

**FINANCING FOR CLIMATE CHANGE ADAPTATION IN  
THE GLOBAL SOUTH: AN ANALYSIS OF CLIMATE  
ACTION IN KENYA'S ARID AND SEMI-ARID LANDS  
1992-2018**

**BY**

**GATHU CAROLINE MWIHAKI**

**SPRING, 2020**

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**BY**

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A Thesis Submitted to the School of Humanities and Social  
Science in Partial Fulfillment of the Requirement for a Degree of  
Master of Arts in International Relations

**SPRING, 2020**

**DECLARATION**

I, undersigned, affirm that this is my original work and has not been submitted to any other college, or university other than the United States International University- Africa for academic credit.

**Signed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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## **LIST OF ACRONYMS**

ASALs	-	Arid and Semi-Arid Lands
CIDP	-	County Integrated Development Plan
COP	-	Conference of the Parties to the UNFCCC
GCF	-	Green Climate Fund
GEF	-	Global Environment Facility
GHG	-	Greenhouse Gas
ICF	-	International Climate Finance
INDC	-	Intended Nationally Determined Contribution
IPCC	-	Inter-governmental Panel on Climate Change
LDCs	-	Least Developed Countries
NAP	-	National Adaptation Plan
NCCAP	-	National Climate Change Adaptation Plan
NDA	-	National Designated Authority
NDC's	-	Nationally Determined Contributions
UNEP	-	United Nations Environment Programme
UNFCCC	-	United Nations Framework Convention on Climate Change
REDD	-	Reducing Emissions from Deforestation and Forest Degradation

## **ABSTRACT**

Climate change is a global phenomenon that is directly linked to the accumulation of greenhouse gases in the atmosphere. Different countries have had varied contributions to the emissions and on the other hand the levels of vulnerability is different as it's determined by their adaptive capacities. Developed countries have been held as the most responsible for the global warming that has significantly changed the weather patterns across the world. The developing countries on the other hand have borne the brunt of the challenges presented by climate change yet they are the least contributors to the hazard. Concerted effort is required to address the problems presented by climate change taking into consideration the impacts it has on the vulnerable people in the global society who are majorly located in the developing countries. Climate induced hazard in Kenya's Arid and Semi-Arid Lands have become more frequent and severe over the last couple of years. As a result of low adaptive capacity of the communities in these areas and implementation of standalone adaptation interventions, these communities continue to face the negative impacts of climate change. Financial resources have been allocated for climate adaptation however a major challenge has been that the authorities have paid more attention to disaster response as opposed to resilience building.

The overall objective of this research was to study the financing for climate adaptation within the global south through an analysis of climate action in arid and semi-arid lands of Kenya from 1992-2018. The study sought to assess the trends in financing for climate adaptation in the Global South between 1992 and 2018, to review Kenya's levels of adaptation to climate change impacts and to evaluate climate action barriers with regard to investments for climate adaptation in Kenya's ASALs. The study adopted a mix method approach. Secondary data was obtained from climate adaptation financing trends from 1992 to 2018 collected from reports. Questionnaires were used to collect primary data. Respondents were selected using convenient sampling method. Quantitative and qualitative approaches were used for data analysis. To run descriptive statistics such as frequency and percentages, the Statistical Package for Social Sciences (SPSS version 24) was utilised to exhibit the quantitative data as tables and graphs in accordance with the key study questions.

The study established that in the early years of adaptation funding under the UNFCCC, three financial mechanisms were set up to fund adaptation activities in developing states and these included the Special Climate Change Fund (SCCF), the Adaptation Fund, and the Least Developed Countries Fund (LDCF). The measures for adapting to climate change were established to be funded through international financing, multilateral banks and national treasury budgetary allocation. Kenya and its ASAL regions have majorly benefited from the Green Climate Fund from between 1992 and 2018. The other sources of financing for Kenya and its ASALs in this period are the Global Environment Facility and the Adaptation Fund. On the issue of effectiveness these financing mechanisms in building the adaptive capacity of the most vulnerable segments (ASALs) of the society, majority of the respondents specified that these financing mechanisms were moderately effective. The study recommends that the climate change stakeholders in Kenya work towards addressing these challenges including transparent governance of the climate adaptation funds. Since this study was limited in scope to cover Kenya as an example, more studies on the same should be carried out across the region, specifically the vulnerable Eastern Africa region.

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## **DEDICATION**

I dedicate this work to all who are genuinely passionate about environmental sustainability and those who seek to create and support real change for environmental issues that are afflicting several people around the world.

I also dedicate it to those who have inspired and supported me to pursue my passion about tackling climate change.

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## **CHAPTER ONE**

### **1.0 INTRODUCTION**

#### **1.1 Background of the Study**

Climate change is a global phenomenon that is directly linked to accumulation of Greenhouse gases (GHG). This global phenomenon has been termed as one of the most complex challenge experienced in this century. Global warming has affected weather patterns affecting rainfall seasons resulting in droughts, forest fires and floods have become more frequent and intense and coast lines rapidly receding due to the rise in sea levels. Climate change is deemed to be among the most fundamental subjects of 21<sup>st</sup> century, such that the Intergovernmental Panel on Climate Change (IPCC) confirming that its impacts have been witnessed by this time. Additionally, scientific discoveries have demonstrated that preventive and rapid activities are essential to tackle its imminent hazards (IPCC, 2012).

Development practitioners, policy makers, and scientists agree on the fact that climate change presents multidimensional challenges that threaten the development of countries particularly in Africa. Latest scientific statistics from the time when the Inter-governmental Panel on Climate Change (IPCC) 5<sup>th</sup> Assessment Report was released proves the world is on the right track to reduce the levels of warming whose impacts will decrease disproportionately among the developing nations and the needier segments of the society and will be more calamitous for African countries. The United Nations Environment Programme (UNEP) Emission Gap Report substantiates that the present mitigation measures will set the world on target for increased global warming unless deliberate actions are taken to strengthen these actions (UNEP, 2017)

According to the World Report (2015), poverty diminution and sustainable development continue being the fundamental international priorities. Ten percent of the global population survived on less than US\$1.90 a day, in comparison with 11 percent who lived on the same amount in 2013. This is a decrease from approximately 36 percent in 1990. More than 50 percent of the utmost poor live in Sub-Saharan Africa. As a matter of fact, the number of poor persons in the region grew to 9 million, among these, 413 million people surviving on less than US\$1.90 per day in 2015, a number which is way above all the total for all the other regions. In the event that this trend is sustained by the year 2030, nearly 90 percent of the extreme poor will be found in Sub-Saharan Africa. In addition to high poverty levels, the populations have limited access to clean and safe drinking water, adequate sanitation facilities and are also faced with the constant risk of food insecurity and nutritional insufficiency; climate change and its impacts aggravates the multiple problems that developing countries face (WorldBank, 2020)

According to the IPCC 2018 special report on 1.5°C, many of the planetary systems are being forced beyond their ability to cope. Climate impacts are reversing development gains increasing poverty and vulnerability. If warming exceeds 2°C the consequences will be severe including ecosystem breakdown, increases in the severity and frequency of extreme weather events leading to social stress and potentially a large-scale migration. Climate change is amplifying underlying risk. Already, nine out of the top ten hazards are weather related. A classic example of this is that between 1998 and 2017, climate-related and geophysical catastrophes claimed the lives of 1.3 million people and impacted an additional 4.4 billion people. The current inadequate levels of political commitment are setting us on a path to at least 3-5°C by the end of the century (IPCC, 2018). In the view of this it has been established that in order for the consequences of climate change to be dealt with effectively, the focus should be on the institutions and the societies, the policies and the

economies that support climate change adaptation in order to preserve the ecological stability of the planet.

According to the Intergovernmental Panel on Climate Change's (IPCC) Synthesis Report, adaptation is defined as the process that involves adjustments being made to the expected or actual effects of climate change (Pachauri & Meyer (eds.), 2014).

## **1.2 Problem Statement**

Least Developed Countries (LDCs) and states in the global south have played a very insignificant role to the current global problem of climate change. This said, these countries are the most vulnerable and the bear the brunt and burden of the negative impacts of climate change. This burden comes in different forms including costs to manage environmental damage which currently range between 70 – 80 percent. To be able to survive in an environment where climate change is a reality that people have to live with, the countries have been forced to achieve a balance between their economic development plans and efforts and conservation of the environment, but the reality is that while this is required of them, these countries lack the requisite capacity to do so (Wider, 2018).

In Kenya and specifically the Arid and Semi-Arid Lands (ASALs), climate induced droughts and floods have been on the increase in terms of frequency and severity. This has greatly affected vulnerable communities due to their low adaptive capacity to cope with the negative impacts presented by Climate Change. Men and women experience climate change uniquely due to differences in levels of vulnerabilities and capacities. Women are more vulnerable because they do not own and control most community or household assets hence they have low adoptive capacity and also men will most likely make migration decisions for pastoral communities. During droughts, women and girls too suffer drudgery and burden to collect water from extremely long distances. The youth are also



disadvantaged in terms of livelihoods as the traditional inheritance which are mainly livestock assets continue to decrease and are eliminated by persistent droughts.

Overreliance on mainstream livestock livelihoods and lack of diversification for more drought resilient livelihood options has led to weaker livelihoods and local economy. Negative impacts include loss of livelihoods and human life; degradation of natural resources such as soils and water with persistence resource-based conflicts. For instance, Turkana County which is classified under the ASALs has suffered prolonged drought episodes in 2017 /2018. Throughout the two years the County experienced below normal rainfall for the two key long rainy seasons that usually start from March – May. Additionally, the short rain season from October – December were a total failure within the same period and even though some occasional flash floods were experienced in the areas, it was not enough to support full recovery from the drought situations and the pastoralist’s communities were forced to migrate in search for water and pasture for their livestock.

Generally, poverty and lack of coping knowledge and skills exacerbate vulnerabilities towards hazards. Different stakeholders have not adequately played their roles in disaster risk reduction. For example, stakeholders such as Kenya Meteorological services and National Disaster Management Authority (NDMA) have had gaps in climate information and early warning. Most county governments tend to have better policies and financial support for disaster management than resilience. Overall, there is little investment in climate change adaptation with participation of the international community and the private sector quite weak.

The overall funding landscape for climate adaptation interventions is changing fast. While ODA for development is declining increasing funds are being mobilised for climate change (House of Commons , 2019)

Many of the climate actions prioritised are meant to build the resilience of communities to better cope with the negative impacts of climate change. The problem is that the bulk of the funding is channelled through the international intermediaries. The multilateral donors are prioritising large infrastructure as usual and the bilateral donors are increasingly channelling their funding through international development consultancies in the form of technical assistance (Sennan M, Stephen K, & Tahseen J, 2019). In this context, developing countries, Kenya Included need support to ensure that the needs of climate vulnerable populations are addressed, and equitable support is provided to them. They also need support in planning appropriate technological responses to climate change at national levels to assess the climate finance that currently exists, and to stimulate markets and innovation for appropriate climate technologies. The local level the Governments (National and County) have an important role to play in building the resilience of the communities to be achieved through mainstreaming of climate change adaptation into development planning.

### **1.3 General Objective**

The general objective of the study was to examine the financing for climate adaptation in the global south through an analysis of climate action in Kenya's arid and semi-arid lands 1992-2018.

### **1.4 Specific Objectives**

This study aimed to achieve the following objectives:

1. To assess the trends in financing for climate adaptation in the Global South between 1992 and 2018
2. To review Kenya's absorption capacity between the amount of financing and levels of adaptation to climate change impacts
3. To assess trends in financing for climate change adaptation in Kenya's ASALs

4. To evaluate climate action barriers with regard to increased investments for climate adaptation in Kenya's ASALs

### **1.5 Research Questions**

The study endeavoured to respond to the following important questions:

1. What are the trends in financing for climate adaptation in the Global South between 1992 and 2018?
2. What is Kenya's absorption capacity for financing and levels of adaptation to climate change impacts?
3. What are the trends in financing for climate change adaptation in Kenya's ASALs
4. What are the barriers to increased investments for climate adaptation in Kenya's ASAL's?

### **1.6 Significance of the Study**

Climate related disasters are intensifying in their rate of recurrence and severity with the most vulnerable communities and populations especially in the global south being hardest hit yet they contribute insignificantly to this menace. The adaptive capacity of the vulnerable communities has remained low despite the seemingly hard effort that has been directed towards it. In the studies relating to the subject of climate change efforts have been directed towards knowledge generation on general adaption actions among populations that are impacted by climate change and the complementing activities around climate change mitigation through reduction of greenhouse gas emissions. Available literature is not conclusive in demonstrating how the strategic adaptation process by the vulnerable communities, local governments, international bodies as well as the private sector have facilitated the process of building adaptive capacity of communities that are faced with the

risk of climate change disasters through financing or otherwise and whether or not these actions have resulted in making the communities resilient. The ASAL Counties in Kenya are heavily affected by various disasters; the most dominant being drought and flash floods. These disasters also adversely affect lives and livelihoods, destroy infrastructure, and interrupt economic activities consequently retarding development. As a result of this there is need to ensure that this vulnerable communities have the capacity to deal with the consequences of climate change and better prepared to respond to drought to prevent recurrent human disasters. This is achieved by empowering the local communities, their institutions and government actors to plan together and implement adaptation priorities that build resilience. This include the development of a model for integrated climate information and communication services and practical resilience solutions that have tangible benefits for the vulnerable groups. Weather forecasts, improved information, and early warning systems, combined with opportunities to challenge behavioral norms and sharing resilience expertise, technology and resources to strengthen the adaptive capacity of communities to climate change, and the resulting natural disasters over the short and longer term. This study is keen to examine whether or not these interventions have been financed, from which sources and the current funding opportunities and the strategic measures in place to harness this support.

The research provides information that will be relevant to the government, policymakers and adaptation practitioners to inform county level policy, legislation and investment planning on food security, resilience building and disaster risk reduction. This will be a critical mechanism to ensure the long-standing sustainability of climate change adaptation projects and initiatives.

## **1.7 Scope of the study**

The study provides an analysis of the climate actions that have been undertaken in the Kenya's ASAL regions with regards to improving the adaptive capability of the communities living in these areas. The period 1992 to 2018 provides an essential timeframe to assess the climate adaptation financing trends and related actions as it captures the period from the time when the United Nations Framework Convention on Climate Change (UNFCCC) was established in 1992 by countries to communally give consideration to what they could carry out to control the global temperature rises and the subsequent climate change, and to deal with the effects which were unavoidable. The UNFCCC also set up an adaptation fund and under this same treaty several adaptation actions including financing have been negotiated to date.

## **1.8 Definitions of Terms**

**Climate Change** – Climate Change is a change of climate that is precisely or indirectly attributed to human action that modifies the configuration of the global atmosphere which results in the natural changeability of climate over a similar period of time.

**Vulnerability** - The Intergovernmental Panel on Climate Change (IPCC) recognizes three constituents of climate change vulnerability: adaptive capacity, exposure and sensitivity.

**Climate Change Adaptation** – IPCC defines climate change adaptation within the human systems as the procedure of adjustment to actual or expected climate and its outcomes, in order to regulate harm or take advantage of valuable opportunities.

**Climate Change Mitigation** – IPCC describes climate change mitigation as a human involvement to reduce the emission sources or improve the sinks of greenhouse gases.

**Climate Resilience** – IPCC defines Climate Resilience as the ability of a system and its constituent parts to foresee, absorb, adapt, or recover from the impacts of a climate induced

hazard in an efficient way, including by means of ensuring the preservation, restoration, or improvement of its important basic functions and structures.

**Climate Finance** – is the local, national or multinational financing that is acquired from different sources including private, public, and alternative sources of financing to support adaptation and mitigation actions that will tackle climate change.

**Adaptive Capacity** – This is the capacity of a system to regulate, amend or change its attributes and actions to regulate possible future harm and to exploit opportunities, so as to carry on to function without key qualitative changes in function or structural identity on account of shocks and stresses.

### **1.9 Chapter Summary**

Chapter one of the study focuses on the background of the study, problem statement, and objectives of the study, research question, and theoretical framework required for the study.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter consists of review of literature on concepts of financing for climate adaptation in global south. The review is focused on the objectives of the study which covers; Current trends in adaptation financing in the global south, Kenya's absorption capacity between the amount of financing and levels of adaptation to climate change impacts and the barriers to increased investment to climate adaptation in Kenya's ASALs. Finally, summary of chapter at the end.

#### **2.2 Theoretical framework**

##### **2.2.1 Endogenous Approach**

Endogenous growth theory is a development focused approach that was developed by U.S. economist Paul M. Romer in the 1980's. This approach holds that for development to be termed as endogenous then it must incorporate local determination of development opportunities, local control on the development course of action, and the preservation of the gains of development within the locality. The approach is characterized as an idealist descriptive contrast to commonly observed processes and patterns of development. The development that follows this model is locally determined, meaning that it is not transferred from one locale to another as it respects and values local processes (Slee, 1993)

In relation to climate change, measures or actions that a country or region takes within geographical boundaries tend to contribute to climate mitigation and adaptation or worse contributes to global warming through emissions of GHGs. As much as developing countries insignificantly aid global warming, they are the hardest hit by the negative impacts of climate change and there are numerous calls and facilities that have been set up

to help these countries adapt. The localized activities, policies and decisions that these countries make determine how and whether or not their populaces will have the requisite capacity to adopt to the changing climate. For adaptation actions to be sustainable, developing countries need to tailor make local solutions including establishing mechanisms for financing these adaptation actions. For example, Kenya has identified and prioritised adaptation actions for the different sectors during the National Climate Change Adaptation Plan (NCCAP) 2015 – 2030. Through this plan Adaptation is financed using various mechanisms in the country but more still needs to be done (GOK, 2016)

### **2.2.2 Capabilities Approach**

The Capability Approach is a methodology that is employed to appraise a number of aspects that define and determine people's wellbeing, issues of poverty and inequality. This evaluative technique was articulated by the Indian Economist and philosopher Amartya Sen in the 1980s. The technique presents an evaluative model for a wide range of policies including welfare state design, development strategies by governments and non-governmental organisations (NGOs) in developing countries. As the theory holds, country or Regions have different capacities and capabilities to impact on climate change either negatively or positively as well as to deal with issues of climate change (Sen, 1999)

Overtime there has been a growing recognition of climate change as a fundamental driver of the manner in which our environment and societies will be in the future. Discussions on how to adapt to the changes in climate and weather patterns and the resulting impacts is an agenda that has been consistent among policy makers and development experts across the globe. Supporting efforts to build the resilience to the impacts of climate change intersects with development choices and activities that cover different sectors such as water, agriculture, energy, health, and infrastructure. This defines the nature of how climate change affects the different sectors, therefore, robust coordinating mechanisms at all levels



is necessary. Governance and accountability measures at global, regional, national and sub national levels are designed in response to the adaptation requirements of the poorest and most vulnerable at these levels.

In line with this Common but Differentiated Responsibilities and Respective Capabilities (CBDR–RC) is a standard in the United Nations Framework Convention on Climate Change (UNFCCC) which recognizes the numerous competences and varying responsibilities of countries in tackling climate change. The nature of climate change and especially in support to adaptation actions in the developing countries calls for collaboration by all states according to their collective but differentiated responsibilities and respective abilities which is also determined by their social and economic status.

Countries in the global south also have the responsibility of undertaking local actions that will build the adaptive capacity of their populace.

## **2.3 Empirical literature**

### **2.3.1 Financing for Climate Change Adaptation in the Global South 1992-2018**

The requirement to adapt to the effects of climate change is apparent in the approaches of governments across the globe. Similarly, this has been acknowledged by a number of international organizations such as the UNFCCC, its subsidiary institutions in addition to the World Bank and bilateral organizations. The financial capacity for climate change adaptation has increased considerably over the last 10 years. While this is considered an achievement in the efforts to mobilize climate related resources, the utilization of these resources has fallen short of the effectiveness threshold defined by the civil society and the beneficiary communities.

The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental accord established in 1992 by states to cooperatively plan what

they could execute to control average temperature upsurges globally and the subsequent climate change, and to deal with the inevitable effects that had already started emerging. To date 196 Parties have ratified the Convention whose secretariat sustains all organizations involved in the international climate change consultations, specifically the Conference of the Parties (COP) and the Conference of the Parties functioning as the meeting of the Parties (CMP) (IISD, 2019).

Realizing that the emission diminution requirements in the Convention were insufficient, Parties commenced negotiations in 1995 to give a boost to the international response to climate change. These negotiations led to the establishment of the Kyoto Protocol; a global treaty linked to the UNFCCC, which compels its Parties to make efforts in the reduction of Greenhouse gases by setting reduction targets. Kyoto protocol was approved during the Conference of Parties meeting held on 11<sup>th</sup> December 1997 in Kyoto, Japan. The agreement later came to force on 16<sup>th</sup> February 2005. Developed countries are bound by the protocol as they are expected to develop and execute commitments to achieve greenhouse gas emission targets for the period between 2008-2012. Following the lapse of this period, another commitment period was commenced in January 2013 and will come to an end in 2020. In 2015, at the 21<sup>st</sup> session of Conference of Parties held in Paris, France, delegates came to an agreement on a global agreement aimed at limiting the increase of global average temperatures to less than 2 °C (3.6 °F) above preindustrial levels. This agreement that does not legally bind the parties was signed by all the 196 signatories of the UNFCCC and it automatically substituted the Kyoto Protocol (G. Briner & A. Prag, 2013)

The Convention and the Protocol while it was still in force foresaw financial backing from Parties with supplementary resources to those more vulnerable but less endowed. The Developed countries were to provide especially financial resources to support developing countries in the execution of the provisions of the convention. To facilitate this process, a

financial mechanism was set up. For example, during the Copenhagen conference that was held in 2009 developed countries pledged to make available US\$100 billion for adaptation and mitigation measures for developing countries by 2020 (OECD, 2016). The Green Climate Fund (GCF) was established in 2010 by 194 countries who are party to UNFCCC to be the operating entity of the Convention's financial mechanism. The funds under this facility are aimed at supporting global responses to climate change. The resource supports climate resilient projects and programmes in the developing countries with particular attention to the needs of the communities and societies that are highly vulnerable to the effects of climate change (UNEP, 2019)

The Adaptation Fund NGO Network (AFN) was set up in 2010 following the approval of the initial project proposition submitted to the Adaptation Fund (AF) by Senegal. The AFN refers to a social feedback instrument, wherein nationwide civil society organizations go together with the AF project development and enactment procedure to guarantee positive project effects for susceptible groups and societies. The objective of the AFN is to be helpful to the ground-breaking characteristics of the AF such as its straight access modality and being that the majority of its constituents in the decision-making structure are developing countries. Despite this, the present adaptation finance situation specifies that the AF is just one among many climate adaptation players that make available public adaptation finance to developing countries. Restraining the radar specifically to the AF is therefore not adequate to guarantee a direction towards climate resilience in the AFN's partner nations and beyond (Karani, I., Brooks, N., Fisher, S., 2015)

In 2018, MDBs dedicated a total of US\$ 43,101 million from their accounts and external sources channelled through these banks to finance climate adaptation for the developing countries. Out of this S\$ 12,936 million, or 30 per cent of total commitments were

channelled to support adaptation actions (Development, European Bank for Reconstruction and, 2018)

A report by OECD shows that there was an increase in the public finance from the developed countries to the developing countries. The increase is estimated at 44% from 37.9 billion in 2013 to USD 54.5 billion in 2017, USD 56.7 billion this is inclusive of the officially supported export credits. The trend is on course towards achieving the amounts projected by OECD. USD 66.8 billion in 2020, excluding export credits (OECD, 2016). Multilateral climate finance attributable to developed countries grew from USD 15.5 billion in 2013 to USD 27.5 billion in 2017, with a particularly noticeable increase of USD 8.6 billion in 2017. This increase took multilateral and overall developed countries' flows to developing countries to a level well above the range for 2013-16 (OECD, 2018)

In 2015, the international community acknowledged three worldwide programs that could generate investments in adaptation, that is, the Paris Convention, the 2030 Agenda for Sustainable Development, the 17 Sustainable Development Goals in addition to the Millennium Development Goals framework and Sendai Framework for the Disaster Risk Reduction. All these require the enhancement of particular approaches to achieve their goals (Dazé et al., 2018). For the first time, the Paris Convention set a global adaptation goal that aims to “enhance resilience and reduce vulnerability to climate change, with a view to contributing to sustainable development and ensuring a sustainable response” Adaptation in the context of the temperature target” (UNEP 2017). In accordance with Article 14 of the Paris Agreement, advancement towards this target will be evaluated after five years starting from 2023 (UNEP, 2017).

The Nationally Determined Contribution (NDC) process – a statutory provision in the 2015 legally binding Paris Agreement for monitoring climate action post 2020 – offers an entry point to influence mainstreaming of climate change into countries' policy, plans and

budgets across multiple sectors especially in emission reduction from the energy sector, adaption with focus on agriculture and urban sectors and avoided, minimised and addressed loss and damage. All countries who are parties who are signatories to the Paris Climate Agreement of 2015 including Kenya have submitted NDCs and are in the process of reviewing these in line with the ‘less than 2°C’ target of the Paris Agreement.

To date, 75% of NDCs have adaptation objectives, bringing in all targets from African countries and 92% from countries within Asia. Water, health and agriculture are areas that are commonly recognized as “vulnerable” and "priority sectors" in NDCs. Nevertheless, just about 18% of the adaptation targets are the amount and no further than 30% of NDCs have set adaptive mechanisms with a set timeframe for their achievement. The main process used by many countries to identify and put into action their own adaptation actions outlined in the NDCs, is the National Adaptation Planning Process (NAP), which focusses on helping countries to anticipate climate change albeit in the medium term. Designed as an iterative procedure, NAPs mainstream climate hazard at all stages of budgeting and planning, including at the national, subnational / local levels. NAPs were initially introduced during the Cancun Convention in 2010 and later on emphasized in the Paris Convention as an instrument to help achieve the universal goal (Dazé et al., 2018).

### **2.3.2 Kenya’s Absorption Capacity between the Amount of Financing and Levels of Adaptation to Climate Change Impacts**

The Climate change policy framework in Kenya is anchored on the constitution, which guarantees clean and healthy environment as a fundamental right under the bill of rights. The Climate Change Act 2016 is the guiding document for Kenya’s response to Climate Change. It is the official basis for mainstreaming climate change deliberations and actions into sectoral functions and gives the legal establishment for the nationwide climate change action plans (NCCAP). The Act establishes the National Climate Change Council, in

charge of the general coordination and advisory tasks. The Act additionally sets up the Climate Change Fund which is a financing mechanism for key climate change actions and projects.

The government has also enacted a robust climate change framework policy aimed at enhancing adaptive capacity and building resilience to climate variability and change, while promoting a low carbon development pathway and a national climate finance policy which promotes the establishment of legal, institutional, and reporting frameworks for access to, and management of climate finance.

The government finalized the second National Climate Change Action Plan 2018-2022 which presents comprehensive actions that Kenya will embark on to tackle climate change, during the medium-term planning period of 2018-2022. NCCAP 2018-2022 seeks to further Kenya's development goals by providing mechanisms and measures to achieve low carbon climate resilient development, in a manner that prioritizes adaptation, and recognizes the essence of enhancing the climate resilience. The plan aligns climate change actions in the country with the Government's development agenda, including the Big Four Agenda; encourages participation of the private sector, civil society, and vulnerable groups within society, provides the framework to deliver Kenya's NDC for the 2018-2022 period; and provide a framework for mainstreaming climate change into sector functions at the National and County levels (Government of Kenya, 2018).

Although Kenya is categorised as a developing country, it's nationally determined contributions (NDCs) demonstrate that it contributes to global warming as it includes both mitigation and adaptation contributions. Kenya has committed in her NDCs to abate her greenhouse gas emissions by 30 per cent by 2030 relative to the business as usual scenario of 143MtCO<sub>2</sub> eq. As far as adaptation actions are concerned, "Kenya will ensure enhanced resilience to climate change towards the attainment of Vision 2030, by mainstreaming

climate change into Medium Term Plans (MTPs), and implementing adaptation actions.” Achievement of these targets will depend majorly on international support in terms of finance, investment, technology development and transfer and capacity development.

Kenya has enacted good policies at national and sub national levels, however, the implementation of these policies has been a challenge. The institutional capacity also still remains a major challenge in terms of sufficient financing, technology and skilled human resources.

The Climate change act adopts a mainstreaming approach, providing for the mainstreaming of climate change into CIDPs. It also provides for the establishment of County Climate Change Funds (CCCF), geared towards addressing community climate change priorities, building resilience and fostering sustainable economic growth. The CCCF mechanism has been piloted successfully in five counties of Isiolo, Garissa, Kitui, Makueni and Wajir and its expansion is one of the priorities in the National Climate Change Action Plan, 2018-2022. The CCCF is currently being scaled out in Machakos, Nandi, Bomet, Kisii, Kakamega, Kisumu, Narok, Siaya, Taita Taveta, Tharaka Nithi, Embu, Vihiga, Kilifi and Kwale.

Climate Change Funds are a devolved finance mechanisms under the authority of each county government that promote mainstreaming of climate change adaptation into local planning and budget systems. Climate Change Funds are key coordination mechanisms for the design and execution of climate change action in the counties, and work through the governments established planning and budgeting systems. These funds are structured to compliment other financial resource streams including funds for International Climate Finance, the private sector, Government of Kenya, Multilateral development banks and County level budgets.

The strategy facilitates the county governments to access the national government's climate change fund, which is being established under the Climate Change Act 2016 (Ninan & Inoue, 2017).

To enhance effectiveness of these financial resources, planning committees at both National and County government's levels integrate climate information services (CIS) with the participatory planning tools to inform the design and implementation of priority actions. Further to this, the committees are also responsible for conducting monitoring and evaluation of the use of the resources and how this translates into adaptation outcomes. The composition of these committees include government officials who do not have the voting rights to ensure that the priorities of the communities are considered and respected but play a key role in the provision of technical support at the planning and approval stages.

Kenya's transformational County Climate Change Fund mechanism defines how climate funds get to the local level and the involvement of the communities that most vulnerable to climate induced hazards in deciding how these financial resources will be spent. (Tanyanyiwa, 2019).

Capacity development is important in the process of achieving adaptation. This involves a range of activities that promote enhanced decision making and results in changes in behaviour as far as anticipation and response to external factors is concerned. In the context of climate change adaptation, capacity development encompasses the ability to plan and execute effective approaches for adaptation in the context of the indeterminate effects of climate change and changing hazards and stresses in order to reduce the likelihood of the occurrence and / or the magnitude of harm from those hazards (Keskitalo & Preston, 2019). The monitoring of results, learning and the integration of lessons learned into policy development and practices are critical in order to build planning capacities. A good example of how this happens is the deliberate action to ensure that for instance all UNDP-



supported programmes and projects are to be designed through the lens of sustainable human development. This means, in practice, assessing whether they address the opportunities and capabilities of the poor and excluded as well as promote sustainability, in effect combining the lenses of both sustainable and human development (Great Britain: Parliament: House of Commons: International Development Committee, 2010).

Climate change adaptation related Programmes and projects are designed in such a way that they make them uniform in terms of the quality standard requirements and processes for which the responsible managers are accountable for. Monitoring and evaluation plays an important role in identifying any required improvements leading to achievement of sustainable results. A systematic organization-wide investment for improved results-based management is under way and will be expanded in the future (Burger & Gundlach, 2018).

Further, care should also be taken while engaging in the various processes especially on participation. Absence of adequate investment in climate change adaptation and mitigation measures is likely to leave the poor behind. To ensure an all-encompassing process in Kenya, County Governments play an important role in that they are the first point of contact with the climate affected populations and become an active player in managing climate change adaptation and mitigation actions in addition to ensuring that Disaster Risk Reduction (DRR) investment is made available. Despite these efforts by county governments there is there is the problem of governance. For example, legislation and policy frameworks specific to climate change and disaster risk reduction are not in place. In this regard, there is need to mobilise political will at the county executive and assembly levels to leverage county climate change funds. The county climate change funds created under the Kenya's 2016 Climate Change Act aims to prepare the counties to access climate finance and mainstream climate in planning in support of adaptation for resilient economic development and poverty reduction. However, having this in place is not enough as there

is need to fast-track establishment of the legal, policy and institutional frameworks prerequisite for effective functioning (United Nations, 2019).

Accurate data on budgets, spending and the impact of this is largely not available as Counties lack the capacity to collect this. There are no specific guidelines of how to collect this data and accounting procedure are not always in place. Currently, majority of the counties are not clear on how to disaggregate climate or DRR expenditures and this has overtime hindered tracking of the budget lines in a comprehensive way. The absence of clear policy guidelines to steer long-term fiscal outlays by counties may see most of them remain chronically underfunded, exacerbating the situation (UNDP, 2011).

Despite the adaptation financing mechanisms that are already present, the levels of resilience among the most vulnerable communities is still low. A number of issues can be attributed to this including, cultural practices by the affected communities as well as the absence of long term adaptation solutions and programmes.

### **2.3.3 Financing for Climate Change Adaptation in Kenya's ASALs**

Through its constitution 2010, Kenya established a devolved system of government establishing 47 counties. This devolution created pathways for addressing challenges presented by climate change at the local level utilising resources that are mobilized from both local and international financial streams.

Out of the 47 counties, 29 have been classified as arid and semi-arid areas. These areas are greatly impacted by climate change. Drought is the main natural disaster that affects majority of the population in ASALs of Kenya. Analysis show that frequency of drought is increasing with the likelihood of drought cycles being repeated every 3 to 5 years, this means that droughts re-occur even before recovery from previous episode has been attained (E Carabine, M Jouanjean, J Tsui, 2015)

Climate change exacerbates the drought situation, leading to competition over scarce resources and conflicts among resource users. Loss of crops and livestock to drought has continued to worsen food security situation in the county and general loss of livelihoods. This has led to the design of strategies that enable communities to adapt production systems based on observed and projected climate trends. These strategies and other related interventions have been supported through domestic and international financial sources.

Presently there are a number of initiatives that are ongoing that are aimed at building the adaptive capacity of Kenyans and enhance the resilience of the people that are threatened by the impacts of climate change. The Government of Kenya has come up with different initiatives including strengthening the work of the National Disaster Management Authority (NDMA) in disaster preparedness and management. The Meteorological department has also been supported to enhance their climate and weather information generation and dissemination as part of the early warning systems which are important in avoiding and reducing the impacts of drought hazards. In addition to this, the government and non-governmental organizations have also been keen to support communities in establishing projects for livelihood diversification and those that will enable them be food secure (Parry, 2016)

The main domestic sources of adaptation financing are the budgetary allocations and voluntary funding from private companies as part of their corporate social responsibility. The treasury does not however specifically allocate funds for adaptation in its budget but adaptation is financed through the allocations made to the various sectors including agriculture, transport and energy.

To support the counties in mainstreaming adaptation to their planning processes, Kenya Climate Adaptation Fund was established in 2012 and is financed by the Department for

International Development (DFID). This fund is mainly focussed on the ASAL areas with pilots already running in five ASAL counties i.e. Makueni, Kitui, Garissa, Wajir and Isiolo.

By January 2014, the fund had allocated £500,000 to communities in Isiolo County to fund a variety of climate resilient projects (Omuko, 2017).

Much of this funding from bilateral and multilateral donors is used to support priority adaptation actions in agriculture and livestock management sectors as well as improving water access and management for ASAL communities as they bear the greatest brunt of the impacts of climate change (Parry, 2016)

#### **2.3.4 Barriers to Increased Investments for Climate Adaptation in Kenya's ASALS**

Kenya among other countries is vulnerable to climate change impacts and they continue to threaten the socio-economic development of the country. Climate change threatens the attainment of Vision 2030 objectives. Droughts and floods in particular are having devastating consequences on the environment, society and the wider economy. The associated spill-over to the macro-economy has been significant (Ondieki & Kitheka, 2019). The overall impact of the 2008-2011 drought in Kenya is estimated at KSh968.6 billion, and was predicted to have caused a slowing down in the growth of the country's economy by an average of 2.8 per cent per year during that period. Similarly, the 1998-2000 drought is estimated to have resulted in a 16 per cent reduction in the GDP in each of the 1998-99 and 1999-2000 financial years. Lost industrial production alone due to inadequate power supply during this period amounted to a loss of approximately Ksh. 110 billion (Parry, 2007).

In the recent past floods have had very devastating consequences including the loss of lives and livelihoods, damage of infrastructure including roads, water and sanitation facilities as well as personal property damage. These losses and damages have had ramifications for

the economy. For example, the 1997-98 El Niño floods are estimated to have caused damage at least equivalent to 11 per cent of GDP in damage to transport infrastructure and KSh3.6 billion to water supply infrastructure. While floods are generally associated with higher damages on public infrastructure assets, the burden of droughts falls more heavily on people, communities and the private sector. In particular, the livestock and agriculture sectors were the most affected by the 2008 and 2011 drought events, with respective drops in productivity of 72 per cent and 13 per cent. Along with these direct impacts, climate-related events affect the overall performance of the economy in the long run (Fund, 2011).

Long term considerations on environment and social sustainability have not been included in investment planning and this has resulted in short term planning and implementation of interventions. The need to create long term economic value has been overlooked by various stakeholders. Economies of scale have been hindered by the fragmentation of institutional investor market as little time is dedicated for product development and thought leadership. Lack of experience and expertise in structuring new investment vehicles for the inclusive Climate Adaptation has hindered actions that would be build the resilience of the vulnerable communities in the face of the growing climate and weather variability. Kenya has a potential green infrastructure channel that presents opportunities for local banks and institutional investors to participate if investments if only this would be structured correctly upfront. This includes attaining an acceptable level of risk, and developing an analytical framework that shows the real risk-adjusted return for these investments long-term environmental and social risks (Schäfer, Kammen, Kebir, & Philipp, 2015).

Limited policy and regulatory incentives, including fiscal incentives, to drive investment towards a sustainable finance model. A number of high-level policy papers confirm the government's commitment to green and inclusive growth, but work to integrate such issues into sector-specific implementation plans is still under way. The Medium-Term Plan's

flagship programs are not integrated into the sector strategies, arguably resulting in less effective implementation. There is currently no public policy or regulation in the financial and capital markets that drives or incentivizes investments in the green economy (Richardson, 2012).

## **2.4 Study Gap**

The landmark global climate pact – the Paris Climate Agreement was adopted at the 21<sup>st</sup> session of the Conference of Parties (COP 21) in 2015. A total of one hundred and ninety five (195) countries endorsed this agreement that includes global goal on adaptation that will be achieved through the contributions of the parties as captured in their Nationally Determined Contributions (NDCs). To realize this ambition, more robust information on among others adaptation needs and financing is required to support the successful implementation of the NDCs and the Paris Agreement. To facilitate the provision of such information, this research will analyze the trends in the financing by different actors to countries in the global south and specifically to Kenya. In addition the level of absorption of the climate change adaptation financing in Kenya as well as issues surrounding investment in this financing in Kenya’s ASAL Counties.

## **2.5 Chapter Summary**

Chapter two provides an elaborate review of literature that is relevant to financing climate adaptation for countries in the global south. It also looks at specific issues relating to the climate adaptation actions in Kenya’s ASALs. Empirical Literature review that necessitated this research and the study gaps.

## **CHAPTER THREE**

### **3.0 RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the research methodology used in this study and provides a general framework for this research. The chapter provides details of the research design, target population, sample and sampling procedures, research instruments used, validity and reliability of instruments, data collection procedures, data analysis techniques and ethical considerations while conducting the study.

#### **3.2 Research Design**

A research design can be described as an activity-based scheme created on the study question and drives the choice of sources and types of information. It is used for identifying the interactions between the study variables and a routine framework for every research action. It is prepared by the researcher after developing the research problem in explicit terms. The research design is important as it enables the research to determine the type of data to be gathered and the tools that will be used in the gathering of this data (Cooper & Schindler, 2014; Kothari, 2004). Ogula (2005) defines a research design as a strategy, and structure of investigation to acquire answers that are relevant to specific research questions and control variance. Additionally, a study design is the plan of action the researcher adopts for answering the research questions and it sets up the framework for study. In other words research design is the blueprint of the research (Kerlinger, 1973).

This study employed a mixed method research design. Mixed method is defined by Orodho (2003) as a method of collecting information research that integrates both qualitative and quantitative data within the study. The advantage of this method is that it was able to collect

rich and comprehensive data that was useful in providing the answers to the research questions.

### **3.3 Population and Sampling Design**

#### **3.3.1 Population**

Ogula, (2005), defines a population as any group of institutions, people or objects that have common characteristics and that are identified for a particular study. The target population for this study constituted climate adaptation financing trends from 1992 to 2018 collected from international, national and local government institutions reports including reports generated by The Kenya Institute for Public Policy Research and Analysis (KIPPRA), Kenya National Bureau of Statistics (KNBS), and Ministry of Environment and Natural Resources), National Treasury and international organizations report. Importantly, the study also targeted to collect data from the Kenya's Arid Lands/ County officers and organizations implementing programmes that are keen on delivering interventions that are aimed at addressing the challenge of Climate Change and resulting impacts and more importantly climate adaptation related programmes in the ASALs. Primary data was used to respond to objectives two, three and four. The study population consisted of Director's in the Ministries of Environment and natural resources and NEMA, county level CEC's Ministry of Finance and Economic Planning; Ministry of Water Services, Environment and Mineral Resources and Ministry of Agriculture, Pastoral Economy and Fisheries. In addition Non-governmental organizations with climate change oriented projects and programmes in Kenya's ASAL Counties including Practical Action, CARE, Transparency International and Trocaire were interviewed. A total of 20 respondents were identified by this study.



### **3.3.2 Sampling Design**

Sampling is a procedure that is applied in research for the selection of a percentage of the population that is used for the study; the selected portion of the population makes statistical inferences about the population. (Zikmund, Babin, Carr, and Griffin, 2017). Sampling can also be defined as the process used in the selecting a part of the population to represent the whole and the conclusions are drawn about the whole population (Cooper & Schindler, 2014).

#### **3.3.2.1 Sampling Frame**

Desombe (1998) and Cooper and Schindler (2001) indicates that a sample frame ought to be composed of a population list where the analyst refers to in the process of gathering information preferred for the study. An appropriately generated sampling frame makes clear the defined target population of the study without the risk of ruining listing with improper entries or entries that characterize elements connected to the population that was excluded (Ross, 1978). Therefore, a reliable and wholesome member list in the population needs to be presented for the study.

The study collected data from national and local government institutions reports (The Kenya Institute for Public Policy Research and Analysis (KIPPRA), Kenya National Bureau of Statistics (KNBS), and Ministry of Environment and Natural Resources) and international organizations report. This secondary information focussed on trends for financing climate adaptation in the global south and Kenya's ASALs. Primary data was collected from Director's in the Ministries of Environment and natural resources and NEMA, county level CEC's Ministry of Finance and Economic Planning; Ministry of Water Services, Environment and Mineral Resources and Ministry of Agriculture, Pastoral Economy and Fisheries. In addition officers working in Non-governmental organizations

involved in climate change issues in the ASAL Counties including Practical Action and Trocaire were interviewed.

### **3.3.2.2 Sampling Technique**

Sampling procedure or technique is categorised as both probabilistic and non-probabilistic samples” (Ghuri and Gronhaug, 2010). In statistics, there are two types of sampling, that is, random (probability) and non-random (non-probability) sampling whereby the objective of the study determines the choice of the sampling method to be used. (Ross, 1978). Probability sampling technique is recommended when the study needs a specific level of confidence in the data collection, on the other hand, non-probability sampling is suitable for studies that seek to achieve precise objectives at that moment. Sekaran and Bougie, 2013), explains probability sampling as a sampling method where all the elements in the population have some known, nonzero chance or likelihood of being selected as sample subjects. As opposed to probability sampling, in non-probability sampling, the objects do not have a known or predetermined possibility of being selected as subjects” Sekaran & Bougie, (2013).

Moreover, the technique ensures that researcher extract the right data from a potential source to hasten the speed of acquiring the right information in the process of data collection and analysis (Cooper & Schindler, 2008)

Convenient sampling was used in this study in the identification of the respondents. This sampling method was the most appropriate for the study because the institutions targeted were already known.

The key categories of probability sampling are systematic random sampling, stratified simple random sampling, random sampling, and cluster sampling. A simple random sample is typically selected corresponding to a set of automated instructions which secures the

random characteristic of the selection technique. A stratified sample assures that subgroups (strata) of a specified population are each satisfactorily represented within the entire sample population of a study (Ross, 1978).

### 3.3.2.3 Sample Size

A sample is a smaller group or sub-group obtained from the accessible/target population to be used for a study (Mugenda and Mugenda, 1999). This subcategory is carefully selected so as to be representative of the whole population with the relevant characteristics. Each member or case in the sample is referred to as subject, respondent or interviewee. Sampling is a procedure, process or technique of choosing a sub-group from a population to participate in the study (Ogula, 2005). It is the process of selecting a number of individuals for a study in such a way that the individuals selected represent the large group from which they were selected.

A sample ought to be of the required size to have the required extent of precision in the findings along with being able to recognize any significant relationship that may be present in the study population. Even though commonly not given attention by most novice researchers, settling on the minimum required sample size to accomplish the key objectives of the study is of great significance (Omar, 2014).

Kadam and Bhalerao (2010) assert that the sample size can be defined using the following formula:

$$n = \frac{2(Z_{\alpha} + Z_{1-\beta})^2 \sigma^2}{\Delta^2} \dots \dots \dots (3.1)$$

Whereby  $n$  represents the required sample size. For  $Z_{\alpha}$ ,  $Z$  is a constant set by agreement according to the accepted  $\alpha$  error and whether it is a one-sided or two-sided effect. On the



CEC Ministry of Agriculture, Pastoral Economy and Fisheries (Turkana, County )	1	5
Programme Leads- Climate Change of Non-Governmental Organizations (CARE Kenya, Practical Action, ACTS, KCCWG, Stockholm Environment Institute, Transparency International, Trocaire, Mercy Corps, Child Fund, Oxfam, REACH)	13	65
<b>Total</b>	<b>20</b>	<b>100</b>

### 3.4 Data Collection

Secondary data was incorporated to represent official opinion or position. Secondary data for the purpose of this study was collected from climate adaptation financing trends from 1992 to 2018 collected from national and local government institutions report including, The Kenya Institute for Public Policy Research and Analysis (KIPPRA), Kenya National Bureau of Statistics (KNBS), and Ministry of Environment and Natural Resources) and international organizations report. The target population for this study was comprised of Kenya’s Arid Lands/ Counties reports as at 31<sup>st</sup> December 2018. Questionnaires that included both open and close ended questions were used to collect primary data.

### 3.5 Research Procedures

Research procedure is a description of how the researcher will acquire data that is relevant for the study. This is guided by the research questions which form the basis for the research instruments to be used. A pilot test to check on the appropriateness of the tools is then conducted. In respect to this study, a pilot test in form of interviews was undertaken as per

the recommendations given by Cooper and Schindler (2018) who explains that a pilot test is done to check on the effectiveness and flag out weaknesses in the research design and instruments. Saunders, Lewis, and Thornhill (2012) also agree with this and goes ahead to suggest that a pilot study needs to be carried out to identify problems. Further to this there is need to ensure validity and reliability of the research which is determined by accuracy of the data collected. Data accuracy on the other hand is largely dependent on the data collection instruments used.

Validity as noted by Mugenda and Mugenda (2013) is the degree to which result obtained from the analysis of the data actually represents the phenomenon under study. Reliability on the other hand refers to a measure of degree to which research instruments yield consistent results.

The study designed a structured questionnaire based on the research questions. The questionnaires were self-administered and were sent via email and the respondent given three days to complete and email back.

### **3.6 Data Analysis Methods**

Gujarati (2009) explains data analysis as the process of cleaning, inspecting and modeling data purposefully to generate important information that is to be used to support decision making. The data collected must be analyzed by the study to generate outcomes. Given that the data collected for this study was both qualitative and quantitative, both methods of analysis were used. Kothari (2004) notes that the process of analyzing data constitutes a number of interrelated procedures conducted with the aim of synthesizing and organizing collected data in such a way that responds to the research questions.

Data analysis for this study employed both qualitative and quantitative approaches. Quantitative data obtained through the questionnaires was coded and keyed in for

computation of descriptive statistics. The Statistical Package for Social Sciences (SPSS version 24) was used to run descriptive statistics including frequencies and percentages to present the data in form of graphs and tables as per the design of the research questions. The qualitative data was generated from open ended questions was categorised under different themes derived from the study objectives and reported in a narration. The qualitative data was used to reinforce the quantitative data.

### **3.7 Ethical Considerations**

Ethical matters in research have long been an attribute of studies and it particularly has its origins dating back to the Nuremberg Code of 1947, following the experiences from the Nazi war criminals' trials (Social Research Association, 2003). Similarly, the ethical considerations were useful to this study on account of the characteristic of the research problem, the data collection methods and the persons who were the study participants. Research participants were explained to the nature and purpose of the research and were given the liberty to decide whether or not to participate in the study by signing a consent form.

The researcher ensured that study participants were aware that their involvement was voluntary at all times as there is general consensus amongst social scientists that researches that involve humans as participants must be carried out with the informed permission of the participants. The study did not require participants to write their names on the questionnaires in respect for anonymity.

The researcher obtained a research clearance and a written permission from United States International University – Africa to conduct the research. This note was also used as an introductory letter.

To comply with ethical standards, the researcher sought a document of informed consent among the participants in the study without giving reasons for their decision to either agree or decline to participate in the research, through this, the researcher complied with the ethical principle of minimizing harm and maximizing benefits in addition to ensuring that the privacy and confidentiality of the participants was respected. Finally, a Letter from the National Council for Science, Technology and Innovation (NACOSTI) was obtained; the research clearance given for a number of reasons including ensuring that the study is conducted according to defined ethics, and to ensure that relevant institutions at the national level are aware of an intended or on-going research for then to intervene at any point of the process as they deem fit.

Further, this study is for academic purposes only and the researcher will use it for that purpose only.

### **3.8 Chapter Summary**

This chapter describes how the research study was carried out. It provides details of the research design that was used in the study, identified target population, how sampling was done, the resulting sample size; data collection tools and procedures; how the collected data was analysed and presented and finally the ethical issues that guided the data collection process.



## **CHAPTER FOUR**

### **4.0 RESULTS AND FINDINGS**

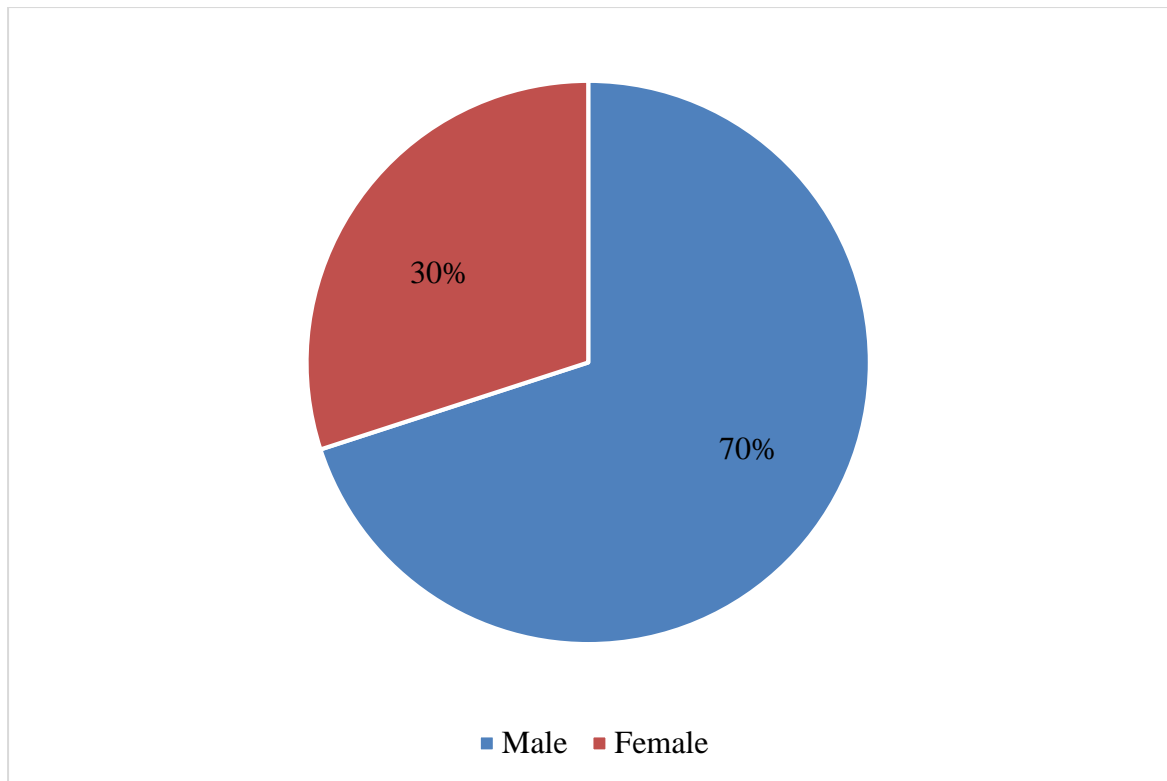
#### **4.1 Introduction**

The purpose of this Chapter is to present results and findings of the study as per the research objectives of the study in Chapter one. The first section is a representation of participants' general information which includes their gender, level of education and age. The second section is a presentation of the findings of this research as guided by the objectives of the study.

The research findings were based on responses from 20 respondents who include county government officials and senior project management staff in civil society organizations working on issues relating to Climate Change. The study received 16 responses out of 20 which represents a response rate of 80%. Mugenda and Mugenda (2013) argue that a response rate of above 50% is acceptable.

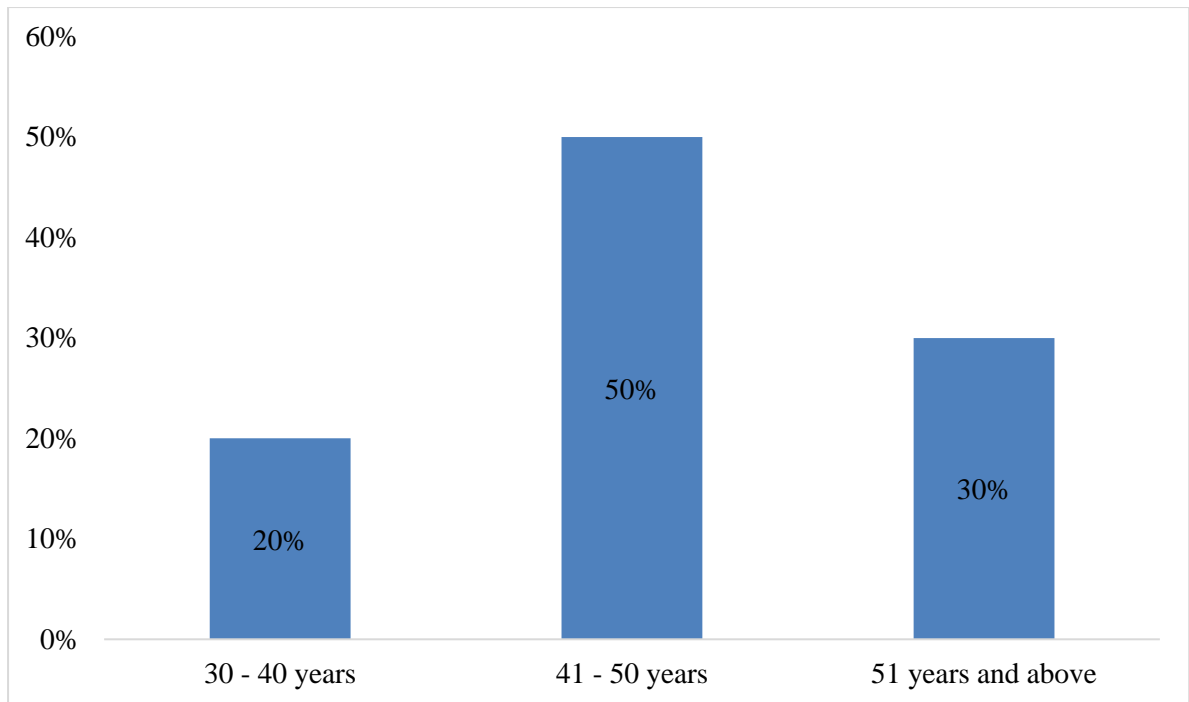
#### **4.2 Demographic information**

The majority of the respondents in this study were male (70%), while female respondents were 30%. This indicates that the study had representation from both genders, the male respondents being majority notwithstanding. Table 4.1 shows this finding.



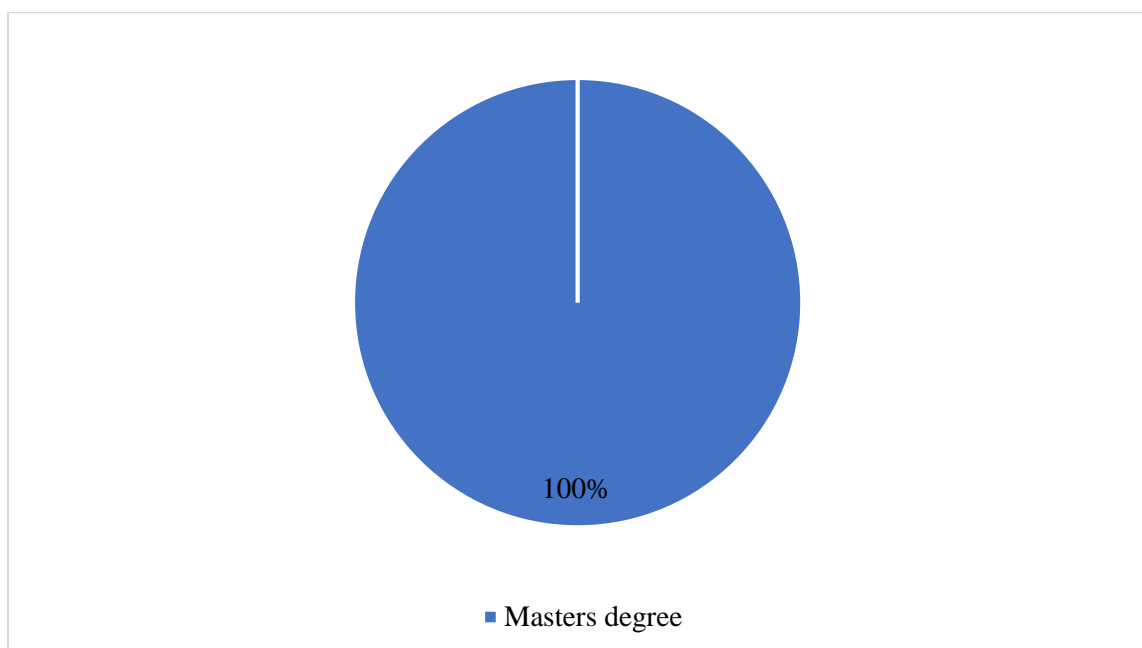
**Figure 4. 1: Gender of the respondents**

Half (50%) of the respondents were aged between 41 and 50 years, 30% were aged above 51 years and the remaining 20% were aged between 30 and 40 years. Figure 4.2 summarizes the distribution of the ages of respondents in this study. This confirms that the study had representation across different ages.



**Figure 4. 2: Age groups of respondents**

The study sought the opinion of experts in their respective fields. This is confirmed by the results in figure 4.3 which shows all the respondents' highest level of education was master's degree.



**Figure 4. 3: Level of education**

### **4.3 Findings**

This section of the study shares the research findings in accordance with the study questions and objectives. The first subsection tackles the question on trends in financing for climate adaptation in the Global South between 1992 and 2018. The second subsection reports on Kenya's absorption capacity between the amount of financing and levels of adaptation to climate change impacts. The third part presents the findings on trends in financing for climate change adaptation in Kenya's ASALs. The final part shows the results on the evaluation of climate action barriers with regards to increased investments for climate adaptation in Kenya's ASALs.

#### **4.3.1 Trends in Adaptation Financing**

The study sought to assess the trends in financing for climate change adaptation in the Global South between 1992 and 2018. Major bilateral funding available for climate change adaptation work and under the UNFCCC and the KYOTO Protocol include; the Global Environment Facility (GEF) and the Adaptation Fund. Other funding includes World Bank's Climate Investment Funds and bilateral initiatives sponsored by Japan, Norway, Germany, and other countries.

In 2015, the international community acknowledged three global level agendas that have the potential to increase the investment for climate change adaptation. These are; the climate pact otherwise known as Paris Agreement, the 2030 Agenda for Sustainable Development and its accompanying Sustainable Goals and Sendai Framework for Disaster Risk Reduction. It was also noted that the realization of the objectives under each would require specific strategies for implementation (Dazé et al., 2018). The Paris Agreement, became the first pact to include a global goal on adaptation that is aimed at enhancing the adaptive capacity and strengthening the resilience and reducing vulnerability to climate

change, with a view to contributing to sustainable development, and ensuring an adequate adaptation response in the context of the temperature goal” (Article 7.1 as quoted in UNEP 2017). Per Article 14 of the Paris Agreement, progress towards the goal will be assessed every five years, beginning in 2023 (UNEP, 2017). To date, 75% of countries that are party to the agreement have’ Nationally Determined Contributions (NDCs) that clearly spell out their adaptation targets including 100% of African countries and 92% of Asian countries.

A number of sectors have been identified as key and priority areas which are also vulnerable and this include but not limited to health, water and agriculture sectors. This said, there still challenges that could potentially hinder the attainment of the set targets, this include the fact some of the adaptation goals totalling to 18% are quantitative and more than 30% of the NDCs have no set timelines for the attainment of the adaptation targets and priorities.

Majority if the countries use National Adaptation Planning (NAP) process as a mechanism for the implementation of their climate change adaptation planning as set out in their NDCs. The NAP is a useful tool for preparing countries for climate change.

The NAPs works as repeated cycle of operations in calculating desired results focus on mainstreaming the risks presented by climate change at all levels of planning and budgeting at both National and local levels.

The introduction of NAPs happened in 2010 Cancun Agreement and a further reference of the same in the Paris Agreement as an important instrument in the attainment of the global goal (Dazé et al., 2018).

An analysis of available data indicate that by 2016 four global financing mechanisms to support adaptation totalled USD 22 billion. This funds have been provided by public sector organizations (Oliver et al., 2018).

## **Green Climate Fund**

The Green Climate Fund (GCF) is an international fund that is aimed at facilitating efforts by the developing countries to limit the contribution and negative effects presented by climate change. Since the establishment of this fund in 2010, developing countries have been supported in their efforts to limit or reduce the emission of Greenhouse Gas (GHC) as well as interventions directed towards climate adaptation. The remit of this financial resource is to promote a shift in development so as to achieve low emission and climate resilient development with a special focus on the needs and priorities of countries that are more vulnerable to the impacts of climate change.

The Green Climate Fund was established by 194 states who are parties to the United Nations Framework Convention on Climate Change (UNFCCC), as part of the Convention's financial mechanism. Further, this fund aspires to support both adaptation and mitigation actions in the same way by delivering equal amounts of funding under the guidance of the principles and provisions of the convention.

Following the consensus by states on the global climate agreement in 2015 – the Paris Agreement, an important role for the Green Climate Fund was defined. A supportive role to the agreement in the achievement of its ambitious goal to keep the global temperatures well below 2 degrees Celsius (Green Climate Fund, 2018)

Concerted efforts is required in providing adequate response to the challenges presented by climate change. This efforts not only include the government level actions but also the participation and support of private sector actors. Collective action involving advanced economies agreed to work together in the mobilization of funds from different sources in significant amounts that will be directed towards addressing urgent mitigation and adaptation needs of developing countries.

Resource mobilization efforts by GCF were launched in 2014. Immediately this was done a total of pledges worth USD 10.3 billion were gathered. These funds come mainly from developed countries, but also from some developing countries, regions, and one city (Paris). Importantly and in a bid to create ownership in line with the principle of country ownership, activities under the GCF are aligned with the needs and priorities of developing countries. Additionally, the fund has established a direct access modality whereby national and sub national organizations are able to receive funding directly without having to wait for the funds to be shared through International intermediaries. In the dissemination of the resources, the fund pays particular attention to countries and sections of the society that are highly vulnerable to the effects of climate change, in particular developing countries majority being African states and Small Island Developing States (SIDS).

GCF aims to catalyse a flow of climate finance to support low-emission and climate-resilient development, driving a paradigm shift in the global response to climate change.

The innovation that this fund presents is on the use of public resources to motivate private sector financiers to invest, unravelling the power of climate-friendly venture for low carbon emission, climate resilient development. To achieve maximum impact, GCF seeks to catalyse funds, multiplying the effect of its initial financing by opening markets to new investments. The Fund's investments is in the form of grants, loans, equity or guarantees (Green Climate Fund, 2018)

### **1. The early years of adaptation finance under the UNFCCC (1992–2008)**

Throughout the years, several stakeholders have articulated different prescriptive opportunities on climate investment specifically on how much funding ought to be provided to address climate change adaptation and who should provide this finance, the allocation of this finance and on the basis on which it should be allocated (Khan, Robinson, Weikmans,

Ciplet & Roberts, 2019; Persson et al., 2009). Since the start of the international climate regime, besides the need to limit emissions of greenhouse gases and acclimatize to climate change, it was established that the developed countries were obligated to back developing countries who are at the risk of climate change in this course. This is according to the Article 4.4 of the United Nations Framework Convention on Climate Change (UNFCCC) which was adopted in 1992.

During the early years of financing climate adaptation under the UNFCCC, from 1992 to 2008, the structures and the operationalization of the Funds under the UNFCCC regime were laid out. From the time when it was commenced in 1993, the Global Environment Facility (GEF) began to finance adaptation actions. However, developing countries were cynical about the GEF as it is organised and disseminated by the donor who sits at the World Bank, and has the expectation that all disbursements should be able to bring about global public benefits, such as in the case of adaptation projects (Khan 2014; Khan & Roberts, 2013). With time however, this policy was lenient, and the Facility started to have capacity for a wide-ranging approach to adaptation financing (Khan et al., 2019).

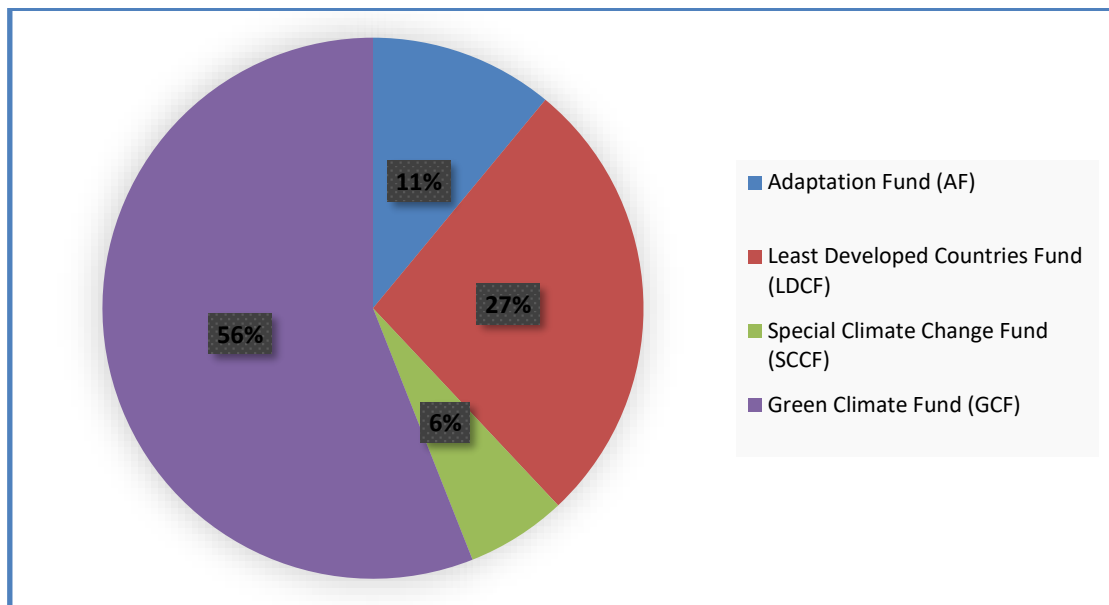
Three financial mechanisms were set up to fund adaptation interventions in vulnerable developing countries at the Seventh session of the Conference of the Parties (COP 7) held in Marrakech in 2001. The funds included:

- i. The Adaptation Fund;
- ii. The Special Climate Change Fund (SCCF); and
- iii. The Least Developed Countries Fund (LDCF).

Additionally, the Global Environment Facility (GEF) set up the Strategic Priority ‘Piloting an Operational Approach to Adaptation’ (SPA) within its Trust Fund in rejoinder to the outcome of COP 7. The management of the LDCF and the SCCF is under GEF, while the



Adaptation Fund Board manages the Adaptation Fund with the permission of the Meeting of the Parties of the Kyoto Protocol (Persson et al., 2009).



**Figure 4.4: Estimates for Adaptation Funds by Source**

## 2. The Copenhagen shift (2009–2015)

During negotiations on the modalities that would be employed in the mobilization of climate related finance, there were extensive differences between groups of nations that lasted up to over two decades this is according to Ciptet et al. (2015). There were also disparities in the amount of adaptation finances accessible to developing countries, in comparison with any evaluation of adaptation requirements. Both the Copenhagen Accord and the 2010 Cancun Agreements assured developing countries USD 30 billion in short-term funding for the period from 2010 to 2012 and an increment to USD 100 billion every year by 2020. The United Nations Environment Programme (UNEP) projected that the costs of adaptation could span from USD 140 billion to USD 300 billion every year by 2030, and between USD 280 billion and USD 500 billion every year by 2050 (UNEP, 2016). The prioritization of countries to receive adaptation funding has also not been formalized (Khan et al., 2019).

Within the period of the Copenhagen shift (2009–2015), the World Bank remained to act as the Trustee of the LDCF and SCCF, whereas the Adaptation Fund was managed by a board of sixteen (16) members constituted by ten (10) members from developing countries, and six representatives from developed countries. The newly set up GCF was initiated and managed by a board of 24 members drawn equally from both the developed and developing world. Regarding their financial contributions for adaptation, donor countries did not specify how they would establish this (Khan et al., 2019; Pauw, Klein, Vellinga & Biermann, 2016).

### **3. The post-Paris era (2016–2018)**

According to Article 9.2 of The Paris Agreement of 2016, the responsibility is on the developed nations to offer climate fund to developing nations for mitigation and adaptation, whereas these developing countries may well willingly contribute to funding the mitigation and adaptation efforts. The constant challenge of double or triple counting of the same fund given through the UNFCCC and non-UNFCCC distribution channels is yet to be resolved. The donor countries continue to report on their own about how they count climate funds, and this barely permits any comparability.

Although grants account for more than 33% of bilateral climate funds, they account for a meagre 10% of total multilateral financing (OECD, 2018). The nations at most risk have incessantly called for adaptation financing in the form of grants to improve their adaptive capacity and evade larger debt. The issues of allocation are still same as they were in the time after the Paris negotiations. The Adaptation Fund is likely to get more finances as contrasted with the Funds including the LDCF and the SCCF which are unequivocally intended to support the requirements of the countries at most risk. The Adaptation Fund raised an amount higher than anticipated for the first time during this period. This period has also witnessed continuing low-level efforts over the management of climate funds. Just

a small percentage of climate finance is controlled through the UNFCCC framework. Several observers of developing country believed UNFCCC would oversee the full USD 100 billion a year commitment, but this has not been the case. Although more than 60% of the USD 10.3 billion has been deposited in the GCF's coffers, and over 50% of it delivered to approximately 75 projects, there are a few rigidities (Khan et al., 2019).

Table 4.1 summarizes the Global annual cost estimates (USD Billion) for developing country regions and sectors 2010-2050.

**Table 4. 1: Global annual cost estimates (USD Billion) for developing country regions and sectors 2010-2050.**

Region	Adaptation costs	Sector	Adaptation costs
East Asia & Pacific	17.9	Infrastructure	13.0
Central Asia	6.9	Coastal zones	27.6
Latin America & Caribbean	14.8	Water supply, flood protection	19.7
Middle East & North Africa	2.5	Agriculture, forestry, fisheries	3.0
South Asia	15.0	Human health	1.5
Sub-Saharan Africa	14.1	Extreme weather events	6.4
<b>Total</b>	<b>71.2</b>	<b>Total</b>	<b>71.2</b>

Source: UNEP (2014).

The results from the study's primary data indicated that some of the funding for climate adaptation in the Global South comes from the following:

- i. United Nations Framework Convention on Climate Change (UNFCCC),
- ii. GEF (Global Environment Facility),
- iii. Multilateral development bank (MDBs) such as the World Bank, African Development Bank (ADB) and the Asian Development Bank (ADB)
- iv. Other multilateral institutions such as the International Union for Conservation of Nature (IUCN), United Nations Environment Programme (UNEP), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Food and Agriculture

Organization (FAO), World Food Programme (WFP), Japan International Cooperation Agency JICA among others.

- v. Bilateral financing e.g. the UK International Climate Finance (ICF), Norway etc.)
- vi. The UN-REDD Programme/REDD+
- vii. Foundations/trusts e.g. the Earth Fund
- viii. Private sector
- ix. Individual philanthropists
- x. International climate finance (ICF)

Further, other countries were found to have their own climate change funds while others are relying on the Global North to help them adapt by providing finance and technical assistance.

However, there were some challenges in financing Climate Change Adaptation for countries in the Global South. The respondents indicated that lack of credible data (100%), uncertainty about future climate scenarios (100%), inadequate valuation techniques (100) and documenting change (100%) are some of the barriers. Table 4.2 shows this finding.

**Table 4. 2: Barriers in financing Climate Change Adaptation**

<b>Barrier</b>	<b>Response</b>
Lack of credible data	100%
Uncertainty about future climate scenarios	100%
Inadequate evaluation techniques	100%
Documenting Change	100%

The other barriers indicated by the respondents include:

- i. Low capacity in terms of information on how to engage the available avenues to access funds (Readiness)
- ii. Accreditation process of entities (both national and sub national) is lengthy and complicated bureaucratic bottlenecks in financial access
- iii. Corruption. Financiers complaining that they pump in a lot of funds, but the funds are misused in the South.
- iv. Failure by The West to honour financial commitments
- v. Low level of capacity of the human resource to design and direct climate finance

### **Role of NGOs in Design, Implementation and Monitoring climate change adaptation activities**

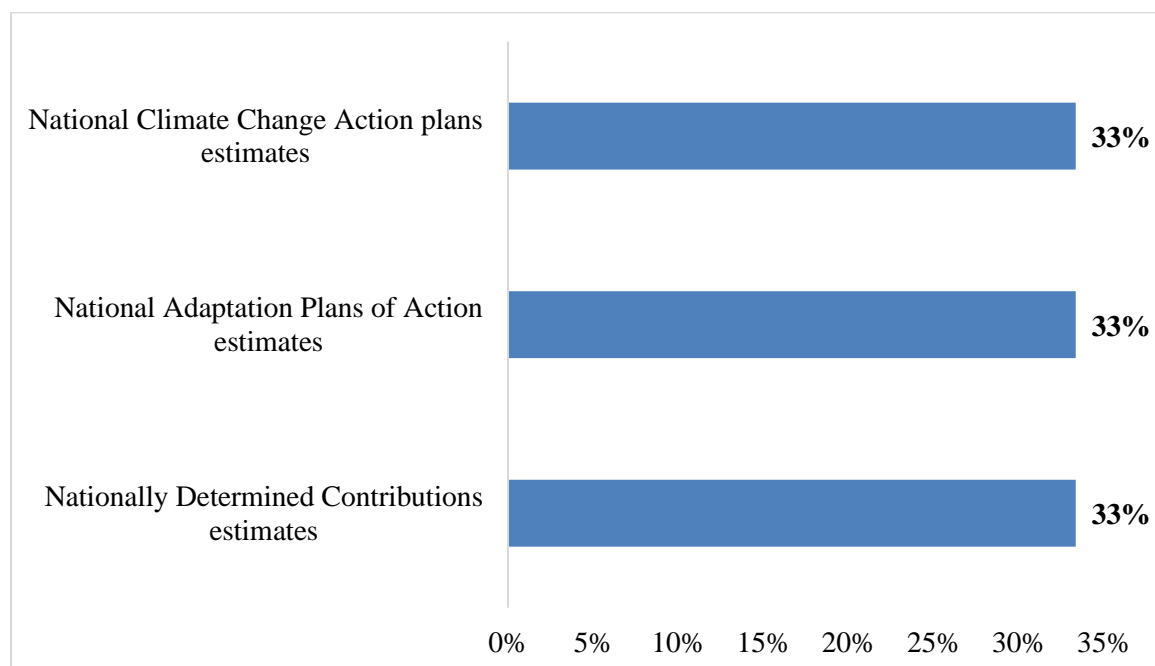
The study also investigated the role of non-governmental organizations (NGOs) in the planning, execution and monitoring of climate change adaptation activities. In summary, the survey results showed that in design, NGOs were best suited to:

- Provide linkages with vulnerable communities.
- Increase awareness on adaptation fund and mobilize active public participation in the design process to enhance design responsiveness to target community needs.
- Play the role of advocacy for gender mainstreaming informed by survey results on the sex disaggregated data.
- Undertake Capacity building to communities, an initiative that would form an integral part of the design.
- Tackle the baseline setting of the biophysical and socioeconomic aspects for the Climate Change adaptation interventions.

- Encourage adaptation strategies and mechanisms for Community-based adaptation.
- Represent vulnerable communities and their interests for a meaningful and participatory planning process.

### 4.3.2 Kenya’s absorption capacity

While reviewing Kenya’s absorption capacity between the amount of financing and levels of adaptation to climate change impacts, this study found that the estimates for climate change budget for countries in the Global South like Kenya are done through the Nationally Determined Contribution (NDC) estimates (for example, Kenya currently needs USD 40 billion to implement NDCs), National Adaptation Plans of Action estimates and the National Climate Change Action plans estimates. This finding is summarized in figure 4.5



**Figure 4.5: Estimates for climate change budget**

Further, the study established that the national and county governments still use the same finance and budgeting templates which reflect majorly the development funds. The fiscal reports reflect the development activities captured in the national and county integrated

plans which only highlight climate change activities but are not fully designed and budgeted. For example, in the case of Homa Bay County, the climate change unit alluded that the estimates for climate change activities under their CIDP, is not anchored on concrete data and designed mitigation and adaptation activities.

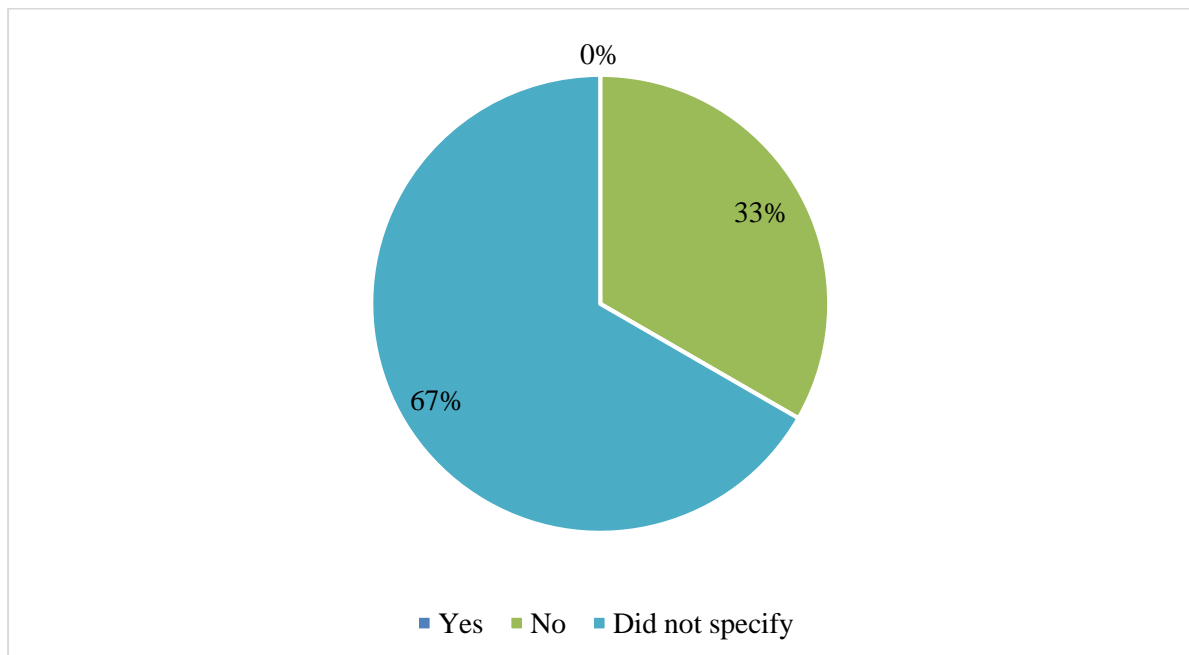
In order to enhance the efficiency of climate finance impacting on the most vulnerable communities and having the highest possible influence in enabling climate resilient development, it is important to initiate more participatory bottom-up method during the engagement of local governments and local communities in the project planning, budgeting and implementation course. The overall amount of adaptation finance has risen every year since 2009 when the developed countries jointly agreed to raise USD 100 billion per year in climate finance by the year 2020 (UNFCCC, 2009). However, the degree to which the apportionments are in line with climate vulnerability of the recipient countries is still contested in the literature.

Saunders (2019) established that the correlation between vulnerability to climate change and adaptation finance is concave. Averagely, the most vulnerable countries to climate change generally received smaller allotments of adaptation funding from bilateral donors as opposed to the less vulnerable countries. Whereas multilateral donors are understood to apportion more adaptation funds to small developing countries, they do not give precedence to vulnerable states in the selection phase. Generally, the provision of adaptation fund is not found to be aligned consistently with the resolutions of the Paris Agreement, which specifies that developing countries should be assisted with financial resources, with precedence given to nations that are mainly vulnerable to the hostile impacts of climate change.

### 4.3.3 Trends in financing for climate change adaptation in Kenya's ASALs

The respondents indicated that the main Climate Change adaptation objectives and/or measures for Kenya's ASAL Counties include ensuring enhanced resilience to climate change towards the attainment of Vision 2030, by mainstreaming climate change into Medium Term Plans (MTPs) and implementing adaptation actions. The other objective is the resilience building of livestock and crop sector through index-based insurance system supported by public-private sector partnership; harvesting of rainwater using dams and water pans and drilling of more boreholes pumped by solar powered system; and the introduction of drought tolerant crops, fruit trees and trees.

Whereas majority of the respondents (67%) did not specify on the effectiveness of Climate Change adaptation objectives in building the adaptive capacity of communities in the ASAL regions in Kenya, 33% indicated that these measures were not effective (figure 4.6).

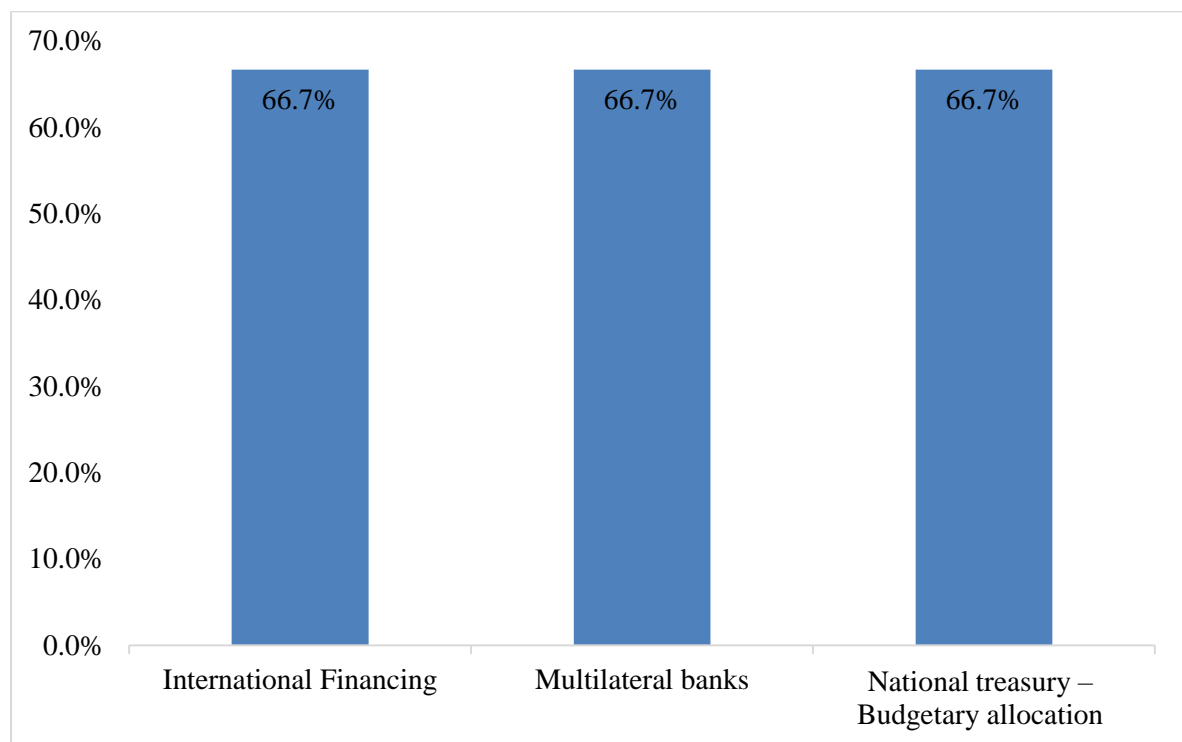


**Figure 4.6: Effectiveness of Climate Change adaptation objectives in building the adaptive capacity**



The respondents indicated that these measures have not been effective basing on the response to the recent flooding and locust invasion that threaten both pasture and crops being ineffective. Several challenges are being faced, which include, lack of sufficient integration of climate change into relevant policies including budgetary and financial reporting to support streamline budgeting and financing for mitigation and adaptation projects; limited knowledge on index-based insurance at all levels; and translation of existing research outputs to support integrated decision and policy making.

In regard to financing the measures for adapting to climate change, the study found that the measures are funded through international financing (66.7%), multilateral banks (66.7%) and national treasury budgetary allocation (66.7%). The results are shown in figure 4.6.



**Figure 4.7: Financing measures for adapting to climate change**

Further, the study established that both adaptation and mitigation actions are being financed (table 4.3). The other climate change actions that are financed include Climate Smart Agriculture activities and Climate-Smart Agriculture Strategy operationalization in Kenya;

infrastructure development like market shades and value addition of agriculture products funded by the World Bank and the African Development Bank; capacity building and research on climate change impacts, and design and policy formulation at subnational level funded by the United States Agency for International Development (USAID), International Development Research Centre (IDRC), Department for International Development (DIFD), Norwegian Agency for Development Cooperation (NORAD), Swedish International Development Cooperation Agency (SIDA) among others.

**Table 4. 3: Measures being financed**

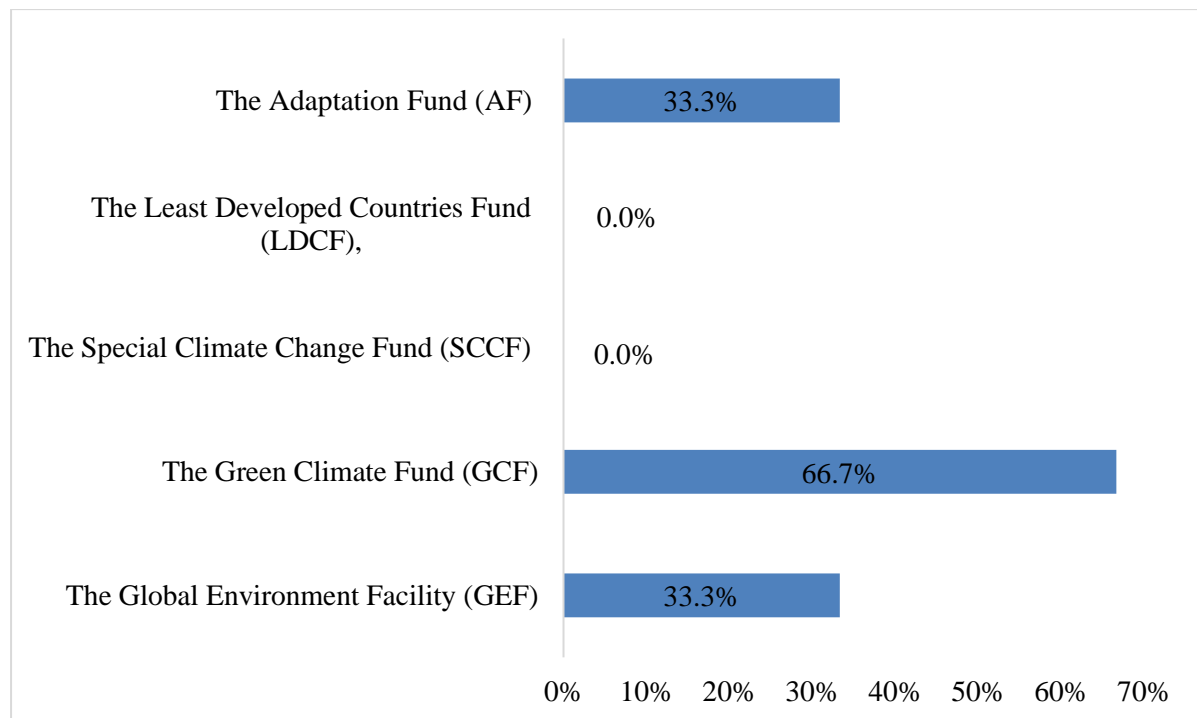
<b>PROJECT</b>	<b>FUNDING SOURCE</b>	<b>AMOUNT</b>
<b>Adaptation</b>		
Increasing the resilience of the livestock and other land-use sectors through restored and effectively governed rangeland ecosystems in Kenya’s arid and semi-arid lands (TWENDE)	GCF	USD 34.5M
Acumen Resilient Agriculture Fund (ARAF)	GCF	USD 56M
<b>Mitigation</b>		
Universal Green Energy Access Programme (UGEAP)	GCF	USD 301.6M
KawiSafi Ventures Fund (Both Adaptation and Mitigation)	GCF	USD 110M
Olkaria II Geothermal Expansion Project	CDM	USD 390,000

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Optimisation of Kiambere Hydro Power Project	CDM	USD 109,000
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Kenya and its ASAL regions have majorly benefited from the Green Climate Fund (66.7%) from between 1992 and 2018. The other sources of financing for Kenya and its ASALs in this period are the Adaptation Fund (33.3%) and the Global Environment Facility (33.3%). The finding is shown in figure 4.8.



**Figure 4.8: Financing mechanisms Kenya and its ASAL’s have benefited from**

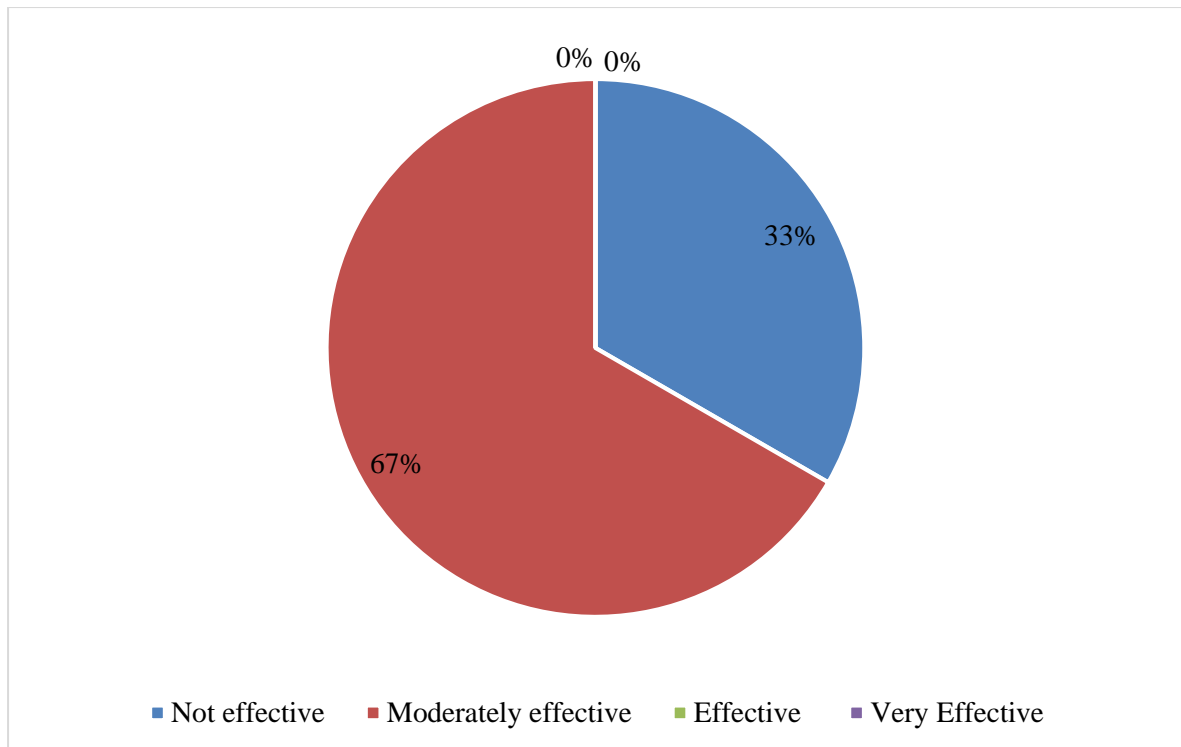
While probing the amount of funding Kenya secured to finance its Climate Adaptation Strategies, there was no substantial data on this. All (100%) of the respondents did not provide a specific figure. The respondents stated that the amount runs into millions but there is no clear figure because of the weak accountability and transparency systems. For example, the National Emergency Management Agency (NEMA) secured around USD 10

million from the Adaption Fund but there are other funds from NGOs, IGOs, banks and counties which aren't captured and consolidated.

The study investigated the local level financing mechanisms to support climate change adaptation interventions in Kenya and specifically the ASALs. From the responses, the study established that in Kenya, more than 5 counties have come up with County Climate Change Funds to help finance climate change adaptation initiatives. The activities financed by the fund are identified and implemented at the village and ward level. Other local mechanisms include:

- i. Private sector-Banks, and companies e.g. Safaricom, EABL etc. as part of their CSR
- ii. National budget – Factored in during preparation of MTPs and funded in annual budgets
- iii. Local foundations and trusts
- iv. Individual philanthropists

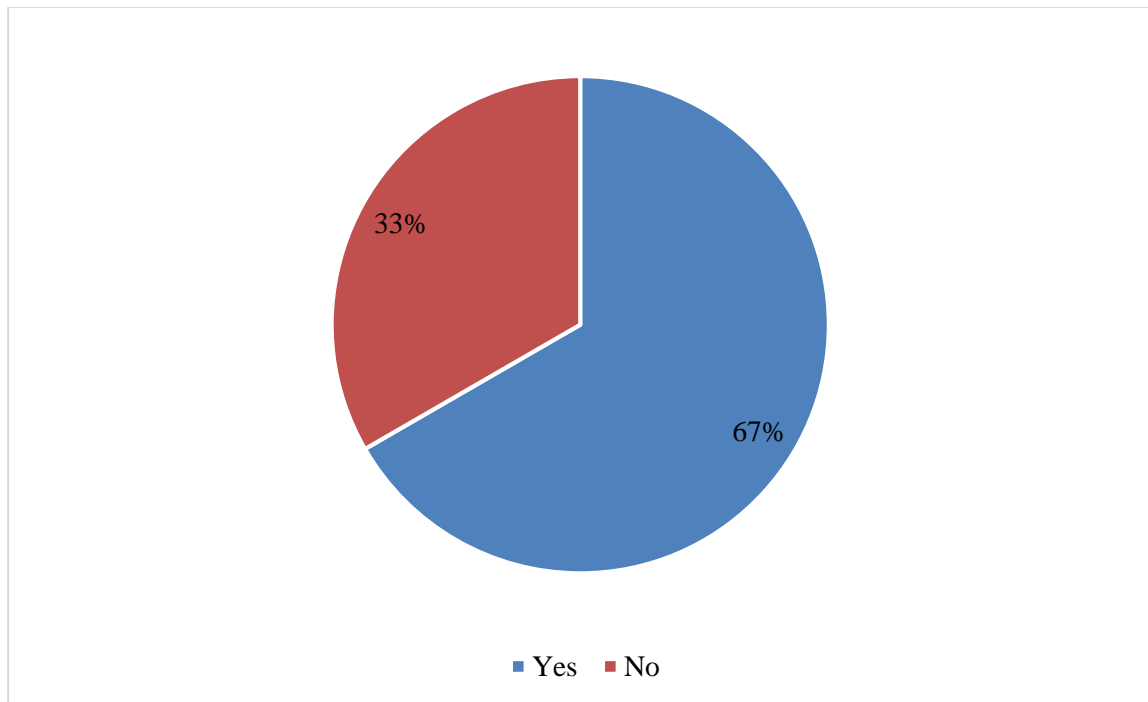
The study also examined the effectiveness these financing mechanisms in terms of building the adaptive capacity of the most vulnerable segments (ASALs) of the society. Majority (67%) of the respondents specified that these financing mechanisms were moderately effective. The remaining 33% indicated that the mechanisms were not effective. This result shows that there is no confidence in these mechanisms being either effective or very effective (figure 4.9).



**Figure 4.9: The effectiveness these financing mechanisms**

#### **4.3.4 Climate action barriers with regards to increased investments for climate adaptation in Kenya’s ASALs**

The study investigated whether Kenya has the capacity to efficiently utilize adaptation funds. Majority of the respondents (67%) indicated that indeed Kenya has the capacity to efficiently utilize adaptation funds whereas the remaining 33% were of the contrary opinion. Figure 4.10 summarizes this finding. Therefore, capacity is no barrier to efficiently utilize adaptation funds.



**Figure 4.10: Kenya having the Capacity to efficiently utilize adaptation funds**

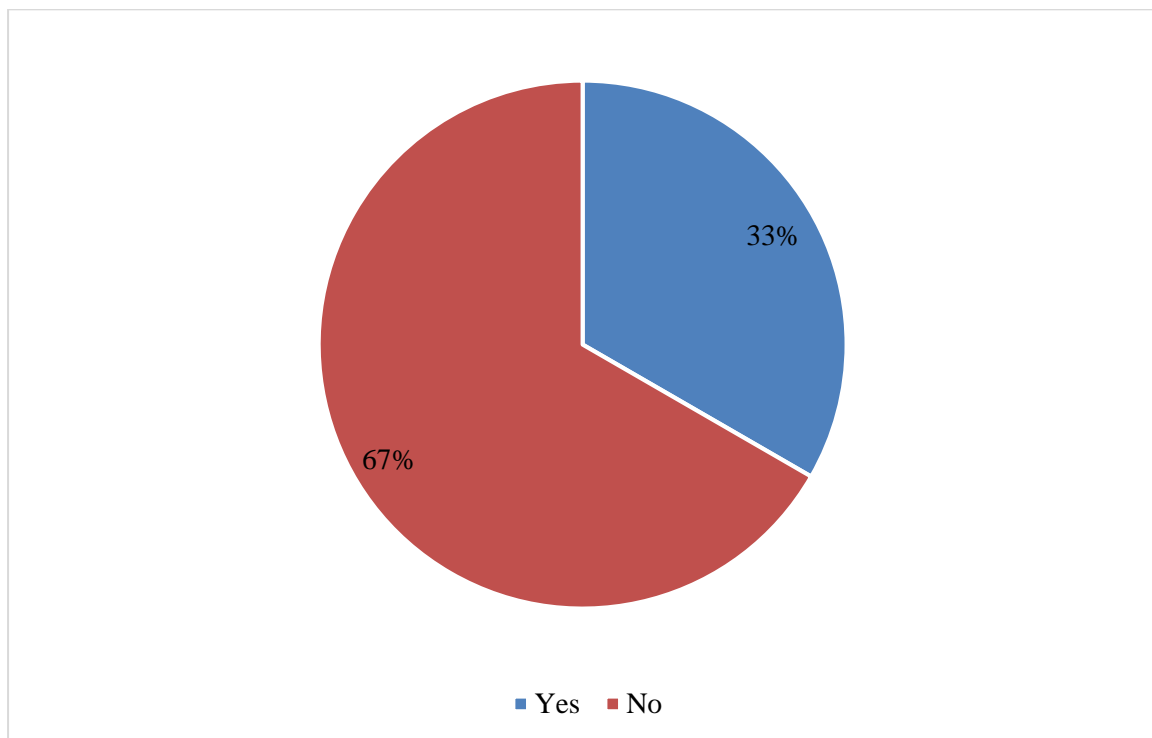
From the results, the mechanisms mentioned by the respondents to have been put in place to ensure proper utilization of these adaptation funds are as follows.

- i. Proper tracking system for carbon finance flows at the treasury
- ii. Strong existing legal, financial and fiduciary frameworks and standards to access and utilize climate finance
- iii. Strong Monitoring & Evaluation system to allow for assessment and reporting on resilience building
- iv. The Paris Agreement of which Kenya is a signatory provides for enhanced Transparency on the use of climate funds.
- v. Kenya has a national level climate change secretariat/department

The 33% of the respondents who indicated that Kenya has no capacity specified that the reason behind this was because Kenya is evolving in utilizing climate finance. The utilization of conventional development finance is not efficient according to the auditor

general's report and the quality of several development projects in the country. This lack of capacity is again compounded by lack of transparency in report on the status of the development projects.

This study also sought to find out whether Kenya through its National and County Governments have adequate Capacity in designing and implementing climate change adaptation programmes /interventions. Majority (67%) of the respondents indicated that both the national and county governments of Kenya have no adequate capacity in designing and implementing climate change adaptation programmes /interventions whereas 33% were of the opinion that both levels of government have the adequate capacity (Figure 4.11).



**Figure 4.11: Capacity in designing and implementing climate change adaptation programmes /interventions**

There is absolutely low capacity because designing of fundable adaptation projects commence with country and county comprehensive vulnerability and risk assessment then

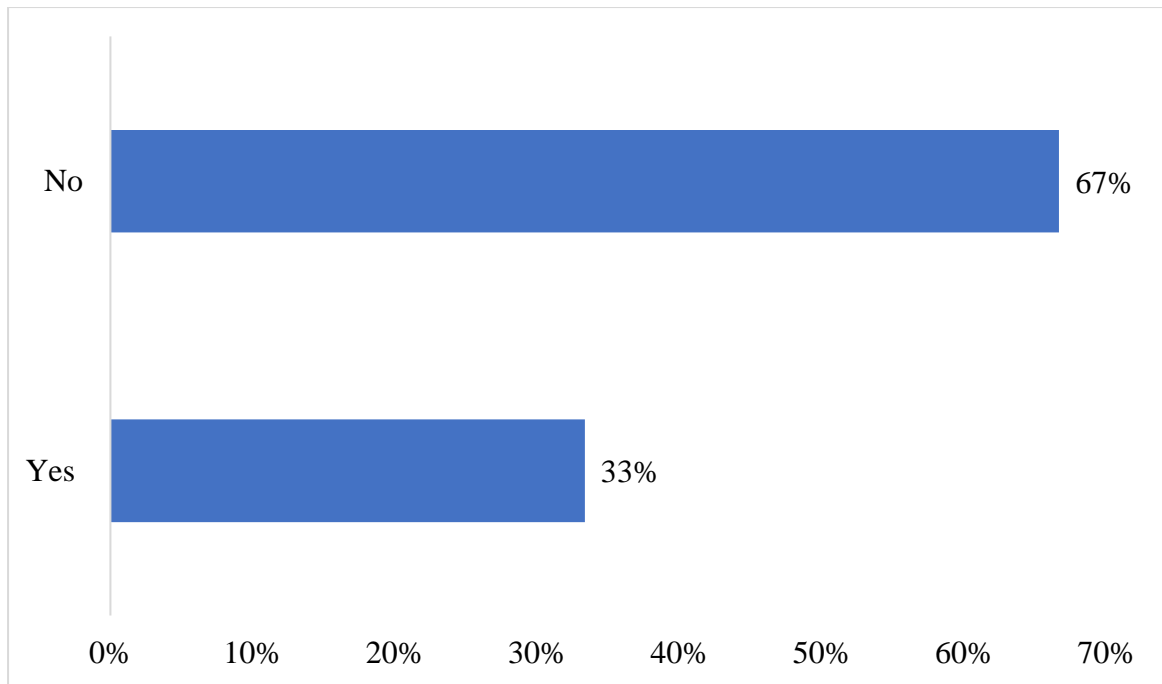
designing of hotspots then developing climate change projects then designing of bankable and fundable mitigation and adaptation projects, which we haven't done as a country and counties.

The respondents who indicated that Kenya has the capacity in designing and implementing climate change adaptation programmes /interventions listed the following capacities.

- i. Adequate policy and legislative framework
- ii. Adequate institutional mechanisms
- iii. Academic institutions-ICCA
- iv. Kenya has one of the best climate change adaptation plans, NDCs and Climate Change Action Plans that have all prioritized adaptation and have pointed out the best adaptation measures to be implemented
- v. At the county level, many counties have come up with policies
- vi. CIDPs have integrated climate change in planning
- vii. Several counties have Climate Change Adaptation plans

On whether planning committees at the county and national levels incorporate climate information services and participatory planning tools to inform the design and implementation of priority action, the study found that majority (67%) do not integrate these tools. Only 33% of the respondents indicated that both levels of government in Kenya integrate climate information services and participatory planning tools (figure 4.12).





**Figure 4.12: Governments integrate climate information services and participatory planning tools**

The following were listed as the ways in which the Government(s) and the Civil Society Organizations ensure that the most vulnerable are targeted for the various adaptation interventions.

- a. Participatory planning processes-Involvement of the locals in planning
- b. Involving locals in Budgeting Cycles
- c. County Climate Change Funds target the village councils and ward councils. Project proposals are initiated by the vulnerable communities themselves. Ward Councils vet and forward to the county climate change council.
- d. CSOs engage social accountability tools to engage government (e.g. community climate change score cards)
- e. CSOs target the vulnerable whom both levels of governments may not be specifically paying attention to.

The Climate Change Act 2016 has empowered non-state, subnational and state actors to strive to work together. However, regular reporting by non-state actors and Counties to the national climate change secretariat is poor hence stakeholders are not sure of exact scale in integrating the poor and the most vulnerable in the climate change programme.

From the study responses, the following are means by which the financial resources earmarked for Climate adaptation in Kenya can be increased:

- a. Participating and Influencing the decision makers during the budgeting process
- b. More awareness on the need for adaptation
- c. National Designated Authority (NDA) in this case the National Treasury should lobby for more simplified avenues of accessing GCF and other funds
- d. Lobby private sector to increase co-financing of adaptation initiatives
- e. Deliberate budgeting and allocation of financial resource for the same.
- f. The resource allocation should be guided by harmonized climate research outputs by various actors;
- g. Integrate climate change and link public finance (climate change fund) Act 2018 with the public-private sector Act and other relevant policies and legislations to facilitate private sector investment on adaptation activities as well as attract more internal and external funding;
- h. Facilitating all counties to develop climate fund regulations
- i. Undertaking comprehensive vulnerability and risk assessment at national and county level to inform designing of bankable and fundable adaptation and mitigation projects;
- j. Training more climate finance experts to work closely with development finance experts;
- k. Enhancing accountability and transparency through timely reporting

## **Chapter Summary**

This chapter illustrates the findings of the study. The results have been organized as per the study objectives and presented through graphs and tables. The next section discusses the study findings, conclusions and the recommendations.

## **CHAPTER FIVE**

### **5.0 DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter outlines a synopsis of the study results, discussion of the research findings, gives the conclusion of the paper and gives the recommendation for policy makers and practitioners that can be implemented in regard to financing for climate adaptation in the global south.

#### **5.2 Summary of Findings**

This study aimed at examining the financing for climate adaptation in the Global South through an analysis of climate action in Kenya's arid and semi-arid lands 1992-2018. Specifically, the study assessed the trends in financing for climate adaptation in the Global South between 1992 and 2018; reviewed Kenya's absorption capacity between the amount of financing and levels of adaptation to climate change impacts; assessed trends in financing for climate change adaptation in Kenya's ASALs and evaluated climate action barriers regarding increased investments for climate adaptation in Kenya's ASALs. Four research question were formulated to inform these study objectives.

The study population was made up of a total of 20 respondent's including directors in the Ministries of Environment and natural resources and NEMA, county level CEC's Ministry of Finance and Economic Planning, Ministry of Water Services, Environment and Mineral Resources and Ministry of Agriculture, Pastoral Economy and Fisheries. In addition, officers working in Non-governmental organizations involved in climate change issues in the ASAL Counties including Practical Action, CARE, Transparency International and Trocaire were interviewed.

The study had representation from both genders with most of the respondents being male and the rest being female. The study also had representation across different ages with half aged between 41 and 50 years. All respondents had an educational qualification of at least a bachelor's degree implying that had expansive knowledge in climate funding.

The first objective of this study was to assess the trends in financing for climate adaptation in the Global South between 1992 and 2018. The study established that in the early years of adaptation finance under the UNFCCC (1992–2008), three financial instruments were set up to support adaptation activities in developing countries and these included the Adaptation Fund, the Special Climate Change Fund (SCCF), and the Least Developed Countries Fund (LDCF). The management of the LDCF and the SCCF was under GEF, while the Adaptation Fund Board managed the Adaptation Fund. During the Copenhagen shift (2009–2015), the World Bank remained to act as the Trustee of the LDCF and SCCF. Within the post-Paris era (2016–2018), the Adaptation Fund is likely to get more finances as contrasted with the Funds including the LDCF and the SCCF. The Adaptation Fund also raised an amount higher than anticipated for the first time during this period. NGOs were found to provide linkages with vulnerable communities; increase awareness on adaptation fund and mobilize active public participation in the design process to enhance design responsiveness to target community needs; play the role of advocacy for gender mainstreaming informed by survey results on the sex disaggregated data; undertake Capacity building to communities, an initiative that would form an integral part of the design; tackle the baseline setting of the biophysical and socioeconomic aspects for the Climate Change adaptation interventions; encourage adaptation strategies and mechanisms for Community-based adaptation, and also represent vulnerable communities and their interests for a meaningful and participatory planning process.

The second objective was to review Kenya's absorption capacity between the amount of financing and levels of adaptation to climate change impacts. The study established that the estimates for climate change budget for countries in the Global South like Kenya are done through the Nationally Determined Contribution (NDC) estimates (for example, Kenya currently needs USD 40 billion to implement NDCs), National Adaptation Plans of Action estimates and the National Climate Change Action plans estimates. Additionally, the study established that the national and county governments still use the same finance and budgeting templates which reflect majorly the development funds. The fiscal reports reflect the development activities captured in the national and county integrated plans which only highlight climate change activities but are not fully designed and budgeted.

The third objective of this research was to assess trends in financing for climate change adaptation in Kenya's ASALs. The measures for adapting to climate change were established to be funded through international financing, multilateral banks and national treasury budgetary allocation. Kenya and its ASAL regions have majorly benefited from the Green Climate Fund from between 1992 and 2018. The other sources of financing for Kenya and its ASALs in this period are the Adaptation Fund and the Global Environment Facility. Regarding the effectiveness these financing mechanisms in terms of building the adaptive capacity of the most vulnerable segments (ASALs) of the society, majority of the respondents specified that these financing mechanisms were moderately effective. The rest indicated that the mechanisms were not effective.

The final objective was to evaluate climate action barriers regarding increased investments for climate adaptation in Kenya's ASALs. Although majority of the respondents indicated that indeed Kenya has the capacity to efficiently utilize adaptation funds, a third of the respondents who indicated that Kenya has no capacity specified that the reason behind this was because Kenya is evolving in utilizing climate finance. The utilization of conventional

development finance is not efficient according to the auditor general's report and the quality of several development projects in the country. This lack of capacity is again compounded by lack of transparency in reporting on the status of the development projects. Majority of the respondents indicated that both the national and county governments of Kenya have no adequate capacity in designing and implementing climate change adaptation programmes /interventions. On whether planning committees at the county and national levels integrate climate information services and participatory planning tools to inform the design and implementation of priority action, the study found that majority do not integrate these tools.

### **5.3 Discussion of the findings**

The study established that in the early years of adaptation finance under the UNFCCC (1992–2008), the Adaptation Fund, the Special Climate Change Fund (SCCF), and the Least Developed Countries Fund (LDCF) were set up to support adaptation activities in developing countries. The management of the LDCF and the SCCF was under GEF, while the Adaptation Fund Board managed the Adaptation Fund. During the Copenhagen shift (2009–2015), The costs of adaptation were projected to span from USD 140 billion to USD 300 billion every year by 2030, and between USD 280 billion and USD 500 billion every year by 2050. The World Bank remained to act as the Trustee of the LDCF and SCCF. The Adaptation Fund is likely to get more finances as contrasted with the Funds including the LDCF and the SCCF. The Fund also raised an amount higher than anticipated for the first time during this period. This period has also witnessed continuing low-level efforts over the management of climate funds with just a small percentage of climate finance is controlled through the UNFCCC framework. These findings are consistent with the findings of Bouwer and Aerts (2006), and Smith et al. (2011), who in their studies outlined the funds under the UNFCCC to be the foreign direct investment (FDI); the Global Environment Facility (GEF); disaster relief and risk mitigation public expenditures such as

public–private partnerships (PPPs); development aid, and non-compliance fund. Thus, there are evidently funds already put in place for both mitigation and adaptation measures for managing climate change within the Global South.

The study established that the estimates for climate change budget for countries in the Global South like Kenya are done through the Nationally Determined Contribution (NDC) estimates. For example, Kenya currently needs USD 40 billion to implement NDCs. National Adaptation Plans of Action estimates and the National Climate Change Action plans estimates. Additionally, the study established that the national and county governments still use the same finance and budgeting templates which reflect majorly the development funds. The fiscal reports reflect the development activities captured in the national and county integrated plans which only highlight climate change activities but are not fully designed and budgeted. Kenya has an adequate absorption capacity between the amount of financing and levels of adaptation to climate change impacts according to these results.

The measures for adapting to climate change were established to be funded through international financing, multilateral banks and national treasury budgetary allocation. Kenya and its ASAL regions have majorly benefited from the Green Climate Fund from between 1992 and 2018. The other sources of financing for Kenya and its ASALs in this period are the Adaptation Fund and the Global Environment Facility. Regarding the effectiveness these financing mechanisms in terms of building the adaptive capacity of the most vulnerable segments (ASALs) of the society, majority of the respondents specified that these financing mechanisms were moderately effective. The remaining indicated that the mechanisms were not effective. Therefore, the ASAL regions of Kenya have in place financing sources for climate change adaptation. However, the study established that these



financing mechanisms were either not very effective mechanisms in terms of building the adaptive capacity of the most vulnerable segments of the society.

NGOs were recognised to provide linkages with vulnerable communities; increase awareness on adaptation fund and mobilize active public participation in the design process to enhance design responsiveness to target community needs; play the role of advocacy for gender mainstreaming informed by survey results on the sex disaggregated data; undertake Capacity building to communities, an initiative that would form an integral part of the design; tackle the baseline setting of the biophysical and socioeconomic aspects for the Climate Change adaptation interventions; encourage adaptation strategies and mechanisms for Community-based adaptation, and also represent vulnerable communities and their interests for a meaningful and participatory planning process. These findings are corroborated by the results of a study by Jones, Harvey and Godfrey-Wood (2016) who established that the increasing demand for and capital spending in climate amenities has encouraged growing participation of NGOs in several roles within the climate change activities. Key roles such as brokerage and intermediaries for climate information have been taken over by NGOs. These functions take advantage of the NGOs' strong links to the communities and vulnerable residents, to involve them in the generation, understanding and usage of information on climate.

Although majority of the respondents indicated that indeed Kenya has the capacity to efficiently utilize adaptation funds, a third of the respondents who indicated that Kenya has no capacity specified that the reason behind this was because Kenya is evolving in utilizing climate finance. The utilization of conventional development finance is not efficient according to the auditor general's report and the quality of several development projects in the country. This lack of capacity is again compounded by lack of transparency in report on the status of the development projects. Majority of the respondents indicated that both

the national and county governments of Kenya have no adequate capacity in designing and implementing climate change adaptation programmes. The study deduced that although Kenya has the capacity to efficiently utilize adaptation funds, there are still several accountability issues surrounding the governance of these funds.

#### **5.4 Conclusions**

The requirement for vulnerable countries and communities to adapt to the impacts of climate change is recognised globally. Similarly, there has been a growing concern on the same across the various International bodies, organizations and institutions including the UNFCCC, World Bank and other multilateral and bilateral agencies. This has led to a significant increase in climate change adaptation financial resources in the last decade. While this is a great achievement linked to the potential to achieve set adaptation goals, there has been an issue of how these funds have been utilised and whether or not they have achieved the efficiency and effectiveness threshold demanded by beneficiaries as well as civil society. It is evident that significant ground pertaining to climate change adaptation has been covered in terms of setting up financial facilities and mitigation and adaptation measures. However this is just the starting point as a lot of effort and resources is still required to build the required adaptive capacity paying keen attention to the most vulnerable communities and sections of the society. In order to achieve this, swift and responsive action is required.

Currently, there are already funds put in place for both mitigation and adaptation measures for managing climate change within the Global South countries like Kenya. Kenya has an adequate absorption capacity between the amount of financing and levels of adaptation to climate change impacts according to these results. The vulnerable ASAL regions of Kenya have in place financing sources for climate change adaptation although these financing

mechanisms were either not very effective mechanisms in terms of building the adaptive capacity of the most vulnerable segments of the society such as the ASAL regions.

The study concludes that although Kenya has finances available for the adaptation and mitigation measure for managing climate change impacts, and also the capacity to efficiently utilize adaptation funds, there are still several accountability issues surrounding the management of these funds.

### **5.5 Recommendations**

Since lack of credible data, uncertainty about future climate scenarios, inadequate valuation techniques and documenting change are some of the barriers, the study recommends that the climate change stakeholders in Kenya should work towards addressing these challenges by way of transparent governance of the funds.

Although some observers of developing country believed UNFCCC would manage the full USD 100 billion a year commitment, and this has not been fulfilled. The observers should propose measures in the next COP meeting – COP 26 that are agreeable by both the donors and the developing countries for the management of the finances. This is because even though more than 60% of the USD 10.3 billion has been credited in the GCF's accounts, there are still some stringencies.

There is need for a robust climate information system that provides accurate, timely and useful climate information to enable better planning by the vulnerable communities and increased preparedness to the effects of climate change. This would include choices of dissemination channels to influence access of climate information by the communities in the ASALs as a mechanism of building their adaptive capacity, adequate response capacities and overall resilience

## **5.6 Suggestions for future research**

This study sought to examine the financing for climate adaptation in the Global South through an analysis of climate action in Kenya's arid and semi-arid lands 1992-2018. Since this study was limited in scope to cover Kenya as an example, more studies on the same should be carried out across the region, specifically the vulnerable Eastern Africa region.

## **5.7 Overall conclusion**

The study concludes that although there is already in place financing for measures of adaptation and mitigation of climate change impacts, there are challenges in governance, prioritization for funding and failure by the donors to honor their pledges. These are areas that should be the main agendas during discussions or negotiations by stakeholders or representatives from the Global South in the forthcoming global climate change summits.

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## **APPENDICES**

### **APPENDIX 1: QUESTIONNAIRE**

**Research Topic:** Financing for Climate Change Adaptation in the Global South; An Analysis of Climate Action in Kenya's ASALs (1992-2018)

#### **Questionnaire**

##### **Introduction**

My Name is Caroline Gathu, Student ID Number 656667. Taking an MA course in International Relations – Development Studies at the United States International University. As part of my course work I am undertaking a research on Financing for Climate Change Adaptation in the Global South; An analysis of Climate Action in Kenya's Arid and Semi-Arid Lands 1992-2018. I wish to request your support in this project by filling out the questions below.

The information you provide will be kept confidential and will only be used for the purpose of this research only.

##### **Consent**

If you are willing to participate in this exercise, please sign the below and proceed:

**Signed:**

\_\_\_\_\_ **Date:** \_\_\_\_\_

1. How are countries in the Global South financed to adapt to climate change?

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2. What are some of the barriers in Financing Climate Change Adaptation for countries in the Global South? **Also Use Kenya as an example**
  - i. Lack of credible data
  - ii. Uncertainty about future climate scenarios
  - iii. Inadequate valuation techniques
  - iv. Documenting Change
  - v. Other (Specify)
3. How are the estimates for climate change budget for countries in the Global South like Kenya done?
4. What are the main Climate Change adaptation objectives/ Measures for Kenya – ASAL Counties?
5. Have these measures been effective in building the adaptive capacity of communities in the ASALs?
  - i. Yes
  - ii. No

If Yes/No, Please explain:

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6. How are these measure for adapting to climate change being financed?
  - i. International Financing
  - ii. Multilateral banks
  - iii. National treasury – Budgetary allocation

7. What is being financed? (Please List)

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8. Which of the following financing mechanisms has Kenya and its ASAL's benefited from between 1992 - 2018?

- i. The Global Environment Facility (GEF)
- ii. The Green Climate Fund (GCF)
- iii. The Special Climate Change Fund (SCCF)
- iv. The Least Developed Countries Fund (LDCF),
- v. The Adaptation Fund (AF)

9. How much in USD has Kenya Secured to finance its Climate Adaptation Strategies?

10. Are there local level financing mechanisms to support climate change adaptation interventions in Kenya and specifically the ASALs? Please describe them?

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11. How effective are these financing mechanisms in terms of building the adaptive capacity of the most vulnerable segments (ASALs) of the society?

- i. Not effective
- ii. Moderately effective
- iii. Effective
- iv. Very Effective

12. Does Kenya have the Capacity to efficiently utilize adaptation funds?

- i. Yes
- ii. No

If YES, What are some of the mechanisms that have been put in place to ensure proper utilization of these adaptation funds?

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If NO, why?

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13. In your opinion, do you think Kenya through its National and County Governments have adequate Capacity designing and implementing climate change adaptation programmes /interventions?

- i. Yes
- ii. No

If Yes, Briefly describe the capacity

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14. Do planning committees at the county and national levels integrate climate information services and participatory planning tools to inform the design and implementation of priority actions?

- i. Yes

ii. No

15. How does the Government (s) and the Civil Society Organizations ensure that the most vulnerable are targeted for the various adaptation interventions?

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16. In your opinion, what roles do the non-governmental organizations (NGOs) play in the Design, Implementation and Monitoring climate change adaptation activities?

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17. How can the financial resources earmarked for Climate adaptation in Kenya be increased?

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**Additional Information:**

**Is there anything else that you would like to share that is not captured in the questions above?**

**Please share here**

*Thank you for your support.*

## APPENDIX 2: LETTER OF INTRODUCTION



National Commission for Science Technology and Innovation  
P. O. Box 30623, 00100,  
Nairobi, KENYA.

21<sup>st</sup> February, 2020

Dear Sir/Madam,

**REF: PERMISSION TO CONDUCT RESEARCH- GATHU CAROLINE**  
**STUDENT ID NO. 656667**

The bearer of this letter is a student of United States International University (USIU) -Africa pursuing **Masters of Arts in International Relations**.

As part of the program, the student is required to undertake a dissertation on "**Financing for Climate Change Adaptation in the Global South: An analysis of Climate Action in Kenya's Arid and Semi-Arid lands (1992-2018)**" which requires the student to collect data.

Kindly assist the student with the research permit and should you have any queries contact the undersigned.

Yours Sincerely,

A handwritten signature in blue ink, appearing to read "Prof. Amos Njuguna", is written over a circular official stamp of the United States International University-Africa.

**Prof. Amos Njuguna,**  
Dean – School of Graduate Studies, Research and Extension  
Tel: 730 116 442  
Email: [amnjuguna@usiu.ac.ke](mailto:amnjuguna@usiu.ac.ke)

### APPENDIX 3: RESEACH PERMIT

  
**REPUBLIC OF KENYA**

  
**NATIONAL COMMISSION FOR  
SCIENCE, TECHNOLOGY & INNOVATION**

**Ref No: 744105** **Date of Issue: 19/March/2020**

**RESEARCH LICENSE**



**This is to Certify that Ms., Caroline Mwhaki Gathu of United States International University Africa, has been licensed to conduct research in Turkana on the topic: FINANCING FOR CLIMATE CHANGE ADAPTATION IN THE GLOBAL SOUTH: AN ANALYSIS OF CLIMATE ACTION IN KENYA'S ARID AND SEMI-ARID LANDS 1992-2018 for the period ending : 19/March/2021.**

**License No: NACOSTI/P/20/4107**

**744105**

**Applicant Identification Number**

  
**Director General**  
**NATIONAL COMMISSION FOR  
SCIENCE, TECHNOLOGY &  
INNOVATION**

**Verification QR Code**



**NOTE: This is a computer generated License. To verify the authenticity of this document,  
Scan the QR Code using QR scanner application.**

Certification of Thesis Supervision Meetings and Progress

(The student and the supervisor must fill and sign this form)

Title of the Project: **FINANCING FOR CLIMATE CHANGE ADAPTATION IN THE GLOBAL SOUTH: AN ANALYSIS OF CLIMATE ACTION IN KENYA'S ARID AND SEMI-ARID LANDS 1992-2018**

**FIRST MEETING:**

Declaration by the Student and Supervisor

I have had the first meeting with my supervisor and I am contented with the guidance given and suggestions proposed.

Student's Name: Gathu Caroline Mwihaki

ID: 656667

Student's Signature:

Date: 27/01/2020

Supervisors Signature:



Date:

27/01/2020

**SECOND MEETING:**

Declaration by the Student and Supervisor

I have had the second meeting with my supervisor and I am contented with the guidance given and suggestions proposed.

Student's Name: Gathu Caroline Mwihaki

ID: 656667

Student's Signature:

Date: 12/02/2020

Supervisors Signature:



Date: 12/02/2020

**THIRD MEETING:**

Declaration by the Student and Supervisor

Student's Name: Gathu Caroline Mwihaki

ID: 656667

Student's Signature:

Date: 21/03/2020

Supervisors Signature:



Date: 21/03/2020

Declaration by the Supervisor for defense.

The student has satisfactorily addressed the corrections/comments/ suggestions  
given on this research project.      YES       NO