and abroad, either temporarily or permanently.[clxxix]

Bonnie Docherty and Tyler Giannini authors of Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees, emphasize the need for a distinction between the different types climate-induced migrants, and group these migrants into two categories. 1) *Voluntary migrants*, who leave their homes and habitats, in search of a better life elsewhere due to environmental degradation. 2) *Forced migrants*, who flee their homes as a result of a natural disaster that has caused large scale or irreparable devastation to their habitats, such as the sinking of their island beneath sea levels. The authors critique El-Hinnawi's definition of climate-induced migrants, which labels them, as environmental refugees, and limits both their scope and suffering, by only addressing forced climate migrants, as opposed to both forced and voluntary

climate migrants as a unified group. Norman Meyers author of Environmental Exodus in conjunction with Jennifer Kent, defines climate-induced migrants as, "those that can no longer gain a secure livelihood in their homelands, and as a result, feel that they have no alternative but to seek sanctuary elsewhere."[clxxx]

The IOM actively rejects the reference to climate-induced migrants as environmental refugees and all casual uses of the word refugee, given that such references lack legitimacy in international law.[clxxxi] This position is held by the IOM, the international political community, the United Nations High Commissioner for Refugees (UNHCR), and the United Nations altogether.[clxxxii] Beniot Mayer author of The International Legal Challenges of Climate-Induced Migration: Proposal for an International Legal Framework, advocates for the active use of the term climate-migrants, as opposed to environmental migrants. Mayer claims that the referring to these migrants as environment instead of climate migrants provides political actors with the opportunity to shift blame to from the international community to the environment. However, if these migrants are identified as climate-migrants, the onus to protect falls upon the international community, which can then be held accountable for its contribution to climate change. Furthermore, the use of the term climate migrants, and the subsequent onus stemming from such a classification, automatically places the plight of these migrants squarely on the agenda of the international community, given that state actors would no longer be able to evade blame.

Echoing the IOM, the UNHCR also advised against the use of terms, such as environmental and climate refugees, and any use of the word refugee, outside of the international legal regime for the protection of refugees.[clxxxiii] UNHCR and the IOM discourage any unsupported use of the term refugee, given that it may undermine the international legal regime for the protection of refugees.[clxxxiv] Md Shamsuddoha and Rezaul Karim Chowdhury authors of

Climate Change Induced Forced Migrants: In Need of Dignified Recognition Under a New Protocol, shed light on the new practice of international organizations, which have begun referring to this new type of migrant as environmentally displaced persons. Framing this type of migration as environmental displacement, offers climate-induced migrants greater protection under international law, which recognizes internally displaced persons (IDP's) as a protected group, of which the primary responsibility to protect falls upon their home state.[clxxxv] Md Shamsuddoha and Rezaul Karim Chowdhury, define IDP's as those who flee natural and man-made disasters, but remain within the borders of their country.[clxxxvi] Referencing the Guiding Principles on Internal Displacement, which identify the rights and guarantee the protection of IDP's in all phases of displacement and International Humanitarian Law, Shamsuddoha and Chowdhury, identify the primary responsibility of IDP protection, as solely belonging to their home state and not the international community.[clxxxvii] Considering UNHCR has specific mandates with regards to protecting IDP's, climate-induced migrants, if classified as environmentally displaced persons, will receive greater protection from organizations such as the UNHCR, the IOM, and their key partners.[clxxxviii]

4. The Scale and Quantity of Climate-Induced Migrants

4.1 Forecast of Future Climate Induced Migration

Docherty and Tyler Giannini, cite the author Norman Myers, who claimed in 1995 that sea level rise will place 26 million people at risk, in Bangladesh alone.[clxxxix] The non-governmental organization titled Displacement Solutions, reports that 100, 000 people in Kiribati, and 10, 000 people in Tuvalu, are at great risk of immanent displacement due to further sea level rise, but does not provide specific numerical migration statistics for the Maldives.[cxc] The International Organization for Migration (IOM), estimates future climate-induced migration as roughly 200 million by the year 2050, and claims that these migrants will move within their country or across borders, either temporarily or permanently.[cxci] There is no consensus on the exact number of environmentally displaced persons/climate-induced migrants. In response to this lacking consensus, The Office of the United Nations Secretary General, has deemed all estimates between 50 million-350 million by the year 2050, as credible.[cxcii]

4.2 Actual Climate-Induced Migration

The IOM already assesses climate change as a key cause of substantial human migration, and reports that in 2008, 20 million persons were displaced as a direct result of extreme weather events.[cxciii] This alarming number of displaced persons dwarfs the 4.6 million IDP's fleeing conflict and violence, in the same year.[cxciv] In 2011, roughly 60, 000 coastal inhabitants of the Khulna district of Bangladesh were forcibly displaced and became IDP's as a result of permanent coastal flooding due to sea level rise.[cxcv] The Equity and Justice Working Group Bangladesh, reports that 17 million climate-induced Bangladeshis have already fled to India, albeit illegally,

and have settled in the states of Assam and Tripura.[cxcvi] Other Bangladeshi climate-induced migrants have fled to Karachi in Pakistan, and have settled in urban slums. These Karachi based Bangladeshi climate-induced migrants, work illegally as deep-sea fisherman, in order to provide for their families.[cxcvii] The Equity and Justice Working Group Bangladesh, also reports notable breaches of international human rights obligations in both migration cases.[cxcviii] There are no recorded statistics of existent cross-border climate-induced migrants from the Maldives, Tuvalu, and Kiribati to date. However, all three states are actively searching for alternative locations to resettle their entire populations, in light of the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report forecast for the SIDS, and the various sea-level rise induced environmental changes illustrated in the previous case studies, on the Maldives, Tuvalu, and Kiribati.[cxcixcc] Unlike the current climate migration crisis in Bangladesh, the situation in the Small Island and Developing States (SIDS) of the Maldives, Tuvalu, and Kiribati, has yet to unfold. Potential climate-induced migrants from the SIDS would be compelled to cross international borders, given that they would not be able to flee coastal zones to higher altitudes, if and when their entire island is submerged beneath seawaters.[cci]

5. International Refugee Law & Climate-Induced Migration

5.1 The Organizational History of Refugee Protection

Agnes Hurwitz, author of The Collective Responsibility of States to Protect Refugees, sheds light on the origins of the refugee question, claiming that it first arose in the nineteenth century.[ccii] It was in this period, that early modern extradition treaties were developed, in addition to the shaping of a principle on the non-extradition of political offenders. In the aftermath of the First World War, the international system became flooded with an increasing number of displaced persons, who all lacked a legal status, which was the impetus for the development of international refugee protection instruments.[cciii] Hurwitz notes that early refugee protection, primarily consisted of the issuance of travel documentation, and sought to protect a particular group of refugees, such as individuals whose respective states failed to offer them protection, and persons who had not have a nationality. 1929, marked the formation of the International Nansen Office, which replaced the pioneer refugee organization prior to its establishment, called the Office of The International Commissioner for Refugees.[cciv] The International Nansen Office reported directly to the League of Nations, and was replaced by the High Commission for Refugees in 1933, which addressed the refugee crisis stemming from Germany, and was officially incorporated into the League of Nations in 1938.[ccv] Given that the United States had not joined the League of Nations, it spearheaded the Intergovernmental Committee on Refugees, which was comprised of 27 State representatives, to alleviate the massive amount of displaced persons from Germany. Refugee protection during the Second World War was largely facilitated by both organizations, with the High Commissioner for Refugees as the operations-lead.[ccvi]

Collective international efforts with the aid of allied forces, led to the birth of a temporary organization titled The United Nations Relief and Rehabilitation Administration (UNRRA) in

1943, which facilitated the repatriation of millions of displaced Europeans, and provided emergency relief assistance.[ccvii] Remaining refugees, were later addressed by the International Refugee Organization (IRO), which was established in 1947. Finally, in 1950, the United Nations High Commissioner for Refugees (UNHCR) was created by the UN General Assembly as a subsidiary organ pursuant to Article 22 of the UN Charter.[ccviii] UNCHR is able to protect 33.9 million people to date, by ensuring emergency services and refugee protection, which is overseen by an elected, non-political, and humanitarian affairs focused, High Commissioner, who reports annually to both the United Nations General Assembly (UNGA) and the Economic and Social Council (ECOSOC).[ccix] UNHCR, extends its protection to anyone outside their country of nationality, or any persons without a nationality, who flees their country or former habitual residence, out of a well-founded fear of persecution, because of their race, religion, nationality, political opinion, and are unable or unwilling to avail the protection of their home government or in the case of the stateless, return to their habitual residence.[ccx] UNHCR's definition of protectable persons bears a striking similarity to the 1951 United Nations Convention Relating to the Status of Refugees.[ccxi]

5.2 International Legal Mechanism for the Protection of Refugees

The United Nations Convention Relating to the Status of Refugees, was signed in Geneva, on 28 July, 1951 and came into force on 22 April, 1954.[ccxii] The 1951 UN Refugee Convention defines a refugee, as any person who is either unwilling or unable to return to his country due to a well-founded fear of persecution, because of his race, religion, nationality, and membership of a particular social group or political opinion.[ccxiii] However, the 1951 UN

Convention, remained limited in scope, applying only to persons fleeing events occurring in Europe, before 1 January 1951.[ccxiv] A solution arrived 16 years later, with the formation of the United Nations, 1967 Protocol Relating to the Status of Refugees. This newly formed protocol, removed the 1951 definitional limitations, and afforded the United Nations Convention Relating to the Status of Refugees complete universal coverage.[ccxv] The UN Refugee Convention is underpinned by the principle of non-refoulement, which stipulates that refugees shall not be expelled or returned, either against their will or in any other manner, to a country or location where there is a threat to their life or freedom.[ccxvi] The United Nations Convention Relating to the Status of Refugees is upheld by Article 14 of the 1948 Universal Declaration of Human Rights (UDHR), which acknowledges the right of persons to seek refuge and or asylum from persecution in other countries.[ccxvii] With the 1951 Convention, and 1967 Protocol Relating to the Status of refugees in mind, the classification of climate-induced migrants as refugees, cannot be justified under international refugee law due to the absence of persecution.[ccxviii]

5.3 Protection Gaps: An Impetus for Change

Jane McAdams, author of Climate Change Displacement and International Law, states that individuals fleeing climate-induced disaster cannot be classified as refugees, for three reasons. 1) The legal classification of refugee can only be applied to individuals crossing an international border.[ccxix] This proves difficult in the case of climate-induced migrants, who predominantly migrate internally, from rural and coastal areas to urban zones, within their states. 2) There are significant challenges in classifying climate change as persecution, given that refugee status can only be given to those who are at risk of persecution if returned to their home

states.[ccxx] While climate induced disasters that lead to displacement are harmful, they do not constitute persecution according to international law.[ccxxi] McAdams claims that the identification of a 'persecutor' remains the key obstacle for individuals fleeing climate-induced disaster, given that they are not being persecuted by their home government, rather the international community, as the key contributor to climate change.[ccxxii] 3) While the effects of climate change can hypothetically be classified as persecution, the language in international refugee law, stipulates otherwise, and views persecution within the framework of religion, race, nationality, political opinion, or membership of a particular social group.[ccxxiii] Considering the widespread and indiscriminate nature of climate change and natural disasters stemming from climate change, McAdams argues that climate-induced migrants are therefore not refugees, because they are not being persecuted on the grounds of religion, race, nationality, political opinion, or membership of a particular social group. Countering the argument of climate refugee proponents, McAdams claims that climate-induced migrants cannot be identified as a particular social group, considering they lack a fundamental and immutable characteristic that binds them, apart from climate change persecution. McAdams argues that climate-induced migrants are not a specific social group and therefore cannot be persecuted on the grounds of belonging to a specific social group, religion, ethnicity, or for holding a particular political opinion, given that they may originate from a wide array of nations, cultural backgrounds, and religious groups. [ccxxiv] Superior courts around the world, remain unified in their claim that climate-induced migrants cannot be classified as refugees, given that 1951 Refugee Convention does not recognize individuals fleeing their home country in search of economic betterment, or as a result of natural disasters, as legal refugees.[ccxxv]

Despite the immense difficulty in identifying climate-induced migrants as refugees through international refugee law, global stakeholders have collectively recognized the need for

complimentary protections, emerging in line with the growing international momentum on climate change and migration. Docherty and Giannini, authors of Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees, claim that climate change migration remains challenged as a politically addressable issue, due to lacking institutions and a robust legal and policy framework.[ccxxvi] With the definitional limitations of the 1951 Refugee Convention in mind, Docherty and Giannini underscored the need for more specific and specialized legal instruments that address and better protect climate-induced migrants crossing international borders.[ccxxvii] The development of such instruments would not only address the plight of those displaced, but will also reduce current protection gaps in international law. While an international legal framework for the protection of refugees already exists, international institutions and the international community as a whole have not addressed the issue of climate-induced migration.[ccxxviii] Docherty and Giannini stressed the need for more comprehensive long-term solutions at the international level, which are currently being blocked by a lacking political appetite, and the absence of appropriate institutions.[ccxxix] The authors claim that the UNFCCC's institutions are not effectively equipped to address cross-border refugees, and stressed that the UNCHR is unable to incorporate climate-induced migrants into its current refugee protection mandate, due to limitations in its institutional capacity.[ccxxx] Docherty and Giannini reiterate the importance of establishing a complimentary legal instrument that addresses climate-induced migrants, to ensure greater protection, while reasserting that such additional instruments must not replace existent efforts to mitigate and manage climate-induced migration.[ccxxxi] This remains a crucial point, especially if existent efforts are successful in reducing the need for cross-border migration.[ccxxxii]

6. Climate-Induced Migrants & the International Political Arena

Building momentum in the international political arena on the issue of climate change and migration coupled with the increasingly apparent connection between international peace & security, human rights, climate change, and migration, has resulted in the subtle realization by international political stakeholders of a need to develop strategic policy and conduct greater evidence-based research. The issue of climate change and migration continues to appear on the agendas of key forums from the meetings of the Post-2015 Sustainable Development Goals to the United Nations Framework Convention on Climate Change's (UNFCCC) Conference of Parties (CoP) meetings. This section highlights the building momentum at the most prominent international political forums on the issue of climate change and migration, while illustrating the subtle recognition by state actors of the nexus between climate change and migration and its potentially adverse global impacts. It also describes the challenges to international legal and political change on the issue of climate change and migration, in a diplomatic context by highlighting the core political objections to discussing the issue in more prominent settings such as the UNSC.

6.1 Building Momentum: The United Nations Framework Convention on Climate Change

On the international stage, many frameworks and processes have been formulated to address climate change. However, assessing policies and initiatives that seek to mitigate and manage climate-induced migration, requires an understanding of the United Nations Framework Convention on Climate Change (UNFCCC). In efforts to maintain legitimacy in the international arena, many of the initiatives geared at managing climate-induced migration, utilize the

UNFCCC, as a foundational tool and guide for their policy formation.[ccxxxiii] One of three Rio Conventions adopted during the 1992 Rio Earth Summit, the UNFCCC, primarily seeks to prevent further human interference with the climate system.[ccxxxiv] The UNFCC's overarching goal is to reduce greenhouse gases, while encouraging developed states, to lead climate change adaption initiatives.[ccxxxv] The convention, also calls for the easing of climate change effects, especially in under-developed states that lack the capacity and resources, to adapt independently to environmental changes.[ccxxxvi] Koko Warner, the Departmental Head of the Environmental Migration, Social Vulnerability, and Adaption Section, of the United Nations University Institute for Environment and Human Security (UNU-EHS), credits the United Nations, other international agencies, and especially civil society for placing climate induced migration on the agenda of UNFCCC discussions.[ccxxxvii]

Following the 13th UNFCCC Conference of Parties (CoP13) held in Bali, the international humanitarian community mobilized a task force titled the Inter-Agency Standing Committee Task Force on Climate Change (IASC), which became active in 2008.[ccxxxviii] The task force focused on climate change and displacement advocacy, research, and policy implementation, with a special focus on assisting vulnerable persons.[ccxxxix] The IASC initiative through its focus on evidence based research further legitimized the loud cries from civil society, for greater international cooperation on climate induced migration, and climate adaption.[ccxl] The task force strategically conveyed to all parties of the CoP, that addressing climate-induced migration and displacement is in fact, aligned with their respective policy interests. The IASC, also shed light on potential areas of collaboration, whereby operational organizations could advise the CoP on the management and mitigation of climate induced migration, and displacement.[ccxli] The head of the Environmental Migration Department of UNU-EHS, Mr. Warner, underscored the success of

the IASC in building and sustaining dialogue with delegates, in Bali and beyond.[ccxlii] The IASC also incorporated civil society in the discussions at the CoP and the UNFCCC, by actively communicating with the Climate Action Network, which consists of active civil society organizations involved in the UNFCCC process.[ccxliii] Given the immense emphasis on the climate induced migration and displacement through the previously mentioned joint international efforts, both displacement and migration continue to remain in the draft negotiation texts of UNFCCC discussions, long after Bali.[ccxliv] The IOM, reports that in 2010, the Global Forum on Migration and Development (GFMD) sought to assess the impact of climate change on human migration and development.[ccxlv] Further highlighting this momentum, the IOM also sheds light on the concluding sessions of the UNFCCC's Cancun agreements, which were held in the same year as the GFMD, and had climate-induced migration, displacement, and planned relocation, as agenda items.[ccxlvi]

6.2 Growing Political Interest: IOM, CoP, UNGA & the UN

On the margins of the 69th session of the United Nations General Assembly (UNGA 69), the IOM held a discussion in Bangkok.[ccxlvii] This historic discussion at the IOM's Asia and the Pacific Regional Office headquarters, marked the integration of migration with the Post-2015 Development Agenda, and was attended by migration experts, activists, ambassadors, and both UN and IOM senior management.[ccxlviii] While climate-induced migrants were not addressed specifically, the discussions did assess climate change and migration, which inevitably encompasses climate-induced migrants.[ccxlix] On 17 December, 2014, the Permanent Mission of Germany to the United Nations in New York, delivered a statement at a side event titled Defining

the Role of Migration in the Post-2015 Development Agenda, and underscored the importance of international cooperation in mitigating climate-induced migration and displacement.[ccl] Ambassador Thoms, the Permanent Representative of Germany to the United Nations in New York, stressed the crucial relevance of initiatives such as the Nansen Group, which is a Swiss and Norwegian government-led consultative process, that seeks to establish consensus on a potential development agenda, for international climate-induced migrants.[ccli] On 11 December, 2014, UN Women co-organized a side event on the margins of CoP20, with the IOM, UNU-EHS, and UNHCR.[cclii] The event aimed to present the victims of climate change to the members of the CoP, while shedding light on the gender dimension of climate change and migration.[ccliii]

6.3 The United Nations Security Council: Climate Migration and International Security

On 17 April, the United Nations Security Council (UNSC) held its first open debate on climate change and its impacts on international peace and security.[ccliv] Requested and chaired by the United Kingdom, which held presidency of the UNSC in April 2007, the open debate was facilitated by the British Foreign Secretary Margaret Beckett. On behalf of the British Government, Mrs. Beckett, warned member states and Council members, about the immense impact of further climate change on the environment, as well as the unprecedented number of migrants that will result from increased natural disasters, such as flooding.[cclv] The Secretary General of the United Nations, Mr. Ban Ki-Moon, urged member states to consider the connection between climate change, migration, and international peace and security. Mr. Ban Ki-moon reports that massive human migration will become inevitable in the event of increased flooding and droughts, which will exacerbate resource scarcity and spark greater conflict, adding

a new dimension of tension to already polarized communities, in the poorest region of the globe.[cclvi] However, not all member states were receptive to the discussion of climate change and migration at the UNSC.

The Chinese delegation issued a statement on behalf of Beijing, emphasizing its discontent with the discussion, and claimed that the UNSC was not an appropriate forum for such a topic, given that it lacked the professional competence to address the topic of climate change.[cclvii] The Pakistani delegation on behalf of the Group of 77, delivered a statement in opposition to the UNSC's discussion of climate change and migration, and accused the Council of yet again encroaching on the mandate, roles, and responsibilities of other UN organs, such as the General Assembly. Papua New Guinea on behalf of the Pacific Island Forum, urged member states to be considerate of the suffering of SIDS, by understanding that climate change and migration, are as threatening to SIDS, as guns and bombs are to substantially larger nations.[cclviii] The representative from Papua New Guinea recognized that climate change agreements are outside of the UNSC's mandate, but explicitly stated that the Council must monitor and review climate change initiatives, to ensure that all member states are actively participating in global efforts to manage climate change, in line with their resource capacities.[cclix] In 2013, Russia, India, China and roughly 100 developing nations actively opposed and rejected a resolution on climate change, which would have placed the issue on the agenda of the UNSC, and argued that further securitization of climate change, would create an unfair burden on developing nations.[cclx]

7. Policy Options

The policy options presented are feasible and recognize the political and legal limitations of addressing the climate-induced migrant dilemma. These policy options do not aim to provide a solution to the crisis, but rather guide international migration stakeholders and policymakers towards the development of immediate, tangible, and realistic polices. The development of such necessary polices will assist those in urgent need of global protection and set the narrative for a shift in refugee law and human rights norms, towards greater climate-induced migrant protection.

7.1. Policy Option 1

With the predictions of the Fourth IPCC report (AR4) and the current political gridlock on climate change and migration in mind, a more feasible approach to mitigating climate-induced migration, is domestic adaption assistance. To ensure that recipient states are not merely funded and abandoned, it is crucial that aid be deployed in the form of prepaid expert funding. Through pre-paid expert funding, countries plagued by increased or exacerbated climate induced disasters can better address their capacity gaps, such as those illustrated in the case studies of Bangladesh and the SIDS (Maldives, Tuvalu, and Kiribati), and achieve the aims set out in their respective NAPA's. This assistance can be earmarked for the purpose of contracting existent expert states, such as the Netherlands on sea level rise management, and Israel on desertification, to facilitate knowledge transfer and intellectual capacity building. The case studies on Bangladesh and the SIDS (Maldives, Tuvalu, and Kiribati) shed light on the evident knowledge and resource capacity issues that countries plagued by climate induced disasters and environmental degradation, struggle to overcome. This process will allow engineers and specialists in countries such as

Bangladesh and the SIDS, to reduce evident knowledge and intellectual capacity gaps. Earmarking aid provided to countries plagued by climate change induced disasters such as Bangladesh, allows donor states to avoid the largely political challenges that stem from non-earmarked aid, such as corruption. While donor states cannot eradicate or halt corruption and related activities in countries receiving climate change aid, they are most certainty within their political rights to earmark the funding they provide to states such as Bangladesh.

Potential climate migration destination states, such as Australia, New Zealand, India, and the United States can offer adaption assistance as a means of bolstering and increasing the efficacy of the established NAPA's of countries such as Bangladesh and the Maldives, in the following three phases. 1) Donor states should establish and consult with an expert senior cadre consisting of IOM, UNHCR, UNEP, World Bank, and Nansen Initiative members, as well as states specializing in key environmental issues, in order to develop a standardized assistance action plan which will streamline migration adaption efforts. The development of such a cadre is critical, given the building momentum at the political level on climate change and migration. An expert senior cadre on climate change and migration, can develop the appropriate humanitarian narrative required to facilitate a shift in the current norms and attitudes at the international level on climate change and migration and climate-induced migration specifically. 2) Donor states should deploy an expert team consisting of scientists, migration experts, engineers, and human right specialists to close specific climate change adaption gaps such as academic research, population resettlement strategies, and the construction of flood resistant housing or structures. This option offers a feasible and immediately applicable short-term remedy for the issue of lacking intellectual capacity and knowledge in states plagued by climate change induced disasters. Investment in intellectual capacity building through prepaid expert funding, offers

donor states both the opportunity to conduct their due diligence, while also mitigating the long-term impacts of climate change phenomenon, such as sea level rise, and possibly preventing widespread climate-induced migration in states such as Bangladesh.

There are two notable drawbacks and or challenges that may stem from the implementation of this proposed policy option. 1) Recipient countries may view this process as intrusive because the aid provided by donors appears to be tied to their willingness to comply with whatever stringent rules international stakeholders may impose upon them. Countries such as Bangladesh may not wish to cooperate in such initiatives, given that their participation may leave them vulnerable to foreign intrusion in their domestic affairs and may undermine their government's ability to service its citizens with full liberty. 2) Not all parties to this process may participate in good faith, given that expert states such as the Netherlands and Israel, have a direct incentive to prolong efforts as a means of accruing greater profit for their assistance. UNCHR, UNEP, and the IOM, may challenge the process further by imposing their organizational goals and mandates upon donor and recipient states.

7.2. Policy Option 2

Greater legal protection for climate-induced migrants should be developed, in light of the slowly emerging international recognition of climate change and migration as human security concerns, occurring in tandem with the international momentum on climate change adaption and mitigation. UNHCR in consultation with the UNGA, UNSC, IOM, and international legal experts on migration and refugee law, should develop more robust and complimentary protections for climate-induced migrants, as a means of guaranteeing their basic human rights and preventing

further violations of international human rights law. In establishing additional and more robust legal instruments tailored to climate-induced migration, the international legal system can reduce existent protection gaps that leave these migrants vulnerable to a wide array of human rights abuses. Given that climate-induced migrants cannot be classified as refugees, and that the international legal framework for the protection of refugees cannot absorb these migrants into its rigid definition of a refugee, the international community must develop new instruments to protect this category of migrants. However, all additional protection instruments should be feasible, aligned with the current refugee protection framework, and must not undermine the existent system. Through the development of complimentary protections in the form of conventions and treaties, climate-induced migrant protection can be incorporated into the wider human rights framework, and in time international legal norms may shift towards the development of more concrete and legally binding obligations. Efforts to manage future challenges to climate-induced migrant protection should focus on shifting current political and legal norms towards the acceptance of concrete and binding legal instruments that compliment the UN 1951 Convention and its subsequent 1967 Protocol Relating to the Status of Refugees.

The international community should work towards the development of more robust complimentary legal protections for climate-induced migrants, in the following three phases. 1) UNHCR must spearhead consultations with the UNGA, IOM, the international humanitarian community, the Nansen Initiative, and international legal experts, in efforts to develop a draft convention for the protection of climate-induced migrants. 2) Once the draft convention is developed, the High Commissioner for Refugees should brief the UNSC in closed consultations, on the contents of the convention and allow the Council to weigh in on future direction of the draft convention, while ensuring that the mandate and authority of the UNGA is not undermined

or overstepped. 3) The High Commissioner should brief the UNGA on the Council's proposed closed consultation recommendations regarding the convention on the protection of climate-induced migrants. Once briefed, the UNGA should vote in favour or against the proposed convention. If successful in attainting enough votes to be passed, the proposed convention will act as a non-legally binding complimentary protection, which member states can choose to ratify or not ratify. If unsuccessful, the proposed convention will act as a pioneer document for future efforts to obtain greater protection for climate-induced migrants.

There are two notable drawbacks and or challenges that may stem from the implementation of this proposed policy option. 1) Traditional political blockers such as China and Russia may challenge the proposed convention at the UNSC, if the Commissioner is not already blocked by the UNGA, which may declare the UNSC's involvement as yet another encroachment on its mandate. 2) The language in the proposed convention may be too weak and too general after political negotiations, to ensure any notable protection of climate induced migrants. Considering that a proposed convention may impose a duty to protect climate-induced migrants, major migrant recipient western nations may block useful legal language that would impose greater responsibilities on recipient states.

7.3. Policy Option 3

Considering the current international political and legal resistance to changing or improving the existent refugee protection legal framework, a potentially alluring policy option would be to maintain the status quo. In ensuring that the modus operandi of the refugee protection regime remains unaltered, UNHCR, IOM, UNGA, and the UNSC, will not be

compelled to undergo an arduous and painful reassessment and renegotiation of the international legal framework for the protection of refugees. Given the political and diplomatic aversion to even the slightest modification or revisiting of the refugee convention, the maintenance of the status quo is arguably the most desirable policy option for the majority of international stakeholders. International migration and human rights institutions may continue to monitor the issue with the support of the international community, acting in line with the current approach to climate-induced migration, without making any recommendations or calls for the implementation of policies or legal instruments to better protect climate induced migrants.

However, there are two notable drawbacks and or challenges that may stem from the implementation of this proposed policy option. 1) While the international legal regime for the protection of refugees may remain the same, the threats to the human rights of climate-induced migrants will only worsen, as they continue to be abused within the borders of recipient states, with no means of protection or avail. 2) If the climate change occurs at the rates predicted by the Fourth IPCC report (AR4), climate-induced migration will increase, and with no preliminary changes in international legal and political norms on climate change and migration, the international community will be ill equipped to develop adequate legal protections and instruments to address large-scale climate-induced migration.

8. Recommendation

Considering the complexity of climate change and migration, in addition to the international legal and political obstacles barring diplomatic consensus on potential solutions to the issue, it would be most feasible to apply a blended policy approach that combines both policy option 1 and 2. Policy option 3, is least effective choice, given that it offers no tangible legal, political, or policy solution to the climate-induced migration problem, and is essentially a policy cop-out. In order to ensure the greatest amount of protection for climate-induced migrants, while appeasing both the political fears surrounding the responsibility and onus of climate change, and the international legal aversion to the modification or altering of the refugee convention and definition, UNHCR must develop a non-binding convention on the protection of climate-induced migrants, in order to establish a complimentary protection base for this category migrants. Inevitably this convention if passed or rejected in the UNGA, will facilitate a necessary shift in international norms on climate-induced migrants, and will place on the agendas of all relevant UN committees and related international organizations the issue of climate change and migration. To build on the existent international political approach to climate change and migration, aid donor states would benefit from consulting with key climate change and migration experts in the form of a senior-level cadre to determine the potential approaches to adaption in major concern areas such as Bangladesh, and the SIDS (Maldives, Tuvalu, Kiribati).

After determining the needs of aid recipient states such as Bangladesh, donor states can coordinate with expert states on key climate change issues such as sea level rise, or desertification, so as to develop lasting solutions to devastating environmental challenges. Instead of giving states such as the Maldives direct aid, countries such Australia, or India would be able to fund and task Dutch engineering firms with the role of developing artificial land and or

floating islands that would be sustainable in salt water. This direct aid approach, offers lasting and immediate solutions to tangible fears in this small island state, while avoiding potential political hindrances to task completion, such as corruption. While carrying the risk of political and legal blockage in international forums, such as the UNGA and UNSC, this proposed blended solution, offers the most reasonable balance between action and inaction, and may shift international norms at the very least, towards an acceptance of climate-induced migration as a major global issue. Furthermore, while climate change and migration is not as stark an issue as terrorism and sexual violence, it is nonetheless a multifaceted and evolving global challenge that requires a greater degree of political and legal progress, which must be spearheaded by the international community, and more specifically state actors. This recommendation offers state actors and governments a two-part tangible solution to assisting the world's most devastated nations, in their ongoing efforts to manage and mitigate the effects of climate change.

9. Conclusion

This paper illustrated the dire need for wider international political dialogue on climate change and its impacts on human migration, while simultaneously highlighting the importance of developing a more robust international legal framework to ensure greater protection of climate-induced migrants. Employing scientific and historical evidence, and through a detailed case study assessment of Bangladesh, and the following SIDS (Maldives, Tuvalu, and Kiribati), this paper emphasized the following three points. 1) Climate change is devastating the most impoverished and underdeveloped states in the world, and has not only ravaged the physical environment of these countries through events such as sea-level rise, but has compelled human populations to leave their permanent settlements due to disease and subsistence crop reduction, as a result of natural disasters, stemming from climate change. 2) Climate-induced migrants cannot be classified as refugees given that they do not have a clearly defined persecutor nor are they persecuted specifically for reasons of religion, race, nationality, and political opinions, or association, but can referred to as environmental displaced persons, offering them protection under existent IDP protection instruments. There is no legal basis for reforming or modifying the current international refugee framework, nor is there a political appetite to address climate change and migration as a major issue on the agenda of the UNGA or the UNSC. 3) The most logical policy direction going forward, that both alleviates political fears and legal aversion to changes in the refugee definition, is the development of complimentary protections with the existent refugee framework that offers greater protection to climate induced migrants such a convention, as well as international aid to climate change affected countries in the form of funded expert services by specialists states in specific climate change issues such as the Netherlands on sea level rise and Israel on desertification. The research findings in this paper, underscored the

urgent need for greater protection of climate induced migrants through more robust international legal frameworks, while proposing that aid donor states apply climate adaptation funding in a manner that produces greater results with minimal risk. The international community must react now in order to respond later, denying the effects of climate change will only exacerbate the obstacles to management and mitigation in the future.

ENDNOTES

[i] Fourth Assessment Report, Working Group I "The Physical Science Basis". Intergovernmental Panel on Climate Change. Copyright 2007. Last accessed December 10, 12. <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.

[ii] Shamsuddoha , Md and Karim Chowdhury, Rezaul. Climate Change Induced Forced Migrants: In Need of Dignified Recognition Under a New Protocol. The Equity and Justice Working Group. Copyright 2009. Last accessed: November 23, 2014. < http://www.glogov.org/images/doc/equitybd.pdf.>.

[iii] McAdams, Jane. Climate Change Displacement and International Law. The Office of the United Nations High Commissioner for Refugees. Copyright 2011. <http://www.unhcr.org/4dff16e99.pdf>.

[iv] Security Council Holds First-Ever Debate on the Impact of Climate Change on Peace and Security. The United Nations Security Council. Copyright 2007. <http://www.un.org/press/en/2007/sc9000.doc.htm>.

[v] Warner. Koko. Climate Change Induced Displacement: Adaption Policy in the Context of UNFCCC Climate Change Negotiations. Legal and Protection Policy Series. The United Nations High Commissioner for Refugees. Copyright 2011. < http://www.unhcr.org/4df9cc309.pdf>.

[vi] Climate Change 2007 (Synthesis Report). Intergovernmental Panel on Climate Change. Copyright 2007. Accessed: September 27, 13. <http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf>.

[vii] McAdams, Jane. Climate Change, Forced Migration, and International Law. Oxford University Press. Copyright 2012. Oxford UK. Pg. 1-283.

[viii] Ibid.

[ix] Ibid.

[x] Ibid.

[xi] Fourth Assessment Report, Working Group I "The Physical Science Basis". Intergovernmental Panel on Climate Change. Copyright 2007. Last accessed December 10, 12. <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.

[xii] Ibid.

[xiii] Ibid.

[xiv] Ibid.

[xv] Third Assessment Report. "Scientific Basis", (Intergovernmental Panel on Climate Change, 2001). Last accessed: November 19, 12. <http://www.ipcc.ch/ipccreports/tar/wg1/518.htm>.

[xvi] Fourth Assessment Report, Working Group I "The Physical Science Basis". Intergovernmental Panel on Climate Change. Copyright 2007. Last accessed December

10, 12. <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.

[xvii] R. Warrwick & J. Oerlemans. "Sea Level Rise", Intergovernmental Panel on Climate Change. Last accessed: November 22, 2012. <http://www.ipcc.ch/ipccreports/far/wg_I/ipcc_far_wg_I_chapter_09.pdf>.
[xviii] Ibid.

[xix] Fourth Assessment Report, Working Group I "The Physical Science Basis", (Intergovernmental Panel on Climate Change, 2007), accessed December 10, 12, <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.
[xx] R. Warrwick & J. Oerlemans. Sea Level Rise. Intergovernmental Panel on Climate Change. Last accessed: November 22, 2012. <http://www.ipcc.ch/ipccreports/far/wg_I/ipcc_far_wg_I_chapter_09.pdf>.
[xxi] Ibid.
[xxii] Ibid.

[xxiii]Third Assessment Report. Scientific Basis. Intergovernmental Panel on Climate Change. Copyright 2001. Last accessed: November 19, 12. <http://www.ipcc.ch/ipccreports/tar/wg1/518.htm>.

[xxiv] Fourth Assessment Report, Working Group I "The Physical Science Basis". Intergovernmental Panel on Climate Change. Copyright 2007. Last accessed December 10, 12. <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.

[xxv]Working Group I: Contribution to the IPCC Fifth Assessment Report. The Physical Science Basis.The Intergovernmental Panel on Climate Change. Copyright 2013. Last accessed: February 16, 2015. <http://www.ipcc.ch/pdf/assessmentreport/ar5/wg1/WG1AR5_ALL_FINAL.pdf>.
[xxvi] Ibid.
[xxvii] Ibid
[xxviii] Ibid.
[xxix] Ibid.
[xxx] Ibid.
[xxxi] Ibid.
[xxxii] Ibid.
[xxxiii] Ibid.
[xxxiv] Ibid.
[xxxv] Ibid.

[xxxvi] Fourth Assessment Report, Working Group I "The Physical Science Basis". Intergovernmental Panel on Climate Change. Copyright 2007. Last accessed December 10, 12. <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.
[xxxvii] Ibid.
[xxxviii] Ibid.

[xxxix] Ibid.
[xl] Ibid.
[xli] Ibid.
[xlii] Ibid.
[xliii] Ibid.
[xliv] Ibid.
[xlv] Ibid.
[xlvi] Ibid.
[xlvii] Ibid.

[xlviii] A.K.M. Abdus Sabur. Disaster Management System in Bangladesh. India Quarterly. Copyright 2012. Last accessed December 10, 12. <http://iqq.sagepub.com/content/68/1/29.full.pdf+html.>
[xlix] Ibid.
[l] Ibid.

[li] Hossain & Hossain. Climate Change, Sea Level Rise , & Coastal Vulnerabilities. Institute of Forestry and Environmental Science. Last accessed December 10, 12. <http://www.academia.edu/1224958/CLIMATE_CHANGE_SEA_LEVEL_RISE_AND_COASTAL_VULNERABILITIES_OF_BANGLADESH_WITH_ADAPTATION_OPTIONS>.

[lii] Dasgupta et al. Cyclones in a Changing Climate: The Case of Bangladesh. World Bank Research Group. Last modified: January 2011. Last accessed December 10, 12. <http://www.gwu.edu/~iiep/adaptation/docs/Dasgupta,%20Cyclones%20in%20a%20Changing%20Climate-The%20Case%20of%20Bangladesh%20(updated).pdf>.
[liii] Ibid.

[liv] Government of the People's Republic of Bangladesh. Bangladesh Climate Change Strategy and Action Plan 2009. Copyright 2009. <http://www.moef.gov.bd/climate_change_strategy2009.pdf>

Fourth Assessment Report, Working Group I "The Physical Science Basis". Intergovernmental Panel on Climate Change. Copyright 2007. Last accessed December 10, 12. <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.

[lv] Sarwar & Khan, "Sea Level Rise-A Threat to the Coast of Bangladesh", Internationales Asienforum, accessed December 10, 12, <http://www.undp.org.bd/library/policypapers/Asienforum_Sarwar_Khan.pdf.>
[lvi] Ibid.
[lvii] Ibid.
[lviii] Ibid.
[lix] Ibid.
[lx] Fourth Assessment Report, Working Group I "The Physical Science Basis". Intergovernmental Panel on Climate Change. Copyright 2007. Last accessed December

10, 12. <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.

[lxi] Ibid.
[lxii] Ibid.

[lxiii] Hossain & Hossain. Climate Change, Sea Level Rise , & Coastal Vulnerabilities. Institute of Forestry and Environmental Science. Last accessed December 10, 12. <http://www.academia.edu/1224958/CLIMATE_CHANGE_SEA_LEVEL_RISE_AND_COASTAL_VULNERABILITIES_OF_BANGLADESH_WITH_ADAPTATION_OPTIONS>.
[lxiv] Ibid.
[lxv] Ibid.
[lxvi] Ibid.
[lxvii] Ibid.
[lxviii] Ibid.
[lxix] Ibid.
[lxx] Ibid.
[lxxi] Ibid.

[lxxii] Hossain & Hossain. Climate Change, Sea Level Rise , & Coastal Vulnerabilities. Institute of Forestry and Environmental Science. Last accessed December 10, 12. <http://www.academia.edu/1224958/CLIMATE_CHANGE_SEA_LEVEL_RISE_AND_COASTAL_VULNERABILITIES_OF_BANGLADESH_WITH_ADAPTATION_OPTIONS>.
[lxxiii] Ibid.
[lxxiv] Ibid.
[lxxv] Ibid.
[lxxvi] Ibid.
[lxxvii] Ibid.
[lxxviii] Ibid.
[lxxix] Ibid.
[lxxx] Ibid.

[lxxxi] Panda, Architesh. Climate Induced Migration from Bangladesh to India: Issues and Challenges. United Nations Institute for Environment and Human Security. Last accessed: March 14, 2014. < http://www.ehs.unu.edu/file/get/5408>.
[lxxxii] Ibid.
[lxxxiii] Ibid.

[lxxxiv] Hossain & Hossain. Climate Change, Sea Level Rise , & Coastal Vulnerabilities. Institute of Forestry and Environmental Science. Last accessed December 10, 12. <http://www.academia.edu/1224958/CLIMATE_CHANGE_SEA_LEVEL_RISE_AND_COASTAL_VULNERABILITIES_OF_BANGLADESH_WITH_ADAPTATION_OPTIONS>.

[lxxxv] Sarwar & Khan, "Sea Level Rise-A Threat to the Coast of Bangladesh", Internationales Asienforum, accessed December 10, 12, <http://www.undp.org.bd/library/policypapers/Asienforum_Sarwar_Khan.pdf.>
[lxxxvi] Ibid.
[lxxxvii] Ibid.
[lxxxviii] Ibid.
[lxxxix] Ibid.

[xc] Economics of Adaption to Climate Change: Bangladesh. The World Bank Group. Copyright 2010.1-93, <http://climatechange.worldbank.org/sites/default/files/documents/EACC_Bangladesh.pdf>.

[xci] The Ministry of Environment and Forest, Government of Bangladesh. National Adaption Program of Action (NAPA). The United Nations Framework Convention on Climate Change. Copyright 2005. Last accessed: March 15, 2015. < http://unfccc.int/resource/docs/napa/ban01.pdf>.
[xcii] Ibid.

[xciii] Community Based Adaption to Climate Change Through Coastal Afforestation in Bangladesh Project. The United Nations Development Programme. Copyright 2011. < http://www.thegef.org/gef/sites/thegef.org/files/documents/document/Bangladesh%20-%20Coastal%20Afforestation%20-%20November%202011.pdf>.
[xciv] Ibid.
[xcv] Ibid.
[xcvi] Ibid.
[xcvii] Ibid.

[xcviii] The Republic of the Maldives National Action Plan for Disaster Risk Reduction and Climate Change Adaption 2010-2020 (Provisional Draft). The Government of the Maldives. Copyright 2010. <. http://ndmc.gov.mv/wordpress/wp-content/uploads/2012/10/Strategic-National-Action-Plan-for-Disaster-Risk-Reduction-and-Climate-Change-Adaptation-2010-2020-Provisional-Draft.pdf >.
[xcix] Ibid.
[c] Ibid.

[ci] Burkett, Maxine. In Search of Refuge: Pacific Islands, Climate-Induced Migration, and the Legal Frontier. The East West Centre. Copyright 2011. <http://www.eastwestcenter.org/fileadmin/stored/pdfs/api098.pdf>.

[cii] The Republic of the Maldives National Action Plan for Disaster Risk Reduction and Climate Change Adaption 2010-2020 (Provisional Draft). The Government of the

Maldives. Copyright 2010. <. http://ndmc.gov.mv/wordpress/wp-content/uploads/2012/10/Strategic-National-Action-Plan-for-Disaster-Risk-Reduction-and-Climate-Change-Adaptation-2010-2020-Provisional-Draft.pdf >.

[ciii] Ibid.

[civ] Ibid.

[cv] The International Federation of the Red Cross. Tuvalu: Joining Forces to Tackle Climate Change. Copyright 2008. < http://www.ifrc.org/Global/Case%20studies/Disasters/cs-tuvalu-en.pdf>.

[cvi] Ibid.

[cvii] Ibid.

[cviii] Ibid.

[cix] Ibid.

[cx]South Pacific Regional Environment Programme. Environmental Planning, Climate change, and Potential Sea Level Rise: Report on Mission to Kiribati. Copyright 1991. <http://www.pacificdisaster.net/pdnadmin/data/original/JB_DM_476a_SPREP_1991_Report.pdf>.

[cxi] Ibid.

[cxii] Ibid.

[cxiii] Ibid.

[cxiv] Ibid.

[cxv] Ibid.

[cxvi] Ibid.

[cxvii] Ministry of Home Affairs, Housing, and Environment, Government of Maldives. The First National Communication of the Republic of the Maldives to the United Nations Framework Convention on Climate Change. Copyright 2001. < http://unfccc.int/resource/docs/natc/maldnc1.pdf>.

[cxviii] Ibid.

[cxix] Ibid.

[cxx] Ibid.

[cxxi] Khaleel, Mohamed, and Saeed, Simad. Environmental Changes in the Maldives: Current Issues for Management. The United Nations Food and Agriculture Organization. Copyright 1996. < http://www.fao.org/docrep/x5623e/x5623e0r.htm>.

[cxxii] Edwards, Alasdair J. The Implications of Sea Level Rise for the Republic of the Maldives. Centre for Tropical Coastal Management Studies, University of Newcastle upon Tyne. Prepared for the Commonwealth Secretariat. Copyright 1989. <http://www.islandvulnerability.org/slr1989/edwards1989.pdf>.

[cxxiii] Fourth Assessment Report, Working Group I "The Physical Science Basis". Intergovernmental Panel on Climate Change. Copyright 2007. Last accessed December 10, 12. <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.

[cxxiv] Lagitupu, Tuilimu. Statement to the Third UN conference on LDC. Government of Tuvalu. United Nations Office in Brussels. Copyright 2001. <http://www.un.org/events/ldc3/conference/address/tuvalu17_e.htm>.

[cxxv] Ralston, Holley, Horstmann, Britta , Holl, Carina. Climate Change Challenges in Tuvalu. German Watch. Copyright 2004. < http://germanwatch.org/download/klak/fb-tuv-e.pdf>.
[cxxvi] Ibid.
[cxxvii] Ibid.
[cxxviii] Ibid.
[cxxix] Ibid.
[cxxx] Ibid.

[cxxxi] Ketchoyian, Kimberly. Kiribati and Sea Level Rise. Inventory of Conflict and Environment (ICE). Copyright 2011. < http://www1.american.edu/ted/ice/kiribati.htm>.
[cxxxii] Ibid.

[cxxxiii] South Pacific Regional Environment Programme. Environmental Planning, Climate change, and Potential Sea Level Rise: Report on Mission to Kiribati. Copyright 1991. <http://www.pacificdisaster.net/pdnadmin/data/original/JB_DM_476a_SPREP_1991_Report.pdf>.
[cxxxiv] Ibid.
[cxxxv] Ibid.

[cxxxvi] Ketchoyian, Kimberly. Kiribati and Sea Level Rise. Inventory of Conflict and Environment (ICE). Copyright 2011. < http://www1.american.edu/ted/ice/kiribati.htm>.
[cxxxvii] Ibid.

[cxxxviii] Edwards, Alasdair J. The Implications of Sea Level Rise for the Republic of the Maldives. Centre for Tropical Coastal Management Studies, University of Newcastle upon Tyne. Prepared for the Commonwealth Secretariat. Copyright 1989. < http://www.islandvulnerability.org/slr1989/edwards1989.pdf>.
[cxxxix] Ibid.
[cxl] Ibid.
[cxli] Ibid.

[cxlii] Ralston, Holley, Horstmann, Britta , Holl, Carina. Climate Change Challenges in Tuvalu. German Watch. Copyright 2004. < http://germanwatch.org/download/klak/fb-tuv-e.pdf>.

[cxliii] Tuvalu's Views on the Possible Security Implications of Climate Change, Report for the Secretary General. United Nations General Assembly 64th Session. Copyright 2009. < Tuvalu's Views on the Possible Security Implications of Climate Change>.
[cxliv] Ibid.
[cxlv] Ibid.

[cxlvi] South Pacific Regional Environment Programme. Environmental Planning, Climate change, and Potential Sea Level Rise: Report on Mission to Kiribati. Copyright 1991. <http://www.pacificdisaster.net/pdnadmin/data/original/JB_DM_476a_SPREP_1991_Report.pd.
[cxlvii] Ibid.
[cxlviii] Ibid.
[cxlix] Ibid.

[cl] Maldivian National Adaption to Climate Change. Ministry of Housing Transport and Environment. The Maldives Partnership Fund. Copyright 2009. <http://www.ifrc.org/docs/IDRL/National%20Adaptation%20Programme%20(Climate%20change))/MALDIVES%20Adaptation%20to%20Climate%20Change.pdf>.
[cli] Ibid.
[clii] Ibid.
[cliii] Ibid.
[cliv] Ibid.
[clv] Ibid.
[clvi] Ibid.

[clvii] Ralston, Holley, Horstmann, Britta , Holl, Carina. Climate Change Challenges in Tuvalu. German Watch. Copyright 2004. < http://germanwatch.org/download/klak/fb-tuv-e.pdf>.
[clviii] Ibid.

[clix] McIver, Lachalan, Woodward, Alistair et al. Assessment of the Health Impacts of Climate Change in Kiribati. International Journal of Environmental Research and Public Health. Copyright 2014. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4053873/>.
[clx] Ibid.

[clxi] The World Bank. The Impact of Climate Change on Low Islands: The Tarawa Atoll, Kiribati. Last accessed: August 15, 2014. <http://siteresources.worldbank.org/INTPACIFICISLANDS/Resources/4-Chapter+4.pdf)>.
[clxii] Ibid.

[clxiii] Maldivian National Adaption to Climate Change. Ministry of Housing Transport and Environment. The Maldives Partnership Fund. Copyright 2009. <http://www.ifrc.org/docs/IDRL/National%20Adaptation%20Programme%20(Climate%20change))/MALDIVES%20Adaptation%20to%20Climate%20Change.pdf>.
[clxiv] Ibid.

[clxv] The Government of Tuvalu's National Adaption Programme of Action. The United Nations Development Programme. Copyright 2007. Last accessed: March 15, 2015. < http://unfccc.int/resource/docs/napa/tuv01.pdf>.
[clxvi] Ibid.

[clxvii] The Government of Kiribati Ministry of Environment. The Republic of Kiribati National Adaption Programme of Action (NAPA). The United Nations Framework Convention on Climate Change.

[clxviii] Ibid.

[clxix] Adaption Learning Mechanism: The Maldives. The United Nations Development Programme. Copyright 2012. Last accessed: March 16, 2015. < http://www.undp-alm.org/explore/maldives>.

[clxx] Ibid.

[clxxi] Tuvalu Signs Agreement for Climate Change Adaption Project. The global Environmental Facility. Copyright 2013. Last accessed: March 15, 2015. <http://www.thegef.org/gef/news/tuvalu-signs-agreement-climate-change-project>.

[clxxii] Ibid.

[clxxiii] The Office of the president of the Republic of Kiribati. The Kiribati Adaption Program. The Government of Kiribati. Last accessed: March 15, 2015. <http://www.climate.gov.ki/category/action/adaptation/kiribati-adaptation-program/>.

[clxxiv] Ibid.

[clxxv] Fabrice Renaud et al. Control, Adapt or Flee: How to Face Environmental Migration? U.N. University Institute for Environment and Human Security. Copyright 2007. < http://www.eachor.eu/documents/RENAUD%202007%20Control,%20Adapt%20or%20Flee%20How%20to%20Face%20Environmental%20Migration%20UNU-EHS.pdf>.

[clxxvi] ESSAM EL-HINNAWI, ENVIRONMENTAL REFUGEES 4 (1985); Diane C. Bates, Environmental Refugees? Classifying Human Migration Caused by Environmental Change, 23 POPULATION & ENV'T 465, 468 (2002); OSCE Economic Forum, Prague, May 23-27, 2005

Bonnie Docherty and Tyler Giannini. Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees. Harvard University Law. Copyright 2009. Last accessed: 01/11/13. <http://www.law.harvard.edu/students/orgs/elr/vol33_2/Docherty%20Giannini.pdf>.

[clxxvii] Ibid.

[clxxviii] Mayer. Benoit. The International Legal Challenges of Climate-Induced Migration: Proposal for an International Legal Framework. Colorado Journal for International Environmental Law and Policy. Copyright 2011. <http://www.colorado.edu/law/sites/default/files/Mayer%20%28Corrected%29-S.pdf>.

[clxxix] Ibid

[clxxx]Norman Meyers, and Jennifer Kent. CLIMATE INST., ENVIRONMENTAL EXODUS:

AN EMERGENT CRISIS IN THE GLOBAL ARENA. Copyright 1995. Last accessed: 09/11/2013. <PDF/Environmental%20Exodus.pdf>.

Bonnie Docherty and Tyler Giannini. Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees. Harvard University Law. Copyright 2009. Last accessed: 01/11/13. <http://www.law.harvard.edu/students/orgs/elr/vol33_2/Docherty%20Giannini.pdf>.

[clxxxi] Shamsuddoha , Md and Karim Chowdhury, Rezaul. Climate Change Induced Forced Migrants: In Need of Dignified Recognition Under a New Protocol. The Equity and Justice Working Group. Copyright 2009. Last accessed: November 23, 2014. < http://www.glogov.org/images/doc/equitybd.pdf.>.

[clxxxii] Ibid.

[clxxxiii] Ibid.

[clxxxiv] Ibid.

[clxxxv] Ibid.

[clxxxvi] Ibid.

[clxxxvii] The United Nations Office for the Coordination of Humanitarian Affairs. The Guiding Principles on Internal Displacement. The United Nations. Copyright 2004. <http://www.unhcr.org/43ce1cff2.html>.

[clxxxviii] Ibid.

[clxxxix] Bonnie Docherty and Tyler Giannini. Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees. Harvard University Law. Copyright 2009. Last accessed: 01/11/13. <http://www.law.harvard.edu/students/orgs/elr/vol33_2/Docherty%20Giannini.pdf>.

[cxc] Kiribati Climate Displacement, Initiatives. Displacement Solutions. Last accessed: December 8, 2013. < http://displacementsolutions.org/ds-initiatives/climate-change-and-displacement-initiative/kiribati-climate-displacement/>.

Tuvalu Climate Displacement, Initiatives. Displacement Solutions. Last accessed: December 8, 2013. < http://displacementsolutions.org/ds-initiatives/climate-change-and-displacement-initiative/tuvalu-climate-displacement/>.

[cxci] The International Organization for Migration. Migration Climate Change and the Environment. Last accessed: March 14, 2015. <https://www.iom.int/cms/en/sites/iom/home/what-we-do/migration-and-climate-change/a-complex-nexus.html#estimates>.

[cxcii] Ibid.
[cxciii] Ibid.
[cxciv] Ibid.

[cxcv] Climate Displacement in Bangladesh. Displacement Solutions. Copyright 2012. Last accessed: November 23, 2014 < http://displacementsolutions.org/wp-content/uploads/DS-Climate-Displacement-in-Bangladesh-Report-LOW-RES-FOR-WEB.pdf>.

[cxcvi] Climate Change Induced Forced Migrants: In Need of Dignified Recognition Under a New Protocol. The Equity and Justice Working Group Bangladesh. Copyright 2009. Last accessed: November 23, 2014. <https://seors.unfccc.int/seors/attachments/get_attachment?code=FTUOSD04NT7HQ2I89WW5QNR2OLXC2DQ9>.
[cxcvii] Ibid.
[cxcviii] Ibid.
[cxcix] Ibid.

[cc] Climate Displacement, Initiatives. Displacement Solutions. Last accessed: December 8, 2013. < http://displacementsolutions.org/ds-initiatives/climate-change-and-displacement-initiative/tuvalu-climate-displacement/>.

Fourth Assessment Report, Working Group I "The Physical Science Basis", (Intergovernmental Panel on Climate Change, 2007), accessed December 10, 12, <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.

[cci] Fourth Assessment Report, Working Group I "The Physical Science Basis", (Intergovernmental Panel on Climate Change, 2007), accessed December 10, 12, <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.

Burkett, Maxine. In Search of Refuge: Pacific Islands, Climate-Induced Migration, and the Legal Frontier. The East West Centre. Copyright 2011. <http://www.eastwestcenter.org/fileadmin/stored/pdfs/api098.pdf>.

[ccii] Hurwitz , Agnes. The Collective Responsibility of States to Protect Refugees. Oxford University Press. Copyright 2009. New York, USA. Pgs. 10-281.
[cciii] Ibid.
[cciv] Ibid.
[ccv] Ibid.
[ccvi] Ibid.
[ccvii] Ibid.

[ccviii] Ibid.
[ccix] Ibid
[ccx] Ibid.
[ccxi] Ibid.

[ccxii] Convention Relating to the Status of Refugees. The United Nations Office of the High Commissioner for Human Rights, UN. Copyright 2015. <http://www.ohchr.org/EN/ProfessionalInterest/Pages/StatusOfRefugees.aspx>.
[ccxiii] Ibid.

[ccxiv] Convention and Protocol Relating to the Status of Refugees. The Office of the United Nations High Commissioner for Refugees, UN. Copyright 2010. <http://www.unhcr.org/3b66c2aa10.html>.
[ccxv] Ibid.
[ccxvi] Ibid.
[ccxvii] Ibid.

[ccxviii] McAdams, Jane. Climate Change Displacement and International Law. The Office of the United Nations High Commissioner for Refugees. Copyright 2011. <http://www.unhcr.org/4dff16e99.pdf>.
[ccxix] Ibid.
[ccxx] Ibid.
[ccxxi] Ibid.
[ccxxii] Ibid.
[ccxxiii] Ibid.
[ccxxiv] Ibid.
[ccxxv] Ibid.

[ccxxvi] Bonnie Docherty and Tyler Giannini. Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees. Harvard University Law. Copyright 2009. Last accessed: 01/11/13. <http://www.law.harvard.edu/students/orgs/elr/vol33_2/Docherty%20Giannini.pd f>.
[ccxxvii] Ibid.
[ccxxviii] Ibid.
[ccxxix] Ibid.
[ccxxx] Ibid.
[ccxxxi] Ibid.
[ccxxxii] Ibid.

[ccxxxii] Fabrice Renaud et al. Control, Adapt or Flee: How to Face Environmental Migration? U.N. University Institute for Environment and Human Security. Copyright 2007. < http://www.eachfor.eu/documents/RENAUD%202007%20Control,%20Adapt%20or%20Flee%20How%20to%20Face%20Environmental%20Migration%20UNU-EHS.pdf>.

[ccxxxii] ESSAM EL-HINNAWI, ENVIRONMENTAL REFUGEES 4 (1985); Diane C. Bates,

Environmental Refugees? Classifying Human Migration Caused by Environmental Change, 23 POPULATION & ENV'T 465, 468 (2002); OSCE Economic Forum, Prague, May 23-27, 2005

Bonnie Docherty and Tyler Giannini. Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees. Harvard University Law. Copyright 2009. Last accessed: 01/11/13. <http://www.law.harvard.edu/students/orgs/elr/vol33_2/Docherty%20Giannini.pdf>.

[ccxxxiii] United Nations Framework Convention on Climate Change. The United Nations. Copyright 2014. <http://unfccc.int/essential_background/convention/items/6036.php>

[ccxxxiv] Ibid
[ccxxxv] Ibid.
[ccxxxvi] Ibid.
[ccxxxvii] Warner. Koko. Climate Change Induced Displacement: Adaption Policy in the Context of UNFCCC Climate Change Negotiations. Legal and Protection Policy Series. The United Nations High Commissioner for Refugees. Copyright 2011. < http://www.unhcr.org/4df9cc309.pdf>.
[ccxxxviii] Ibid.
[ccxxxix] Ibid.
[ccxl] Ibid.
[ccxli] Ibid.
[ccxlii] Ibid.
[ccxliii] Ibid.
[ccxliv] Ibid.

[ccxlv] Climate Change, Environmental Degradation, and Migration (The International Dialogue on Migration). The International Organization for Migration. Copyright 2011. <http://www.iom.int/jahia/webdav/shared/shared/mainsite/microsites/IDM/workshops/climate-change-2011/background_paper.pdf>.
[ccxlvi] Ibid.

[ccxlvii] Integrating Migration into the post-2015 Development Agenda. The International Organization for migration. Copyright 2014. <https://www.iom.int/cms/render/live/en/sites/iom/home/news-and-views/press-briefing-notes/pbn-2014b/pbn-listing/integrating-migration-into-the-p.html>.
[ccxlviii] Ibid.
[ccxlix] Ibid.

[ccl] Side Event: Welcoming remarks by Ambassador Thoms on "Defining the role of Migration on the post-2015 agenda". The Permanent Mission of Germany to the United Nations in New York. Copyright 2014. < http://www.new-york-un.diplo.de/Vertretung/newyorkvn/en/__pr/speeches-statements/2014/20141217-thoms-

side-event-migration-post2015.html?archive=3759636>.

[cli] Ibid.

[clii] Spotlight: Women leading discussions on climate induced migration. UN Women, The United Nations. Copyright 2014. <http://asiapacific.unwomen.org/en/news-and-events/stories/2014/12/bangladesh-women-leading-discussions-on-climate-induced-migration-01#sthash.kIUdDKsi.dpuf>.

[cliii] Ibid.

[cliv] Security Council Holds First-Ever Debate on the Impact of Climate Change on Peace and Security. The United Nations Security Council. Copyright 2007. <http://www.un.org/press/en/2007/sc9000.doc.htm>.

[clv] Ibid.

[clvi] Ibid.

[clvii] Ibid.

[clviii] Ibid.

[clix] Ibid.

[clx] Security Council, Background Guide. University of British Colombia, Model United Nations. Copyright 2015. <http://ubcmun.org/assets/sc-bg-guide2.pdf>.

BIBLIOGRAPHY

Adaption Learning Mechanism: The Maldives. The United Nations Development Programme. Copyright 2012. Last accessed: March 16, 2015. < http://www.undp-alm.org/explore/maldives>.

A.K.M. Abdus Sabur. Disaster Management System in Bangladesh. India Quarterly. Copyright 2012. Last accessed December 10, 12. <http://iqq.sagepub.com/content/68/1/29.full.pdf+html.>

Burkett, Maxine. In Search of Refuge: Pacific Islands, Climate-Induced Migration, and the Legal Frontier. The East West Centre. Copyright 2011. <http://www.eastwestcenter.org/fileadmin/stored/pdfs/api098.pdf>.

Chapter 13: Sea Level Change, Fifth Assessment Report. The Intergovernmental Panel on Climate Change. Copyright 2013. Last accessed February 16, 2015. <http://www.ipcc.ch/pdf/assessmentreport/ar5/wg1/WG1AR5_Chapter13_FINAL.pdf>.

Climate Change 2007 (Synthesis Report). Intergovernmental Panel on Climate Change. Copyright 2007. Accessed: September 27, 13. <http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf>.

Climate Change, Environmental Degradation, and Migration (The International Dialogue on Migration). The International Organization for Migration. Copyright 2011. <http://www.iom.int/jahia/webdav/shared/shared/mainsite/microsites/IDM/workshops/climate-change-2011/background_paper.pdf>.

Community Based Adaption to Climate Change Through Coastal Afforestation in Bangladesh Project. The United Nations Development Programme. Copyright 2011. < http://www.thegef.org/gef/sites/thegef.org/files/documents/document/Bangladesh%20-%20Coastal%20Afforestation%20-%20November%202011.pdf>.

Dasgupta et al. Cyclones in a Changing Climate: The Case of Bangladesh. World Bank Research Group. Last modified: January 2011. Last accessed December 10, 12. <http://www.gwu.edu/~iiep/adaptation/docs/Dasgupta,%20Cyclones%20in%20a%20Changing%20Climate-The%20Case%20of%20Bangladesh%20(updated).pdf>.

De Vries, Jan. The Industrial Revolution and the Industrious Revolution. Journal of Economic History. Cambridge University Press. Copyright 1994. <http://www.unsa.edu.ar/histocat/haeconomica07/lecturas/devries1994.pdf>.

Economics of Adaption to Climate Change: Bangladesh. The World Bank Group. Copyright 2010.1-93, <http://climatechange.worldbank.org/sites/default/files/documents/EACC_Bangladesh.pdf>.

Edwards, Alasdair J. The Implications of Sea Level Rise for the Republic of the Maldives. Centre for Tropical Coastal Management Studies, University of Newcastle upon Tyne. Prepared for the Commonwealth Secretariat. Copyright 1989. < http://www.islandvulnerability.org/slr1989/edwards1989.pdf>.

Fourth Assessment Report, Working Group I "The Physical Science Basis". Intergovernmental Panel on Climate Change. Copyright 2007. Last accessed December 10, 12. <http://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq-5-1.html>.

Government of the People's Republic of Bangladesh. Bangladesh Climate Change Strategy and Action Plan 2009. Copyright 2009. < http://www.moef.gov.bd/climate_change_strategy2009.pdf>

Hossain & Hossain. Climate Change, Sea Level Rise , & Coastal Vulnerabilities. Institute of Forestry and Environmental Science. Last accessed December 10, 12. <http://www.academia.edu/1224958/CLIMATE_CHANGE_SEA_LEVEL_RISE_AND_COASTAL_VULNERABILITIES_OF_BANGLADESH_WITH_ADAPTATION_OPTIONS>.

Integrating Migration into the post-2015 Development Agenda. The International Organization for migration. Copyright 2014. <https://www.iom.int/cms/render/live/en/sites/iom/home/news-and-views/press-briefing-notes/pbn-2014b/pbn-listing/integrating-migration-into-the-p.html>.

Ketchoyian, Kimberly. Kiribati and Sea Level Rise. Inventory of Conflict and Environment (ICE). Copyright 2011. < http://www1.american.edu/ted/ice/kiribati.htm>.

Khaleel, Mohamed, and Saeed, Simad. Environmental Changes in the Maldives: Current Issues for Management. The United Nations Food and Agriculture Organization. Copyright 1996. < http://www.fao.org/docrep/x5623e/x5623e0r.htm>.

Lagitupu, Tuilimu. Statement to the Third UN conference on LDC. Government of Tuvalu. United Nations Office in Brussels. Copyright 2001. <http://www.un.org/events/ldc3/conference/address/tuvalu17_e.htm>.

Maldivian National Adaption to Climate Change. Ministry of Housing Transport and Environment. The Maldives Partnership Fund. Copyright 2009. <http://www.ifrc.org/docs/IDRL/National%20Adaptation%20Programme%20(Climate%20change))/MALDIVES%20Adaptation%20to%20Climate%20Change.pdf>.

McAdams, Jane. Climate Change, Forced Migration, and International Law. Oxford University Press. Copyright 2012. Oxford UK. Pg. 1-283.

McIver, Lachalan, Woodward, Alistair et al. Assessment of the Health Impacts of Climate Change in Kiribati. International Journal of Environmental Research and Public Health. Copyright 2014. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4053873/>.

Ministry of Home Affairs, Housing, and Environment, Government of Maldives. The First National Communication of the Republic of the Maldives to the United Nations Framework Convention on Climate Change. Copyright 2001. < http://unfccc.int/resource/docs/natc/maldnc1.pdf>.

Ocean Facts. National Oceanic and Atmospheric Administration. Last modified: July 11, 2012. <http://oceanservice.noaa.gov/facts/oceanorsea.html>.

Panda, Architesh. Climate Induced Migration from Bangladesh to India: Issues and Challenges. United Nations Institute for Environment and Human Security. Last accessed: March 14, 2014. < http://www.ehs.unu.edu/file/get/5408>.

R. Warrwick & J. Oerlemans. Sea Level Rise. Intergovernmental Panel on Climate Change. Last accessed: November 22, 2012. <http://www.ipcc.ch/ipccreports/far/wg_I/ipcc_far_wg_I_chapter_09.pdf>.

Ralston, Holley, Horstmann, Britta , Holl, Carina. Climate Change Challenges in Tuvalu. German Watch. Copyright 2004. < http://germanwatch.org/download/klak/fb-tuv-e.pdf>.

South Pacific Regional Environment Programme. Environmental Planning, Climate change, and Potential Sea Level Rise: Report on Mission to Kiribati. Copyright 1991. <http://www.pacificdisaster.net/pdnadmin/data/original/JB_DM_476a_SPREP_1991_Report.pd.

Sarwar & Khan, "Sea Level Rise-A Threat to the Coast of Bangladesh", Internationales Asienforum, accessed December 10, 12, <http://www.undp.org.bd/library/policypapers/Asienforum_Sarwar_Khan.pdf.>

Security Council Holds First-Ever Debate on the Impact of Climate Change on Peace and Security. The United Nations Security Council. Copyright 2007. <http://www.un.org/press/en/2007/sc9000.doc.htm>.

Security Council, Background Guide. University of British Colombia, Model United Nations. Copyright 2015. <http://ubcmun.org/assets/sc-bg-guide2.pdf>.

Side Event: Welcoming remarks by Ambassador Thoms on "Defining the role of Migration on the post-2015 agenda". The Permanent Mission of Germany to the United Nations in New York. Copyright 2014. < http://www.new-york-un.diplo.de/Vertretung/newyorkvn/en/__pr/speeches-statements/2014/20141217-thoms-

side-event-migration-post2015.html?archive=3759636>.

Spotlight: Women leading discussions on climate induced migration. UN Women, The United Nations. Copyright 2014. <http://asiapacific.unwomen.org/en/news-and-events/stories/2014/12/bangladesh-women-leading-discussions-on-climate-induced-migration-01#sthash.kIUdDKsi.dpuf>.

Third Assessment Report. Scientific Basis. Intergovernmental Panel on Climate Change. Copyright 2001. Last accessed: November 19, 12. <http://www.ipcc.ch/ipccreports/tar/wg1/518.htm>.

The Government of Kiribati Ministry of Environment. The Republic of Kiribati National Adaption Programme of Action (NAPA). The United Nations Framework Convention on Climate Change.

The Government of Tuvalu's National Adaption Programme of Action. The United Nations Development Programme. Copyright 2007. Last accessed: March 15, 2015. < http://unfccc.int/resource/docs/napa/tuv01.pdf>.

The International Federation of the Red Cross. Tuvalu: Joining Forces to Tackle Climate Change. Copyright 2008. < http://www.ifrc.org/Global/Case%20studies/Disasters/cs-tuvalu-en.pdf>.

The Ministry of Environment and Forest, Government of Bangladesh. National Adaption Program of Action (NAPA). The United Nations Framework Convention on Climate Change. Copyright 2005. Last accessed: March 15, 2015. < http://unfccc.int/resource/docs/napa/ban01.pdf>.

The Republic of the Maldives National Action Plan for Disaster Risk Reduction and Climate Change Adaption 2010-2020 (Provisional Draft). The Government of the Maldives. Copyright 2010. <. http://ndmc.gov.mv/wordpress/wp-content/uploads/2012/10/Strategic-National-Action-Plan-for-Disaster-Risk-Reduction-and-Climate-Change-Adaptation-2010-2020-Provisional-Draft.pdf >.

The World Bank. The Impact of Climate Change on Low Islands: The Tarawa Atoll, Kiribati. Last accessed: August 15, 2014. <http://siteresources.worldbank.org/INTPACIFICISLANDS/Resources/4-Chapter+4.pdf)>.

The United Nations Office for the Coordination of Humanitarian Affairs. The Guiding Principles on Internal Displacement. The United Nations. Copyright 2004. <http://www.unhcr.org/43ce1cff2.html>.

Tuvalu's Views on the Possible Security Implications of Climate Change, Report for the

Secretary General. United Nations General Assembly 64th Session. Copyright 2009. < Tuvalu's Views on the Possible Security Implications of Climate Change>.

Working Group I: Contribution to the IPCC Fifth Assessment Report. The Intergovernmental Panel on Climate Change. Copyright 2013. Last accessed: February 16, 2015. <https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/drafts/fgd/WGIAR5_WGI-12Doc2b_FinalDraft_Chapter12.pdf>.

Working Group I: Contribution to the IPCC Fifth Assessment Report. The Intergovernmental Panel on Climate Change. Physical Science Basis. Copyright 2013. Last accessed: February 16, 2015. <https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/drafts/fgd/WGIAR5_WGI-12Doc2b_FinalDraft_Chapter12.pdf>.