

UNIVERSITY OF NAIROBI



INSTITUTE OF DIPLOMACY AND INTERNATIONAL STUDIES

**CHALLENGES OF PROMOTING FOOD SECURITY POLICIES IN KENYA,
(1990 -2017)**

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**A Research project submitted in partial fulfillment for the Degree of Master of Arts in
International Studies**

October, 2018

DECLARATION

This research project authored by me, **Hassan Maulana Mohamed** is my original work and has not been submitted to any other institution for examination. Any reference to work done by another person, institution and materials obtained from other sources have been clearly cited and referenced. No part of this publication may be reproduced or stored in any retrieval devices without the prior permission of the author and the University of Nairobi.

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DEDICATION

I wish to dedicate this Research Project to my wife; **Khadija** who inspired me to finish that which I started and who supported me morally and encouraged me all the way.

ACKNOWLEDGEMENT

This work is the result of many who invested their time, energy and interest of success of this project. I am grateful to my supervisor **Dr. Shazia Chaudhry** for her professional guidance and advice throughout the process of this study. I also wish to give special thanks to the University of Nairobi lecturers, for their support and efforts to equip me with the necessary tools for my study.

ABSTRACT

Food security has over the years established to be a major global problem. The SSA saw most of its states succumb to the challenge of food security. Some of the challenges causing the growth of food uncertainty in the SSA include structural, political, environmental and economic factors. Research indicates that many parts of the African population are food insecure and malnourished. The main drive of the study is instituting the challenges of upholding food security guidelines in the continent, but more specifically in Kenya (1990-2017). The specific objectives; to evaluate the efforts of political will to the implementation of policies to do with food security specifically in Kenya; to determine the roles of institutional frameworks and policies that have been adopted for the successful means of achieving food security in Kenya. Many other scholars have written on the food security problems in Africa as well as in Kenya. But this study specifically aims to examine key issues that are related to policy failure, especially in this country. The review was deliberated to provide a theoretical background that provided the foundation for analyzing the problem of the study being investigated. The data collection instrument used was questionnaires; data collected was analyzed by creating descriptive percentage and frequencies and then presenting the statistics in form of charts, graphs, percentages and tables. Marxism theory was used to support the study. Karl Marx (1818-83) argues that there are three main assumptions of Marxism; first, they believe that human beings are cooperative as individuals but conflictual in groups; second they advance the argument that the competition among the groups especially between the owners of wealth and laborers is conflictual and authoritative; and third that the conflictual relationships that come as a result of natural expansion of capitalism seek radical change in the international economic system. Key findings of this study are; there is a general thinking among the people in the communities that it is the role of the government to provide them with the necessary means towards achieving food security; Study also found that there is lack of good will political leaders; the initiatives undertaken by the government are not beneficial and sustainable to the people and hence rendering themselves useless; In most cases, food security strategies are highly used than the policies themselves which are drafted and implemented on ad hoc basis when it comes to fighting food insecurity. It has been revealed in the study that there are little or no chances of involving the populace and other stakeholders when it comes to making policies to do with food security; there has been minimal implementation of policies to benefit the common man in the countryside. It can therefore be concluded that policy implementation in the advancement of achieving food security in Kenya is weak and slow. The Study recommends that efforts facilitated by the advancement of policies need to be enhanced to achieve food security in Kenya; Policy making and implementation in the achievement of food security is an area that needs improvement; Extensive involvement in policy formulation and execution, augmented by institutional devolution by all is required; Trade policies and other macroeconomic should be in favor of achieving food security of the rural people; Every policy regarding food security should be reviewed by relevant stakeholders before going to parliament; the government needs to increase food crop production by empowering the farmers and ensuring access of agricultural extension advices which in turn can result in improved yields.

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LIST OF ABBREVIATIONS

AIDS	-	Acquired Immunodeficiency Syndrome
AP	-	Administration Police
ASAL	-	Arid and Semi-Arid Lands
ASDS	-	Agriculture Sector Development Strategy
AU	-	African governments
CA	-	Conservation Agriculture
CAADP	-	Comprehensive Africa Agriculture Development Programme
GLASOD	-	Global Assessment of Soil Degradation
CBOs	-	Community Based Organizations
CSA	-	Climate Smart Agriculture
GDP	-	Gross Domestic Product
HIV	-	Human Immunodeficiency Virus
ICAO	-	International Civil Aviation Organization
MDG	-	Millennium Development Goals
NCCAP	-	National Climate Change Action Plan
NCPB	-	National Cereals and Produce Board
NEPAD	-	New Partnership for Africa's Development
NGOS	-	Non-Governmental Organizations
NYS	-	National Youth Service
REDD+	-	Reduce Emission, deforestation and Degradation
SAPs	-	Structural Adjustment Programs
SDGs	-	Strategic Development Goals
SRA	-	Strategy for Revitalizing Agriculture
SSA	-	The sub-Saharan Africa
UN	-	United Nations
UNEP	-	United Nations Environmental Programme

WMO	-	World Meteorological Organization
ICPC	-	Independent Corrupt Practices and other related offences Commission
EFCC	-	Economic and Financial Crimes Commission
KALRO	-	Kenya Agricultural and Livestock Research Organization
PPP	-	Public Private Partnerships
GWP	-	Global Warming Potential
CSAP	-	Climate-Smart Agricultural Practices
AEZ	-	Agro-Ecological Zones
SLIS	-	Special Livestock Insurance Schemes
SSIS	-	Small-scale insurance scheme
NPRS	-	National Poverty Reduction Strategy
RBC	-	Regional Business Centre

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.0 INTRODUCTION

Food security has encountered many challenges across the globe and specifically the Sub-Saharan Africa (SSA). The ever increasing world population, rural-urban migration and limited capacity of environment to produce enough food have had an enormous impact and influence to the food insecurity. Natural disasters such as drought and floods as well as wars and conflicts and pandemic diseases have been regarded as other factors that intensify food insecurity¹. The rising food insecurity dilemma has thus become a perennial issue among states within the region. Whereas low income and the thriving poverty have been major determinants of food insecurity, the protracted challenges in SSA have in turn aggravated other social susceptibilities such as diseases and civil wars². For instance, in 2007, unrests against the rapidly rising food prices where households typically expended a huge portion of their earnings on foodstuff which consequently heightened hunger problems ensued in fourteen countries across SSA³. Despite the fact that there have been unrests and demonstrations from the populace in their respective countries, states have been looking for various ways aimed at curbing food insecurity.

Today, about 30% of the numbers of inhabitants in SSA, hundreds of millions are malnourished, majority of who are in nations influenced by clashes and conflicts.

¹ S. Jathurinha "Food security and sustainable resource management in a market economy: Challenges and options. *Journal of agriculture in tropics and subtropics*, Vol 4, No 1, Pp 41-47

² J. Mangala, '*New Security Threats and Crises in Africa: Regional and International Perspectives*', p.111

³ P. Hough, *International Security Studies: Theory and practice*. Routledge, New York, 2015, p vii

Starvation is everywhere all through Africa, yet a large portion of the expansion in the quantity of undernourished throughout the most recent ten years occurred in nations influenced by civil wars – regularly enriched with plenteous mineral assets - while the circumstance in different nations has by and large enhanced, albeit unevenly and at a moderate rate.

It is very evident, from the forgoing paragraphs, that the attainment of food security status in a state is the government responsibility to ensure that there is food security to everyone since it has a direct repercussion on societal, political and economic steadiness in a state⁴. For this reason, it is also the role of the state to make sure that it adheres to the instruments of achieving food security as well as internalizing those charters and creating binding policies geared towards the attainment of food security countrywide. It is therefore against this backdrop that Kenya is party to the Sustainable Development Goals. There have also been policies to do with food security such as the Vision 2030, Agricultural Sector Development Strategy.

The difficulty of ensuring food security is attributed to a number of reasons some of which are man-made and some are natural. This study will use theoretical methods to understand the challenge of food security in Kenya. To a larger degree, it will apply Marxism in understanding why food availability and security is such a challenge in Kenya. On the other hand the practical part will focus on the applicability of policies and political will on the achievement of food security. It is in this view therefore that the study was proposed to understand the challenge of food security in Kenya holistically since the issue is a multidiscipline, which may involve intellectuals in international relations, economists, political scientists, historians, or geographers and environmentalists.

⁴ Bahemuka MJ. "Global Food Security: Attempts to Food Security by Kenya Government." In: Global Food Security Conference. Mc Gill University; 2008. Pp 22-34

1.2 BACKGROUND TO THE STUDY

About one in every nine individuals globally, agonizes from protracted hunger, this is despite progress by the SSA in combating food insecurity. Hundreds of millions do not have sufficient food frequently necessary in an active and healthy life. At African level, CAADP, among others prioritizes increased funding to agriculture sector; workable land supervision and reliable water control systems; improved rural substructures to enhance market access; and increased food stocks through improved smallholder productivity and being more proactive in responding to food crises remains single largest movement by African governments .⁵

A list constraint has blocked the improvement of farming in the area, yet solace can be picked up from the sureness that if a portion of these can be settled or eased, it will be conceivable to discharge in any event part of the impressive development capability of SSA horticulture. To begin with, limitation on farming improvement – and unchanged food security – is political distress and outfitted clashes. They have kept ranchers from creating, uprooted populaces, obliterated foundation and littered the wide open with arrive mines.⁶

Poor administration, restricted enthusiasm with respect to the great in the destiny of the heft of the populace and powerless institutional limit have additionally added to poor arrangements that have demonstrated unequipped for tending to the difficulties of horticulture and country improvement. Mind deplete, rushed usage of deficiently worked-out changes and urban predisposition likewise are common in the majority of SSA. In nations which are rich in mineral-, macroeconomic situations became troublesome to agribusiness, diluting the competition spirit.⁷

⁵ Tom Dienya, State Department of Agriculture Ministry of Agriculture, Livestock and Fisheries November, 2015, p2

⁶ FAO reports” Food Security in Sub-Saharan Africa” published in 2006.p 2.

⁷ Ibid p. 4.

Developing the Agriculture may originate from extension of developed land, expanded efficiency or broadening into higher esteem included produce. Improvement of developed land in many SSA nations has been compelled by the physical accessibility, uncertain land proprietorship, constrained access to mechanical control and diminished accessibility of work in view of relocation, rivalry from cultivation events and transferable diseases, for example, HIV/AIDS. Efficiency has stayed low in light of under usage of water assets, constrained compost use, restricted utilization of enhanced soil-ripeness management practices and frail help administrations (research, expansion and finance).⁸ Recurrent dry spells, torment and related expanded dangers have debilitated the venture that is key for raising profitability. Failing and wasteful markets (to a great extent because of a slight private segment in many nations), deficient interest in infrastructure, costly shipping, feeble data frameworks and bad supervisory structure hindering appropriate compensation of producers and discouraged them from putting and represent considerable authority in new and high esteem items. Costs stay minimal and are very unstable – and there are no systems that can encourage, limit or offer the hazard borne by producers.

In Kenya, farming is the backbone of the economy which lies at the core of sustenance security and straightforwardly contributes 24 % GDP, yearly estimated at more than 340 billion shillings while 27 % in a roundabout way estimated at Kshs 385 billion. The rural division additionally represents 65 percent of Kenya's aggregate fares and gives in excess of 60 percent of casual work in the rural regions. This clearly shows that agriculture in Kenyan is the economic drive as well as the means of livelihood for the mainstream of the population⁹. Despite realizing the significance of the agricultural sector, food production in Kenya has over the years been primarily subsistence, traditional and poorly mechanized. Furthermore, support for the relevant institutions and the available infrastructure have been insufficient¹⁰. This has resulted in the challenge of food shortage; which in turn resulted into

⁸ Ibid p 9.

⁹ Government of Kenya, 'Agricultural Sector Development Strategy 2009-2020' 2009 P.iv

¹⁰ Ibid ,2009-2020' 2009 p.iv

food security in Kenya. Since independence, the country has been hit by the challenge of food security which required the intervention of government to address the problem. For instance in 2007/8 and 2016/17 respectively, Kenya was hit by erratic rains which resulted in less harvest which in turn contributed to less food availability hence people were food insecure.¹¹

Food insecurity and hunger have been among the most persistent challenges to ever exist in Kenya. Over the years, Kenya has faced a series of food crises. Maize is Kenya's staple food above wheat and rice. Achieving food security and food sovereignty at individual, household, and national levels has been a very big struggle for farmers as well as the government of Kenya. Research shows that 51 percent of Kenya's populace lack access to sufficient food due to poor weather conditions as well as poverty among the communities¹².

The adverse effects of food security have so far brought in issues of malnutrition, low productivity and the spread of diseases¹³. If not handled well, the issue of food insecurity may lead to social unrest. David Kilcullen further argues that the lack of provision of social amenities can result in people forming organized groups which might end up as insurgencies¹⁴. These insurgencies might want to overthrow the government for lack of provision of basic needs just as it happened in the revolution of the Arab spring.

Up to 2 billion people in the world face food security challenges because of fluctuating degrees of poverty. According to the United Nation the required 2700 calories that was to be produced has been achieved, yet it is not enough because not all is used to feed human beings. Some of the calories produced go to bolster creatures, to deliver bio-fuels and a third of the calories are

¹¹ U. Sadauskaite, 'The issue of food insecurity in Kenya, Master Thesis, Unpublished, 2014, p17

¹² Ibid , 2014, p17

¹³ U. Sadauskaite, 'The issue of food insecurity in Kenya, Master Thesis, Unpublished, 2014, p17

¹⁴ D. J. Kilcullen, 'Counterinsurgency', Oxford University Press, Oxford, 2010, p116

squandered along the natural way of living. The small landholders that are feeding the majority of the world population uses 70% of farming assets to produce 30% of the world's sustenance making the little landholders to create 70% to utilize 30% of the assets.¹⁵

Food security is not only adverse in Kenya but in Africa too, various countries in Africa have experienced devastating effects of food insecurities. A good example is Ethiopia in Eastern Africa and South Africa in the extreme Southern Africa and Cameroon in West Africa, Egypt among other countries in Africa face food security challenges. Ethiopia has a population of 76.9 million people and 10 million people out of its population are prone to drought while 7 million are classified as food insecure. The high population growth rate in the country increases food insecurity further.¹⁶

Egypt has a 2% growth rate annually of its population which is on a higher side and is classified as the number one importer of wheat in the world. Despite the fact that it produces half of its demand for wheat and in spite of the average food production the country is exposed to escalating food prices due to its wheat imports. Moreover, the desert terrain of the Sahara limits crop production. A report by the World Bank indicated that the baladi bread subsidy costs the Egyptian government almost 3.5 million dollars per annum.¹⁷

Approaches tending to food security in Africa, and Kenya specifically, is incorporating training, past and current horticultural strategies and their effects, sexual orientation lopsidedness and to

¹⁵ U. Sadauskaite, 'The issue of food insecurity in Kenya, Master Thesis, Unpublished, 2014, p31

¹⁶ D. J. Kilcullen, 'Counterinsurgency', Oxford University Press, Oxford, 2010, p109

¹⁷ R.A. Emongor, 'Food price crisis and food insecurity In Kenya'. Nairobi, Kenya Agricultural Research Institute n.d.,2006., p23

guarantee managerial of rural practices to encourage Kenya's potential capacity to sufficiently sustain its kin's.

1.3 STATEMENT OF THE RESEARCH PROBLEM

Being the 4th largest economy in SSA and the prominent economy in East Africa as well as the RBC, the sector of agriculture is the backbone of its economy where 24 % of the gross domestic product is being funded directly and whereas with the manufacturing sector indirectly contribute 27 % of the GDP through linkages, distribution and other sectors on similar lineage. Nearly 45 % of the country's revenue is comes from agriculture and the sector contributes 50 % of export earnings. Due to the facts stated above, the agriculture sector has been receiving much attention since it is regarded as a significant instrument for stimulating Kenya's economic growth.

Surprisingly however, the achievement of food security has proven to be daunting task and the inability to eradicate extreme poverty and hunger as powerful (economically) as Kenya is surprises most scholars and analysts alike. A study conducted by Emongor identifies the significance of food security in the advancement of the Kenya's economy. The study also revealed that presently more than 10 million Kenyan agonize from prolonged unsustainable food security and malnutrition, where at any given time emergency relief food is needed for at least five million people. Therefore food security continues to be an important national policy issue not only in Kenya but Africa in large. Regardless of many challenges, availing food for the citizens is one of the government priorities, all regimes have had to cope with those challenges; short local supply, post-harvest wastages, escalated prices on food importations and low standards of living in majority of its citizens . In the recent past the nation has faced recurrent food security challenges occasioning from increased food prices and input prices, protracted and severe famines, uncontrolled inflation

rates among others. Where groups like the poor , internally displaced people ,the pastoralists and other vulnerable groups which forms a large section of the population have had to fight for adequate access to food a situation which if not intervened may result into severe starvation and death.

For the past two decades food insecurity has become persistent in Kenya, a country with abundant agricultural endowments. It is very startling to note that despite the awareness, expertise, and the means to end food insecurity, Kenya remains to be among those suffering the most food insecure in the continent. This sounds contradicting. Most of the food in the household is lost or wasted along the food supply chain. The present food insecurity problems faced in Kenya are attributed to poor household food-resource handling procedures during agronomic practices, harvesting, processing, storage, consumption and exchange procedures practiced by rural smallholder farming households.

Despite the fact that Kenya is gifted with all the resources for agricultural production, the region has for several years been suffering in food insecurity. Furthermore, Kenya is vastly exposed to unpredictability of the climate and climate change itself, since farming activities directly rely on climatic conditions. This has over the years contributed to adverse effects on food security in the country.

It should therefore be noted that a population that is food insecure and poorly equipped concerning agricultural production is desperate to survive and this is often at the expense of environmental sustainability since they engage in unsustainable agricultural practices. This is why it was important to undertake this study so as to discover the reasons for the food security challenge to Kenya and what reasons underline its failure to endure food insecurity.

1.4 OBJECTIVES OF THE STUDY

The study is guided by following specific objectives;

- i. To examine the reasons for policy failure in the realization of food security in Kenya.
- ii. Assess the role of political will to the implementation of policies to do with food security specifically in Kenya.
- iii. Determine the various frameworks that can be adopted for the success means of achieving food security in Kenya.

1.5 RESEARCH QUESTIONS

- i. Why are the food security policies failing to achieve their goal in Kenya specifically?
- ii. To what extent is the political will necessary to the implementation of the food security policies in Kenya?
- iii. What various frameworks can be adopted successfully in achieving food insecurity in Kenya?

1.6 LITERATURE REVIEW

The section seeks to understand and establish the state of current knowledge and/or arguments that were generated with time concerning the challenge of food security in the continent with a special focus on Kenya. Specifically, it aims at focusing on the objectives of the subject matter of the research project. To this end therefore, knowledge to be generated includes views, concepts, theories, understanding, evidence and the main authors. It further involves the researcher finding out what has already been written on the topic as well as evaluating the shortcomings, informational and academic gaps in secondary data sources.

1.6.1 FOOD SECURITY: A CONCEPTUAL ANALYSIS

According to FAO, in the World Food Summit of 1996 food security exists when there is access to sufficient, harmless and nutritive food to meet their nutritional needs and sustenance dispositions characterized by continuous possession by all individuals, having both the physical and monetary access for a functioning and sound life. It has likewise been characterized as the presence of the fundamental conditions for people to be having both the physical and monetary access, in socially adequate courses, to food that is protected, nourishing and with regards to their social inclinations, to encounter their dietetic requirements and living a beneficial and sound lives.¹⁸

Food sovereignty is the privilege of people, nations, and public associations to characterize their agrarian and food policy without the removal of agricultural supplies into alien states. It composes, organizes production of food and intake as indicated by the necessities of neighborhood networks, offering need to generation for nearby utilization.¹⁹

Grains, roots and tubers assume a focal part in sustenance source in SSA however their generation has for the most part felled behind the rate of populace development. Those nations that have possessed the capacity to build their grain creation and fare rural items have by and large made strides in food security. Fulfilling nourishment interest, SSA nations had to depend progressively on imported food; 25 % of oat utilization is at present imported. This extent is significantly greater in underprivileged nations whose balance of trade is negative accompanied with higher obligations, where those imports are never feasible. Relief food, which had expanded immensely in the last four decades, has now settled and sums all things considered to 3 percent of cereal consumption. However, in a few nations, food aid has turned into a standard wellspring

¹⁸ GOK. Policy Responses to Food Crisis in Kenya. Prepared by Kenya Agricultural Research Institute (n.d),2012

¹⁹ WFP. Kenya Food Security Outlook, February to September 2016.

of supply and its extent in the cereals devoured can be at least 20 percent, making these nations subject to foreign handouts.²⁰

Food security requires guaranteeing that food grains are physically and financially open to family units, and monetary availability relies on the acquiring power of the general population, which is principally influenced by two factors in particular, the cost of food grains and the wage of the general population.²¹

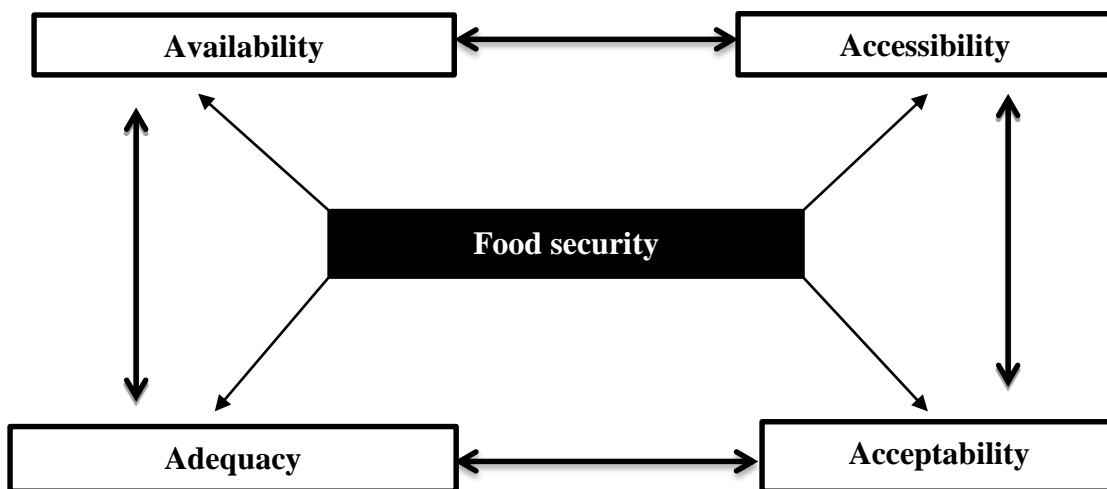
By this definition four key measurements of food security are underscored; food availability, access, acceptability including the adequacy of these conditions. Food availability entails a physical quantity of food supplies. Food access is the income required for the purchasing power of food items (economic measure of the income). Food acceptability focuses on the nutritional measure of calories, protein and micronutrient intake and absorption that is the utilization. Food adequacy or stability emphasizes is on measuring various prices of food, variation of supplies due to adverse weather, infestation by pests pests and pathogens, or instability of a nation which may be politically or economically influenced, through a period of time. From this explanation therefore, it should be noted that food security is the consequence of food related developments throughout the food chain-from the points of production to those of consumption among households and individuals, namely, the overall food system.²²

²⁰ FAO reports published (2006).P 2

²¹ Muigua, (2014)

²² Hope, 2016

Figure 1.1: Determinants of food security



The concept of food security is multidisciplinary which includes demographic, political, social (discriminatory food access), economic, cultural (eating habits), and technical aspects, and therefore requires interplay among many other factors if it is to be fully achieved in the society. Thus, for better understanding of this concept, a multi-dimensional approach was devised to take into interpretation numerous perceptions of the phenomenon, be it political, economic, environmental, or societal.²³

Economy and Food Security: in Kenya poverty is one of the main roots of food insecurity which requires sustainable development mechanisms for its elimination and an extra unbiased dissemination of wealth, looking at the agricultural sector for example, It is assessed that more than 80% who are under poverty level live in rural communities and are primarily subsistence farmers.²⁴

²³ Barilla, 'Center for Food and Nutrition' (2006), pg 28

²⁴ The University of Miami Inter-American Law Review Vol. 43, No. 1, Lat Crit South-North Exchange. The Global Politics of Food: Sustainability and Subordination (Fall 2011), pp. 77-87

1.6.2 FOOD SECURITY IN KENYA

Food security is not only adverse in Kenya but in Africa too, various countries in Africa have experienced devastating effects of food insecurities. A good example is Ethiopia in Eastern Africa and South Africa in the extreme Southern Africa and Cameroon in West Africa, Egypt among other countries in Africa face food security challenges. Ethiopia has a population of 76.9 million people and 10 million people out of its population are prone to drought while 7 million are classified as food insecure. The high population growth rate in the country increases food insecurity further.²⁵

In Kenyan farming is the foundation of the economy which lies at the core of sustenance security and straightforwardly contributes 24 % GDP, yearly estimated at more than 340 billion shillings while 27 % in a roundabout way estimated at Kshs 385 billion. The rural division additionally represents 65 percent of Kenya's aggregate fares and gives in excess of 60 percent of casual work in the rural regions. This clearly shows that farming in Kenyan is the economic drive as well as the means of livelihood for the mainstream of the population²⁶. Despite realizing the significance of the agricultural sector, food production in Kenya has over the years been primarily subsistence, traditional and poorly mechanized. Furthermore, support for the relevant institutions and the available infrastructure have been insufficient²⁷. This has resulted in the challenge of food shortage; which in turn resulted into food security in Kenya. Since independence, challenges of food security have hit the country which required the intervention of government to address the problem. For instance in 2007/8 and 2016/17 respectively, Kenya was hit by erratic rains which resulted in less harvest which in turn contributed to less food availability hence people were food insecure.²⁸

²⁵ D. J. Kilcullen, 'Counterinsurgency', Oxford University Press, Oxford, 2010, p109

²⁶ Government of Kenya, 'Agricultural Sector Development Strategy 2009-2020' 2009 P.iv

²⁷ Ibid ,2009-2020' 2009 p.iv

²⁸ U. Sadauskaite, 'The issue of food insecurity in Kenya, Master Thesis, Unpublished, 2014, p17

Food insecurity and hunger has been one of the most persistent challenges to ever exist in Kenya. Over the years, Kenya has faced a series of food crises. Maize is Kenya's staple food above wheat and rice. Achieving food security and food sovereignty at individual, household, and national levels has been a very big struggle for farmers as well as the government of Kenya. Research shows that 51 percent of Kenya's populace lack access to sufficient food due to poor weather conditions as well as poverty among the communities²⁹.

The adverse effects of food security have so far brought in issues of malnutrition, low productivity and the spread of diseases³⁰. If not handled well, the issue of food insecurity may lead to social unrest. David Kilcullen further argues that the lack of provision of social amenities can result in people forming organized groups which might end up as insurgencies³¹. These insurgencies might want to overthrow the government for lack of provision of a basic need just as it happened in the revolution of the Arab spring.

Most households in Kenya are food insecure and malnourished due to widespread of malnutrition and poor dieting practice where majority are net food buyers. The rise of food costs may lead to more families falling below the poverty line hence more poor people in the country³².

Approaches tending to food security in Africa, and Kenya specifically, is incorporating training, past and current horticultural strategies and their effects, sexual orientation lopsidedness and to guarantee managerial of rural practices to encourage Kenya's potential capacity to sufficiently sustain its kin's.

²⁹ Ibid , 2014, p17

³⁰ U. Sadauskaite, 'The issue of food insecurity in Kenya, Master Thesis, Unpublished, 2014, p17

³¹ D. J. Kilcullen, 'Counterinsurgency', Oxford University Press, Oxford, 2010, p116

³² R.A. Emongor, '*Food price crisis and food insecurity In Kenya*'. Nairobi, Kenya Agricultural Research Institute n.d.,p14

1.6.3 POLITICS OF FOOD SECURITY

A Substantial slowing economy and poor social development with disastrous consequences for the population, especially the poor third world nations,³³ originates from complex relationship and management of the numerous positions of individual countries and the lack of agreement on policy choices and decisions making, which in the long run force multinational institutions and organisations to suspend or delay the pursuit and execution of initiatives and resolutions to deal with food security. These type of Situations create

Resolution through political management of the determining factors which breed poverty and malnutrition pass that should be marked by systemic ideas that are corresponding and unified in their intent and actions to be supported and accomplished. Lack of coordination and consistency between political initiatives has negative impact on reducing malnutrition and poverty or producing proficient outcomes. The recent unpredictability and fluctuation in prices of agricultural products might have influenced many observers to criticize the failure of the market; which are considered to be the meeting point between private (and public) but its features still make it a appropriate tool in which to discover a sustainable point of equilibrium between arrays of different requirements.³⁴ The crucial role played by the market is the supply and demand for goods and services.

Society and food security: The three main interrelated areas of food security in the societal traits are, the individual health, their distribution and socio-political concerns such as conflict and migration. Malnutrition causes immunodeficiency in the human system, easily expose them to diseases and increase the harshness and extent of the diseases themselves. Social-economic

³³ Ibid, p102

³⁴ Ibid, p 109

conditions such as unfitness to work, social-economic sidelining of the sick person and lack of nutritive awareness also have a bearing on the relationship between illnesses and undernourishment³⁵

Population increase and rural urban migration in Kenya has signified a main challenge to the sector of agro-food, producing exponential growth in the demand for food products which must be attained. There is currently a resilient urbanization sensation in Kenya, with continuous emptying of urban areas and a population blast in urban areas expected in the future too.³⁶

Environment and Food Security: The available natural resources are the fundamental tools to the manufacture of food, development of rural areas, workable growth and population welfare. There is growing pressure exercised on natural resources both in Kenya and other countries as well. Regarding their proficient use, conservation and containment of negative effects linked to the course of economic improvement. Depletion of these natural resources is caused by competition of individuals to abuse and snatch natural resources that are rare and unevenly disseminated in a given area often result into conflicts and civil wars resulting to food insecurity. These trends are also intensified by the climate changes, dangerous weather conditions and water.³⁷

Complex impacts on agriculture and the ability to provide food is highly due to the effects of climate change. They have a direct effect development and capital distribution, and as a result affect the demand for agricultural products. The affects have brought about global food insecurity, dependence on imported food products and increasing the already hazardous conditions to the population. As an example, now Kenya is failing to produce satisfactory and is currently importing

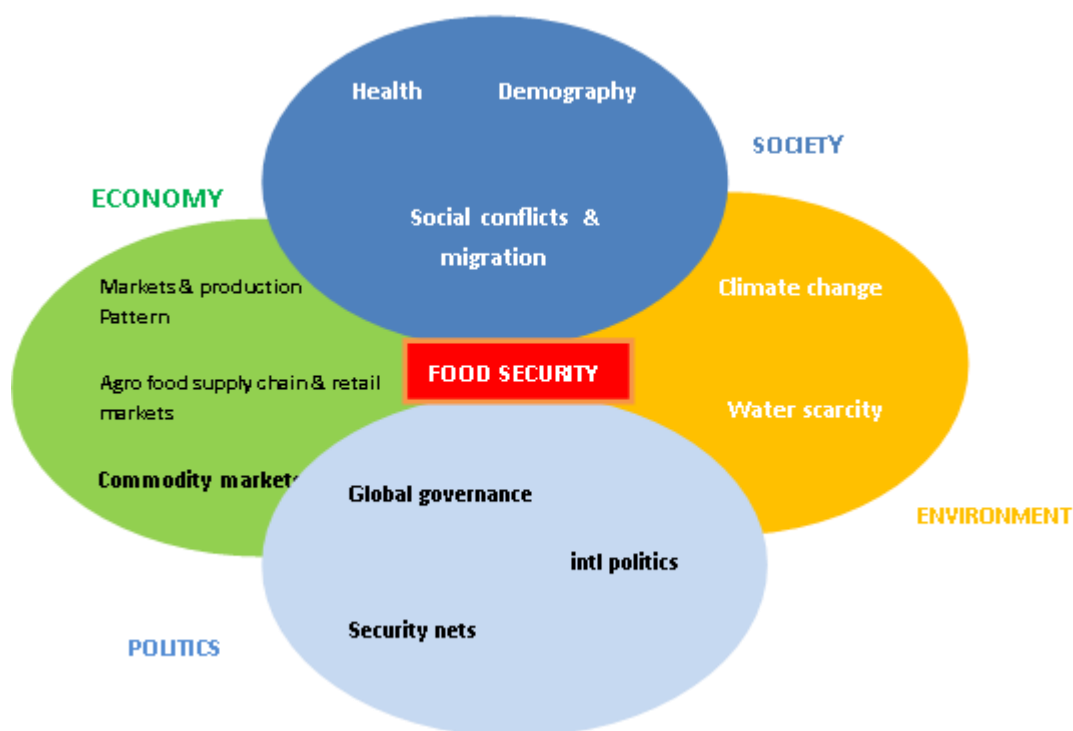
³⁵ Stephen J. Scanlan, *Food Availability and Access in Lesser-Industrialized Societies*, *Sociological Forum* Vol. 16, No. 2 (Jun., 2001), Pp. 231-262:210

³⁶ Ibid , Pp. 231-262:210: 217

³⁷ Richard S.J. Tol ,*Climate Change* ,Copenhagen Consensus Center (2011),Pp 5 – 22 :8

food supplies from neighbouring countries. The combined effects of climate change, land dilapidation, cropland losses, water scarcity and pest infestations may cause anticipated harvests to be 5–30% short of demand by 2050.³⁸

Figure 1.2: The multifaceted aspects of food security



Source (Altieri 2004)

1.6.3.1 THE ROLE OF FOOD SECURITY POLICY FRAMEWORKS

Policy makers have come to realize that the agricultural and food crisis in Africa is mostly connected to both policy failure and structural rigidities³⁹. Although there are various players that are involved in the fight against food insecurity in Kenya and these are government ministries,

³⁸ Emongor, 'Food price crisis and food insecurity In Kenya': Nairobi, Kenya Agricultural Research Institute. (2015).,p14

³⁹ O. Obasanjo and H. Dórville, 'The challenges of agricultural production and food security in Africa'. Taylor and Francis, New York, 2012, p. iii

departments and agencies, United Nations organizations and non-governmental organizations policy implementation remains a challenge in the fight against food insecurity. The various regimes have been instituting policies aimed at achieving food security, more recently the Vision 2030. Some policies being advanced are international such as the Millennium Development Goals (MDG) and more recently Strategic Development Goals (SDGs).⁴⁰

Over the years, agricultural research in Kenya introduced some modernizations and interventions applicable to the country's farming systems that are projected to instantaneously upsurge the yields and resilience to climate change. However, most of the innovations that have been adopted take a top-down approach as dictated by international aid agencies and national governments ignoring the potential of local innovations and resources⁴¹.

The escalated food price crisis in Kenya Given has generated many social problems; there have been numerous policy interventions, adopted by Kenya together with the development partner organizations in the fight against food insecurity. This has been actualized by instituting two pieces of legislation namely the NFNSP (2011) as well as the FSB (2014). The former recognizes food as a problem of national security since it is also embedded in the constitution of the republic of Kenya⁴². It talks about food trade, food safety, information about food security legal framework. The latter on the other hand the Food Security Bill provides a legislative framework with the main aim of addressing food insecurity in Kenya where it provides for the creation of a food security experts, in charge for the formulation of policies, strategies and programs regarding food security

⁴⁰ *ibid*, p. viii

⁴¹ C. Bertini, *Meeting the challenges of food security in Africa*. International Livestock Research Institute, Addis Ababa, 2001, p97

⁴² Government of Kenya, *National Food and Nutrition Security Policy* Agricultural Sector Coordination Unit, Nairobi, 2011, p21

for implementation for local governments⁴³. However the Food Security Bill is yet to be passed despite being table to the relevant committee in 2015.

Also, there have been both short to medium-term undertaken by the government, farmers and consumers geared towards dealing with the challenge of insecurity. The country introduced the Coping short-term strategies and long-term policy measures .The short-term coping strategies pursue the protection of the poor without altering the local food economy. The long-term policy measures would tolerate farmers to enjoy the production incentives while also steadying the economy to avoid susceptibility to forthcoming crises and price inconsistency⁴⁴.

1.7 HYPOTHESIS OF THE STUDY

H1: formulation of the proper policy frameworks in the country is key to the achievement of food security in Kenya.

H2: Political will to implement food security policies in the country determines the food security status of the nation.

H3: The challenge of food security in Kenya is related to the global climate changes

1.8 JUSTIFICATION OF THE STUDY

I have situated the justification of this study at both academics and policy formulation levels. At the policy level, the perpetual occurrence of severe hunger among the poor people as well as lack of adequate food for everyone in Kenya has undone the existence of most policies to do with food security in Kenya. On the academic level, the study will be beneficial to those who will seek to

⁴³ Konrad Adenauer Stiftung, 'Briefing paper: *The Food Security Bill*, Nairobi .2014, , Pp1-4

⁴⁴ U. Sadauskaite, '*Food and Nutrition Security*'2014, p11

understand Kenya's fight against the challenge of food security. It will also inform scholars and student alike their role in achieving food security in Kenya.

The study will therefore be significant to the citizens because it will provide insights to the general public on how they can improve food security in Kenya. To the civil society as well, the study will be important because it will expose not only their strengths and weaknesses, but more importantly it will provide the international perspective that will inform the civil society organizations on best practices as to what role the civil society play in advancing the achievement of food security.

The donor community will find this study to be important since it will provide them with information on the capacity gaps as regards the challenges of food security and how to deal with it and as such it will assist them to channel capacity building support in order to address those gaps. Lastly the study will be important to the government, through the Ministry of Agriculture where it will provide feedback on its current practices and provide lessons that will help to improve the way the Ministry engages with stakeholders to improve on dealing with challenges of achieving food security in Kenya.

1.9 THEORETICAL FRAMEWORK

In international studies, the issue of food security can largely be located in the area of international political economy where most theorists talked about food security. Food security can also be classified as a security issue because securitizing food translates framing to be a security issue. This is because there are existential threats of some kind, requiring exceptional responses. This therefore shows that the notion of food security is wide, on a range of concerns and disciplines are drawn, as well its location within a relatively narrow institution of thinking about security and

political economy IR.⁴⁵ However, on the international arena, food security is different from national security and is frequently directly contradictory to it, since national interests have tended to be seen as being served by hoarding rather than sharing produce⁴⁶. Largely, this study will focus on the assumptions of Marxism in relation to food security.

In modern capitalism, Food has become a fundamental contradiction. Today, the discussions of the sociology and economics of food and food regimes appear to be universal with some of the greatest contributions brought by Marxian theorists.⁴⁷ Amid plentiful food production, hunger will always remain a lasting problem where as food security is currently a persuasive concern globally.

Marx in his keen observation of the political economy of capitalism and the metabolism of nature and society that lack of an analysis of food would symbolize an astonishing and important gap in his work. Marx established a refined and comprehensive analysis of the industrial food system in Britain before the twentieth century, during the so called “the Second Agricultural Revolution.” he was the first to comprehend of these problems of changing food “regimes”⁴⁸ he also did he study the production, dissemination, and intake of food;: he analyzed the expansion of agriculture in diverse methods of production; macroclimate and food tilling; the soil chemistry; industrial agriculture; livestock situations; modern technologies in food production and preparation; toxic additives in food harvests and food security. Furthermore, all these issues are progressively connected to Marx’s larger critique of capitalism.

⁴⁵ C. Death, *‘Food Security’*, Oxford Bibliographies, 2016. P 6

⁴⁶ P. Hough, *International Security Studies: Theory and practice*. Rout ledge, New York, 2015, p252

⁴⁷ Harriet Friedmann and Phillip McMichael, “*Agriculture and the State System*,” *Sociologia Ruralis* 29, no. 2 (1989): 93–117.

⁴⁸ “The Origins of High Farming,” in *Holderness and Michael Turner, eds., Land, Labour and Agriculture, 1700–1920 London: Hambledon, (1991), Pp149–64.*

He is less concerned with by the upper classes when it comes to consumption but rather the nutritive consumption of the abundant majority of the populace; the working class, both rural and urban. In existing food-regime analysis as a proper issue of survey developed from the Marxian and world-system traditions, mostly the work of Harriet Friedman and Philip McMichael, in the late 1980s.⁴⁹ In the start, it focused on the concept of universal food “regimes,” created on explicit and uneven disseminations of power and resources, in conflict to conventional analyses that portrayed the history of food systems as a process of linear, constant expansion and growth.⁵⁰ The concept of the food regime thus stood for the historical specificity of given provisions of invention, exchange, dissemination, and consumption.

Marx brought the interrogation of the soil at the basis of food production, and thus of soil chemistry, geology, agronomy, and other natural sciences. He argued a given means of production which could be judged partly by the “means of nourishment” derived from the soil.⁵¹ Capitalism, while stimulating improved productivity in agriculture, also instigated a metabolic gap by depriving the soil of its nutrients,” Marx noted in *The Poverty of Philosophy* in 1847,

“Since vast plots in the eastern counties of England were cleared; they had been left uncultivated from the lack of proper comprehension of the relation between the humus and the composition of the sub-soil.” Thus, farmers were often “enthusiastic” simply to return the fertility of soils to something close to its original level.

⁴⁹ *A Food Regime Genealogy*,” *Journal of Peasant Studies* 36, no. 1 (2009): 139–69; Robert Albritton, *Let Them Eat Junk* London: Pluto Press, (2009). p140.

⁵⁰ *Ibid.* pp 120- 134

⁵¹ *Ibid.* p 122

Karl Marx In his Criticism of Political Economy", said

"No social order is ever destroyed before all the productive forces for which it is sufficient have been developed, and new superior relations of production never replace older ones before the material conditions for their existence have matured within the framework of the old society. Mankind thus inevitably sets itself only such tasks as it is able to solve, since closer examination will always show that the problem itself arises only when the material conditions for its solution are already present or at least in the course of formation."

This theory has been selected to this analysis on the following basis:

Capitalists only produce for profit and not for need; the world economy can yield abundant food for all of us. More than we actually want is already being produced, taking the case government of Malawi for instance where they decided to overlook the guidance of the IMF and World Bank and offered their small scale farmers free fertilizers and seed a starter package . On that year the country had a nationwide excess of corn. The World Bank and other "aid donors" compelled them to stop the programme claiming that it has "distorted the market". Ever since the free packs were no longer present to the subsistence farmers thus resulting in a collapsed agriculture. From 2000 to 2002 there was starvation in the country and more than 2000 perished of famine. This shows that it had the prospective to feed countless of its citizens. It's just recently when western governments were throwing hundreds of trillions of dollars at the banking system, then disappearing down a bottomless pit. All these disclose that the resources are always there, whereas this vast sum of wealth could be used to alleviate "third world" debt and offer subsidies to the poor farmers. On this foundation therefore the continent at large could be producing excess food.

Secondly, the real relationship between the weak and the industrialized countries is hidden under the debt mechanism. The parable is that the west donates "aid" to these poor countries but the truth is that with this "aid" not knowing that they are being they locked in a deadly trap by creating a situation whereby more funds will be taken out than it will is pumped in, thus elevating the advanced countries, that is enriching the capitalists and bankers.

Thirdly, "Third World" debt mechanism of the immature countries has progressed over the years and how it has increased to the advantage of the imperialist countries and their ruling leaders.

Prior to the 70s a "third world" debt phenomenon had grown. But in the mid-70s - since the first concurrent world recession after the World War two- most of the developing nations were forced to rush to the World and Bank IMF to renegotiate their arrears and implement policies such as the "IMF stabilisation programmes."

1.10 METHODOLOGY OF THE RESEARCH

1.10.1 RESEARCH APPROACH AND DESIGN FOR THIS STUDY

As already pointed out, this study's main objective was to explore and analyze the challenge of food security in Africa with a special focus on Kenya between 2006 and 2016. Before coming up with the approach for this study it was necessary to establish as to whether the identified instrument or method would bring out what it is supposed to bring out, or measure what it is made-up to measure. In the case of this study therefore, the method to be employed was expected to assist in providing more information on what challenges Kenya has been facing in achieving food security. Considering the nature of this study, it is envisaged that the researcher should use both the qualitative and quantitative research approach to gain detailed information. However the

combination of the research methods have been adopted in form of mixed method research approach.

1.10.2 MIXED METHOD RESEARCH

A mixed method research design has been adopted in this study. It is referred to as a study design where a student pools both the elements of qualitative and quantitative research methods (for instance, use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the extensive dedications of depth and breadth of understanding and substantiation⁵². The mixture of research methods in mixed method involves processes and activities such as the collection, analysis, and integration of quantitative and qualitative data in a particular study⁵³.

Greene *et al* argues that the purpose of mixed method research is fivefold: first is triangulation which involves the use qualitative and quantitative methods in an attempt to meeting of the data gathered by all approaches in a study to boost the integrity of the study findings. Secondly, is complementarily which permits the student to acquire a packed understanding of the research problem and/or to clear up a given research result. Third is improvement. In this, mixed methods usually offer provision in the development of a research study by creating a synergistic effect, whereby the results from one method assist to improve or inform the other method. Fourth, mixed method research enables initiation, where the study's outcomes may raise discrepancies, questions or divergences that will necessitate explanation, thus introducing a new study. Thus, the desired effect of the new study would be to add new understandings to prevailing theories on the

⁵² S. J. Taylor, R. Bogdan & M. L. DE Vault, *Introduction to Qualitative Research Methods: A Guidebook and resource*, 4th Edition', John Wiley & Sons, New Jersey. 2016, p136

⁵³ S. N. Hesse-Biber, *Mixed methods research: merging theory with practice*, The Guilford Press, New York, 2010, p3

phenomenon under scrutiny. Fifth, is expansion which occurs are qualitative and quantitative components are included in a study to increase its scope and breath⁵⁴.

Thus, adopting this research strategy for this study was beneficial since it helped the researcher to focus on both the qualitative and quantitative cases concerning food security in Kenya. For this reason, it managed to provide in-depth information for the challenge of food security in Kenya.

1.10.3 DATA COLLECTION

Concurrently gathered and put on the same questionnaire, Earl Babbie identifies a number of methods that are used to collect data in qualitative and quantitative research. These include naturalistic inquiry, case studies, structured observations of meetings and focus group discussions⁵⁵. This study employed a case study approach as much focus is on Kenya for a twenty years period (1990-2016).

1.10.4 SECONDARY DATA

One of the common approaches of secondary data collection is Literature review. It was used as a starting point of this process of this inquiry. It helped the researcher to establish the general practice regarding the question of food security, thereby situating this inquiry on Kenya in the broader context of the existing body of literature⁵⁶. Secondary data for this work was revised to achieve a better understanding of the subject matter.

⁵⁴ J. Greene, V Caracelli & W. Graham, 'Toward a conceptual framework for mixed method evaluation design'. Educational Evaluation and Policy Analysis. Vol. 11, 1989, pp 255-274

⁵⁵ E. Babbie, 'The practice of social research, 12th edition.' Wadsworth Cengage Learning, New York, p303

⁵⁶ C. Badenhorst, 'Writing the Literature Review', 2017. Cecile Badenhorst: A research and writing go-to site for postgraduate students and academics. Downloaded from:

Apart from engaging with academic literature on the subject, this research study also benefitted from government documents such as laws and policies and information sourced from the internet and the print media. Review of secondary data assisted not only in situating the study in the existing body of literature, but also assisted in establishing practices and experiences from other countries.

1.10.5 PRIMARY DATA

This study applied two methods of primary data collection namely; focus group deliberations and vital informer interviews. Key informant denotes to anybody who can offer detailed information and views founded on his or her awareness of a particular issue⁵⁷. Semi-structured interviews were conducted to get information from stakeholders in the field of agriculture and food security. Basically, key informants were targeted because of their special knowledge of food security in Kenya. The interviews in this case were about opinions as well as facts of the matter. There were two sets of questions namely closed ended and open ended question. For the key informants, the guiding questions were open-ended which permitted respondents to reflect freely on the issues, and to provide the researcher the flexibility to ask follow-up questions. For the focus group discussion, the first part of the questionnaire had closed ended questions which mainly wanted to make an understanding on the demographic aspects of the respondents.

Tape recording was also used as a main method of capturing data while conducting interviews. As per the ethics of research, the interviewees were asked for their consent to use the tape recorder during the interviews.

⁵⁷ M. Skovdal and F. Cornish, 'Qualitative Research for Development: A guide for practitioners', Practical Action Publishing Ltd, Warwickshire, 2015, 41.

Since this is an exploratory study there was focus group discussions intended to capture respondents' perceptions of the challenge of food security in Kenya. Similar to individual interview, the discussion in focus groups took the form of a conversation, although the participants talk to each other and not only to the researcher. Like an interview, a focus group had a topic guide, although this was often a shorter and simpler one, because, ideally, the focus group moderator spoke even less than they do in the individual interview context⁵⁸. Focus groups comprising of about five to 10 participants were interviewed on their experiences on the challenge of food security in Kenya. The participants were carefully selected and focus was on those with a common interest in agriculture and food security. At the same time, they are likely to have somewhat different perspectives. For this reason farmers from both rural and urban areas were interviewed.

1.10.6 SAMPLING

This study applied purposive or judgmental sampling. The sample in this method is designed to cover important segments of the population, or important experiences defined by the research. It is not a haphazard or faultlessly representative sample; rather, it is determinedly selected to target significant sets or skills.⁵⁹ Thus, focus was on those respondents with adequate knowledge on food security in Kenya.

1.10.7 DATA ANALYSIS

Content analysis was applied to lessen the collected data to a convenient size, develop sum-ups and look for patterns. The researcher applied content analysis of written or recorded materials drawn from individual words by respondents, and quizzing of observers, as well as the study of

⁵⁸ E. Babbie, *'The basics of social research, 4th edition.'* Wadsworth Cengage Learning, New York, 2008 p204.'

⁵⁹ Ibid.p 213

trace evidence from the physical environment⁶⁰. The study also applied statistical analysis to analyze quantitative data where graphs and charts were used.

1.11 SCOPE AND STUDY CONSTRAINT

Much focus in this study was placed on Kenya as a whole and not only the areas that were largely hit by the food crisis. This is because when seeking assistance internationally, Kenya is regarded as a whole and not the specific areas affected by food scarcity. The specific timeframe in which the study focused on is from 1990 to 2017. A lot has happened during this period and this is when most policy makers and scholars have focused on the issue of the food scarcity and food security. It was envisaged that collecting data on this case study would not be an uphill task since most communities in Kenya were affected by shortage of food. This made it easy to hear the views from people from both countryside and built-up areas of the country.

The key drawback in this study was the fact that collecting data from respondents in the Ministry of Agriculture and other government departments mean lack of response from some questions and failure to provide proper documentation. To respond to this limitation, the researcher planned to book for appointment well in advance before collecting data as well sending the questionnaire to the respondent a week before the interview date so that they can first understand what the study is all about.

⁶⁰ S. Hesse-Biber and R. B. Johnson, *The Oxford Handbook of Multi method and Mixed Methods Research Inquiry*, Oxford University Press, Oxford, 2015, p256-268

1.12 CHAPTER OUTLINE

Chapter one is an introductory chapter. Here, the contextual to the challenge of food security in Kenya will be assessed, the problem statement will be discussed, the research questions and objectives of the study will be laid out, the literature review, hypotheses, study validation, theoretical background, and study the methodology will all be discussed.

Chapter Two provides the background of the current situation of the challenge of food security in Kenya during the period 1990 to 2017.

Chapter Three looks at the extent to which the policies of food security are observed in trying to curb food insecurity in Kenya. There will be a discussion of the available policies, strategies and laws and their influence on food insecurity in Kenya. The chapter will pursue to enlighten the extent to which political will can be relevant to the attainment of food security in Kenya. It will present a well detailed discussion as what the political leadership has done to curb food insecurity in Kenya in the past decade. Further, the chapter presents the various means that can be adopted to make Kenya a food secured country.

Chapter Four analyses the data collected in the previous chapter while taking into consideration the hypotheses and theoretical framework discussed in the study.

Chapter Five will provide key findings, and recommendations of the study. This will be based on the findings of the study.

CHAPTER TWO

FOOD SECURITY IN KENYA

2.1 INTRODUCTION

“Chronic food insecurity in African states stems from decades of poor governance. Regimes bent on amassing wealth absorbed the region’s resources into patrimonial power structures. Self-serving elites, quick to profit from graft and patronage, have stood between leaders and the people, monopolized state revenues and emptied the countryside, but they have provided neither employment nor industry”⁶¹.

For the past decade, food security has been one of the biggest challenges that the Kenyan government has been facing. Regimes have come and go but food security, an element of human security has been a persistent issue in the growth and development of Kenya as a government. It is estimated that more than 5 million in Kenya are constantly food insecure⁶² and the number rises to 10 million people in times of natural (such as climate change and drought) or manmade disasters⁶³. This chapter is an assessment on the background of the challenge of food security in Kenya. The main purpose of discussing the background to the challenge of food security is to explore the reasons for its existence and strategies that have been taken to mitigate food insecurity in Sub Saharan Africa generally and in Kenya specifically.

⁶¹ United Nations Development Programme, Africa Human Development Report 2012: *‘Towards a Food Secure Future’* United Nations Publications, New York, 2012, p. vi

⁶² World Vision Kenya, *“Building a better world for children through food and agriculture”*, Video documentary, 2016

⁶³ R. Emongor, n.d.

2.2 KENYA'S PROFILE

2.2.1 KENYA'S GEOGRAPHY AND TOPOGRAPHY

Being the focus of East Africa as reflected by several presently, Kenya has a total extent of roughly 580,000 km². The southeastern border of the country is demarcated by the Indian Ocean, whereas minor slice of Lake Victoria defines the southwestern border. The country's climate changes from tropical beside the coast to arid in the inland. Many of its towns experience modest temperatures despite being located on the equator since they were made at high altitudes. The country's topography comprises of central highlands and low plains, divided by a rich plateau and the Great Rift Valley, Nevertheless, as tiny as 3% of the total country's land area is arable (able to support a crop).⁶⁴

2.2.2 TOPOGRAPHY

Topographic profile of Kenya is very characteristic, where the central is much higher than the rest of the country, and the mountains are approximately in a line running south to north. Mount Kenya is the highest mountain; the uppermost mountain on the continent with an elevation of 17,058 feet above sea level which is constantly snow-capped. Approximately, is situated in the epicenter of the republic. The Great Rift Valley runs from north to south through Kenya, splitting the Lake Victoria basin to the west from the hills in the east, which slip into the coastal beaches and dry green lowlands. Kenya's landscape forms compound ecological regions, comprising the highland zone. This is a area of undulating highlands described by plentiful rainfall, calm weather, highly nutritious volcanic soils, and thick human settlement.⁶⁵

⁶⁴ United Nations Development Programme, Africa Human Development Report 2012: '*Towards a Food Secure Future*' United Nations Publications, New York, 2012, p. xx

⁶⁵ Ibid. p xi

The country bestrides the Equator, and is situated on the eastern coast of Africa. Approximately one and half times the extent of Japan, it covers a surface area of around 586,600 km². To the east it is bordered by Somalia, to the north is Sudan and Ethiopia, to the west is Uganda and Tanzania to the south.

Other lonely hills and mountains in the northern Kenya comprise of Mount Kulal, Mount Nyiru and Mount Marsabit, and the Taita and to the southern Kenya are the Chyulu Hills. The most latest volcanic formations having the finest soils on earth due to their wide diversity of common components of the rock and are readily chemically detached into elemental constituents.⁶⁶

The country is split by the Great Rift Valley which expanses 6,000 km from Mozambique in south-eastern Africa to Jordan, north of the Red Sea. The Valley encompasses of seven lakes, several with freshwater suitable for farming while few are soda-based.⁶⁷ the native forest covers merely 2% of the nation. Considerable amount of this forest found in the high-altitude central highlands, and on secluded mountains whose altitude is appropriate for the indigenous forest.⁶⁸

The forest in Kaka mega in the Western Kenya is a secluded rainforest, formerly was part of the Guineo-Congolan rainforest which strides across the continent from east to west. It is a distinctive forest habitation in the country and popular in botanic spheres globally. Secluded remnants of woodland and coastal forests I still in existence, comprising mangrove forests in most coastal bays, but predominantly on the Lamu archipelago.

⁶⁶ Kariuki Muigua. *Food Security and Environmental Sustainability in Kenya*. Nairobi; University of Nairobi, (2014) .p 254

⁶⁷ Ibid, p 69

⁶⁸Ibid, p113

2.3 FOOD SECURITY AND FOOD SYSTEMS

2.3.1 Concepts and definitions

For many decades, Food security has been a parity and development distress. As Amartya Sen explained over three eras now,

*‘Starvation is the characteristic of people not having enough food to eat. It is not the characteristic of there being enough food to eat’.*⁶⁹

The commonly used description that is still the most devised at the 1996 World Food Summit. It states that:

*‘food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life’.*⁷⁰

The distinguished variance concerning this definition and the other ones is the change from a thin focus on food production to an expansive conceptualisation that incorporates four fundamental measurements: food obtainability, accessibility, consumption and steadiness. In this regards there it’s very evident that physical access and affordability, wellbeing and dietetic balance, as well as socially and culturally indomitable inclinations are much of emphasis than the food supply itself.⁷¹

⁶⁹ FAO reports published in 2006.pg2

⁷⁰ Ibid, p 10

⁷¹ Ibid, p 15

2.3.2 DIMENSIONS OF FOOD SECURITY

2.3.2.1 PHYSICAL AVAILABILITY OF FOOD

The “supply side” of food security is what explains the Food availability and is concluded by the gauge of food production level, stock and net trade.⁷²

2.3.2.2 ECONOMIC AND PHYSICAL ACCESS TO FOOD

Sufficient supply of food whether locally or internationally, does not in itself warrant domestic level food security. Fears about inadequate food accessibility have caused a better policy emphasis on revenues, spending, supply and demand and charges in realizing food security goals.⁷³

2.3.2.3 FOOD UTILIZATION

This is universally comprehended as the manner by which the body creates the most of numerous nutrients in the food. Adequate nutrient and vitality intake by persons results from good upkeep and nourishing exercise, preparation of food, and deictic diversification and at home food dissemination. Combined with decent biological consumption of food utilized, this defines the nutritional position of a person.⁷⁴

2.3.2.4 STABILITY OF THE OTHER THREE DIMENSIONS OVER TIME

A person is reflected to be food insecure In spite of his satisfactory food intake, if he has inadequate access to food on an episodic basis, endangering a decline of his nutritional status. Hostile weather situations, party-political uncertainty, or other economic factors such as food prices fluctuation,

⁷⁴ ⁷⁴ J. Mangala, ‘New Security Threats and Crises in Africa Regional and International Perspectives,2004 p15

⁷⁴ J. Kinyua, ‘Towards Achieving Food Security in Kenya’ Presentation at Parallel Discussion on Priorities for Action: Perspectives for East and Central Africa, 2004 p21

⁷⁴ Ibid,p 5

might impact on one's food security status. For food security objectives to be realized, in conclusion, for all the four dimensions must be achieved instantaneously.⁷⁵

2.4 GLOBAL DIMENSIONS OF FOOD INSECURITY

Advancement in decreasing worldwide lasting malnourishment has decelerated from the time of the major spikes in food charges between 2007 and 2008, whereas the latest estimations on the total number of constantly malnourished individuals between 2010–2012 was put at 800 million, where only 20 million living in developing nations. Between 90–92 and 2010–2012 the number dropped in East and Southeast Asia and Latin America, it rose alarmingly in South Asia (from 32% to 35 %) and SSA (from 17 to 27 %).⁷⁶

The figures above, reflect on chronic malnutrition only without capturing the bearings of blows like the hiking of food prices, forcing the individuals and families to adjust the amount and quality of their food intake leading to prevalent undernourishment; taking all these into account, it's clear that a vast majority of people globally do not eat adequately to lead a healthy life.⁷⁷ A paradox that is exposed here is that, While there is an increasing fear that food production will need to be intensified significantly in the next four decades to cater for the rising population globally,⁷⁸ there is nevertheless a unanimity that 'there is enough food in the world today for everyone to have the nourishment necessary for a vigorous and useful life'.

There are numerous explanations for this irony. The first is the great reliance on imported food in both the rural and urban populations. The Previous global, increase of food prices provoked short-

⁷⁵ FAO, 2008

⁷⁶ FAO et al., 2012

⁷⁷ Johnston and Bargawi, 2010

⁷⁸ Godfray et al., 2010

term increased uncertainty. In 2008, food prices were at the top that is 3 times more than it was observed in early 2000s. While this was a short-term this event, the prices have continued increasing compared to five years earlier, and were hiked again in 2010.⁷⁹

The factors behind the latest and current universal food prices are multifaceted which include decelerating farming output, risky weather occasions disturbing productivity, the transformation of food crops into biofuel creation, and growing assumption in commodity potentials. Food goes to waste globally in a staggering quantity, approximately 35%.⁸⁰ In low- and developing countries, most of the loss comes as a result of ineffective reaping, conveyance and stowage.

In divergence, in developed nations unused is produced mostly by families and vendors: overall, between 30 and 50 % of the purchased is thrown away. Furthermore, population evolution raises the whole demand for food, whereas growth in revenue impacts on feeding patterns.⁸¹ These tendencies are probable to increase: climate change and amplified biofuel creation as an alleviation struggle are perceived as main threats for long-term food security, mostly when combined with populace growth.

2.5 FOOD INSECURITY IN KENYA

2.5.1 ECONOMIC CAUSES OF FOOD INSECURITY IN KENYA

In Kenya, Poverty is evaluated midst the topmost roots of food insecurity. It contributes to a chain of factors that are associated to food insecurity such as insufficient agricultural yield due to low access to productive resources such as investment capital, farm land and manpower, limited access

⁷⁹ von Braun and Tadesse, 2012

⁸⁰ Godfray et al., 2010

⁸¹ Stage et al., 2009; von Braun and Tadesse, 2012

to markets, overburdening land, insufficient access to suitable machineries and knowhow by farmers, effects of worldwide trade and sluggish transformation process⁸². In the urban areas high food prices reaching up to 100-130% increase above normal contributed to failure of the people to purchase food because of scarcity.

Poverty and hunger also have increased the contact and influence of HIV/AIDS; it has shattered societies and contributed melodramatically to inflated health care expenditures, lack of employment, decreasing quality base, and shattered social wellbeing net systems in Kenya. “HIV/AIDS continues to devastate many villages and leave poverty among households that either sell everything to take care of their sick ones or households that are now headed by children orphaned by the disease or grandparents that are completely helpless raising five to ten grandchildren alone on small, unproductive farms.”⁸³

2.5.2 ENVIRONMENTAL CAUSES OF FOOD INSECURITY IN KENYA

The ASAL population is the most susceptible to food insecurity due to the frequent natural tragedies of famine, livestock sicknesses, infestations of the crops and animals pest, and restricted access to suitable skills, info, credit, and commercial services.⁸⁴

2.5.2.1 RECURRENT AND PROLONGED DROUGHTS

A Natural-Ecological Factors Environmental and ecological deterioration has been taking place all over Africa for over at least the last two decades. The Sahara has been estimated to spread south and east at the rate of about 80 miles per year, drastically reducing land productivity across the

⁸² J. Mangala, *New Security Threats and Crises in Africa Regional and International Perspectives*, 2004 p1

⁸³ J. Kinyua, *Towards Achieving Food Security in Kenya* Presentation at Parallel Discussion on Priorities for Action: Perspectives for East and Central Africa, 2004 p19

⁸⁴ *Ibid*, p 5

Sahel region of West Africa. This desertification has contributed to drought by accelerating soil erosion and has resulted in the loss of cropland and pasturage. However, drought is not the only cause of the ecological crisis, which has been made worse by the clearing of forests for firewood and intensive overgrazing by livestock. This deforestation, which has increased over the last decade, has resulted in major loss of the soil; recent satellite pictures reveal that about 400 million tons of dusts per year are blown from West Africa across the Atlantic. In the northern highlands of Ethiopia, which are plagued by the current famine, the serious soil erosion over the last two decades has greatly contributed to the crisis. The long dry season is not the only serious problem, for during the short wet season rain falls heavily and washes away precious topsoil. In the absence of trees or any mechanism to stop this loss, thousands of tons of soil are carried into the Nile from the Ethiopian highlands.⁸⁵

2.5.2.2 FLASH FLOODS

Floods bring large scale devastation leading to enormous socioeconomic and conservational injuries to human lives, buildings, belongings and the farmsteads, thus imposing life-threatening misery on the affected societies. They impede viable growth, food, security and evolution. Losses due to floods are amassed and have an unbalanced effect on poor countries. They overwhelm the standard of living and overall growth visions.

Distinguishing the significance of calamity management and alleviation, so as to escape the huge fatalities after flood disasters resulting to food insecurity, the World Bank's aid has moved from traditional relief system and restoration towards supportive culture of avoidance for workable growth. The approach progressively depends on information sharing, forming societies of training,

⁸⁵ Ikani Daniel Idoko *An Impact Assessment of Flooding on Food Security among Rural Farmers in Dagiri Community, of Gwagwalada Area Council, Abuja, Nigeria*. Agricultural Development, (2016). 1(1): 6-13.

and floating cognizance in disaster risk management aiming at government executives, civil society, and local populations disposed to floods.

It's very clear that, that the increase in flood calamities and subsequently food insecurity it is in relation to the increase in the susceptibility of people globally. This increase in flood tragedy was provoked by the human stubborn pathway of development. Significantly also was the acknowledgment that this upsurge in susceptibility was not even. Disparities through the regions were huge, countries, capitals, municipalities, societies, socioeconomic groups, classes, and even gender, with insufficiency and illiteracy being the top cause of susceptibility particularly in SSA. The floods normally arise subsequent to a severe, lengthy drought which destroyed livestock and livings across the Horn of Africa and left more than 4 million Kenyans facing severe food insecurity.⁸⁶

2.5.2.3 LAND DEGRADATION

Land degradation globally, is caused by two driving forces driving forces; inadequate land and increased population growth leading to food insecurity. The subsequent outcome is small scale farming, little production per individual and growing landlessness. Land scarcity and decrease in productivity, combined, lead to non-viable land management systems, hence degradation. Poor farmers are steered to clear forest, cultivate sharp drops without preservation, overgrazing rangelands and making uneven application of fertilizers.⁸⁷ Land degradation therefore leads to lessen yield. Many nations are now suffering from swift populace growth. Hence, increasing areas

⁸⁶ ⁸⁶ J. Kinyua, '*Towards Achieving Food Security in Kenya*' Presentation at Parallel Discussion on Priorities for Action: Perspectives for East and Central Africa, 2004 p16

⁸⁷ Journal of Environment and Earth Science Vol.5, No.8, 2015, p 46

of available land will be cultivated without considering the soil nature. This will automatically destroy the natural vegetation that has been replaced by cultivated grounds. Consequently, with continuous agriculture, fertility will be lost. As a result, there will be a loss in yield resulting in food insecurity globally.⁸⁸

2.5.2.4 SOIL DEGRADATION

From the GLASOD study, thinly degraded soil is defined as having slightly reduced farming suitability, though suitable in local farming systems. Here the Original biotic functions are basically quiet unbroken, and its full productivity can be restored through reforms in farm management. Soil that offers greatly reduced productivity is known as moderately degraded soil, which remains suitable for use in local farming systems. According to GLASOD data, dry lands make all degraded soils, approximately 58%, where the humid regions make up to nearly 42%, 900 million hectares were degraded In the tropics only by water erosion, 500 million by wind erosion, 240 million by chemical degradation and 50 million by physical degradation. They established that about 70% of dry lands in the continent, Asia, and South America were degraded, in that 30 % belonged irrigated dry lands, 47 % to rain fed dry lands and 73% of rangelands.⁸⁹

2.5.2.5 INCREASING WATER SCARCITY

Water is a precious yet non-renewable resource. In Africa, Water shortage is one of the most crucial food security issue facing the continent especially the NENA, availability of fresh water in the region anticipated to fall by 50 % by 2050, said FAO, predicted that Per capita fresh water

⁸⁸ Ibid, p32

⁸⁹ Journal of Environment and Earth Science www.iiste.org ISSN 2224-3216 (Paper) ISSN 2225-0948 (Online) Vol.5, No.8, 2015, p 24

accessibility in NENA has dropped by two-thirds over the past 40 years, intensifying fears over the dilapidation of water quality and the influence of climate change.⁹⁰ Demographic tendencies are increasing urgency to the matter: Prolonged starvation in the area is assessed at 11 %, while the populace remains to rise at 2 %, nearly double the global rate.

More than 85 % of existing rain is consumed by Farming and other agricultural activities, but due to growing urban populations demand for agricultural yields is likely to grow and increased exportation, irrigation and groundwater resources are also expected to be on the rise. The FAO - Assistant Director-General and Regional Representative for the Near East and North Africa- Said Abdessalam Ould Ahmed,⁹¹ said;

"Agriculture need be dominant to our reactions to the encounter of water shortage in the NENA Region. It is by far the leading user of water in the area; nevertheless it is also essential to our existence and long-term spirit, accounting for some \$95 billion in extra value to regional economies,"

2.5.3 POLITICAL CAUSES OF FOOD INSECURITY IN KENYA

For the past ten years, worsening security situations have triggered certain relief organizations to extract and hence impeding their duty of assisting those in need of food aid. Attacks by the al-Shabaab terrorists in Northern Kenya have driven several agricultural workforces in the government to vacate the area, undesirably touching the disposal of agricultural delays and impacting negatively to the achievement of food security within the region. Intercommunal violence also limits the realization of food security in many parts including coastal, eastern, and

⁹⁰ Ibid, p12

⁹¹ Journal of Environment and Earth Science www.iiste.org ISSN 2224-3216 (Paper) ISSN 2225-0948 (Online) Vol.5, No.8, 2015,p 27

northern areas of Kenya. These intercommunal conflicts which include resource based disputes, mainly over cattle, land, and water in the aforementioned areas in Kenya have occasioned to hundreds of injuries and fatalities, and expatriated hundreds of thousands individuals. Among the highly affected regions are Turkana, Marsabit , Samburu ,Baringo, and Isiolo county. ⁹²

2.5.3.1 LACK OF POLITICAL WILL

East African nations are missing the political willpower putting food security top at their agenda notwithstanding the capacity of the region to be self-reliant in feeding their nations and even come to be net exporters. Almost 20 million people in the region are food insecure and rely on relief food, and roughly 40 million are, nonetheless about 80 % of the region's populace depends on farming for a living.⁹³

Non-tariff obstructions and interruptions at border points extend the food flow from countries with excess to those with insufficiency. Where cross-border trade is also discouraged and increase transaction costs, thereby increasing food insecurity.⁹⁴

EA region is extremely reliant on staple foods such as maize. Trade policies concerning taxes, subsidies, and institutional governing frameworks, political and social systems affect the regions food security. Food security also depends on natural dynamics such as climate conditions. Ironically, Tanzania and Uganda are net exporters of staple food whereas Kenya, Rwanda and

⁹² USAID, Kenya-Food Insecurity Fact Sheet Number 1 2015, 2015, p3

⁹³ Fred Aluoch "Lack of political will among EA countries fuels food insecurity" East African standard, special correspondent 28 June 2014,p4-9

⁹⁴ Ibid, p 11

Burundi are net importers, unfortunately cross-border trade is largely informal because of policies and regulatory frameworks such as taxes and transport bans.⁹⁵

2.5.3.2 CORRUPTION

Corruption, however it is defined, expands the already deep breach between the rich and the poor globally. It impedes social and economic growth, obstructing the attempts by international and local development organizations, such as IFPRI, to combat starvation and deprivation consistently and thoroughly. It alters market maneuvers and robs average citizens of the assistances that should ensue to them, such as freedom from hunger in an age of plenty. At its utmost persistent, corruptions even compromise the country's autonomy. It alternates "competitive" bribery for open competition. It impedes expansion of privatized sectors and dismays investments. The damaging nature of corruption exhibits itself in that; decision making is not for public advantage, when projects of extraordinary budget and prestigious nature, complicated and which is preferred over cost-efficient, community -founded creativities consuming suitable expertise. The results are foreseeable. We want constant reminder on the foul of corruption and systematic confrontation, and to warrant the feasibility of programs to globally alleviate hunger, it is only by taking corruption out in the public sphere for us to contain it, and prepare the platform for a generous yield for citizens in need of sustenance.⁹⁶

2.5.3.3 WEAK INSTITUTIONS

It's well-known that SSA is exceptionally poor, poorly governed nations, they all have a mutual fiasco or deficiency, may be due to lack of the essential resources to put in place appropriately

⁹⁵ Ibid, p 17

⁹⁶ Abdul Aziz, The Impact of Corruption on Food Security "*Governance and Food Security*": (2001) ,p 16

operative institutes. This leaves them extremely susceptible to corruption of one form or another. They can't be anticipated to improve and implement rigorous long-term agricultural policies, containing land tenure and water managing system, beside a context of organizational unpredictability. For nations to donate successfully to the planning and implementing process by themselves there has to be, as a lowest precondition, of good governance practices. In many governments globally suggests, corruption booms in cultures where government institutions are weak. Weak governments as well as business institutions may be associated to badly constructed house pillars. They melt easily under the weightiness. To have resilient structures therefore, we are obliged to pay more consideration to the groundwork on which the pillars are to support. In conclusion, good institutions are nurseries for good governance. There isn't creativity whether on food security or poverty mitigation that will work in the lack of principled public conduct due to poor governance principles. At the end of the day governments should set the ethical and decent tone and principles of public conduct. Their efficacy, however, is only as robust as the institutions that reinforce their planning and implementation capacity which must be founded on serving the needs of the many, not the interests of the few.⁹⁷

2.5.3.4 POOR BUDGETARY ALLOCATION

National budgets are shown be conspicuous in modern economic management. Budgetary allocations aid in planning and projecting disbursement and influx of the nation's revenue.⁹⁸ The budgets contribute largely in the forms, links within sectors, configuration, and the sectorial distribution according to the country's priority. Agricultural sector Allocation brings the preferred outcome in the remaining sectors of the economy via the relevant linkages. Prior to the last decade,

⁹⁷ *ibid*, p3

⁹⁸ Akande et al., (2009).P 15

universally there was an average growth rate of 3% in the agricultural sector such that a bigger fraction of this growth resulted from Asian economies. For example, in Asia, Agricultural sector activities led to an increase at an average rate of 2.8% from the same period Kenya gained independence. This productivity in Asia economies was largely attributed to utilization of highly producing variety of seeds and the determined inputs usage such as fertilizers. On the other hand, in SSA, averagely, over the same period, the rate of agricultural evolution was 3%; however, per capita growth of the agricultural populace was recorded at 0.9%.⁹⁹This indicative and ineffective consequence of inadequate allocation of budgetary resources to agricultural sector leads the sector to lag behind that of its Asian peers. Measures which are dynamic in performance, planning and budgeting require adequate information on per capita agricultural income which can also lead to their implementation.

Increase in budgetary allocations especially to the agricultural sector remains a top strategy of achieving high agricultural productivity as well as poverty minimization. The designed partnership has the potential of promoting enhanced research and technology similar to provision of adequate resources necessary in increasing production. Therefore, necessary frameworks should be put in place thus promoting viability, compliance, monitoring and adequate implementation by different sectors of the economy for budget to succeed. On the other hand, allocations from the government to this sector need to be properly monitored in promoting growth as well as development of the sector. Further enhancement of sustenance in increase in the allocation of resources accounted for

⁹⁹ Dethier and Effenberger, (2011), P v

the agricultural sector as long as such increases are necessary to accelerate growth of the sector should be considered and thus prioritized.¹⁰⁰

2.5.3.5 POOR GOVERNANCE

It has been realized globally that, the problem of food insufficiency is highly determined by the role of governance in the overall scheme of things, unfortunately Political governance has tended to get negligible consideration on the issue. That part of good governance is a prerequisite both in the state administration as well as on the commercial aspects. Good governance, transparency and accountability, is the best remedy to counter the disease of corruption which has projected a global phase.¹⁰¹ Decent governance, fighting corruption, must be incorporated and accepted passionately since it embraces the key to food security on a sustained foundation. For that matter, it is the key to our future that ought to be firmly grounded in objectivity, fairness and human self-respect for everyone.

2.5.3.6 INSTITUTIONAL FRAME WORK

African Institutional frameworks in terms of political rights and civil freedoms can be considered somewhat to be adequate. They normally tend to fight food insecurity through operational policies and the reverse is true. However, in relations to population, an increase in population growth minus a correspondent increase in productivity, will automatically lead to food insecurity. The

¹⁰⁰ Omar Abdirahim Dubow, “*Government Budgetary Allocation and its effect on agricultural growth*”, (2015), P ii

¹⁰¹ Current Nutrition Food Science. “*Food security, institutional framework and technology*” 2018 Pp: 154–163.

reinforcement and reforming the anti-corruption agencies specifically the EFCC and ICPC are extremely commended in this effort to form tough institutions.¹⁰²

2.6 CONCLUSION

Research Priorities and Lack of Appropriate Agricultural Technology is the main contributing factors of food insecurity in many African countries. Most African soils are different from those of temperate zone countries which supply agricultural experts ‘and fund research. Weather patterns, indigenous flora and fauna and varying social patterns also make agriculture in Africa a vastly different enterprise from its counterparts in Europe and North America. Likewise, resources made possible by economic and physical infrastructure and taken for granted in the advanced countries are inadequate or totally lacking in Africa to duplicate the agricultural methods and strategies of these developed countries. Hybrid grains often depend on extensive use of chemical fertilizers and pesticides, neither of which are readily available or affordable for African farmers. Farming methods, machines and marketing systems developed in the West, and the United States in particular, require capital investments to the point that even in the latter there is a record number of bankruptcies and fore closure of family farms. In Africa, farming is and will remain labour intensive rather than capital intensive, needing the research and technology which can best use the resources that are either locally available or easily obtainable. In addition, Trans African Journal of History agricultural research has not only tended to rely on inappropriate methods but has also given much more attention to cash cropping rather than subsistence farming. The later get more

¹⁰² Ibid, Pp 154–163

research towards improving yields and towards developing varieties resistant to drought, salt, pests and disease.¹⁰³

Over the years, both the government of Kenya as well as non-governmental organizations has been trying to find ways of dealing with the challenge of food security. Some attempts have been successful and some have not. Though, the efforts have still been advanced and by diversifying them it means all the parties involved are willing to fight the challenge of food security with all necessary actions. It is against this background therefore that this section discusses some of the means that have been applied in mitigating food insecurity in Kenya.

Among the extreme challenges to realizing food security in Kenya concerns the environment. As a result, the Kenyan stakeholders have been trying to find means of dealing with this challenge. In trying to deal with the environmental degradation and climate change as challenges, initiatives have been made to find means of adaptation to climate change. This involves rain water harvesting which should be used during dry periods for agricultural production¹⁰⁴. This is so because Kenya's agriculture is largely rain fed. Thus by trying to do this policy makers have realized that a sound and adequately supplied irrigation infrastructure is prerequisite to ensuring bumper yields which will in turn result to the achievement of food security in the country. But the challenges to effective irrigation are many¹⁰⁵.

¹⁰³ Timberlake 1985: 74

¹⁰⁴ World Vision Kenya, 2015

¹⁰⁵ Ibid , 2015

CHAPTER THREE

POLICIES AND STRATEGIES IN SUPPORT OF FOOD SECURITY IN KENYA (2003 - 2016)

3.1 INTRODUCTION

The Vision 2030 was embraced in 2008 as her a fresh framework for Kenya’s growth. The vision aims at changing the country into “*a newly industrialized, middle income nation offering a high worth of life to every Kenyan in hygienic and protected environment*”¹⁰⁶. In this framework, agriculture is recognized as a crucial sector in attaining the envisioned yearly economic growth rate. To be accomplished through transforming the small scale farming from subsistence to an advanced, commercially focused and contemporary agricultural sector.

The revision of SRAs followed which led to expansion of the ASDSs that forecasts a food secure and thriving nation by 2020 that intends to realize a standard move from sustenance to agribusiness. The policies will discourse related matters of enduring; poverty- based food insecurity and malnourishment including the permanency of serious food insecurity and malnourishment related to repeated and recurrent crises and their precarious relationships¹⁰⁷.s the other policy interventions are:

3.2 THE LAND ACT 2012 AND LANDS POLICY 2012

The main purpose of this act was to review, merge and justify land laws; to offer a viable management and land administration including land based resources, and for linked drives. The policy demands for instant engagements to address the environmental challenges such as soil

¹⁰⁶Kerosi, G. Agriculture, Rural and Urban Development Sector in Kenya: *Analysis of Budget Estimates FY 2016/2017*. Nairobi. 2016

¹⁰⁷*Strategy for Revitalizing Agriculture* (SRA,2004-2014), p 32

degradation, erosion and contamination. The policy for instance specifies the principles of preservation and administration of land centred natural resources, the delicate and serious ecosystems as well as arid land and wetland. This has therefore been framed to dialogue the serious concerns of land management, land accessibility, design of land usage, compensation of historical prejudices, environmental degradation, struggles, unplanned multiplying of informal urban settlements, out-dated legal structure, institutional framework and information management.¹⁰⁸

3.3 AGRICULTURAL POLICY 2012

The policy plays a weighty part in the economy of this nation; however the administration of that segment has been determined by confused, contradictory and insufficient pieces of strategies and laws. Until 2012, more than 100 pieces of laws were used to control the sector by dispersing in different government ministries with incomplete or total sovereignty without a categorized synchronization at the mother ministry ;Ministry of Special Programs, Agriculture, Water & Irrigation, and Ministry of Regional Authority.¹⁰⁹

3.4 THE AGRICULTURAL SECTOR DEVELOPMENT STRATEGY (2010-2020)

This policy targets at guaranteeing food and nutritive security and changing agriculture into a contemporary and *profitably* feasible Sector. The main regions branded in the ASDS comprise the restructuring and rearrangement inquiry, postponement and governing organizations to raise their

¹⁰⁸ GOK. *Land Act, revised 2015* (2012). Cap 280

¹⁰⁹ Odhiambo, E.O. *How the New Agricultural Policy & Legislative Framework Would Impact on Value Chain Actors*. Presentation during the Food Security Workshop at Sirikwa Hotel, Nairobi, 14th August 2013

effectiveness; decreasing food insecurity by 35% and the number of people living below the absolute poverty line to less than 25%.

The important parts of strategy and policy worry, consequently, consist of: Rising agricultural yield and returns, specifically for small scale growers, agricultural exploration, skill propagation and implementation; refining rural substructure and trade-related abilities hence market accessibility; administration of water and Land by way of extending the zone beneath viable land management and water control systems.¹¹⁰

It also stressed on reduction of over-reliance on rain-fed farming in the face of limited high potential agricultural land irrigation. It also encourages diversification into non-traditional agricultural commodities and value addition to reduce vulnerability. Other crucial concern dealt by the policy is improving food security and a reducing the number suffering population from starvation and hence the realization of MDGs.

3.5 THE CLIMATE CHANGE ACT, 2016

This Act offer for a governing structure aimed at enhancing reaction to climate change; to offer for a device and methods to attain small amounts of carbon climate development, and for associated resolutions.¹¹¹

3.6 THE NATIONAL CLIMATE CHANGE ACTION PLAN, - 2013

The government launched NCCAP after several months of scrutiny and discussions; which centres on various options for a low-carbon climate resilient development corridor as we adjust to climate

¹¹⁰Alila, P O. & R. Atieno. *Agricultural Policy in Kenya: Issues and Processes*. A paper for the Future Agricultures Consortium workshop, Institute of Development Studies, Nairobi, UoN, 20-22 March 2006

¹¹¹ GOK. *The Climate Change Act, 2016*, p 13

effects and moderate rising emissions. Empowering features of funding are also addressed, policy and legislation, management of information, aptitude expansion, skill requirements and observing and reporting. The document is reinforced by technical reports established by groups of international professionals steered by Kenya based thematic working groups and under the oversight of a multi-sectorial multi-stakeholder taskforce.¹¹²

3.7 ANTI-CORRUPTION AND ECONOMIC CRIMES ACT -- ACECA -2003

3.7.1 THE PUBLIC OFFICER ETHICS ACT - POEA- 2003

The penalties of corruption are publicly known globally; its undesirable and damaging effects on the nation's progress and economy, and the necessity to eradicate it. In pursuing to deal with corruption, in 2003, the Parliament voted for the ACECA and the POEA. After the promulgated of the new constitution, this made far reaching adjustments in the anti-corruption system.

The Parliament, Pursuant to this Article endorsed the EACC, which revised the ACECA by withdrawing the provisions establishing KACC including its Advisory Board, while holding all other sections related to corruption felonies and economic crimes, their inquiry and trials.¹¹³

3.8 NATIONAL FOOD AND NUTRITION SECURITY POLICY - NFNSP 2012

To elevate the country's intervention on food security, it formulated the Sessional Paper No.1 on NFNSP 2012. The framework embraced comprises the earlier discussed four dimensions of food security: availability, accessibility, stability and meeting nutritional requirements.¹¹⁴

¹¹² GOK. *National Climate Change Action Plan*, 2013, p 9

¹¹³ GOK. *Anti-Corruption and Economic Crimes Act*, 2003, p vii

¹¹⁴ *Ibid* p iii

3.9 THE AGRICULTURAL FINANCE STRATEGY

The revive of the Agricultural Finance Corporation strategy which was key in providing farmers with loans to help in purchasing farm inputs among other things. Some of the envisaged activities are to ensure defaulter pay loan recovery arrears and the governments' consideration in cash input to the institution to assist it to fully recover financially.

3.10 NATIONAL AGRICULTURAL EXTENSION POLICY 2012

The objective of this policy is to; enable the growth of multiplicity in amenity provision, develop the efficacy and usefulness of extension service provision for both the communal and private sectors and to ensure monitoring arrangement to guide service providers on modalities of setting operational quality models and standards.

3.11 NATIONAL AGRICULTURAL RESEARCH SYSTEM POLICY 2012.

In order to tackle this problem, the government has reviewed the old research institutions by coming up with this policy. This policy had the rationale of aligning research to vision 2030 and define a new framework and policy direction towards achieving a food secure and prosperous rating. This sector is supposed to be the main driver for bringing the 10 % economic development yearly according to the economic pillars of the vision 2030. It's clearly important for the government in combination with agriculture and livestock research institutions to come up with Kenya Agricultural and Livestock Research Organization [KALRO], a technology innovation resource center shall be guided by government to help link technology with markets and industrial development.

3.12 SEED POLICY

The Seed policy makes provision for the government to collaborate with other stakeholders like the Kenya Seed Company to ensure good quality seeds are produced through contracted farmers who would in-turn fetches good financial deals. The most targeted seeds are maize and beans. The government also came up with designated farms where it could carry out research on seeds.

3.13 THE WATER ACT 2016

This act provides for managing, conserving, usage and controlling of water resources and for the acquiring and regulating of constitutional rights to use water; to cater for the regulation and management of water supply and sewerage services; to cancel the Water Act (Cap. 372) and some of the provisions of the Local Government Act; and for related resolutions¹¹⁵

3.14 NATIONAL ENVIRONMENT POLICY, 2012

This Policy pinpoints the effects of in access of grazing in the ASALs. In the rain-fed areas, especially where zero grazing is practiced, the main issue in livestock production is waste management as well as disposal that can cause environmental pollution. In urban areas, disposal of effluents from abattoirs, butcheries, tanneries and other establishments that process livestock products are a major problem.¹¹⁶

¹¹⁵ GOK. *Law of Kenya*, Act 8 of 2002

¹¹⁶ Ibid,

3.15 DRAFT NATIONAL FOREST POLICIES, 2015

It provides a basis for better forest control, allocating resources, partnering and collaborating with the state and non-state actors, enabling the sector contribute in accomplishing the country's growth and poverty mitigation objectives within a workable atmosphere.¹¹⁷

3.16 UNDERSTANDING POLICY MAKING AND POLICY IMPLEMENTATION ON ISSUES OF FOOD SECURITY

This study has revealed that there is minimal participation of the citizens and CSOs when it comes to issues to do with food security. As revealed by the study respondents having different positions on the way they understand policy making and implementation with the government representatives responsible for food security, there is little involvement while others were unconvinced. Referring to the argument advanced by *La Via Campesina* who advocated the conception of food sovereignty, as he was advancing Marxist ideas, it can be concluded that the state needs to safeguard and control the country's agricultural productivity and to protect the local markets from the importers who buy the produce at a below par price. These can only be achieved through the making and implementation of protective policies in favour of the locals¹¹⁸. There is need to have pro-policies ,where evicted persons or IDPs, farmers, and small scale farmers need to acquire accessibility to land, water, and seeds as well as productive resources and sufficient public services such as agricultural extension.

¹¹⁷GOK. *Draft National Forest Policy*, 2015

¹¹⁸ W. D. Schanbacher, 2010, p53

3.17 POLICY RESPONSES TO THE CHALLENGE OF FOOD SECURITY IN KENYA

The country's food security policy has for a very long time now centered on refining local supply of basic foodstuffs, largely grain crops like, millet, sorghum and rice not forgetting corn¹¹⁹. There are numerous policies and strategies that have been identified on all traits of food productivity, supply, dissemination and use to warrant access and obtainability to adequate food for everyone so as to improve agricultural productivity which will in turn contribute in achieving food security in Kenya. The policies are divided in the government enacts both long term and short term policies together with other stakeholders to eliminate all challenges associated with food security.¹²⁰

One of the notable policies, as earlier mentioned is the Vision 2030 that has identified agriculture as one of the crucial sectors in the country's advancement¹²¹. The other guiding policies and strategies are; the Strategy for Revitalizing Agriculture, the Maputo Declaration, Strategic Development Goals, KNFP, FNSP, and the Agricultural Sector Development Strategy, among others.

In implementing these policies, the Kenyan government has been involved in price equilibrium policies. The state-run NCPB is concerned with domestic procurement of yielded maize and management of the inventory¹²². Thus the availability of staple food in Kenya is down on the NCPB which regulates the availability of maize and other important cereals in Kenya.

Despite the existence of agricultural laws, policies and strategies, the challenge of food security is still a significant challenge to the development of this country due to a number of factors; the

¹¹⁹ 'Food Security Issues in Kenya: Situation Analysis' pp6-8

¹²⁰ R. Emongor, n.d. p6

¹²¹ *ibid.* p13

¹²² FAO, The 2007–2008 food price episode: *Impact and policies in Eastern and Southern Africa*, Rome, 2009, pp28-29

government does not adhere to the spirit of the policies. For instance, the 2003 Maputo Declaration of the AU dictates all African states to raise venture in the agricultural sector to at least 10 % of the national budget by 2008. Despite being a signatory, Kenya has not lived up to this declaration and currently its investment is pegged at 5 percent of the national budget¹²³. This has in a way showed lack of commitment on the political side of it by the government.

According to a report by UNDP, most African countries changed their policies from being agricultural states to manufacturing countries.

Hence this has resulted into an increase in urbanization¹²⁴. This has in turn resulted into low agricultural production rate and thus turning the country into food insecure. Kenya has had a high rate of urbanization over the years.

Private traders Lack support policy limiting their commitment in trade and consequently, failure to dispense excess food to the deficit regions. The overall drop in agricultural productivity has steered to reduce food income and a drop in availability, making the country more susceptible to food insecurity. Being the staple food in Kenya, the maize sub sector is of vital significance to the reduction of food insecurity in the country.

Local maize production is reduced due to There have been that have stalled agriculture sector by the policy limitations. Additionally there has been absence of support to private sector development and efficiency improvement in maize trade¹²⁵.

¹²³ B. Owuor, 'Governance of the Food Sector in Kenya: *Present and Future Challenges*'. In *Food Security in africa*, Heinrich Boll Stiftung (2008) p23

¹²⁴ UNDP, 2012, pp50-51

¹²⁵ Unnamed Document '*Food Security Issues in Kenya: Situation Analysis(2012)*' pp6-8

The trade policy in Kenya's in a way increased the food insecurity. The policy was initially introduced with the aim of safeguarding the agricultural sector as well as the manufacturing sector against strong and unbalancing competition from foreign investments. The regime unlawfully tax agricultural exports therefore denying the country of important foreign exchange by which food imports could be accessed. Even after the trade regime was opened up, low-priced food imports inhibited the domestic food prices and therefore food productivity. Infrastructure investment in Kenya has been very poor which is vital in encouraging cross border trade in food supplies, hence alleviating food insecurity¹²⁶.

3.18 CONCLUSION

Realizing food security is the main dare to the Kenya's government. Variety of issues comprising climate, topography, technology and innovations, individual habits, finances, marks, trading, transport, stowage process, legal framework on land tenure system, global resolutions, wars, among many others contribute to food insecurity. To deal with food insecurity, measures like multi-dimensional approach and involvement of all interested parties both locally and abroad. The regime takes cognises of all the challenges and introduces measures both short term and long term to deal with the food insecurity.

Indeed, it is an undeniable truth that the unpredictable weather conditions owing to climate change and global warming have contributed highly to the challenges of food security in Kenya. Again, the concept of food security has been advanced as purely a liberalist and economic neoliberal system of globalization which have in turn contributed highly to the decay of food insecurity in Kenya. The country is taking a back step when it comes to the proposition, adoption and

¹²⁶ Nyangito, (1999) p5

implementation of food security systems. Due to the outcomes of this study, it has been discovered that there are less programs and systems being implemented despite their existence on paper.

Going back to as early as 1930 when the world faced the food security issue. Millions of people would become dependent and even die due to lack of food. Kenya has been having the problem of food security since the country passed the 30 million population mark around 1998.

Whereas the change of government from President Moi who handed over to President Kibaki and later to President Uhuru Kenyatta saw Kenyans incorporate new methods of food productions. Thanks to the internet that provided new information there was however no strong food security bill enacted to lead to food available to all.

The constitution passed 2010 guarantees every citizen the right to food in Article 43 that reads “(1) every person has the right—(c) to be free from hunger, and to have adequate food of acceptable quality.” President Uhuru Kenyatta can achieve this if he put more emphasis on the Constitution, Article 60 that reads;

“(1) Land in Kenya shall be held, used and managed in a manner that is equitable, efficient, productive and sustainable, and in accordance with the following principles— (c) sustainable and productive management of land resources.”

145 million acres of the Kenyans land-dwelling of and weather if anchored on a sustainable and productive management bill has the capability not only to sustain the current 44 million people but to also stabilize the entire east and Central Africa through production and supply of enough food. The right food bill is vital to food security.

Corruption as discussed before, very rampant in all African countries and Kenya in particular, is one of the stumbling blocks to growth and development. Deviation of country’s finances,

maladministration has resulted from poor governance and has twisted the drought and shortage of food into famine. The international aid and donor funds often does not identify the most susceptible people owing to an elevated level of corruption, thus abusing the benevolence from contributors.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

In chapter two (2) we looked at Kenya's profile in terms of its geographical disposition and the topography and it was revealed that farming is favourable in most parts of the country despite the persisting hunger and poverty in other corners of the nation owing to deficiency in finances, poor technology and lack of knowledge of alternative farming methods. We also discussed the causes /challenges that hamper food security; political, environmental, economic and social factors, those projected were the lack of know-how, technology and corruption.

In chapter 3 we looked at the policies available in backing of food security in this nation since 2003 to date ; the land act and land policy act 2012, agricultural policy 2012, national climate change action plan 2013 which were put in place and operational. On the other hand we discussed the policy making process on matters food security and there implementation and it was revealed that public participation and involvement is lacking , whereas the implementation is a challenge mainly due to lack of political will and lack of finances.

This chapter analyses and interprets the data presented in the preceding chapter. The analysis and interpretation of the study finding is informed by the theory, hypothesis and existing literature as reviewed and discussed in Chapter one, and builds on the preliminary analysis done in the previous chapters. The data analysis is guided by the key objectives of carrying out this study which is to evaluate the reasons for the existence of the challenge in promoting food security policies despite the existence of adequate local and international policies. The analysis informs the study to draw conclusions and propose recommendations that would strengthen the already existing measures of mitigating the challenge of food security in Kenya.

This chapter presents the findings related to the policies of food security that have affected the food condition in Kenya and Africa as a whole. The chapter further discusses respondents' perceptions and views on food security policies in Kenya. It is in this sense therefore that the findings were integrated from the three sets of respondent namely the policy and decision makers, facilitators and the benefactors.

4.2 PARTICIPATION IN POLICY DESIGN AND EXECUTION

The respondents were less satisfied with the minimal form of their participation in policy design and execution. Since the interviewed respondents for this study had agreed on a couple of issues to do with policy making and implementation on food security, it is a clear indication that when it comes to policy, the government takes a top down approach. Thus because of limited representation in policy making and implementation, the stakeholders (businessmen, NGOs and farmers) it is hard for the poor man to manage to achieve food security. The absence or inaccessibility of government officers both at the local central and local levels in providing policy advice to the stakeholders can also be faulted as poor service delivery. Therefore, without government availability in policy advice, it means that there is no monitoring and evaluation framework for policy implementation in trying to achieve food security. It can therefore be concluded that without an effective government representation in providing policy advice, food security cannot be achieved.

The practice of the executive behavior when it comes to make ad hoc policies in dealing with the challenges of food security has also been considered. The study revealed that the executive and some policy input and directives from the donor community determines what should be done in finding solutions to the challenge at hand. During this period, citizens are not represented. This top down approach has some elitist inclinations that in the long run negatively affect the outcomes

of the policy being implemented at that particular period of time. The challenge to this now is that in the final analysis, it becomes difficult for the people on the ground to acknowledge if food security has really been achieved or not.

4.3 ROLE AND EFFECTS OF GOVERNMENT POLICIES IN DEALING WITH THE CHALLENGE OF FOOD SECURITY IN KENYA

Under this category, I wanted to establish the respondents' view regarding the role and effects of government policies in dealing with the challenge of food security in Kenya. In addition, the study was an attempt to establish whether respondents feel that the policies are effective enough in ensuring food security in Kenya. The themes that were found from the study revealed there is a general view that the legal and policy frameworks related to food security in Kenya don't realize their projected ends.

4.4 THE NEED FOR INCLUSION IN POLICY MAKING AND IMPLEMENTATION

Regardless of the experience of the respondent, there was unanimity that there is a need for inclusion and participation of food security policies if Kenya is to deal with the challenge of food security forever. All the interviewed respondents highlighted that the policies do not only benefit the government but also the common people because they suffer or benefit a lot if the policy is a success or a failure. According to one respondent, he stressed on the need to have inclusive participation as follows:

In Kenya we have had numeral policies and strategies that are related to food security. But the challenge persists. The state is not able to deal with such a challenge for once and for all. However, there is no inclusiveness; these strategies should have been devised in such a way where there was a high participation rate among the actors such as the civil society, farmer's organizations, the

private sector, the development partners as well as government representatives so as to achieve ownership from all the stakeholders involved.¹²⁷

It can thus be understood that nationally, food security cannot be achieved if farmers and consumers are left out. There is need for inclusion to make sure the voices of all the key players are heard. Both farmers (producers) and the private/public sector are key actors in dealing with food insecurity challenges in Kenya. However, the above statement was followed by mixed views and feelings from the respondents. Most of the respondents were not satisfied with how policies regarding food security in Kenya have been drafted and implemented. The respondents highlighted that the government does not have a human face when it comes to policy formulation and implementation in regards to food security. One respondent from the civil society organizations was quick to point out that the policies are not effective because they follow a top down approach where only those from the policy making circles are the ones who benefit on their own way. In his words he said:

“Weak policies for the agricultural sector have had a negative impact in the efforts to achieve food security. The biggest problem in Kenya is that the policies are basically imposed by the politicians and these policies are formulated without even involving other relevant stakeholders such as farmers, non-governmental organizations and the private sector.”¹²⁸

Another respondent, while agreeing with the quote above lamented that on the policy point of view, the government has not done much to achieve food security for the Kenyan population. She

¹²⁷ Interview with a student in Kenyatta university , Nairobi , 28 June 2018

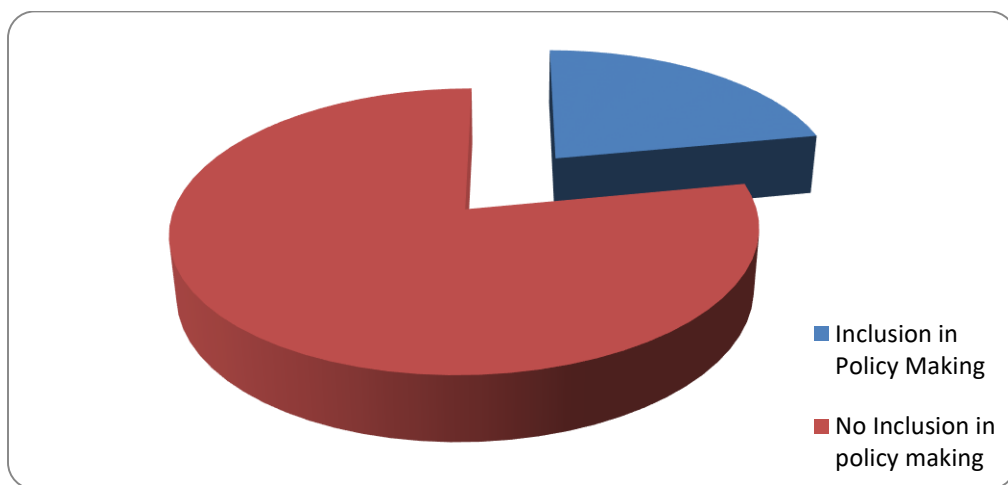
¹²⁸ Interview with ministry of agriculture officials , Nairobi , 13 June 2018

explained that the issue climate change is not taken seriously in finding long term solutions to avert it and revert back to the normal rain patterns. In her words, she explained as follows:

“Global warming and climate change are the greatest challenges in as far as food security is concerned. The Kenyan government and the private sector need to make a thorough examination of the existing policies and strategies in an attempt to achieve sustainable food security as well as fight the effects of global warming and climate change so as to get back to the normal rainfall patterns without that our children will die from thirst and hunger”.¹²⁹

However, following the questions that were discussed at the FGDs, respondents were asked to make a decision if there is enough inclusion in policy making and implementation on issues of food security. The chart below shows the respondents’ perception of the same.

Figure 4.1: Respondents ‘perceptions on the policy making and implementation representation



¹²⁹ Interview with a climate change directorate official , Nairobi , 22 June 2018

4.5 LACK OF LOCAL GOVERNANCE STRUCTURES

Practically all the respondents who were requested to respond to this question both from the individual farmers, farmer groups and the civil society organizations showed disappointment in their responses because of the lack of local government structures such as task forces and committees that can enforce action in the quest to deal with the challenge of food security in Kenya. There was a general observation that much as the central government has devolved into county governments, there is no commitment to implement actions by the county governments.

4.6 POLITICAL WILL IN ENSURING FOOD SECURITY

Through a discussion through FGDs, respondents showed dissatisfaction with the role of the politicians in the advancement of food security methods. During the study, opinions of the respondents regarding the role of political will in achieving food security were collected and quantified. As presented on the figure below, the responses from those interviewed indicate that 48 percent of the respondents strongly agreed that there is political will in ensuring food security; 19 % of the total respondents disagreed, 8 % decided not to express their opinion, 14 % agreed that there is political will while 11 % of the total respondents strongly agreed that there is political will on the part of the government.

Respondents on this issue were very critical of government and could not mince words in trying not to show their dissatisfaction. In this sense one of the representatives of the CSO explained what political will means. Because of this fact, most of the respondents that were selected through purposive sampling were asked to define in their own understanding what political will means when it comes to facilitate food security. One respondent argued that:

“Political will is not only when you want the government to publicize its plans to do something on food security but rather the commitment, zeal and actual implementation of the program. For example when the government makes plans to promote irrigation agriculture, there must be accountability in choosing contractors, public funds must be allocated efficiently and there must be sustainability of the particular project. If you ask me, in Kenya there is little or no political will when it comes to achieving food security”.¹³⁰

Political will in this sense was categorized into local and national. At the local level, the study focused on the role of the county governments in advancing food security while on the national level focus was on the role of the executive arm of government in the implementation of various activities towards the achievement of food security. To this end, focus was placed on the Ministry of Agriculture. However, the study failed to get in depth information from the respondents from the aforementioned ministry. The representatives from the business communities were critical on the issue of political will and their discussion was highly emotional as they showed dissatisfaction with how the government is not taking the issue of food security seriously. The representative of the business community stated that:

“The achievement of food security is down on one resource and that is land. The land policies do not benefit the common *mwanainchi* since the politicians themselves have a fair share of the scarce arable land. There is need to share land to those farmers who have no land. Most farmers are failing to achieve food security because they are landless and getting access to land, water, and seed is very difficult”.¹³¹

¹³⁰ Interview with Ministry of Agriculture officials , Nairobi , 13 June 2018

¹³¹ Interview with a student in Kenyatta university , Nairobi , 28 June 2018

4.7 FRAMEWORKS THAT CAN BE ADOPTED FOR THE SUCCESSFUL MEANS OF ACHIEVING FOOD SECURITY

This section sought to understand respondents' views on how the country can improve its already existing means of achieving food security. Although the majority of the respondents gave a positive mind on the questions, they were displeased with how Kenyan policy makers have been fairing in their implementation of agriculture and food security management. They stated that there are no new means that the country that hasn't been applied both in Kenya, Africa as well abroad. Asked whether the frameworks and methods that are used can help advance and achieve food security, one respondent pointed out the frailties of the systems:

“It is pathetic to note that government is implementing solutions that are backward thinking, ineffective and outdated. Importing food crops and selling at a subsidy will not achieve anything by the end of the year. Instead of empowering farmers in the rural and wetlands through irrigation, the government is busy importing what it could have produced. Looking at our Cereal and Produce Boards are stinking with corrupt officials who prefer dealing with ghost farmers and leave the genuine ones at bay, wasting billions of tax payers' money at the expense of the business tycoons.”¹³²

With further investigation on the topic, the study established that there are more options that can be done in ensuring that food insecurity is the story of the past. It is worth noting that knowledgeable respondents, such those of the FGD are more knowledgeable of the issues of food security. After brainstorming for a while and failing to agree on one point the respondents came to agree that the government can do more on irrigation. One respondent highlighted that:

¹³² Interview with Ministry of Agriculture Official , Nairobi , 13 June 2018

“Just imagine the Egyptians whose country is very dry manage to be food secure all year round because of irrigation. In Kenya we have lakes, rivers and swamps where water can be reserved and used later on for irrigation farming. It is so disappointing these days to not that most valleys around the cities are used to build expensive houses instead of using them as reservoirs for water harvesting”.¹³³

4.8 POLITICAL WILL AND INVOLVEMENT IN FOOD SECURITY DECISION MAKING

The rationale for putting this question to the study was that to understand respondents’ views on whether there is political will in achieving food security, and it is there why food security is still a challenge for Kenya. From the onset, it is an undeniable that political will is of paramount importance on matters food insecurity. Political will provides policies and policy advice, policy implementation and guidance to the local people who are in most cases the victims to food security.

Though both primary and secondary research, the study has established that there is minimal political will in the advancement of food security policies in Africa as a whole and Kenya in particular. It is a well-known fact that food security is a basic human right for everyone as stipulated in the Kenyan republic constitution. Looking at the current trends of hunger, famine and lack of food in the country, it can only be inferred that the government does not prioritize fighting food security when the challenge is not in existence. The last minute solutions to the challenge and lack of pro activeness show lack of seriousness on the part of the political leaders despite including food security in their political party manifestos. Although food security in its entirety must be observed by all, government must take a leading role followed by other stakeholders. For the

¹³³ Interview with Ministry of Water, Environment and Natural Resources official , Nairobi , 20 June 2018

period in question however, international NGO's have played a critical role in fighting hunger and famine and help eradicating food insecurity.

As seen in the previous chapter, some of the respondents were unconvinced about the role of the legislature and the three government regimes implementing food security policies to enable the nation achieving the desired food security. This is because despite the food security policy framework in place the political arm is till dragging its feet when it comes to implementation owing to numerous reasons such as un ending armed conflicts ; corrupted and selfish leaders, lack of proper fund management among others. The food scarcity in the past three years could have acted as a motivation for political leaders to now begin to prioritize food security of their supporters. This issue of political will is so much connected to policy making and implementation on food security. The weakness of one of these interlinked activities definitely has an effect on the other and this is evidenced by the Kenyan situation. Implementation of policies would mean that there is political will on the part of government. Without political will it would be difficult for the populace to implement activities aimed at achieving food security at the county and national level.

As discussed earlier in the paper, the Maputo declaration compels states to allocate not less the 10 percent of the annual budget. The study further revealed that county governments have limited capacity in implementing food security policy frameworks and activities on a large scale.

4.9 POLITICAL REGIMES AND HOW THEY DEALT WITH THE FOOD INSECURITY IN KENYA

4.9.1 FORMER PRESIDENT MOI REGIME AND FOOD SECURITY IN KENYA (1978 - 2002)

Agriculture being the *backbone* of our economy the former president started an immense crusade to protect, our forestry, water catchment areas and reserves and most critical, the soil, whose

erosion was carrying away important nutrients fundamental to workable food security, where his cabinet met under a tree, he congregated his cabinet under a spreading thorn tree in Machakos town and became the nation's first open-air parliamentary sitting and then led the citizens in building gabions along Eldao river in 1989.

According to an interviewee, a senior politician,¹³⁴ the soil erosion prevention project is one of the most successful project initiatives in Kenya facilitated by the former President. More memorable as *A plan to prevent soil erosion*, the commissioned programme, also included terracing, a farming practices including construction gabions, which was part of our colonial hard labour in Kenya, where few Kenyans practiced after independence until in 1982. In this practice the undulating and hilly farm flanks to recollect soil fertility where tree planting with the rallying call: *if you cut one tree, plant two* was the order of the day.

Moi was among recipients of the UNEP Global 500 award for “active involvement in environmental projects like building gabions and planting trees.

It is revealed that, In Rome, Italy; Moi accused the deteriorating food insecurity in African to political struggles, droughts and the HIV/AIDS menace. The states joining the World Food Summit meeting in 1996 had pledged to eliminate hunger in the world predominantly in the third world, and this pledge was further strengthened at the historic Millennium Summit when they resolve to lessen poverty by half by the year 2015. Since then, however, no significant progress was achieved where millions of people suffered malnourishment and famine, and about 50 % of the Kenyan populace was open to the challenges of food insecurity. He established a NPRS aimed

¹³⁴ Interview with former Govt official , Nairobi ,27 June 2018

at alleviating the roots of poverty, and develop the performance of the agricultural sector a critical sector in realizing the nation's food security.

NEPAD provided a suitable outline of collaboration between African nations and development partners in encouraging sustainable food security initiative pinpointed the determination of realizing food security in African nations via the promotion of food production and nutritional standards in his regime.

He was concerned by the increasing numbers of starving populaces in the SSA, Citing Kenya as an example of the disturbing status; he alleged that more than three million in east African Needed relief food during the past years due to severe drought.

A former government official¹³⁵ briefed that, In Coast Province for instance; more than 100,000 people were provided with relief food under hostile situations. Moi stressed on the need to guide farmers to rise food production, where farmers were advised to embrace various methods of enhancing maintainable soil fertility and growing of improved and disease resistant seed varieties. He stimulated the farming community to spread food crops so as to boost food security in the region, and introduced a new legislation on cash crop farming to offer the essential drive for their regeneration.

4.9.2 FORMER PRESIDENT MWAI KIBAKI REGIME AND FOOD SECURITY IN KENYA (2003 - 2013)

In a face to face interview a former politician¹³⁶ narrates that In January 2011 former Leader Mwai Kibaki ordered line ministries concerned in introducing methods to alleviate effects of the then

¹³⁵ Interview with former govt official , Nairobi ,27 June 2018

¹³⁶ Interview with former Govt official , Nairobi ,27 June 2018

“La Nina phenomenon” which was associated with intense storms in some places and droughts in others, He requested them to institute practical measures that will immediately alleviate the suffering of people in drought stricken areas acting in the best interests of the nation and its citizens.

In this regard his administration mobilized transportation from the KDF, AP and NYS to immediately distribute supplies to estimate five million Kenyans affected by the drought across the country and supplied the crucial supplies to affected citizens and their livestock without further postponement.

He asked the said ministries to expedite and called upon the ministries to assign enough funds for the exercise but at the same time safeguard and cautiously consume tax payers' cash for the maximum welfare of the poor citizen.

In the same period he announced some measures such as ;animals off-take, Providing assistance food, Purchase of food from excess areas, Transportation of food to scarcity areas, Building up of strategic food reserves, school feeding programme, Water provision and Livestock feeds programme to be engaged .

For continued production of sufficient food in the next season, the President ensured that the Treasury has allocated adequate funds to purchase fertilizers and advised relevant government departments to acquire the product early enough.

Elaborate plans to distribute the crucial supplies in most affected districts (now counties) were executed by the military and other disciplined forces playing a key role in the conveyance and dissemination of the supplies. Counties which were mostly affected include Turkana Pokot, Makueni, Wajir, Mandera, Marsabit, Isiolo, Tana River, Garissa Tharaka, West Samburu, Baringo, Kajiado, Kwale, and Kilifi.

Ministry of Agriculture was urged to constantly implement Quality Management Systems at all echelons so as to discourse food insecurity challenges in the Kenya, in 2012. Another government official¹³⁷ narrated that, during the official unveiling of the ISO 9001: 2008 certificate presented to the Ministry of Agriculture, Kibaki ordered the ministry to use the certification to deliver excellence services to the farmers. Under the ISO accreditation; firstly, the decrease of post-harvest crop losses from 40 % to 10 % and boost of water harvesting constructions from 220 to 460 by the end of that year was among the goals set out. Secondly, increasing customer access to superior farm inputs by 10 % by the end of that year and to increase agricultural productivity and output by 5 % annually to attain food security for all through enhanced extension services and embracing contemporary farming skills. Thirdly, they were to increase control of crop pests and diseases by end of the year and solidification of private-public corporations, advance access to ICT-based Agriculture information and maintainable land use practices.

He expounded that, in 2004, Kibaki admitted a national disaster during that period of drought which had affected 60 % crop failure in five provinces. Up to 4.3 million adults and 1.5 million children relied on relief food for the next six months or so. He then called for both local and international food contribution and funding. According to the interviewee, the government had disseminated food worth KSh1.5 billion, and required a further \$32 million (KSh2.56 billion) to provide water, sanitation, health and nutrition, agriculture, livestock and education. A deficiency of four million bags of maize was also foreseen for the next harvest. That same year, Kenyans were stimulated to expand their eating habits and start eating ants, rats, donkeys and other edibles, to avoid of hunger as others did elsewhere in Africa where Kenyans felt offended by those proposals which reflected a high level of pride.

¹³⁷ Interview with former Govt official , Nairobi ,27 June 2018

He once again declared then-ongoing famine in parts of the country, a national disaster in the year 2006, where up to 2.5 million of the population would rely on relief food. Prolonged drought had caused crop failure and livestock losses. He appealed to local and international partners to support his Government by helping those affected. The same scenario repeated itself In the year 2009, where the government declared that period's drought and famine a national disaster, and launched an request to raise more than KSh37 billion to address the situation. Approximately 10 million Kenyans were then food insecure and the government would import more than 7 million bags of maize at the cost of KSh17 billion to alleviate the calamity.

Due to the persistent drought the latest national disaster declaration was on May 30, 2011, where the Kibaki administration had called for essential by the relevant ministries to support affected populations. It was the usual appeal for relief food and similar interventions would follow suit.

Ministers in his government, their acquaintances and uppermost government officials, benefited monetarily from the political economy of famine. This manifested in the licensing of companies given contracts to supply maize to famine-stricken counties. The government's tendering process had been egregiously contravened in the selection of the maize importing companies, as was illustrious later in a Parliamentary Investments Committee reports. During that period, more than forty (40) people and an unknown number of livestock died.

One of NCPB¹³⁸ officials revealed that, the 2004 famine-national-disaster declaration which required KSh4 billion was never lifted and in 2005, another disaster was declared by the same government, aiming to raise KSh11 billion to fight the famine. Many Kenyans starved in many parts of the country ironically, due to lack of storage space since the silos were full and over one

¹³⁸ Interview with former Govt official , Nairobi ,27 June 2018

million bags of maize from last season's harvest laid idle, while some of it rotting, at the NCPB silos in North Rift. There were thousands of bags at the NCPB branch in Kitale and thousands at the Moi's Bridge depot. Farmers were being turned away with truckloads of newly-harvested maize and had to sell them to private companies at throwaway prices, where some threatened to export their maize to Uganda if the government was not willing to buy from them. Another hundreds of thousand maize bags stored at privately owned stores in Kitale and frustrated farmers had to sell at half the regular price which was KSh800, instead of KSh1,600.00 The government was criticized for being unprepared whenever the time for purchasing maize came. For instance the delays by the Finance minister to releasing the money budgeted for buying the commodity. Collusion of NCPB officials with some businessmen to enable them sell their stocks first. It was therefore deliberate when they failed to transport maize to silos in the famine-stricken areas. Never the less the Ministry of Agriculture was the worst, since it failed to handle the purchasing and distributing of maize to various parts of Kenya responsible as her key responsibility.

It was also mentioned that political manipulation as a factor in the widespread famine. People played politics with food in some constituencies. Where a lot of food was diverted and sold to finance the Banana campaign ahead of the referendum. That is why people died with hunger. Corruption therefore peddled the politics of maize and food, with ministers cashing in on the disastrous situation for their selfish reasons. Declaring a famine that has trailed us for the better part of the year a national disaster is so that supporters can move in with cash. Paradoxically, there is a food surplus.

4.9.3 PRESIDENT UHURU KENYATTA REGIME AND FOOD SECURITY IN KENYA (2013 TO DATE)

An interviewee from the ministry of agriculture¹³⁹ reveals that Since 2013, Shadowing nutrition and food insecurity was an dominant objective of the Kenyatta's administration, which needed directed investment to secure better advisory services; improve and expand agro-technologies to upturn production, conservation and better use of food; increase investment in high-value - traditional and nontraditional foodstuffs as well as enhance access and to cut the prices of inputs. Furthermore, the accomplishment that the nation moved from reliance on rain-fed agriculture to irrigation- and technology-based agriculture to guarantee food and nutrition security all year round and strengthening of relevant agricultural sector institutions. Food supply chain links and value-addition methods were to be reinforced by his government. The target was to be self-reliant in food production, divert emergency funds used in drought relief to expansion projects and considerably lower the cost of living in rural and built-up areas.

The current management is committed to cut the country's food insecurity by altering agriculture from sustenance to marketable, market oriented farming. The Government is said to have allotted Kshs 30 billion to the concerned ministry to finance execution of programmes that will augment agricultural production and ensure food security.

Accessing food at affordable prices, is part of the Kenyatta's administration's outline, to ensure this, the government has put actions in place to improve approachability of fertilizer to farmers at a realistic cost. In the last two (2) Financial Years, the Government acquired and disseminated a total of 177,100 MT of numerous types of fertilizers costing of Kshs 5.9 billion. These funded fertilizers are retailing at Kshs 1,800 per 50 kg. He also introduced reduced a price of planting

¹³⁹ Ibid, Nairobi ,27 June 2018

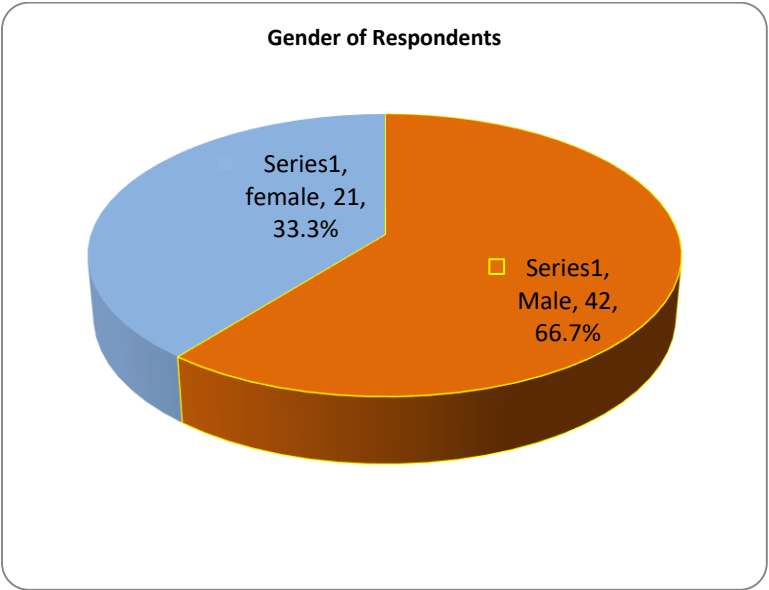
fertilizer to Ksh 1,200 per 50kg so as to cushion the farmers against rising cost of inputs . He also instituted a multi-institutional technical group of experts to combat the “fall army worm” that has affected the cereal sub-sector, and provided Kshs 300 million towards containing this pest threat.

Other Government efforts used to boost agriculture productivity are Crop insurance programmes, provision of livestock, facilitating farmers to access affordable credit and expanding markets for the country’s exports mainly the cash crops.

4.10 METHODS OF DATA ANALYSIS AND PRESENTATION OF DATA

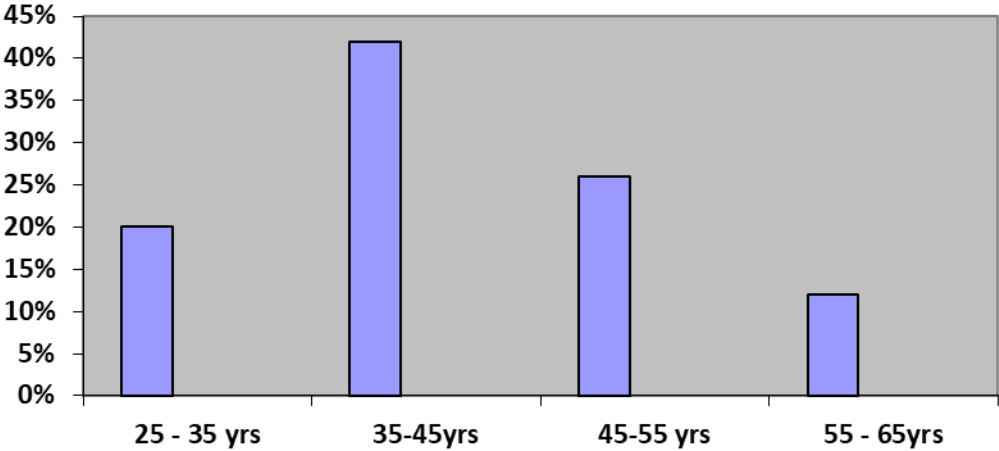
Here I have used descriptive statistical analysis to ascertain occurrences and percentages to answer all of the questionnaires.

Figure 4.2: Gender of the respondents



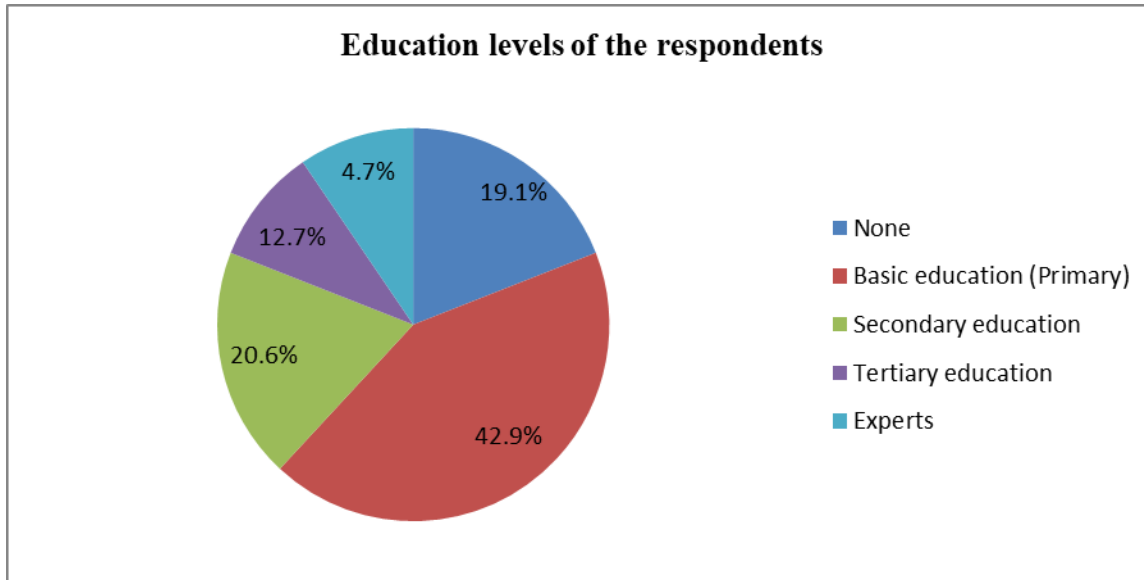
66.7 % of the respondents were male while 33.3% of the respondents were female

Figure 4.3: Age of the respondents



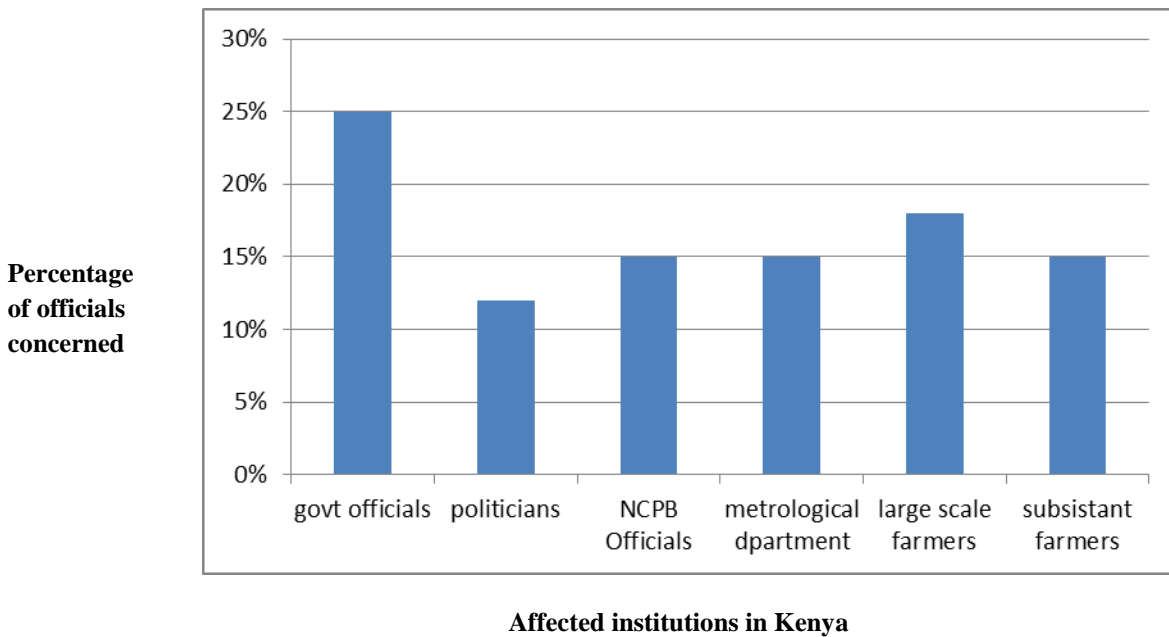
20% of the respondents were between the ages of (25-35), 42% between the ages of (35-45), again 26% between the ages of (45-55) and 12% between the ages of (55-65).

Figure 4.3: Education level of respondents



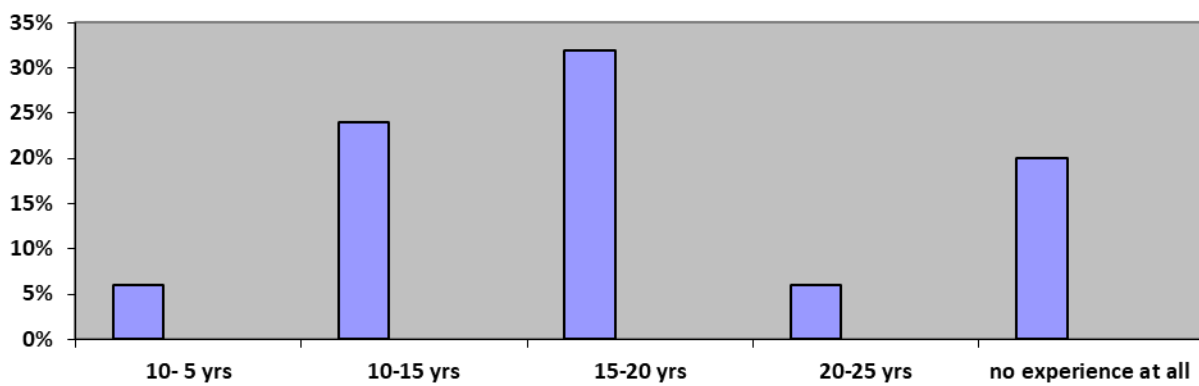
42.9% of the respondents had attained basic education, 20.6 % secondary education, 12.7% tertiary education and 4.7% were the experts where 19.1% had none.

Figure 4.4: Affiliation of the respondents



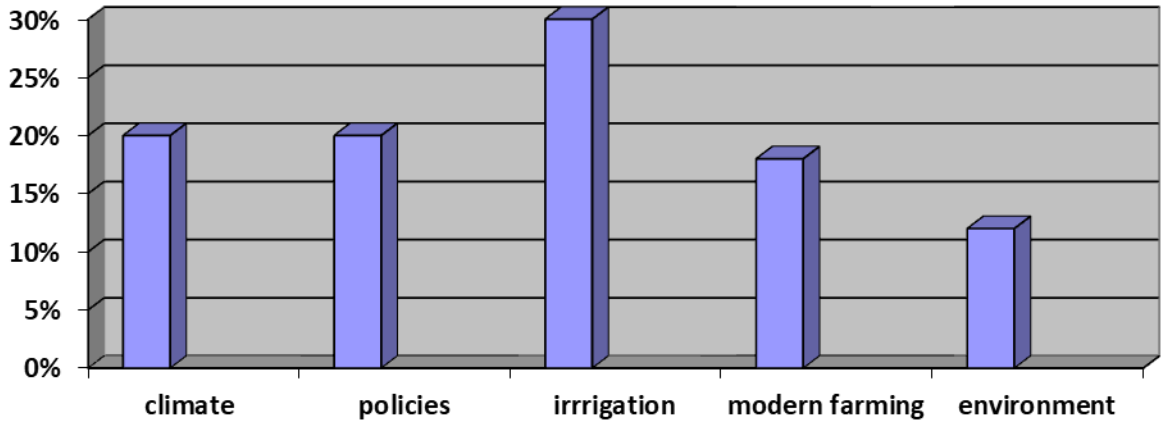
36% of respondents were from Government institutions including *Ministry of agriculture, metrological department* and the *National Cereals and Produce Board (NCPB)*. 13% from Non-Government institutions including United Nations Development Programme (UNDP). 3% from the private sector, 16% were Development Partners, 17% large scale farmers while 15 % were subsistent farmers.

Figure 4.5: Respondents, experience on matters food security



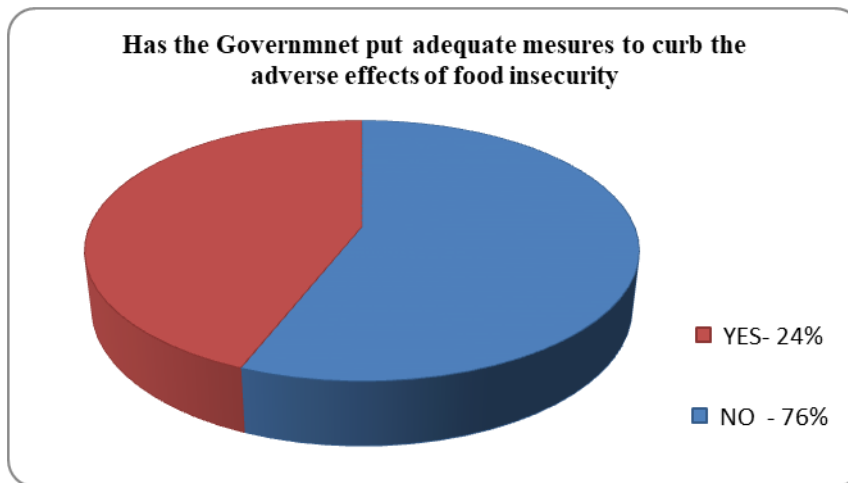
16% of the respondents have more than five years' experience in matters food security, 26% have more than ten years of experience, 32% have twenty years of experience and 6% have twenty five years of experience, While 20% had little or no experience at all including farmers.

Figure 4.6: Respondents knowledge on factors affecting food security



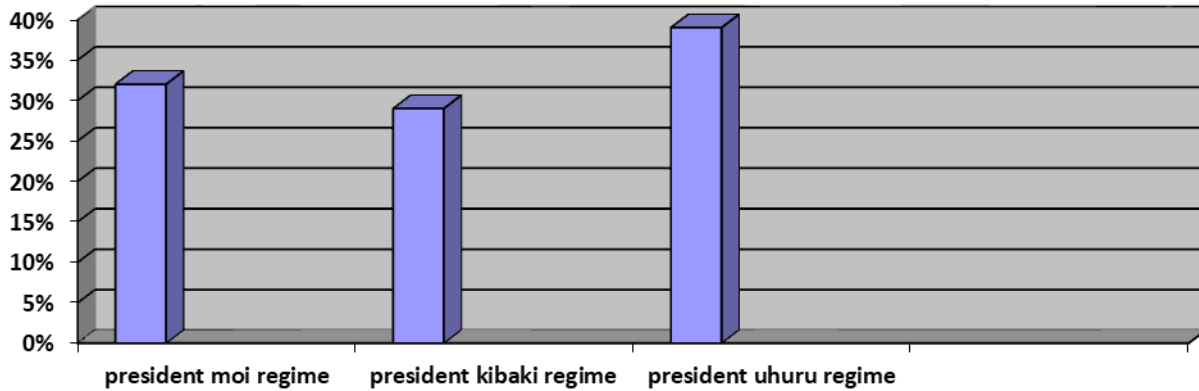
The respondents have adequate knowledge on food security matters, 30% have adequate knowledge on irrigation, 20% on climate change and policies, 17% on modern farming 13% on environmental issues

Figure 4.8: Government measures put to curb adverse effects of food insecurity



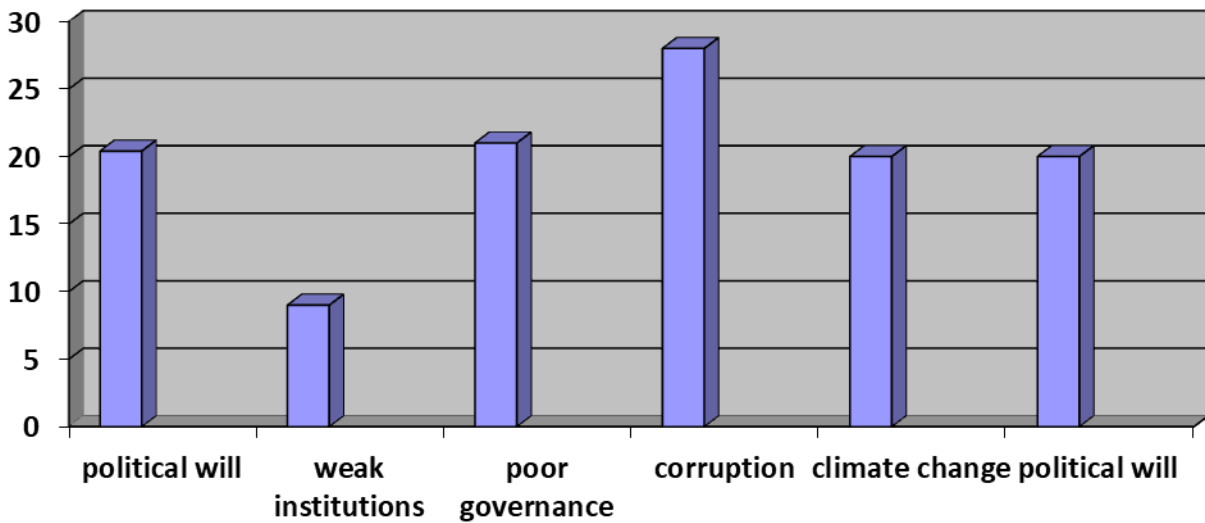
24% of the respondents feel that the Government has done or is doing enough to restraint the hostile effects of climate change while 76% feel the Government is not doing enough.

Figure 4.9: Respondents' views on political regimes and food security



Most respondents feel that the current government of President Uhuru Kenyatta has done best in terms of policy formulation and implementation as compared to that of former president Moi and Kibaki respectively.

Figure 4.9: Main contributing factors effecting food insecurity



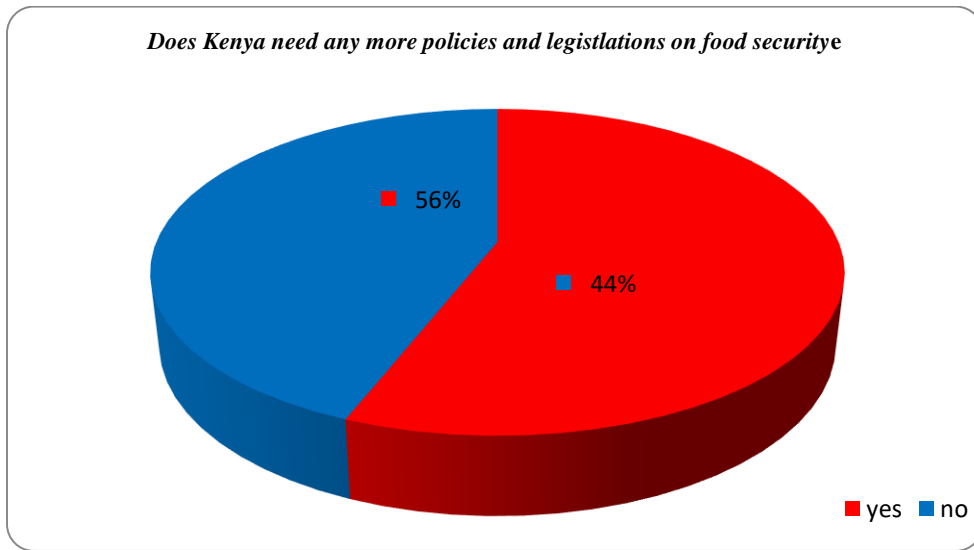
Most respondents feel that *corruption* is the key influence towards food insecurity in the country, where the weak institutions being the least.

1. Approaches the Government should use to food security policy formulation and implementation

- a. According to the respondents, the following are the approaches they propose;
- b. Sensitize and create awareness to the general public about the conservative agricultural techniques
- c. Build the capacity of communities towards all agricultural practices
- d. Good governance including policy enforcement.
- e. Involve all stake holders
- f. Adequate budgetary allocation
- g. Conduct several bench markings in successful and food secure countries with characteristics similar to Kenya.
- h. Sealing all loop holes of corruption
- i. Embark on transformative high impact projects.
- j. Encourage alternative sources of foods in the country
- k. Offer incentives to the public to invest heavily on agriculture.

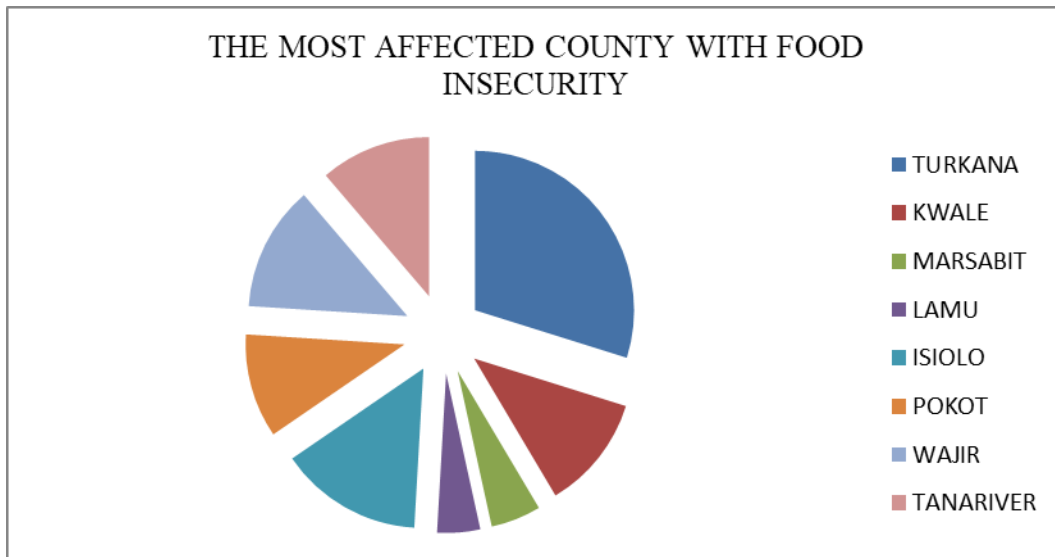
2. Does the country require more policies and legislations on food security or only the implementation is required.

Figure 4.10: Need for policies and legislations on food security



56% feel that the Country doesn't require more policies on food security while 44% feel that the already existing policies are enough.

Figure 4.11: Counties that have been severely affected by food insecurity



According to the respondents the *Turkana County* is the hardest hit by the adverse effects of food insecurity.

3. Ways the government should involve members of the public on food security matters and policy implementation

- a. Public awareness and capacity building at grass root level
- b. Knowledge management
- c. Create voluntary measures with incentives for propelled action by individuals
- d. Sensitization and establishment of projects geared towards reduction of greenhouse gases.

4. African countries with success stories in implementing food security policies

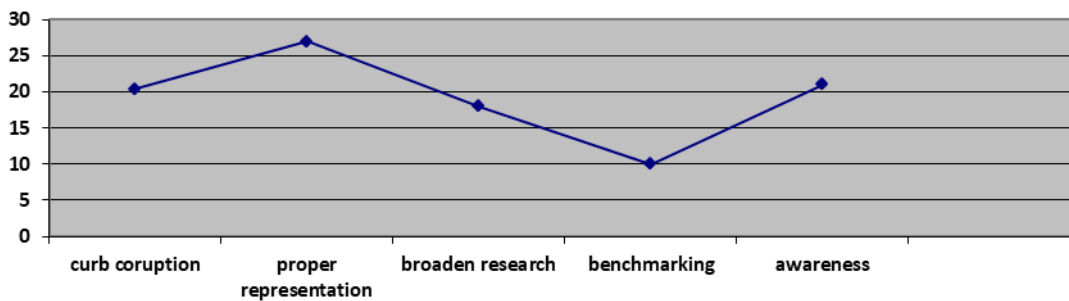
- a. South Africa
- b. Egypt
- c. Ethiopia
- d. Uganda
- e. Zimbabwe

5. Key measures and interventions the Government could borrow from other successful countries to curb adverse effects of climate change

- a. Enforcement of government regulations.
- b. Have funds exclusively for addressing food security issues in the country.
- c. Promote forest conservation from the grass root level to ensure rain fed agriculture is sustainable.
- d. Embrace community sensitization including alternative food production initiatives.

- e. Landscape approaches with Reduce Emission, deforestation and Degradation (REDD+).
- f. Control felling of trees including deforestation and forest degradation.
- g. Adoption of climate smart technologies and green energy.
- h. Focus on strengthening institutions for sustainability.
- i. Crop insurance especially in ASAL.

Figure 4.12: Most effective methods the government should use to enhance better policies on food security



Most of the respondents feel that *proper representation during policy formulation was the key in promoting sustainable food security.*

4.11 CONCLUSION

The discussion and analysis in the preceding paragraphs indicates that policy making and implementation in the achievement of food security is an area that needs improvement. The discussion in this chapter hinged upon the findings that reveal that Kenya has a long way to go if it is to achieve proper food security. This study proposed Marxism as its theoretical framework and if the theory is to be confirmed for the present day Kenya, it can be applied to a minimal extent.

As the study has revealed, market-led, neoliberal models have been adopted in most countries including Kenya which argues that large-scale agriculture is appropriate for providing food security. Despite this not being the case in Kenya, there has been minimal implementation of policies to benefit the common man in the countryside. It is in this view therefore that this study confirms H1 which states that efforts facilitated by the advancement of policies needs to be enhanced to achieve food security in Kenya.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

While taking into considerations the research questions, study objectives and findings, this chapter will give the deduction of the study. It is also in this chapter that recommendations are proposed for Kenya to improve and/or address its policy processes in the quest to achieve food security for its citizens.

5.2 KEY FINDINGS

This study intended to assess the reasons for the problems of food security notwithstanding the implementation of both the local and international policies. From the various data tools that were applied in collecting as well as analyzing data for this study it can be concluded that policy implementation in the advancement of achieving food security in Kenya is weak and slow. It has been revealed that there are little or no chances of involving the populace and other stakeholders when it comes to making policies to do with food security. Attempts have been made by the local people to try and talk with their leaders but to no avail. It has also been established in the study that in most cases strategies are highly used than policies when it comes to fighting food insecurity. Also, it has been realized that most food security strategies are drafted and implemented on ad hoc basis.

Just as an extension to the issue of policy making and implementation on food security, the study also focused on the extent to which political will is applied to making sure there is political will. The study also revealed that there is little to show that there is political will. It was revealed that

in most cases politicians only talk about food security during political campaigns through their manifesto. This study furthermore established that there is some form of political will and this happens only when there is need for an intervention. The reasons why it has been concluded that there is minimal political will is the fact that in most cases there is little to show on the ground despite the leaders signing to agreements as well announcing plans of doing something but in reality nothing is being done really.

The research also found that there is a general thinking among the people in the communities that it is the role of the government to provide them with the necessary means towards achieving food security. This revelation was analytically examined in two arguments; first, the fact that it is the regime's responsibility to ensure the right to food of its populaces does not mean everything should be provided for free. Some of the respondents were complaining that they are not given free food and subsidized farm inputs. Without the subsidy they leave their lands to fallow. Secondly, that there is a general consensus that the government must also inquire from the farmers of what they need the government to do for them in trying to achieve food security. The study learnt that some of the initiatives undertaken by the government are not beneficial and sustainable to the people and hence rendering themselves useless.

5.3 RECOMMENDATIONS

Under harsh circumstances, four key priority areas for action can be recommended:

- Instantaneous actions to ensure sufficient access to food for the hungry and for refugee's resettlement and demobilized soldiers for food distribution to susceptible individuals; dissemination of agricultural tools and livestock; and backing participation of the populace in restoration activities financially.

- Restoration of infrastructures such as roads and bridges, markets and storage spaces, irrigation facilities in the rural areas.
- Founding of rural services and improvement of basic such as training, micro-credit, extension, seed increase, and service centers which are based on lean public organizations and contractual provisions with civil society, the private sectors and NGOs.
- Creation of rural organizations and formation of a suitable institutional and policy atmosphere; steady macroeconomic environments and legal system; a policy and supervisory framework favourable to both private initiatives and local ones; and statistics and information systems on food security and markets.

The Kenyan government needs to create a good policy environment for both local and international policies if it is to ably deal with the challenges associated with food security. As it has observed in the study that poverty is a big challenge to the achievement of food security, the regime should ensure that poverty it implements the various poverty reduction strategies. Trade policies and other macroeconomic should be in favor of achieving food security of the rural people. Also, there is need to protect to protect the local farmer from businesses and cross border trade. The policies should emphasize on the extensive involvement in policy formulation and execution, combined with institutional devolution by all.

The study identified a number of challenges but one the challenges that was worth noting was the fact that policy making and implementation is minimal on the government side. To ensure accountability and good service delivery, the government should include representatives of relevant stakeholders when it comes to food security. While it might be too hard to achieve accountability, it can still be recommended that every policy regarding food security should be reviewed by relevant stakeholders before going to parliament. The minister responsible must

identify stakeholders to work with and allow their input and review before a bill becomes law. This will ensure representation and participation.

There is need to increase food crop production. Since the importation of food crops can be expensive for a third world state like Kenya, the only way of solving food security challenges is by increasing its production. This however will entail a number of things to be done. First, there is need to revamp and improve extension services in the country. Both governmental and non-governmental organizations should make sure farmers in all areas access agricultural extension advices which in turn can result in improved yields. Secondly, increasing and improving agricultural research would improve and increase productivity. The use of drought resistant crops as well as genetically modified crops can be used to improve yields hence achieving food security.

Farmers must be empowered to act in trying to fight against climate change and GWP. There is therefore need to plant vegetative cover, trees, and rainwater harvesting and water reservoirs. These can help to improve farming and hence increase harvests.

Issues that could be preventing farmers from applying Climate-Smart Agricultural rehearses are; the need to use tools on the farm for other dedications. For instance, use crop residues as livestock feed instead of maintaining crop residue from former harvests on top of the soil to provide cover and enrich the soil's nutrients; moreover, interval between enactment of the practice and realization of the paybacks of CSAP on their farms, small scale farmers might choose not to implement or maintain the CSAP¹⁴⁰

¹⁴⁰ Elizabeth Dooley, Dr. Sophie Chapman. *Climate-smart agriculture and REDD+ implementation in Kenya*. University of Cambridge. United Kingdom. 2014. p. 18.

The Climate Smart Agriculture (CSA) Strategy notes incoherence between agriculture, food security and climate change leads to inefficiencies in the implementation of climate change mitigation and adaptation interventions. Hence CSA provides an avenue to address the inconsistency with a main objective of mainstreaming sustainable land and agricultural-water management into production systems to enhance resilience of farmers, pastoralists and fisher-folk.¹⁴¹

Rain nurtured farming is one of the main contributors to the nation's GDP, where cash cropping and horticulture donating significantly to the nation's foreign currency. Known it's depending on the CSAP will continue to be the most affected by climate change. Government involvements here includes: support strategies for community-based adaptation such as early warning system to alter timing of planting dates; enhanced financial and technical support to extra drought tolerant food crops such as sweet potatoes sorghum, cassava, and millet; promoting irrigated agriculture; addressing land degradation to increase rain-water infiltration and reduce run-off; promotion of the CA, whose objective is to realize viable and cost-effective agriculture which will improve farmers' incomes by applying the CA principles of slightest soil disruption, long-lasting land cover and crop alternation.¹⁴²

Diversifying rural economies through value addition to agricultural products is the Other measures that is being implemented in agriculture, which include:; investing in research and development; innovative insurance scheme; enhancing agricultural extension services to train farmers; strengthening pest management systems; and, developing proper food storage facilities.¹⁴³

¹⁴¹Development and Climate Change Nexus: The Case of Kenya. UNDP FAO Working Paper. 2017. p. 49.

¹⁴² Government of Kenya. *National Climate Change Response Strategy. 2010.* Ministry of Environment and Mineral Resources. p. 50.

¹⁴³ Government of Kenya. *National Climate Change Response Strategy. 2010.* Ministry of Environment and Mineral Resources. p. 51.

Providing efficient and affordable technologies and other incentives to convert farm residues into energy sources such as briquettes or biogas would also be beneficial to farmers.¹⁴⁴

In livestock and pastoralism, mitigation and adaptation measures include: breeding animals from various AEZ that acclimatize well to climatic vagaries; developing SLIS; regular vaccination campaigns and cross border disease surveillance; early warning systems; teaching populations on identification and establishing of banks of backup forage from crop deposits, forage and periodic pasture, conservation of seasonal wetlands; investing in storage of fodder; inventory of indigenous knowledge; promoting economic diversification among pastoral communities; awareness campaigns on importance of balancing stocking rates to ensure sustainable pastoralism.¹⁴⁵

Climate change impacts may be solved through agricultural development strategies such as risk management schemes that will help small-scale farmers handle it and such schemes are being implemented on pilot basis in various counties through Public Private Partnerships (PPP). SSIS is based on restrained rainfall and area-specific crop models, which will offer a safety mesh for major crop destructions resulting from uncertain weather conditions.¹⁴⁶

¹⁴⁴ Development and Climate Change Nexus: The Case of Kenya. UNDP FAO Working Paper. 2017. p. 78.

¹⁴⁵ Government of Kenya. *National Climate Change Response Strategy*. 2010. Ministry of Environment and Mineral Resources. pp. 51-52.

¹⁴⁶ Elizabeth Dooley, Dr. Sophie Chapman. *Climate-smart agriculture and REDD+ implementation in Kenya*. University of Cambridge. United Kingdom. 2014. pp. 36-37.

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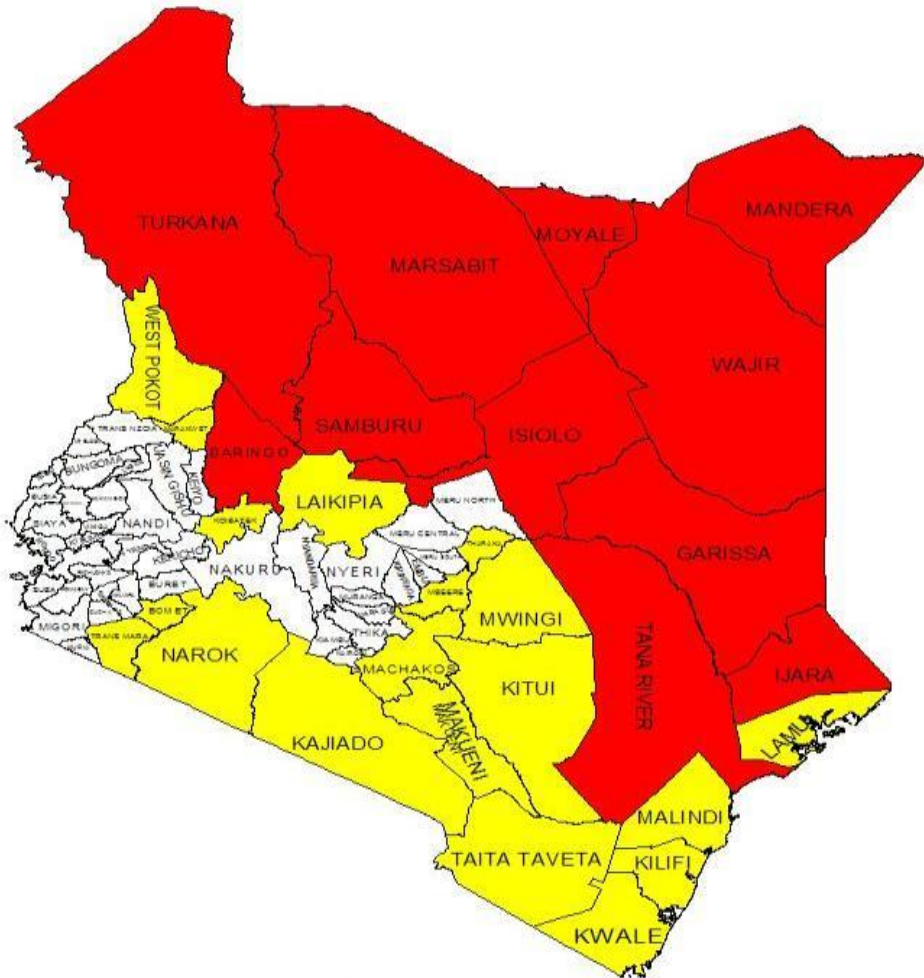
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APPENDICES
APPENDIX I

MAP OF KENYA SHOWING ARID AND SEMI ARID DISTRICTS



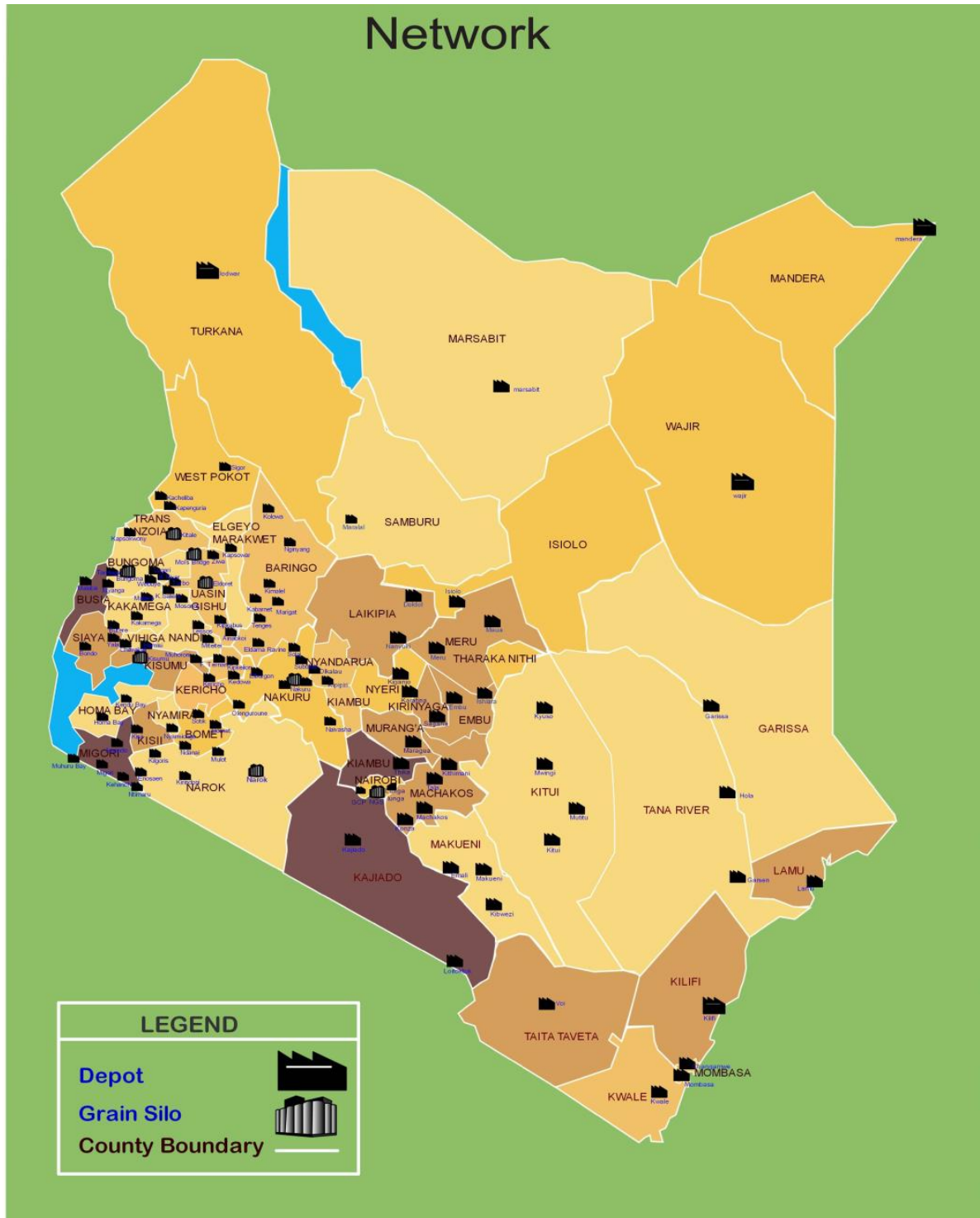
RED ARE ARID DISTRICTS
YELLOW ARE SEMI ARID DISTRICTS

	ARID AREAS
	SEMI ARID AREAS

APENDIX II

-

NCPB, GRAIN SILOS AND DEPOTS DISTRIBUTION IN KENYA



APENDIX III - WORLD POPULATION UNDERNOURISHED

World population undernourished in 2011-2013

	MILLIONS	PERCENT
Southern Asia	295	35
Sub-Saharan Africa	223	26
Eastern Asia	167	20
Southeastern Asia	65	8
Latin America and the Caribbean	47	5
Western Asia and Northern Africa	24	3
Developed regions	16	2
Caucasus and Central Asia	6	1
Oceania	1	<1

SOURCE: FAO (ALL FIGURES ARE ROUNDED)

APENDIX IV - STRUCTURED INTERVIEW QUESTIONS FOR FARMERS

1. Can you describe the situation in Kenya concerning food security?
2. What is the main purpose of your farming
3. Are you aware of the cost effective methods used to ensure high yields in your farm
4. Between conservative and modern methods which one do you prefer to practice and why
5. Do you depend on rain farming or you have irrigation schemes in your farm
6. Has FAO been supportive in the county and what kind of support do you get if any
7. Is the government doing anything to support agriculture in the county and nationally as well
8. What are the effects of pest in the overall farming and the availability of fertilizers and seedlings?

APENDIX V - STRUCTURED INTERVIEW QUESTIONS FORMER POLITICIANS / GOVT OFFICIALS

1. Compare and contrast the previous three regimes in ensuring food security since the retired President Moi era.
2. Which government had the will in formulating and implementing food security policies and frameworks
3. What were the main challenges affecting the implementation of various policies available on ensuring food security in Kenya in the three regimes?
4. Which regime introduced the most effective formula in ensuring food and affordability in the country?
5. To what extent did the regimes include all the stake holders, both in formulating and implementing food security frameworks and polices.
6. How does corruption affect implementation focusing on the three regimes
7. Rating the three regimes from (**Satisfactory, Good** and **Very Good**) on the efforts of ensuring sustainable food security, which regime scores high.
8. How do you rate the 3 regimes of government from retired president Moi to Kibaki until the current president in formulating and implementing food security policies? (weak/good/very good)
 - a. Retired President Moi regime []
 - b. Retired President Kibaki regime []
 - c. U/Kenyatta regime []

9. How do you rate the reasons affecting poor policy implementation[1 - 5]
- a. Corruption [] b. lack of funds [] c. lack of political will [] d. climate change [] e. others []
10. Can Kenya achieve food security status....YES [] or NO []

APPENDIX VI - STRUCTURED INTERVIEW QUESTIONS FOR KENYA METROLOGICAL DEPARTMENT EXPERTS

1. What are the country's maximum and minimum levels of precipitation since 1990 to date?
2. How has the unpredictable rains affected food production in the country?
3. What are the challenges in ensuring high yield food production
4. What plans do you have in improving food production and food security in regards to agriculture and water resources management?
5. What are the challenges encountered during the Collection and dissemination of meteorological information required both nationally and internationally?
6. How does the World Meteorological Organization (WMO) and the International Civil Aviation Organization (ICAO) procedures in assisting improving food security the country.
7. is there any co-operation with other authorities in all aspects of applied meteorological research, and the maintenance of the National Meteorological Library

APPENDIX VII - STRUCTURED INTERVIEW QUESTIONS KNCPB OFFICIALS

1. What is your storage capacity in the counties and national wide ?
2. What other services do you offer to the general public apart from providing storage facilities?
3. What are the main farm produce do you store
4. Who are your partners in the country and what roles do they play in ensuring food security
5. How effective is your strategic plans 2015- 2020 in as far operational excellence is concerned
6. Compare and contrast the number of tonnage that was yielded since the MOI era to date

APPENDIX V - QUESTIONS TO THE LOCAL MWANANCHI

1. Can you describe the situation in Kenya concerning food security?
2. What are some of the major causes of food insecurity in the country?
3. What are some of the activities being undertaken by the government to ensure food availability and accessibility to everyone including people from marginalized communities in the country?
4. What are some of the challenges that the government faces to ensure food security policies are implemented?
5. Do you have any recommendations as to what should be done by the government and other institutions to ensure food is available and accessible by people living in Kenya?
6. How do you rate the 3 regimes of government in formulating and implementing food security policies? (weak/good/very good)

- a. Retired President Moi regime []
 - b. Retired President Kibaki regime []
 - c. U/Kenyatta regime []
7. Reference to the under mentioned factors, How do you rate the reasons affecting poor policy implementation[1 - 5]
- a. Corruption []
 - b. lack of funds []
 - c. lack of political will []
 - d. .climate change []
 - e. others []
8. Do you think that Kenya achieve food security status....**YES** [] or **NO** []

APENDIX VIII - STRUCTURED INTERVIEW QUESTIONS FOR MINISTRY OF AGRICULTURE OFFICIALS

1. What are some of the major causes of food insecurity in the country?
2. What are some of the challenges that the government faces to ensure food security policies are implemented?
3. Is the access to affordable fertilizer with the aim of reducing unit cost of production useful in agricultural yields in the country?
4. Improved agricultural risk management
5. Is the provision of insurance cover for crops to selected Counties, have a positive impact towards enhancing food security in Kenya?

APPENDIX XI- FROM MDGs TO SDGs

End poverty in all its forms everywhere

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Ensure healthy lives and promote well-being for all at all ages

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Achieve gender equality and empower all women and girls

Ensure availability and sustainable management of water and sanitation for all

Ensure access to affordable, reliable, sustainable and modern energy for all

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Reduce inequality within and among countries

Make cities and human settlements inclusive, safe, resilient and sustainable

Ensure sustainable consumption and production patterns

*Take urgent action to combat climate change and its impacts**

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Strengthen the means of implementation and revitalize the global partnership for sustainable development

APPENDIX X - LIST OF PARTICIPANTS

INTERVIEW DETAILS	NCPB OFFICIALS	METROLOGICAL DPTMT	MINISTRY OF AGR	MINISTRY OF WATER ,ENV & NR	CLIMATE CHANGE DIRECTORATE	FORMER GOVT OFFICIALS
Date	1 June 2018	6 June 2018	13 June 2018	20 June 2018	22 June 2018	27 June 2018
Time	0900 hrs -1200 hrs	0900 hrs -1200 hrs	0900 hrs -1200 hrs	0900 hrs -1200 hrs	0900 hrs -1200 hrs	0900 hrs -1200 hrs
Place	NCPB Offices	METROLOGICAL DPTMT Offices	MINISTRY Offices	MINISTRY Offices	CCD Offices	Karen
Officer	Mr Ernest Ogwano	Mr Gideon Gathaara	Dr. Richard I. Lesiyampe	Eng. John Rao Nyaora	MR. Samuel Muchiri	Hon . Raphael Tuju
Designation	Monitoring And Eval Offr	Conservative sec	Principal Secretary	Director of Water Resources	Snr Asst Director	