ENVIRONMENTAL MIGRANTS: A CASE STUDY OF REFUGEES IN DADAAB CAMPS

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DECLARATION

This research project is my original work and it has not been submitted for course award in any other college, institution, or university.

Signed: Date: **01/09/2022**

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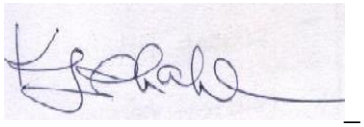
This research project has been submitted for review with my approval as the university supervisor.



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Mr. LINCOLN K KARINGI

DEDICATION

My heartfelt gratitude goes to my parents, siblings, and to my true friends, may Allah (SW) bless you all.

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This is to register my profound appreciation to all those, either collectively or individually, whose assistance and co-operation helped me make this research project success. I would like to express my gratitude and appreciation to my supervisory committee - **Dr:** Kenedy J Omoke and **Mr**. Lincoln K Karingi – for their helpful remarks, their unending support, encouragement and criticisms in bringing this research from its humble origins to the finished project it is today. Without their guidance and assistance, this would not have been possible.

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ABBREVIATION

BBC- British Broadcasting Corporation

CBC- Canadian Broadcasting Corporation

DRC- Danish Refugee Council

FEWS NET- Famine Early Warning Systems Network

HPN- Humanitarian Practice Network

HRW- Human Right Watch

IDB- International Data Base

IOM- International Organization for Migration

IRC- International Rescue Committee

MSF- Médecins Sans Frontières

NRC- Norwegian Refugee Council

OCHA- Office for the Coordination of Humanitarian Affairs

OXFAM- Oxford Committee for Famine Relief

UN- United Nations

UNEP- United Nations Environment Programme

UNHCR- United Nations High Commissioner for Refugees

USAID- United States Agency for International Development

WB- World Bank

WFP- World Food Programme

WHO- World Health Organization

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ABSTRACT

In a time of rapid Environmental Changes, this project focuses on the problem of bridging the widening disparity between universal human rights and the changing face of migration. Environmental change continuously displaces people through floods, drought, famine, rising sea levels, desertification, and agricultural loss. However, as the project's interpretivist approach illustrates the international legal system and local migration regulations have been unable to keep pace with these developments, providing little to no protection to these disadvantaged forced environmental refugees.

This project's main contribution includes a conceptualization of the problem of forced environmental migration and its unique technique in identifying categories of people displaced by environmental stress. Its core premise is that people displaced by environmental stress should have the right to movement and adaptation assistance, but then again, these rights are not sufficiently backed or protected by international law. Whereas refugees escaping violence profit from the continuation of long-standing global institutions and legal protections, protecting individuals impacted by environmental disasters do not enjoy such legal protection. Its study indicates that while a few recent advancements in law and policy have the opportunity to mitigate some of the difficulties posed by individuals displaced by the environment. The present international framework and domestic policy fail to satisfy the fundamental normative and practical needs associated with an ethically acceptable response to involuntary environmental migration.

The research explores the root causes of this challenge and concludes that the problems posed to the international community by forced environmental migration may be deeper than the field has previously thought. Indeed, it believes that the multi-causal nature of migration may contribute to the disparities between the rights of the individuals displaced by environmental disasters and their manifestation under the existing global framework.

This study demonstrated that migration is a multi-cause event, that changes in the environment would impact migration through its influences on drivers, and that each migrant is susceptible to various drivers and motives for moving or relocating. Including some that may or may not be impacted by environmental change; as a result, an acceptable worldwide policy for 'environmental migrants' is deemed unfitting.

There are, however, established international partnerships, legal agreements, and institutional structures. 'Soft law' techniques, such as the Guiding Principles on Internal Displacement and, perhaps, the recently proposed Nansen Principles, are examples of 'bottom-up' approaches that establish agreement while allowing for adaptive and personalized adoption by governments.

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The relationship between changes in environment and migration is highly of a complicated one. Migration often occurs as the consequence of some layered political, social, and economic conditions, highlighting the changing environmental state and demographic conditions. The migration trends of migrants as a result of ecological changes also vary. It could be within someone's country (internal) or international; voluntary or involuntary; temporary or permanent. Involuntary migration, sometimes called 'forced migration,' might result from environmental disasters such as drought, flood, or government-instigated resettlement.

Oliver-Smith, A (2010). et al. noted that, throughout history, if a notable change in the environment is noticed and, in return, affects the availability of food, humans would migrate elsewhere to locate a more favorable environmental state and for them to maintain their way of life. In the years ahead, movement flows related to environmental changes are predicted to rise, most notably in the world's poorest nations. They are because environmental changes are expected to escalate the seriousness of severe environmental phenomena such as heavy rainfall or floods, drought, and famine. These environmental conditions not only hurt and degrade infrastructure, housing, and means of subsistence but can also increase human migration and displacement directly and indirectly (Oliver-Smith, 2010).

Environmental migration is becoming more closely linked to large-scale relocation and imminent loss of life. Furthermore, many of those who need to relocate to achieve a secure food source are unable to do so because they are hindered by structural insecurity; this eliminates migration as a viable adaptive strategy for them. As a result, the complexities of modern environmental migration continue to mount up. With an increased risk of death and desperate people unable to lawfully relocate, it is apparent

that there are new faces of involuntary migration: ones that desperately need specific and practical solutions from states and the global community.

According to UNEP, climate change would impact migration flows in three respects:

1) Warming would eventually decrease agricultural production, weaken ecological resources like productive soil, and pollute clean water in some places.
2) The increased frequency of severe weather conditions, such as heavy rainfall and subsequent flash flooding in tropical areas, would impact a growing number of people, which results in a mass eviction.
3) Sea-level rise would eternally kill vast low-lying coastal areas, forcing millions of residents to relocate.

The horn of African countries, particularly Somalia and the Northern part of Kenya, is now witnessing the climate change's negative consequences in terms of inadequate rainfall and severe environmental conditions, such as drought and floods (OCHA 2011). In some places, rainfall is predicted to lessen by much amid the century, leaving many local livelihoods impossible to sustain and significantly increasing the risk of chronic malnutrition. As climate change continues to increase the potency and intensity of environmental disasters such as wildfire, cyclones, tsunamis, floods, and droughts, the number of displaced people will peak and increase in numbers.

Apart from the many general studies undertaken on the linkages between environmental change and migration, there is a need to undertake studies on how specific aspects of environmental stress such as drought, famine, and floods contribute primarily to human migration. The study examines the relationship between specified environmental changes such as drought, famine, floods, and human migration on the people in the Dadaab Refugee Camps.

1.2 Statement of the Research Problem

From the beginning of time, environmental conditions have shaped human migration. (Adamo & Izazola 2010). Indeed, population-climate studies have focused on the linkages between environmental changes and migration. According to OCHA in between mid-2011 and 2012, it was the Horn of Africa's worst drought in recent history; and affected the entire East Africa regions Areas of Kenya, Somalia Ethiopia were severely affected by the failure of seasonal rains. Farming came to a halt as water source dried up. Schools closed very early for lack of food and livestock perished. Many families' lives were uprooted in devastation.

In Somalia, roads and villages, turned into rivers overnight and tens of thousands, displaced. Their homes submerged (Samuel 2018) and sometimes can only be accessed the area by boat. The Rahanweyn and the rural Bantu ethnic minority clans that were agro-pastoral were the most affected and displaced. (HRW 2014). After months of drought, the heavy rains are now destroying what was left of people's crops and livestock. Malnutrition and threats of diseases like cholera and malaria are now on the rise (WHO).

The agency that is responsible for the global public health, the World Health Organization reported that malaria and cholera are among the illnesses that threaten 9 million people in the region. This is partly because of the overcrowding; unsanitary conditions that Horn of Africa live in. Malnutrition rates among children are on the rise in parts of Ethiopia and that of Kenya (UN 2012) and up to 50% in Southern part of Somalia. The country of Somali's child mortality rate of 12.7% tops among all countries surveyed in 2009 (WHO 2011). Many areas in Somalia particularly in central and southern parts have been completely cut off and people are in urgent need of Aid.

Refugees that were forced to flee environmental changes in Somalia cross the border and flee to its neighboring country Kenya and arrive at the Dadaab camps. Initially, Dadaab was settled up as a transit camp for Somalis fleeing conflict and civil war. Whereas refugees escaping violence profit from the continuation of long-standing global

institutions and legal protections, the protection of people who have been impacted by natural disasters poses more questions than answers.

The study examined the relationship between specified environmental changes such as drought, famine and floods and how they bring about migration. The present research takes the view that the observed mass influx of refugee in Dadaab camps is as the result of people being displaced by confounding environmental factors of drought, famine and floods and the study research project attempts to provide answers to the following questions;

i. What is the relationship between floods and Migration?
ii. To what extent has drought contributed to people fleeing to Dadaab refugee camps?
iii. What is the contribution of famine in relation to people migrating to Dadaab camps?

This research argues there are mass influxes of refugees arriving at an accelerating rate at the Dadaab refugee camps which can largely be attributed to the sudden environmental changes in their previous homeland and wherever they may happen to be and in return, their arrivals leads to changing the whole makeshift of the camps in Dadaab.

1.3 Research Objectives

1.3.1 General Objectives

The main objective of this study is to look into the relationship between a specified aspect of environmental disasters (drought, famine and floods) and human migration, with a view to establishing the extent to which these linkages amounts to the overpopulation of the Dadaab camps in Garissa County.

1.3.2 Specific Objectives

The specific objectives of this study are;

i. To examine the relationship between floods and migration
ii. To assess the extent at which drought contributed to people fleeing to Dadaab refugee camps
iii. To examine the contribution of famine in relation to migration

1.4 Hypotheses

1) H_0: There is no significant relationship between floods and migration of the refugees in Dadaab.

   H_1: There is a significant relationship between floods and migration of the refugees in Dadaab.

2) H_0: There is no significant relationship between drought and migration

   H_1: There is a significant relationship between drought and migration.

1.5 Significance of the Study

Previous efforts to repatriate the already overcrowded refugee camps did not yield any long lasting solution; instead new arrivals keep on coming largely because of environmental changes that happened in their previous homelands. The research study examines the new arrivals of refugees in the Dadaab camps and to understand the primary reason behind this wave of migration. Analyzing the main and the primary reasons of this recent migration will benefit and may lead to sustainable peace across Dadaab town since the locals and the refugees are always in constant fight due competition over natural resources i.e water.

The study also gives insight on how a confounding factor of drought, famine and floods instigates human migration and how they effects on how we do things. It also gives insight on how too much water from storms, river flooding, drought, famine is driving people from their homes. And how some other places too little water is robbing people

off their livelihood; all this which could provide the largest wave migration in human history.

This research study also highlighted perhaps one of the most pressing issues new arrivals face during and before being registered as refugees. By understanding how people spend weeks walking through bushes from Somalia to make it to Dadaab, and how they are admitted to the initial reception center, this research project will be of great importance to the department of refugee registration in the hope of making their registration process easier.

1.6 Scope and Limitation of the Study

1.6.1 Scope of the Study

The research study was limited to Dadaab refugee camps in Garissa County; North Eastern Province. The research study focused on assessing the relationships between environmental changes and migration and how they bring about influx of refugees to the Dadaab camps. The research primarily covered the environmental migrants present in Dadaab camps and it also seeks to assess the relationship between changes in the environment and migration.

1.6.2 Limitation of the Study

Since the research location is in Dadaab camps, some of the difficulties I encountered were as follows;

1) **Unfriendly weather;**

Dadaab's hot days and cold nights might have been a challenge in undertaking the study. Not to forget the presence of unfriendly insects during the night, such as mosquitoes and scorpions. However, the presence of mosquito repellent lotions in the local pharmacies eased such challenges as they ward off insects. And it's also important to note that getting raised in semi-arid places prepared me to develop some tolerance to heat exposure.

2) **Bad roads;**

On travelling to the Dadaab refugee camps, one usually takes a bus, but then again, the roads were in bad condition and that made the travelling and conducting the research less interesting. However, the presence of shuttle Matatus, which are much more luxurious than the big buses that travel to and fro from the camps, might ease such challenges.

3) **Unfriendly security personnel**

The presence of Para military security personnel in the Dadaab region sometimes made it tough to conduct interviews. They don't like having their pictures taken, and at times they tend to chase you down until you settle down with them. However, providing a letter proving that I am here to conduct academic research was a great help.

4) **The Locals and the Refugees conflict**

The supremacy battle between the locals in Dadaab and the refugees is also another challenge that I faced. Both the refugees and the locals are in constant war over natural resources such as water and grazing spots, and sometimes it is tough for them to help a local conduct an interview in their place.

1.7 Operational Definitions and Concepts

Existing literature on the relationships between changes in the environment and migration has been hindered by the use and selection of words and phrases. At different times, these have included terms such as 'environmental migrants and climate migrants'. The following are the terms used in my research study.

1) **Human Mobility;** this is a random process whereby it describes how individual humans move within a network or system.
2) **Iris Scan;** is a verification gadget that is used by UNHCR so that they avoid registering anyone more than once. Every person has a unique iris. By using this iris scan, fraud is detected.

3) **Jerrycan;** used by the households in the camps, Jerrycan is an old fashioned kit that the refugees use to go fetch water.
4) **New Arrivals**; this is when refugees and asylum-seekers move in mixed flows and arrive at a place they did not previously existed at.
5) **PWDS;** an acronym that stands for Persons with Disabilities which UNHCR reaffirms to its commitment to upholding the rights of persons with disabilities in accordance with Executive Committee Conclusions. They also prioritize the assistance to refugees and other persons of concern living with disabilities.
6) **Ratio Cards**; this are temporary cards, or some sort of a 'tokens' like, which are given to recently arrived refugees during crisis.
7) **Registration Tent**; a registration tent is a standard tent and a shelter like place where the UN agency for refugees and other agencies such as ICRC/IFRC use to plan, prepare and to register the new arrivals of refugees.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter provides a review of documented information considered relevant to this study and also presents a theoretical framework and empirical reviews. The aim of this chapter is to go through some of the previous analysis that has been done on this topic. This section begins with global trends in migration, regional and of course local in the context of migration that are related to environmental changes. The theoretical framework that is related to migration and that of the conceptual framework which also explains the links between environmental changes and migration is also discussed in this chapter. Literature gaps that this current research proposal intends to fill will also be included in this chapter.

2.2 Theoretical Bases of the Review

2.2.1 Global Trends in Migration

In the last decades, since environmental disasters started to be included as a potential threat in the concept of human security, there has been increasing debate as to whether environmental disasters are a major cause of migration throughout the world. According to the International Data Base, (2010), the world's population began to increase rapidly about hundreds of years ago and soon it will top about 10 billion. According to United Nations reports conducted in 2017, over 258 million people worldwide do not live in the country of their birth, accounting for about 3.4% of the global's population, and their numbers are growing and that from 2010 to 2015, the overall number of new immigrants increased by 2.4 percent each year, from 220 million to 248 million. Migrants who account for just 10% of all overseas refugees, were estimated to number 25.9 million in 2016, with the majority of them (82.5%) residing in developing countries.

A refugee, according to the 1951 Convention on the Status of Refugees, is "a person fleeing persecution because of race, religion, nationality, membership in a particular social group, or political opinion.". Whilst most refugees in the camps have fled violence in their war torn countries, there are smaller portions in the camps because their home

land has changed. Climate no longer support their livelihood so they cross the border and end up in the refugee camps. They are called “Environmental migrants”.

According to IOM, “environmental migrants are individuals or groups of persons who, mostly due to a rapid or progressive change in the environment that adversely affects their lives or living conditions, are forced to leave their accustomed homes or choose to do so either temporarily or permanently and who travel to either within their country or abroad.”

An environmental migrant is someone who is fleeing their home country because they have seen so many flooding or droughts, and their homes or farms have been destroyed. An Environmental Migrant is a farmer in a country where the weather has become too hot and dry for them to live, causing them to migrate. An Environmental Migrant is a person who is trapped in a wildfire or flooding’s and had their home destroyed, forcing them to relocate to a completely different location. Whereas migrants fleeing from persecution enjoy the advantages from the continuance of enduring global institutions and legal guarantees, the protection of persons displaced by environmental disasters do not enjoy such benefits.

Estimates of the figures that are presumed to relocate as a result of climate change have received considerable and potentially unfair policy and media coverage especially given that the statistics' validity has been questioned. Renaud F, and Bogardi J (2007), believe that the concept of ‘Environmental Migrants’ was set in motion by an Institute called the Lester Brown of the World watch in the 1970s. The contemporary definition of what is now known as the ‘Environmental change-induced migrations and relocation’ started around the 1970s with a journal publication called the Twenty-two Dimension of Population Problem. Tolba Mustafa, a former executive director of the UNEP (1989), in his journal article wrote that “If the world does not act to support sustainable development, up to 50 million people may become environmental migrants”.

In 2001, the publication of the World Disasters Report by the Red Crescent Societies and IRC was a crucial event that caused the concept of "Environmental Migrants" to become prominent as an international policy concern, which stated that almost 210 million people were killed or injured by environmental disasters, which is almost eight times higher than the number for those killed or affected by conventional military and political conflicts from 1991 to 2000. This view is supported by a report from; Reuters (2014) which estimated that in between (2008-2013), close to 170 million people were displaced by environmental disasters. To bring these numbers into perspective, the total number of people displaced by war and persecution over the same time span was approximately one fifth of that total or about 35 million people.

Another major policy shift arose as IOM started identifying environmental migrants as those who have been displaced by extreme natural disasters as well as those whose migration is caused by worsening environmental conditions. While IOM states clearly that the word "environmental refugees" should be avoided because it actually has little legal standing under international refugee law.

Westra & Satvinder (2015), in reviewing the debate about whether the world has changed 'environmentally' have noted that powerful typhoons sweeping, wildfire getting pace, rising sea levels all contributing to the destruction of peoples livelihood worldwide as climate related disasters continue to increase its intensity and forces people to flee this inhabitable conditions. This view was also supported by Kelly (2016), who indicated that weather was getting more excessive and that drought, famine, floods, and vast areas was being devastated by environmental catastrophes.

In an article about greenhouse gas emissions, Pierre-Louis (2018), noted that greenhouses gases are rising at an accelerating pace which in return results the warming of the Earth atmosphere and then causing a wreaking havoc on the climate. Disaster like typhoon and floods are becoming more frequent and powerful consecutive years of drought is costing farmers their crops and livestock. But what happens to the people who live in these places

and where do they go if they are forced to flee? Human kind which is responsible for this havoc is becoming its victim. More and more people are forced to abandon their homes.

2.2.2 Regional Trends in Migration

In the Horn of Africa, droughts, famine, tropical storms, flooding and heavy rains are striking at ever shorter intervals and are growing in intensity. And more and more people are on the run from it. British environmentalist, Norman Meyers (1993), noted that If sea level rise to the extent that scientists have predicted, then by 2030, Millions people on the coasts worldwide will be in acute danger. The densely populated coastal regions of Asia will be most affected and that elsewhere, this phenomenon develops slowly during that period of time as with the rising of sea level invades parts of coastal towns in Somalia.

Studies carried out by CARE International (2009), reports that environmental change is so far contributing to displacement and migration. The nations that don't prepare to fund now in disaster risk reduction are in a high risk and where the official response to disasters is mostly restricted. The Guardian (2009), a British tabloid also reported that extreme weather, floods and droughts are unsettling people and thousands are driven across borders. And by 2050, millions of people will be forced to leave and displaced by the environment.

In Ethiopia, the country has endured its second extreme drought in less than a year. 2017 rainy season saw insufficient rainfall, resulting in extreme and insufficient water shortages, loss of livestock and failed crops across the Nation (USAID 2018). The famine that has plagued Ethiopia's southern region comes while the country's other regions, such as the North and Central highlands, begin to rebound from a disastrous drought in 2016, which was caused by several successive seasons of insufficient and below-average rainfall.

Famine Early Warning Systems Network reported that in 2012, areas of South Sudan faced extreme drought. This was accompanied by widespread floods, which impacted up to a million people and killed over 73,000 metric tons of cereals that were ready for

harvest. The combined effects of drought, devastating flooding, rising poverty and a longstanding economic downturn along with extended political instabilities are forcing people over the brink.

In the republic of Somalia, they had a long and unfriendly climate, extreme heat and dry desert condition. They started the decade with devastating drought and famines in the region have seen for years, and things will just get worse from there. Drought conditions began in late 2014 and continue to this day. Actually, since the beginning of 2011, Somalia has only had one genuine rainy season. Now, persistent droughts have now stripped millions of rural herders of their cattle, their only true resources, and pushed humans closer to insufficient water sources. For several years, and being nomads as a way of life, around 80% of Somalis make their living by herding their animals to the best grazing areas. In the absence of enough rain water, that culture of the Somali nomads is fast becoming impossible. Dry, sandy, parched desert fields are increasingly encroaching on Somalia, devastating the land. Somalia is suffering from a crippling drought that shows no signs of relenting. The rains have collapsed again, just six years after the last severe drought crisis.

Temperature have risen in the Horn of Africa regions over the last 3 decades and according to Oxfam, a United Kingdom based charity reported that there is a growing evidence climate change is making drought more frequent and more severe and is forcing people to migrate. There is no refugee status for victims of climate change. The tragedy is that the population which is obliged to more, do not have a legal framework for protection like that of the refugees. It's actually much more difficult for people who have relocated to a foreign country because you presently cannot get recognition with climate as a reason for seeking an asylum or refugee status. In addition, for the locals who end up hosting climate refugees, the influx of people will strain local resources and show or cause human prejudices.

According to, Santur; Hassan (2019), a Somali-Canadian reporter reported that, the lack of seasonal rains disrupted the lives of over two million residents in Somalia as livestock

died and crops wither due to a shortage of pasture and water. War and displacement prevent international non-governmental organizations from getting proper and accurate hunger data for Somalia, but there is remarkable cause for concern. War and conflict interrupts the access to food, and close to 3 million people: which is nearly 20 percent of the Nations' population are IDPs, as a result of conflict, floods, and food shortages. The nation has the highest infant mortality rate in the globe, at 12.7 percent, of all countries surveyed in 2019 (UNHCR 2011).

According to UNHCR, Somalia's drought and famine's period have led to such issues as a stream of migrants fleeing to the Kenyan border and exacerbated by political instabilities which contributed to the worsening of human rights in the region. Ayiemba and Oucho, (1995) also noted that migrants are often associated with a wide variety of social and environmental concerns, including: Arms and drug trafficking, human rights violations, particularly towards women and children and environmental deterioration among other things.

In many ways, today's people who want to escape harsh conditions face problems that our forefathers did not face. As the duration, intensity, and effect of storms and related weather disasters escalate as a result of climate change, environmental migration is becoming rapidly synonymous with large-scale relocation and immediate loss of life. Furthermore, many of those who need to migrate in order to achieve a secure food source are hampered by structural insecurity, which essentially excludes displacement from their list of potential adaptation strategies. As a result, the dynamics of modern climate migration begin to compile

2.3 Empirical Bases of the Review

For the last two decades, global public interest has been centered on the linkages between environmental change and human migration as a critical field of public policy to an unparalleled degree. Climate change is widely acknowledged to be happening, largely because of human activities and that it that it presents serious difficulties for human

settlement as with the case of the environmental migrants in Dadaab refugee camps and societies across the world.

2.3.1 New Arrivals

In the most recent years, almost millions of Somalis have had to evacuate their homes largely because of environmental changes in their place. Migrants that a forced to flee civil war, famine and drought in Somalia cross the border into its neighboring country Kenya and arrive at the Dadaab refugee camps. Initially, Dadaab was settled up as a transit camp for Somalis fleeing conflict and civil war. Naturally, there are two reasons that people are forced to flee from their homes: drought and conflict. Drought that has been there for the last 10 plus years and that has caused them to lose their livestock and laid waste to their farms. So, there was no any other alternative way than coming to Dadaab by foot; provoked by the insecurity and the famine. There are women who died on the way (CBC NEWS 2011) and some raped (UPI 2011). Some men were even subjected to torture and their bodies lacerated with bayonets.

Dadaab town, once a small settlement, became an overcrowded town when Somalia's civil war broke out, and refugees who were forced to leave settled in three major camps. Dadaab's refugee camps were designed to house 90,000 people, but they now house four times that number due to the new arrivals of the environmental migrants. Sally Williams (2011), a telegraph journalist reported that in the Dadaab camps, thousands of desperate families arrive here every single month escaping drought in Somalia and other neighboring countries. In the main camp, there are hospitals, a place to get food and water and there a school for children, but on the outskirts of the camp there's hardly anything. This is life for the people who live here. They have practically nothing. They have to make their houses out of whatever they can find and getting food and water is very difficult conditions for the new arrivals and as always, this is a heart breaking for them.

Some didn't even survive (Williams 2011). Most of those that did not survived are buried outskirts of Dadaab town and the reasons they died are thirst and starvation. They were

hit massively by droughts and famine and fled their homes in search of food and sustenance. When they reached here in Dadaab camps, they missed the help they expected. The food they got is not even enough and some don't even get anything. Despite the suffering they have encountered, they are still facing the same hardship that made them flee from their homes. These people have nothing. They depend on other refugees who do not get enough and there is already competition over what they have. And for some, the source of the water is as far as 3 to 4 kilometers away. Sometimes it takes two days in the line just to get a 20 liters jerrycan of water. Before they can access food ration cards, new arrivals must be registered at the camp.

New arrivals of refugees who are fleeing from famine sometimes settle the outskirts of the Dadaab camp as they wait for registration. Here, they (refugees) are getting on with their business of surveying. At the start, they built shelters. A shelter that will have to last for months before tents become visible within refugee camps, if they ever do. Everything here is a makeshift; handmade. Whilst children wait for a place in the official camp school, a temporary handmade Islamic Madrasa is built from available sticks. It's a viable space where the children can learn something other than survival.

Of all the arrivals of the new migrants, children are the most vulnerable. A good number of them are sent to specialist clinics run by Doctors without Borders and IRC. Medicine Sans Frontières also reported that in its feeding centers and hospitals, they were treating over 10,000 critically malnourished children. Children‘s have known nothing in their short lives other than drought and famine. This has clearly affected their growth. Children are underweight, a clear indication that malnutrition is wasting all of their muscles (Polonsky, Ronsse, Ciglenecki 2011).

New arrivals are often expected to stay for several days, if not weeks, waiting to be accepted to the first reception area. Here, they are given three weeks' worth of emergency rations. This is mostly due to the fact that the processing system is weighted down and that it would take at least that long for these new immigrants to be properly identified as refugees and issued ration cards. Migrants walk for weeks through the bushes from

Somalia to Dadaab, Kenya. According to UNHCR, the lengthy and difficult desert trip up to the Dadaab refugee camps has taken many lives, and many people have died en route. So, one can only imagine their happiness when they finally see the outskirts of Dadaab.

Jenkins (2000), observed that there is a wire mark and rolls of barbed wire at the gate entrance of Dadaab refugee camp and that the new arrivals always rush to and are desperate to get inside the camps. The barbed wire at the gate entrance is it's a wire mark that border between famine and food, between war and safety and that they have waited long enough from the blistering sun so that they could get inside the camps and gets registered. Those who are vulnerable are picked down from the line and are taken to the registration tent for registration. Some of them won't get sanctuary on days simply because there are too many people being inside. Some of them were born just some days before and most of them are starving. According to Lough Richard (2011) of Reuters reported that some migrants gave birth on the road just days before they arrived at the camps having walked all the way from their village in Somalia due to the drought and they did not eat for days. Most of them are sick and that they are try to get some treatment. They constantly moved to gates trying to join those already inside. More than a thousand newcomers and often as many as fifteen hundred are struggling in there from the busy every single day. Most of these new arrivals are fleeing from natural disasters that hit hard on the southern part of Somalia.

A vital step in refugees' life is to be formally registered. Some of these migrants' board vehicles in the early morning to come to spend and in many situation, they wait for the whole day waiting for registration in Kenya's department of Refugees affair that operates what is known as the 'registration tent'. Finally, the last step is when a refugee moves from having a 'wristband' and to a 'ration card' and hopes the new home. It is a slow, tiresome, finger pointing, photographing, interviewing and checking. In the end, the new arrivals get their ration cards and once they do, they do every two weeks and they can turn up to one of the warehouses to collect their food. The United Nations' challenge is keeping supply because every day, they are going to need to feed a couple of thousands of extra people.

As the refugee camp grapple with more new arrivals and extreme weather arriving in the Eastern part of Africa, the worry is that, there is more of Horn of Africa to fall into famine and refugees are often faced with the cruel decision of which children they can go and carry with them for days and weeks in the hope of reaching a refugee camp, and which they shall be forced to leave behind (Dorward 2011). Whilst the physical fitness of future arrivers will be even worse than those who are struggling in now, as always, there is disease and already overcrowding in the camps. The challenge for the charity and aid agency workers here is to resist being overwhelmed. The presence to make room or accommodate for the thousand who arrived Dadaab each week is having some effects on Dadaabs' Natural Resources.

The unconstrained movement and relocation of large numbers of communities may have a significant impact on the Environment. Arriving in an 'alien surroundings', migrants face hunger, fatigue, humiliation and grief. The first thing the refugees do is to look after themselves, and most often to find basic needs like food and shelter. Trees are cut down to provide support for basic shelters (Kreiger, Panke & Pregering 2020). Dead wood is collected in order to create fires for warmth and as a cooking fuel. Where only a few people are involved, the environmental consequences are unlikely to be either severe or long-lasting, but when tens of thousands of people are involved, the outcomes may be detrimental to the environment. Not only will the international community have to be compelled to defend and assist them, however it'll also have to deal with the subsequent immense environmental pressure on the places they move to.

Life in Dadaab is very basic. Despite the fact that there is no lack of distress in the camps, what is noticeable is the industriousness and how these migrants are working hard tirelessly and their determination to overcome this situation that they are in. You will find real happiness and genuine excitements from migrants who have now arrived at the end of a long and exhausting journey. After the horrors of fleeing droughts of Somalia, journey to Kenya, and the persistent walking and queuing is finally relieved, not only for the migrants, but also the aid workers and the authorities themselves, which the

assistance may be minimal, but they have access to water, they have access to health care and some of them actually understand that there is no fear for them in the case of flooding. To some outsiders, Dadaab might look like a huge confinement camp, however, for some refugees, this place offers possibilities that they did not had in Somalia.

One the most noteworthy problem linked to refugee-affected areas is deforestation, soil erosion (UNHCR 2001), depletion and pollution of water resources. The effects of environmental decline on the refugees themselves are enormous (Shepherd 1995). Poor water quality impacts the health of enormous numbers of individuals during a situation in which infectious infections are likely to spread quickly. Deforestation increasingly causes vulnerable women and children to move at a regular pace for wood, exposing them in physical harm. Children could have to be compelled to fail to attend to school to help.

A lot of people arrive from Somalia to the Kenyans refugees' camp. But few can leave. The only legal means to do so is by obtaining a visa to be relocated in a 3rd country; a process that goes on between two and three years. Only those who arrived in 1991 and 1992 can benefit from this. This global crisis that is hitting the Horn countries particular badly could imply that the number of groups that were able to successfully support themselves by nomadic pastoralism will be reduced, and the idea that everyone will go back to what they were doing naturally before will be difficult. Abandoning the traditional culture and way of life is not an easy decision. Pastoralism is not only a way for the Somalis to make a living; it is who they are. They would have no choice but to adapt if the weather changes.

2.4 Theoretical Framework.

2.4.1 Push and Pull Theory of Migration:

Ravenstein of England developed the push and pull theory of migration in the nineteenth century. It claimed that individuals migrate due to circumstances that drive them out of their current country and forces that attract them in to another. Ravenstein's theory was revised by Everett Lee (1966) to place greater emphasis on internal (or push) forces. Lee also discussed the effect that intervening barriers have on the migratory process.

Distance, physical and political hurdles, and having dependents, he claimed, can all delay or even impede migration.

Everett Lee argues that people migrate as a result of push and pull factors. A push factors which prompt them to get out of their present geographical region, whereas on the other hand a pull factor cause them to migrate into a new place. To move to a new location, people view their current place of residence so badly that they feel pushed away from it, and on the other hand they view another place so nice and attractively that they feel pulled towards it.

Lee, categorizes the factors involved and the relocation procedure into four.

1) Factors related to the place of origin;
2) Factors related to the destination area;
3) Intervening obstacles; and
4) Personal factors.

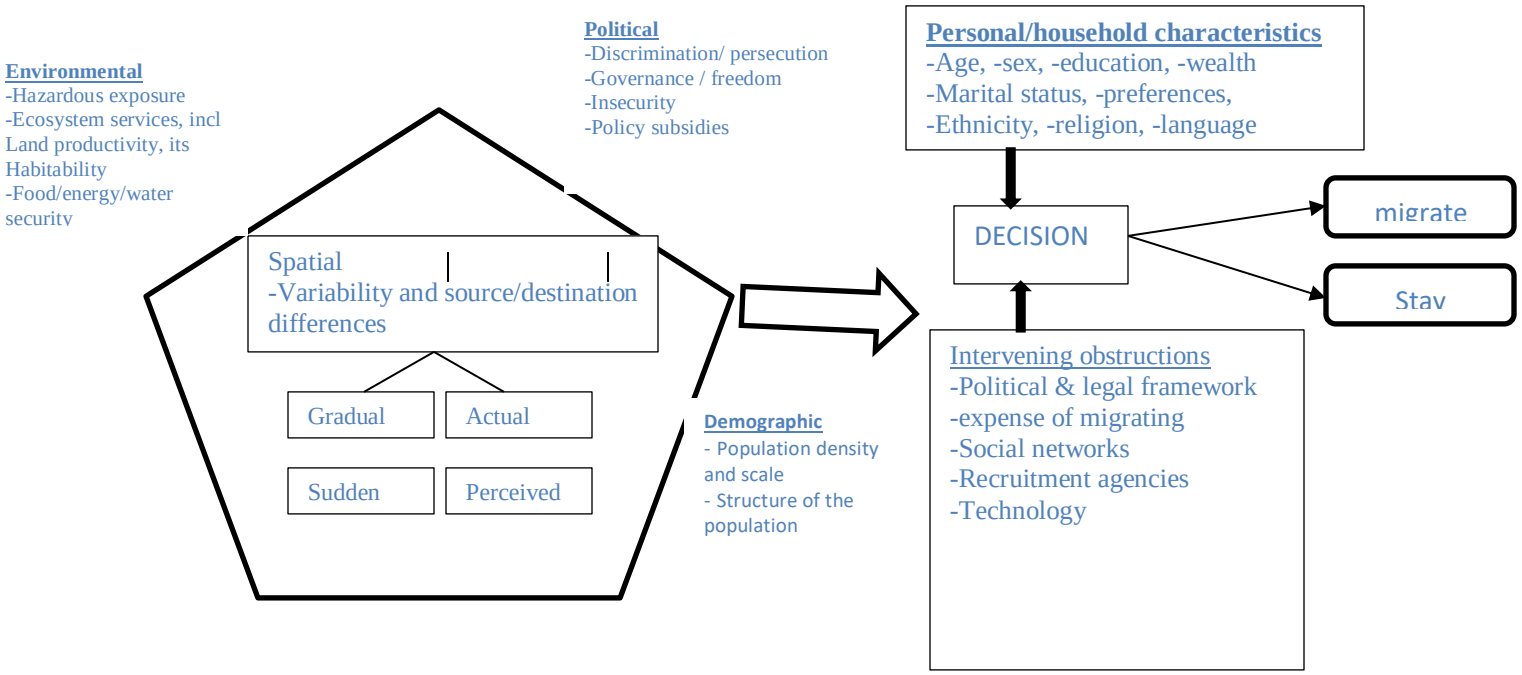
Lee expanded on each of these four groups by finding that in each area, there are various causes that work to move people away from their regions, to keep people in their places, or to draw individuals to it. After all of these have been properly weighed, migration may take place. In most cases, however, a person has a better and more realistic knowledge of his place of origin, while his knowledge of his destination is quite simplistic and inexact. Distance and transit are examples of these. However, technological advancements have diminished their significance in recent times. Finally, personal influences are important because, rather than the real factors associated with the location of origin and/or destination, the individual's interpretation of these factors has been shown to affect the actual act of migration. Lee came to the conclusion that on numerous occasions, migration is selective and influenced by pull and push factors. Areas of plus factors are prioritized for migration.

People are drawn to visually appealing places while also being moved away from dangerous and unsafe areas. In the case of Horn of Africa environmental migrants, they

are attracted to Dadaab and Kakuma refugee camps complex and seek refuge because of the presence of humanitarian aid agencies. The Dadaab and Kakuma refugee complex attracted migrants in the Southern part of Somalia that was hit hard by the drought, the flash floods that also struck the lower Jubba and lower Shabelle, and the famine that targeted the Amhara Tigray province in Ethiopia. This can all be attributed to the Push and Pull factor that is explained in Everett Lee laws of migration.

2.5: Conceptual Framework

Figure 2.1: Conceptual Framework



Source; European Migration

The conceptual framework illustrated as a pentagon (Figure 2.5), categorizes various migration factors into five divisions: political, social, economic, environmental and demographic. From the conceptual framework above, it is obvious that human migration is the result of a diverse set of causes. In exploring the interconnected human migration drivers, the researcher will look at the key reasons for migration and how environmental changes may affect them.

2.6 Knowledge Gap in the Literature Review

The key knowledge gap identified in the literature review is lack of empirical evidence on government's effort to implement human migration and climate change adaptation regulations. Government has not taken into account to the fact that People's migration, resettlement, and relocation must be better considered in climate change adaptation programs. Government shall be required to ensure that societies impacted by heavy rains and droughts, are more resilient.

Existing empirical literature also shows that there are numerous studies being undertaken at the international, regional, and local levels to explore the missing connection that this research seeks to address. Understanding of previous patterns has been used where it was deemed appropriate or illustrative. However, this research is more confined to regional trends, despite the fact that there are several political, social and other influences that might significantly affect the migration system in the Horn of Africa.

It's also worth noting that there also several studies about the refugees in Dadaab camps but none has been done about those refugees who migrated as a result of Environmental changes in their previous homeland. Most of the studies talk about the refugees in general and the conflict and how the political turmoil's in Somalia, along with South Sudan and other neighboring countries have mixed up the global world and in return leading to stream of refugees in the Dadaab camps. It's therefore important to do a holistic assessment of how environmental changes lead to migration and how they bring about streams of refugees migrating in to the Dadaab camps.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the method that is used to conduct the research. This includes the research design, study population, sampling procedure and methods of data collection. Data analysis, ethical consideration and the study's presentation methods are also discussed.

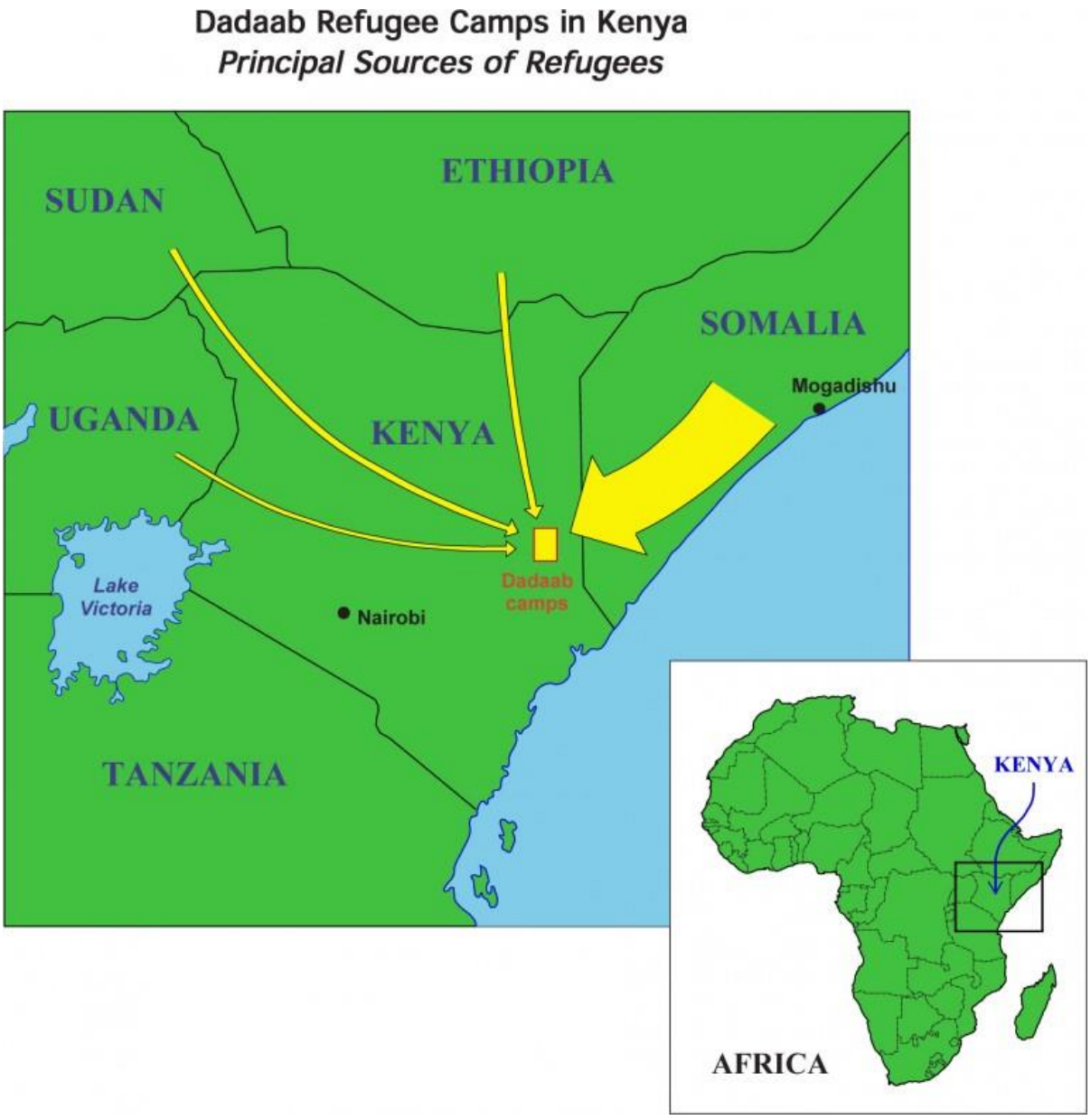
3.2 The Study Area

Garissa County is one of three counties in Kenya's Northeastern Province, with the county code 007. It is bordered to the east by the Republic of Somalia and northwest by Wajir County. The majority of the people in Garissa County are pastoralists who maintain their cattle on the open ranges. A few households make a living from irrigation agriculture along the Tana River on the county's western outskirts. The Bour Algi Giraffe Sanctuary, located about 6 kilometers south of Garissa, is home to endangered species such as the Rothschild Giraffe, Gerunk, and other herbivores such as Warthog and water buck.

Dadaab is a town in the county of Garissa. It is the location of the UN High Commissioner for Refugees base, which holds almost 220,000 registered refugees as of the end of the end of the year 2019. (UNHCR, 2019). The Dadaab refugee complex is made up of four camps. The first camp was established in 1991, when people escaping Somalia's civil war begun to cross the Kenyan border. In late 2011, almost 130,000 migrants fled drought and famine in Somalia, resulting in a second major influx (UNHCR)

Dadaab's population is mainly made up of nomadic pastoralists who herd camels and goats. The remainder of the town's economy is dependent on refugee facilities. The main attraction in Dadaab is the UNHCR base, which represents the migrants in the town's camps of Hagadera, Ifo, and Dagahaley. The remainder of the town's economy is dependent on providing services to refugees. This study will focus on all the main camps, that is; Ifo, Ifo 2, Hagadera, Dagahley refugee camp and the Dadaab host community.

Figure 3.1: Map of Dadaab Refugee Camps Showing their Origins.



3.3 Research Design

The survey was designed in a descriptive manner. Its aim was to predict an accurate overview of persons, activities, and situations. Since the researcher's goal was to describe issues related to environmental migration, the descriptive survey study creates a comprehensive overview that allows a researcher to use a variety of methods on a single topic. This provides time and space to gain a full grasp of the subject, resulting in a solid foundation on which the influences influencing the case study can be described in great detail. Furthermore, in contrast to a fixed point of view in an individual interview, a variety of perspectives are provided.

A descriptive research is a means of obtaining information that includes questioning or conducting a questionnaire to a selection of people from the target population. It is a scientific approach that includes studying and explaining a subject's actions without manipulating it in any way. It is also used by industry analysts to assess consumer preferences, as well as by businesses. Descriptive study is conducted to determine and promote the description of the component in question. There are some advantages of descriptive research i.e.; it helps in getting to know a group's features in a given scenario.

3.4 Study Population and Sample Frame

3.4.1 Target Population

The number of individuals from which a researcher wants to identify and draw mathematical conclusions is referred to as the target population. The study targeted refugees in Dadaab camps and Sampling of refugee respondents was done in Hagadera, and Ifo as they are two of the main and oldest camps in Dadaab region and these two camps was selected to represent the other camps as most Refugee Camps are of the same kind in nature. The local community was also sampled from the population in Dadaab town and nearby Sub County wards such as Liboi, Dertu, Damajaley, Abakeyle and Labasigale.

From the total population of the Selected two Main camps, Ifo, and Hagadera refugee camps including households and traders, was also randomly sampled respectively, while from the host community of Dadaab town and the nearby rural sub county wards another households was randomly selected, ensuring representation across the camps and host community. The target population of this study and the key informants were from the international humanitarian organization's staff, local chiefs, government staff, teachers and local leaders. The Ward representatives was also interviewed and they provided vital information concerning Climate refugees and the impacts they have on the Natural Environment and their relationship with the community, changes in social services delivery and receptions of the local community regarding refugees, sources of income, environmental effects, food security and the nature of sharing of local facilities, among others.

3.4.2 Sampling Selection

A sample is a particular section of a wider population that is considered to be representative of the whole. The study adopted stratified sampling technique. The technique is appropriate as the study population is heterogeneous in that, different departments were involved. To determine the sample size, the researcher used Yamane Taro's formula. It is represented mathematically us:

$$n = \frac{N}{1 + N\,(e)^2}$$

Where;

n= sample size,

N = population size,

e = Margin of error

e = 0.05 based on the research condition.

N= 180

e= 0.05

$$n = \frac{180}{1+180(0.05)^2}$$

$$n = \frac{180}{1.45}$$

n=124

The sample size in this research study was 124 of the target population this means that the sample size its 80% of the target population hence the research took 69% of target population in each category as shown in table 3.2 below.

(6*124) / 180 = 4

(7*124) / 180 = 5

(8*124) / 180 = 6

(20*124) / 180 = 14

(138*124) / 180 = 95

Total (4+5+6+14+95= **124)**

Table 3.2:

Category	Target Population	Sample Size (69% of Target Population)
Local leaders	6	4
Humanitarian staffs	7	5
Government officials	8	6
Refugee traders	20	14
Refugee Households	138	95
Total	**180**	**124**

3.6 Methodology of the Study.

The research relied on both secondary and primary sources of information. Secondary data involved systematically analyzing data and research collected by other researchers or investigators by carrying out documents review from various organizations such as the UNHCR, DRC, NRC, WFP and other documents prepared by /about other African countries hosting refugees such as, Ethiopia, Uganda, and Sudan amongst others. Also, activities such as the collection, analysis and review of data in published and un published material such as academic books, journals, periodicals, newspapers, magazines, relevant to the study was used. This involves visiting libraries and archives to assess materials on refugees and particularly those that did research about environmental migrants.

3.6.1 Data Analysis and Presentation

In order to illustrate the effects of environmental changes on migration, a quantitative evaluation of the relationships between the two variables was carried out. The data was organized into variables, and the results coded. Descriptive statistics, such as percentages, was used to interpret and make sense of the collected data. Pie charts, tables and graphs were also applied to illustrate the results.

3.6.2 Interviews with Dadaab Refugees

The researcher randomly asked refugees questions related to their plights of leaving their motherland households and seeking refuge in a different country. And whether they have migrated as result of environmental changes that happened in their previous homeland or whether it was a confounding factor of both environmental change and conflict.

3.6.3 Questionnaire

The questionnaires had both open-ended and closed-ended ones; In the case of open-ended questions, a five-point Linker style scale, ranked from 1=strongly disagree to 5=strongly agree; was used for all constructs, with 5 being the highest score.

3.7 Ethical Consideration

Ethical consideration safeguards participants' human rights, including their right to privacy, while upholding the highest degree of confidentiality. The research project report was requested for legal review in order to carry out this study. A study permit was also sought from the Kenya's Department of Refugees (DRA). An informed consent form was created and distributed to the participants. The respondent's rights to participate in the study were upheld at all times during the testing, and they were told that it is their right to choose whether or not to participate. There was no incentive offered for the respondents to participate in the research.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATIONS OF THE FINDINGS

4.0 Introduction

The research study's findings are presented in this section. The general approach adopted includes the use of tables and charts to illustrate the research study's findings.

4.1 Response Rate

To collect responses from the study population, the researcher distributed a total of 124 questionnaires at the Dadaab refugee camps. Table 4.1 displays the replies' findings.

Table 4.1: Response Rate

Response	Frequency	Percentage (%)
Returned	105	85
Unreturned	19	15
Total	**124**	**100**

The table above shows the proportion of returned and unreturned questionnaires from the field. From a total of 124 questionnaires distributed only (105) 85% of the questionnaires were returned while (19) 15% of the questionnaires were not. This is assumed 105 returned questionnaires to represent the study population.

4.2 Demographic Analysis

The research attempted to find out the demographic features of the respondents since they are regarded as important variables that provide some fundamental information about the respondents. The gender of the respondents, as well as the qualifications of the staffs and the length of years in the camps was factors examined in the study.

4.2.1 Education Level of the Respondents

The research attempted to investigate the highest level of formal education the respondents have received. This was achieved by looking at the level of formal education, primary, secondary, technical and also college level. The results are shown in Figure 4.2.

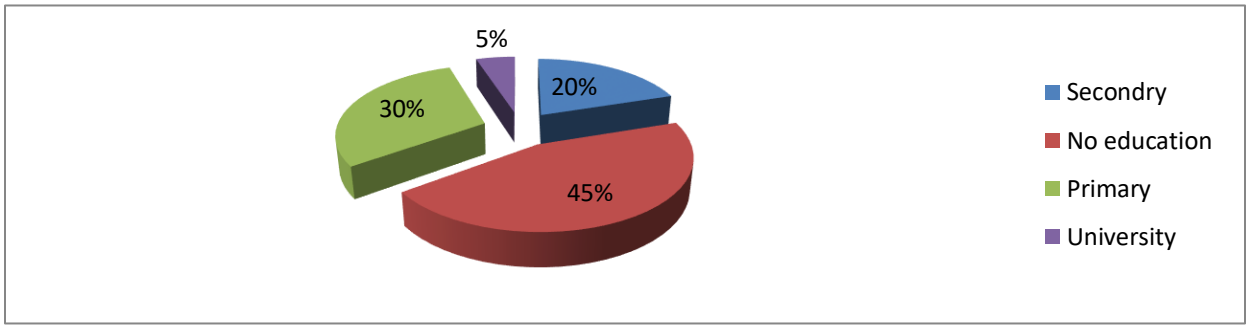


Figure 4.2: Level of Education.

The study indicates that the majority of respondents (47) 45 % had no formal education, followed by (32) 30% of those polled have just an elementary level of education and (21) 20% of the respondents had a secondary education as their highest level of schooling, with the remainder having (5) 5% reported that they had a university as their highest level of education.

4.3 Number of Years in the Camps

The table 4.3 below shows the amount of years the respondents have spent in refugee camps.

Table 4.3: Years in the Refugee Camps

	Frequency	**Percentage**
1 - 10 years	25	26%
10 - 20 years	50	52.5%
20 years and above	30	31.5%
Total	**105**	**100.0**

According to the data in Table 4.3, 26 percent of respondents had been in refugee camps for almost 1-10 years and the majority of the respondents 52.5% for 10-20 years and the remaining 31.5% for 20 plus years. This demonstrates that the study's respondents have been in the camps for an extended period of time and so have appropriate knowledge of the study's research topics.

4.4 Research Variables

4.4.1 Floods

The data was collected using a Likert scale of 1-5. Tables displaying the mean and standard deviation of the degree of agreement for each factor were provided as results.

Table 4.5 Floods

Floods	**N**	**Mean**	**S.D.**
1. Floods cause structural damage to your business, store, industry, or structure.	105	4.57	2.57
2. Floods results outbreak of waterborne diseases?	105	4.56	2.77
3. Floods results losses of agricultural product?	105	3.86	1.45
4. What effect do floods have on your living situation in terms of added costs?	105	4.35	2.64
5. Floods results in the interruption of basic needs?	105	4.44	2.77
6. There is a clean-up cost after flood occurrence?	105	3.91	1.47
Average Mean		**4.28**	

The findings on the effect that floods had on Structural properties are that it damages the structures of the building. Damage to any building component, including the foundation, walls, floors, windows, roofs, connected carpets, attached shelves, and so on, is classified as structural damage. The vast majority of responders agreed firmly that Floods amount to structural damage to your business, store, industry, or structure. Moreover the majority of responders agreed on that Floods results outbreak of waterborne diseases and this is demonstrated by a score of 4.56 and a standard deviation of 2.77.

Respondents also agreed on that Floods results loss of agricultural product, this is demonstrated by a score of 3.86 and standard deviation of 1.45. Additionally according to the data, it was agreed that Floods have an impact on people's living conditions by increasing the expense of food, transportation, and, worst of all, repairing access roads and parking lots. This was demonstrated by a score of 4.35 and standard deviation of 2.64.

Furthermore, the research revealed that Floods results in interruption of basic needs. It has been noted that when flooding happen, basic needs such as water supply, electrical; supply and maybe telephone connection might also be interrupted which might also take long hours of fixing it hence normal daily routines interrupted. Finally, there is a clean-up cost following a flood, which was agreed upon with a mean score of 3.91 and a standard deviation of 1.47. The expense of cleaning up the inside and outside of the building is included in the clean-up fee. Labor expenses, Costs for hired machines and equipment, as well as additional expenses.

The result indicates that floods present a perfect condition for a migration to happen. The findings were in agreement with Dun (2011) who posits that Flooding on a frequent basis can cause independent household or individual relocation decisions, as well as government-initiated displacement of households.

4.4.2 Drought

The Table 4.6 analyses the effect of drought and or whether it creates a perfect condition for migration. From the questionnaire a Likert scale of 1-5 was used.

Table 4.6: Drought

Drought	N	Mean	S.D.
1. Drought diminishes crop growth and the carrying capacity for livestock	105	4.87	2.82
2. Drought instigates malnutrition, dehydration and related diseases	105	4.97	2.24
3. Drought drives snake migration, which leads to snake bites.	105	4.85	2.94
4. Drought fuels conflict over natural resources such as water and food.	105	3.81	1.48
5. Drought causes Mass migration, leading in domestic displacement and international refugees.	105	3.89	1.45
6. When a drought strikes a region prone to desertification and erosion, dust storms occur.	105	4.28	2.76
Average Mean		**4.45**	

The research findings shows that the respondents agreed drought diminishes crop growth and the carrying capacity for livestock with a means score of 4.87 and a standard deviation of 2.82. With a score of 4.97 and a standard deviation of 2.24, respondents also agreed that drought causes hunger, dehydration, and associated illnesses. Furthermore, with a mean score of 4.85 and a standard deviation of 2.94, respondents strongly agreed that drought increases snake migration, which results in snake bites.

Also, respondents believed that drought increases conflict over natural resources, such as water and food, as evidenced by a mean score of 3.81 and a standard deviation of 1.48. Drought causing widespread migration, leading in internal displacement and foreign refugees was agreed upon with a mean score of 3.89 and standard deviation of 1.45. Finally, with a mean score of 4.28 and a standard deviation of 2.76, respondents agreed that dust storms occur when drought strikes a desertification and erosion-prone area. The

research results reveal that the majority of respondents agreed with the questions being asked and that drought cause's human mobility, as evidenced by the average means score of 4.45. The research findings on drought and displacement agree with Gray &Mueller (2012) who posits that drought increases migration and that land-poor households are among the most vulnerable.

4.4.3 Famine

The Table 4.7 analyses the effect of famine and or whether it creates a perfect condition for migration as well. From the questionnaire a Likert scale of 1-5 was also used.

Table 4.7: Famine

Famine	N	Mean	S.D.
1. Famine causes severe malnutrition, particularly among small children and pregnant women.	105	4.58	2.73
2. Malnutrition weakens the body and raises the risk of infection, which can be fatal.	105	4.35	2.84
3. Famine is especially dangerous to the elderly who are relocated and/or living alone (or isolated from family).	105	4.34	2.97
4. Children, both born and unborn, who survive acute malnutrition into maturity suffer long-term consequences.	105	4.56	2.11
5. When there is displacement, schooling is disrupted, and undernourished hungry children have short attention spans and poor academic performance.	105	4.69	2.76
6. Famine has a long-term impact on certain people's mental health, particularly those who are displaced and lose their homes and land.	105	4.97	2.45
Average Mean		4.58	

According to the survey results, respondents overwhelmingly agreed that famine causes severe undernutrition, particularly among small children and pregnant women. A mean score of 4.58 and a s.d of 2.73 demonstrated it. Respondents also agreed that malnutrition weakens the body and increases the risk of infection, which can lead to death. It was demonstrated by a score of 4.35 and a s.d of 2.84.

Respondents were in agreement that the most vulnerable to famine are older individuals who are relocated, living alone, or separated from family. A score of 4.34 and a s.d of 2.97 demonstrated this. Respondents strongly agreed that young and unborn children who survive severe malnutrition into maturity have long-term consequences.

Furthermore, learning is disrupted during famine, particularly when there is relocation and displacement; that malnourished hungry children have limited attention spans and lower school performance. A mean score of 4.69 and a standard deviation of 2.76 demonstrated this. Finally, respondents strongly agreed that Famine has a long-term mental health impact on certain people, particularly those who are displaced and lose their house and land, as evidenced by a score of 4.97 and deviation of 2.45.

The average mean of famine in relation with displacement was 4.58. This means that the majority of the respondents agreed with the questions posed. The results of this study were in line with Hugo (2013) who argues that famine is one of the dimensions influencing migration

4.6 Statistical inference

Based on the data collected, the researcher performed an inferential statistical analysis. A correlation and regression analysis was used. This was done to look for trends in the data that had been gathered. More than one statistical analysis was done to validate the data and look for any inconsistencies.

4.6.1 Correlation Analysis

Table 4.8 Correlation between Drought and Migration

			Drought	Migration
Spearman's rho	**Drought**	Correlation coefficient	1.000	.738**
		sig. (2-tailed).	.	.000
		N	105	105
	Migration	Correlation coefficient	.738**	1.000
		sig (2-tailed)	.000	.
		N	105	105

The Spearman Coefficient (rs) was calculated using data from 105 respondents and was found to be 0.738. As the H_0: $p = 0$ shows the there is no correlation and H_1: $p \neq 0$ shows that there is a correlation between drought and migration of the refugees in Dadaab. The Spearman Coefficient (rs) result indicates that there is a positive correlation between the two variables being tested. Because the probability Sig (2-tailed) is less than the alpha 5% value, the H_0 hypothesis is rejected. The results are shown in table 4.8 above.

Table 4.9 Correlation between Floods and Migration

			Floods	Migration
Spearman's rho	**Floods**	Correlation coefficient	1.000	.374**
		sig. (2-tailed).	.	.000
		N	105	105
	Migration	Correlation coefficient	.374**	1.000
		sig. (2-tailed).	.000	.
		N	105	105

The calculation of the relationship between the two variables, Floods and Migration is shown in the table above. According to the findings, the Spearman coefficient (rs) for 105 respondents is 0.374. This implies that there is a link between floods and migration.

4.6.3 Analysis of Variance

The research employed Analysis of Variance to find out just how much the model is statistically significant and findings reported in table below.

Table 4.10 ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	7.25	10	2.69258	10.351	.000[b]
	Residual	190.54	94	.412		
	Total	197.79	104			

When investigating the Analysis of Variance statics, the results showed that the regression model in the research had a 0.00% significance threshold,meaning that the study population parameters were most likely correct as the significance level was less than 0.05. The data above illustrates that the independent variables; Floods and Drought is correlated with the dependent variable; migration/displacement.

CHAPTER FIVE
FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The present research study set out to look into the relationship between specified environmental changes (i.e drought, famine and floods) and how they bring about migration. The present research project takes the view that the observed mass influx of refugee in Dadaab camps is as the result of people being displaced by confounding environmental factors of drought, famine and floods. This was in order to arrive a meaningful and useful findings and related conclusion. This would pave way for a plausible and relevant recommendation to policy makers and future researchers alike, in a bid to enhance development in the study area and managing the social tensions and conflicts caused by migration.

In this last chapter, a comprehensive overview of the relevant research findings, emerging conclusions and resultant recommendation is given in light of the research goals and hypothesis stated in chapter one. In addition, particular contributions made by this research in relation to the specified objectives are provided.

The research study component objectives were as follows;

iv. To examine the relationship between floods and migration
v. To assess the extent at which drought contributed to people fleeing to Dadaab refugee camps
vi. To examine the contribution of famine in relation to migration

The objectives, for purposes of statistical analyses have been re-casted into their respective null hypothesis as follows.

1) H_0: There is no significant relationship between floods and migration of the refugees in Dadaab.

   H_1: There is a significant relationship between floods and migration of the refugees in Dadaab.

2) H_0: There is no significant relationship between drought and migration

   H_1: There is a significant relationship between drought and migration

5.1 Research findings

The research findings presented in this section emanates from the various objectives the present research had set out to investigate. First, the major findings on the Environmental changes that resulted into migration are treated each separately and then specific findings on various interrelation examined in the study are presented in the subsequent subsection.

a) Floods

To fulfill the study's stated goal, it was necessary to focus on a single aspect(s) of environmental changes such as floods and how it brings about displacements that also result into people migrating to the refugee camps in Dadaab. In this regard, the following is a summary of the research finding;

i. That the findings on the effect that floods had on Structural properties are that they damage the structures of the building. Damage to any building component, including the foundation, walls, floors, windows, roofs, connected carpets, attached shelving and cabinets, and so on, is referred to as structural damage.

ii. That floods results the outbreak of waterborne diseases. The major cause of waterborne illnesses during flooding is contamination of drinking water supplies. Floods contaminate the supply of clean water with bacteria, parasites, and viruses, resulting in the spread of waterborne diseases.

iii. That floods results losses of agricultural product. Flooding may cause erosion and soil movement, destroying fields and crops. Erosion reduces the rich top soil,

having left agricultural plants with really no place to grow roots. Flood-deposited sand, have the potential to suffocate and destroy exposed crops.

iv. That flood have an impact on people's living conditions by increasing the cost of food, transportation, and, worst of all, the expense of repairing access roads and parking lots.

v. That floods results in the interruption of basic needs. It has been noted that when flooding happen, basic needs such as water supply, electrical; supply and maybe telephone connection might also be interrupted which might also take long hours of fixing it hence normal daily routines interrupted.

vi. That there is a clean-up expense following a flood. The expense of cleaning up the inside and outside of the building is included in the clean-up fee. Labor expenses, Costs for hired machines and equipment, as well as additional expenses.

Plate 1: Outside the Registration tent at the Ifo Refugee camps. Photo by; Hassan MK

b) DROUGHT

i. That drought diminishes crop growth and the carrying capacity for livestock. Droughts have the potential to raise the feed prices and also limit water availability for livestock and other agricultural needs. Dry weather can also affect dairy farmers' ability to cultivate feed, as well as the availability and cost of purchased feed.

ii. That drought encourages malnutrition, dehydration and related diseases. Drought's indirect consequences include malnutrition, which is linked to an increased susceptibility to diarrheal illnesses as a result of its negative effects.

iii. That drought causes Snake migration, which results in snake-bites. As the global temperature rises, so does the presence and number of snakes. Climate change affects habitats and ecosystems. Warmer global temperatures increase the likelihood that animals (such as snakes) will spread and explore new regions to call home.

iv. That drought has sparked a natural resource conflicts, such as those over water and food.

v. That drought cause mass migration which result in international refugees. Drought has made huge areas of land unbearable or practically useless, causing people to relocate to cities where employment are becoming increasingly scarce and food is becoming increasingly costly, and others have been compelled to cross the border and relocate to neighboring nations.

vi. Finally, there are dust storms when a drought hits a desertification and erosion-prone area. Dust storms are more likely during times of drought. Particulate particles in the air caused by these occurrences might irritate the bronchial passageways and lungs. This can aggravate chronic respiratory diseases and raise the risk of respiratory infections such as bronchitis and pneumonia.

c) FAMINE

i. That famine cause's severe malnutrition, particularly among pregnant women and small children which this sometimes may constitutes as a public health crisis.

ii. That malnutrition sometimes weakens and damages the body and raises the risk of infection, which can lead to mortality.

iii. That during a famine, older individuals who are relocated and/or living alone (or separated from family) are more susceptible. While drought affects everyone, those over the age of 70 are disproportionately affected. Certain aging-related problems, such as diminished physical strength and incapacity, might exacerbate their condition.

iv. That during times of famine, infants who have survived acute malnutrition into maturity have long-term consequences. Malnutrition can result in the onset of illnesses and chronic health problems. Undernutrition increases the risk of obesity, heart disease, and diabetes in the long run.

v. That during famine, schooling is delayed due to relocation, and that undernourished hungry children have short attention spans and poor academic performance.

vi. That hunger has a long-term mental health impact on certain people, particularly for those that are forced to flee and lose their home and land.

Plate 2: Inside the registration tent at the Hagadera Camp. Photo by Hassan MK

5.2 Conclusions

In the light of foregoing research findings and other related personal observation from fieldwork, a number of conclusions have been drawn. It is critical to understand that the current study's theme has been that specified environmental changes such as drought, famine and floods and how they bring about human migration. This research argues there are mass influxes of refugees arriving at the Dadaab refugee camps which can largely be attributed to the sudden environmental changes in their previous homeland and wherever they may happen to be and in return, their arrivals leads to changing the whole makeshift of the camps in Dadaab.

5.2.1 Migration

I. Migration has several causes and that changes in the environment will have an effect on migration along with its effects on drivers.

II. Managing the social discord that arise as a result of migration caused by changes in the environment; There is really no proof to support this assertion that environmental conflict causes migration, or that migration driven by changes in the environment causes unrest. However, there are significant links between changes in the environment, migration & conflict: one which is that movement, including those that are driven by changes in the environment can exacerbate geopolitical/political tensions, particularly by raising tensions and interfering with conflict in the receiving regions. This is even more probable if movement is long-term, cross-border, illegal or unanticipated. And two which is that, Environmental displacement may possibly cause geo-politic conflicts especially if it results in a large number of individuals arrive in certain places in a short period of time, without any political leadership to deal with these tensions.

III. Global climate changes can contribute to poverty by increasing people's vulnerability to war, natural catastrophes, and economic hardship. Individuals' capacity to travel in a planned, safe manner might be limited by a corresponding loss in financial assets, essentially trapping them. The consequences, particularly the diminished capacity to migrate in a well-planned and secure manner when there is an increased level of exposure, this entails that there is a larger likelihood of humanitarian crisis and perhaps uncontrolled and extremely worrying displacement.

IV. Migration can be regarded as a response to environmental changes, and in some situations, it can be used to create long-term resilience. Given the predicted worldwide environmental change, environmental and development policymakers must implement a broad and a diverse variety of policies. There is no one answer, and a variety of actions are necessary. Steps to limit the rate at which the environment is changing, as well as measures to lessen the effect of environmental disasters, are critical. Nonetheless, Policies that improve communities' and households' resilience over time to changes in the environment

should be given equal importance. These may include, among other things, initiatives to improve livelihoods, insurance and social protection systems.

V. This research analyzes how changing environmental elements may interact with other major change drivers to impact and interact throughout the next five decades with global human movement patterns. The results provide insights for policymakers who must address issues such as human vulnerability, environmental change adaptation, conflict management and he quality of human settlements today and in the future. Notably, the study acknowledges that, in the context of changes in the environment, migration may result in complicated combinations of benefits and costs to countries involved.

5.3 Recommendations

The following recommendations are based on both research findings and the related conclusions arrived at the foregoing sections. These are made to various group of interest.

5.3.1 For Planners and Policy Makers.

It is important that a series of measures are taken in time to deal with problems associated with environmental changes. This study asserts that change is required from a diverse range of policymakers, and just simply not those alone dealing with both the environment and migration. Migration policy is often the responsibility of the government particularly the internal ministry, which they are in charge of controlling transnational human migration movements. Connections between migration and changes in the environment, on the other hand, necessitate the attention of a much larger range of players, since the problem impacts others sectors such as, urban planning, development cooperation, rural affairs, and many other sectors.

Given that the large number of migrations happens within state borders and is is expected to continue this again in near future, there is a good argument to be made that the key requirement would be for a domestic policy response, although with the global world backing. Future migration induced by climate change needs immediate action by governments and international organizations.

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a) For Ministry of Environment and International Environmental Organizations

The Environment ministries and international environmental organizations should concentrate their efforts on;

i. Regardless of the implications for migration, environmental stress, in general, and the overall decrease of negative environmental change, key policy priorities.

ii. There is a case to be made for a larger effort to enact regulations that restrict the endangerment of communities to environmental risks. Site-specific solutions, which including water and flood control, are among them, in addition to the provision and offering of broad forecasting and warning capabilities; however initiatives led by the state and under exclusive governance situations may require special consideration.

iii. Third, there is a compelling justification for strengthening adaptability in vulnerable regions and areas such as improving livelihoods measures, in order to help residents, particularly in rural areas, a genuine option about whether or not to remain there.

iv. There is also a strong argument to be made for measures that concentrate not just on migrant source areas, but also on migrant's destination areas as well.

v. The creation of bilateral or regional migration agreements that give disadvantaged persons that are now "stuck" in vulnerable places with more livelihood options in a controllable policy framework.

vi. Pursue international cooperation to exchange information and best practices among governments in order to foster improved migration governance.

b) For Humanitarian ministries and organisations

In this case, humanitarian activities must be more explicitly linked to development initiatives in order to ensure community resilience in the event of humanitarian emergencies. Similarly, particular humanitarian issues include.

i. The requirements to guarantee that protection gaps related with the relocation caused by environmental change issues is addressed.

ii. The necessity for efficient and reliable early-warning systems for cyclones, floods, and droughts that are based on accurate forecasts but are also linked to practical and legislative measures that will ensure execution and follow-up action by neighboring communities, organizations, and regions.

c) For Organizations and Ministries Responsible for Public Policing

Concerns regarding migrations in the face of environmental change go beyond the fact of movement to the likelihood that future large-scale migrations may contribute to regional and global security concerns. The research suggests that there is a linkage between environment, migration, and security, but it is multifaceted and multidimensional, making efforts to characterize insecurity only as a result of environmental change and a rise in migration is difficult.

Specific issues regarding security and public order includes

a. Conflict resolution issues emerge in both cities where people migrate and rural regions with a dynamic resource base. However, because these conflicts are complicated in both situations, solution must connect with the broader environment in which they emerge.

b. Just as there is value in developing early-warning systems for environmental severe events, there seems to be value in developing conflict early-warning systems that enable governments and civil society organizations to be effective in dealing with conflict and prevent its escalation.

5.4 Contribution made by the Study

The research findings highlighted in the preceding section of this work should be viewed as contribution made by this study. However, there's a need to identify the specific contribution made by this study. These contributions are;

- Providing an extensive and detailed coverage of several aspects of environmental changes such as floods, drought and famine and how they bring about displacement which later then results into migration.
- A number of study gaps for individuals pushed due to climate change were identified. There exist protection gaps for populations displaced as a result of global environmental change. This is important for further research work by researchers and scholars alike in an attempt to enhance development both in the main camps and as a well as Dadaab sub county.

REFERENCES

Adamo, S & de Sherbinin, A. The impact of climate change on the spatial distribution of populations and migration. 2011

Adamo, S., Izazola, H; Human migration and the environment. Population Environ

Allafrica.com: Somalia's Al-Shabaab Rebels Ban Some Aid Groups From Territories. August 2011.

Ayiemba Elias, H.O and John Oucho, 1995: The refugee crisis in Sub-Saharan Africa. What are the solutions? Africans population paper No.4 April 1995- African population and Environmental institute, Nairobi

Bearak Max: How the world's poorer countries breathe worse air, in charts and maps. Washington post, Oct. 3.2016

Blondel Nicole: Firewood Survey around Dadaab Refugee camps. EESS mission respond, UNHCR Kenya. 2000

Capital FM: Help Kenya manage Somalia crisis, US pleads. 16th July 2011.

CBC News. 25th July 2011: Famine refugees face increased violence, aid groups say.

ClarkGray & ValerieMueller, Drought and Population Mobility in Rural Ethiopia, 2012

Dorward, David: From fear to famine: the politics of hunger in the Horn of Africa. The Conversation, 2011

Erlandson, John M: Racing a Rising Tide: Global Warming, Rising Seas, and the Erosion of Human History. Published 2008

Famine Early Warning System Network: Emergency levels of food insecurity will continue in parts of southern Somalia; grave food security concerns in Sudan and South Sudan. 7th August 2012.

Graeme Hugo, Global Human Migration and Famine, 2013

Hersh, Joshua: East Africa Famine Threatens Regional Stability, USAID Chief Says. Huffington Post. 13th July 2011.

Huffington Post: Somalia Food Crisis One of Biggest in Decades: U.S. State Department Official". 16th July 2011.

Human Right Watch: From Horror to Hopelessness: Kenya's Forgotten Somali Refugee Crisis, 2009

Human Rights Watch Plan: Human Rights Watch. 23rd November 2014

International Data Base: World Population. 28th June 2010.

Jenkins, Cathy: Somali refugees face bleak future. BBC NEWS, 2000

Kelly, M.J: Trends in Extreme Weather Events since 1900 An Enduring Conundrum for Wise Policy Advice. Published 2016

Krieger, T., Panke, D., & Pregernig, M. (Eds.): Environmental Conflicts, Migration and Governance. Bristol: Bristol University Press, 2020

Lough, Richard: Teenage Somali famine refugee gives birth in the bush. Reuters, 2011

Maxwell, Daniel: The 2011 Somalia famine: Context, causes, and complications. Published 2012

Médecins Sans Frontières: No More Delays or Restrictions For Somalis Needing Aid and Refuge. 22nd July 2011.

Myers, Norman: Environmental Refugees in a Globally Warmed World. Published by: Oxford University Press Vol. 43, No. 11 (Dec., 1993).

OCHA (UN Office for the Coordination of Humanitarian Affairs). Eastern Africa Drought Humanitarian Report No. 3. 12th July 2011.

Oliver-Smith, A, Warner, K., Hamza, M. *et al* Climate change, environmental degradation and migration.

Olivia Dun; Migration and Displacement Triggered by Floods in the Mekong Delta, 2011

Oxfam international: uprooted by climate change: responding to the growing risk of displacement. 2017

Pierre-Louis Kendra: Greenhouse Gas Emissions Accelerate Like a ‘Speeding Freight Train’, The New York times. Dec.5th.2018

Polonsky, J.A., Ronsse, A& Ciglenecki, I. et al.: High levels of mortality, malnutrition, and measles, among recently-displaced Somali refugees in Dagahaley camp, Dadaab refugee camp complex, Kenya, 2011.

Renaud Fabrice, Bogardi Janos J.: Control, adapt or flee: How to face environmental migration? 2007

Reuters: Natural disasters forced 20 million from their homes in 2014 alone: report. July 20th 2015

Richardson, Paul. UN Declares Famine in Two South Somalia Regions as 3.7 million Need Help. July 2011.

Richardson, Paul: UN Declares Famine in Two South Somalia Regions as 3.7 million Need Help. 20th July 2011.

Saantur, Hassan Ghedi: Weather and war: How climate shocks are compounding Somalia's problems. 19th November 2019

Samuel Okiror: Lethal flash floods hit east African countries already in dire need. 8th May 2018. The Guardian

Shepherd, Gill: The Impact of Refugees on the Environment and Appropriate Responses. Humanitarian Practice Network, 1995

The East African: Manufacturing a famine: How Somalia crisis became a fund-raising opportunity. 7th August 2012

The Guardian: Global warming could create 150 million 'climate refugees' by 2050. 3rd Nov 2009

UN Office for the Coordination of Humanitarian Affairs: Eastern Africa Drought Humanitarian Report No. 3. 10 June 2011

UN: Somali famine is over, but action still needed. The journal, 7th August 2012

UNHCR (2019) Dadaab Refugee Complex

UNHCR chief urges more help for drought-hit Somalis. Tehran Times.14th July 2011.

UNHCR report; Planned Relocation, Disasters and Climate Change: Consolidating Good Practices and Preparing for the Future, 2014

UNHCR: Refugees and the Environment, 2001

UNHCR: Somali refugee death rate at 15 times above norm. 21st July 2011.

United Nation: Somali famine is over, but action still needed. 2012

United Nations: One-Third of Somalis Now Displaced. 15th September 2011.

United Press International (UPI): Somali women face sexual violence. 2011

Westra Laura, Juss Satvinder: Towards a Refugee Oriented Right of Asylum, 2015

Williams, Sally: Famine in Africa: inside Dadaab, the world's largest refugee camp, The Telegraph

Wooldridge, Mike: Horn of Africa tested by severe drought. BBC News. July 2011

World Health Organization: Ethiopia, Kenya Face Measles Epidemic". 20th July 2011

APPENDICES

APPENDIX I: INTRODUCTION LETTER

Hassan Mohamed Khalif

Box 523- 70100

Garissa

Request for Questionnaire Filling

Dear Sir

I am a postgraduate student at the University of Nairobi, doing a research study on the presence of Environmental Migrants at the Dadaab Refugees camps. This is in partial fulfillment of the requirement of the Masters Degree in Environmental Planning and Management.

You were chosen at random from a large group of people to take part in this survey. It is estimated that completing the questionnaire would take less than ten minutes of your time. Please answer as truthfully and correctly as possible. Your contribution is vital to the progress of this thesis and will be deeply appreciated. I promise to keep whatever information you submit absolutely private and to use it exclusively for academic reasons.

Thank you

Hassan Mohamed Khalif

REPUBLIC OF KENYA

APPENDIX II: RESEARCH QUESTIONNAIRE

Part A: Biography

1) Name.....

2) Gender

☐ Male Female ☐

2) Age bracket

19 to 29 ☐

30 to 40 ☐

41 to 51 ☐

51 years & above ☐

3) How long have you lived in this Current location?

- Since Birth ☐
- _____years ☐
- Not sure ☐
- Refused to respond ☐

4) What is the most advanced level of formal education you have received?

- ✓ ***No formal education*** _____
- ✓ ***Primary*** _____
- ✓ ***Secondary***_____
- ✓ ***Post-Secondary***_____
- ✓ ***Other***_____
- ✓ ***Unsure*** _____

5) I'll read you a list of potential sources of revenue. Can you tell us about your (household's) primary source(s) of income in your previous location?

- ✓ **Agricultural produce/ fishing income, Business owner, Marketing sales , Civil servant salary_, Industry worker (firm, factory, corporation), Temporary labor, Professional__, Other_, Unsure/Refused to Respond**

SECTION II:

A. FLOODS

Kindly respond to the following questions on floods.

Question	Likert Scale				
	1	**2**	**3**	**4**	**5**
1. Floods amount to structural damage to your company/shop/industry/ building?					
2. Floods results outbreak of waterborne diseases?					
3. Floods results losses of agricultural product?					
4. Floods effect to your living condition by means of additional cost?					
5. Floods results in the interruption of basic needs?					
6. There is a clean-up cost after flood occurrence?					

B: DROUGHT

Kindly respond to the following questions on Drought.

Question	Likert Scale				
	1	**2**	**3**	**4**	**5**
1. Drought diminishes crop growth and the carrying capacity for livestock.					
2. Drought instigates malnutrition, dehydration and related diseases.					
3. Drought drives snake migration, which leads to snake bites.					
4. Drought fuels conflict over natural resources such as water and food.					
5. Internal displacement and international refugees are the outcome of mass migration.					
6. When a drought strikes a region prone to desertification and erosion, dust storms occur.					

C: FAMINE

Kindly respond to the following questions on Famine.

Question	Likert Scale				
	1	**2**	**3**	**4**	**5**
1. Famine causes severe malnutrition, particularly among small children and pregnant women.					
2. Malnutrition weakens the body and raises the risk of infection, which can be fatal.					
3. Famine is especially dangerous to the elderly who are relocated and/or living alone (or isolated from family).					
4. Children, both born and unborn, who survive acute malnutrition into maturity suffer long-term consequences.					
5. When there is displacement, schooling is disrupted, and undernourished hungry children have short attention spans and poor academic performance.					
6. Famine has a long-term impact on certain people's mental health, particularly those who are displaced and lose their homes and land.					

THANK YOU FOR YOUR COOPERATION!!!

APPENDIX III: BUDGET AND WORK PLAN SCHEDULE

	Time Frame	Budget
Final proposal	**April-May**	**3000**
Data collection	**June-July**	**25,000**
Data analysis	**July-Sep**	**3000**
Final Project Paper	**October**	**10,000**
		41,000