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**Topic:**

**A Social Evaluation of Food Security Strategies in Kitui District**

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EAST AFRICANA COLLECTION**

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**Dr. Pius Mutuku Mutie**

**November, 2008**

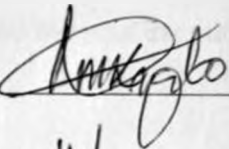
## DECLARATION

This Project Paper is my original work and has not been submitted in any other University for academic award.

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## **DEDICATION**

This work is dedicated to:

My late sister Andriana Katile Maina (Stella) who did not live to witness its completion.

My children: Lynette, Laura, and Linda Kyalo.

My beloved parents Anselmi and Anne Munyasya.

My husband Hon. Peter Kyalo Kaindi and

My sisters: Anastasia Kibutu and Assumpta Munyasya, who challenged me by getting their Masters degrees before me:

Thank you all for your encouragement and support throughout my study period.

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Most importantly, I thank God for bringing me this far.

**November 2008**

## LIST OF ACRONYMS/ ABBREVIATIONS

ADB	African Development Bank
AMREF	African Medical Research Foundation
ADRA	Adventist Development Relief Agency
ALRMP	Arid Lands Resource Management Project
ASALs	Arid and Semi-Arid Lands
CARE-Kenya	Cooperative Agency for Relief Everywhere
CRS	Catholic Relief Services
CDF	Constituency Development Fund
DANIDA	Danish International Development Agency
DFRD	District Focus for Rural Development
DMO	Drought Management Officer
DMT	Disaster Management Team
DRR	Department of Relief and Rehabilitation
ERS/WEC	Economic Recovery Strategy for Wealth and Employment Creation
GFD	General Food Distribution
GoK	Government of Kenya
GBM	Green Belt Movement
GTZ	German Technical Cooperation
ITK	Indigenous Technical Knowledge
IRC	International Red Cross
IMF	International Monetary Fund
ITC/FSP	Integrated Tree Crops into Farming systems Project

KAP	-----	Kitui Agricultural Project
KARI	-----	Kenya Agricultural Research Institute
KAPP	-----	Kenya Agricultural Productivity Project
KADP	-----	Kitui Integrated Development Programme
KDDP	-----	Kitui District Development Plan
KRDS	-----	Kenya Rural Development Strategy
MDGs	-----	Millennium Development Goals
MoA	-----	Ministry of Agriculture
NCPB	-----	National Cereals and Produce Board
NGOs	-----	Non Governmental Organizations
PRSP	-----	Poverty Reduction Strategy Paper
SRA	-----	Strategy for Revitalizing Agriculture
SIDA	-----	Swedish International Development Agency
SRDP	-----	Special Rural Development Programme
WB	-----	World Bank
WFP	-----	World Food Programme

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# **1.0 CHAPTER ONE: INTRODUCTION**

## **1.1 Background**

### **1.1.1 Definition of Food Security**

Food security has many definitions which have been advanced by different authorities. According to United States Agency for International Development (USAID, 1999), food security is achieved “when all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life”. It is also defined as “access to food by all people at all times” (FAO/WHO, 1992). Food security involves creating an adequate food supply to meet the needs of the population, without destroying natural resources needed to continue producing food. It is also described as access to enough food to live active, healthy lives.

### **1.1.2 Definition of Food Insecurity**

Food insecurity is the severe shortage of food security and is defined as the reverse situation of food security. Famine is defined as severe shortage of food, generally affecting a widespread area and large numbers of people (Microsoft 2006, Encarta Dictionary). Famine comes from the Latin word *fames* which means “hunger”. In this study, the terms food insecurity, hunger, and famine will be used interchangeably to reflect severe shortage of food caused by one or more factors.

In order to achieve food security, the cumulative availability of physical supplies of food should be sufficient, households should have adequate access to those food supplies through their own production, through the market or through other sources, and also the utilization of those food supplies should be appropriate to meet the specific dietary needs of individuals (USAID, 1999).

Food insecure individuals are said to be afflicted with hunger. Several attempts have been made to try and solve the famine problem in Kenya. There are strategies used by various external stakeholders involved in the fight against hunger. These external strategies in this study are referred to as “Top-down” strategies or “Strategies from above”. “Bottom-up” strategies or “Strategies from below”, or “Internal strategies” in this study, refers to the strategies undertaken by the community.

### **1.1.3 Natural Causes of Food Insecurity**

Food insecurity (famine/hunger) is caused by unavoidable natural factors (acts of God), which include hostile climate conditions like low rainfall and drought in arid and semi-arid lands (ASALs), and low agricultural productivity due to poor soils, which are deficient in vital plant nutrients. Natural disasters like floods, locust, birds and armyworm invasions and others like earthquakes and landslides are also major contributing factors to famine. Droughts, floods, and forest fires constitute some of the major natural causes of hunger because under these circumstances food production is curtailed. In industrialized countries, poverty typically prevents people from obtaining food. In developing countries, the factors that contribute to food insecurity include poverty, low crop yields, and unfavorable policies economic policies.

### **1.1.4 Drought and Food Insecurity**

Drought is singled out as one of the natural disasters having the greatest socio-economic impact and affecting the greatest number of people. In the event that drought leads to famine, more people are affected and this disrupts day-to-day activities of households, villages, communities and even governments. Extreme cases of famine lead to loss of life, for both human beings and livestock. It is, therefore, a major community and government concern to achieve sustainable food security. Famines are sometimes pronounced "national disasters" demanding attention from affected communities and governments concerned. When governments are overwhelmed by the occurrence of famine, external assistance is often sought from the international community who serve as donors to alleviate hunger through a network of agencies.

The drought phenomenon has a direct relationship with food insecurity, especially for peasant farmers who depend on rain-fed agriculture for their livelihood. The frequency of droughts and floods in Kenya has increased in the last three decades, with more pronounced effects in ASALs. This has caused crop failure, loss of livestock and increasing land degradation, further exacerbating the effects of drought and floods (SRA, 2004:16). This could be attributed to overexploitation of natural resources with no consideration for the survival of future generations.

Communities suffer from hunger due to either natural or man-made causes. However, strategies to mitigate the hunger situation receive reactions from within (internal) and without (external). In semi-arid areas, delayed rains or rain failure is a common and frequent cause of food insecurity. A newspaper extract is quoted to show the impact of drought in Mwea: “Hundreds of people in the semi-arid Mwea Constituency may starve due to rain failure”...“Pupils drop out of school due to food shortage” (Daily Nation, Friday July 4, 2008: 39). This situation is inevitable and rains are bound to fail or delay repeatedly in future.

Evaluation of both internal and external strategies will reveal the reasons for lack of success or sustainability. This study is necessary in order to find out reasons for persistent food shortages in spite of interventions.

### **1.1.5 Artificial Causes of Food Insecurity**

Artificial causes of hunger include population growth, wars, debt, ethnic conflict, misuse of natural resources, flawed economic and political systems, civil wars, unfair trade policies by Northern nations having negative impact on food security in the South. World Bank (WB) and International Monetary Fund (IMF) policies e.g. Structural Adjustment Programmes (SAPs) which do not put enough emphasis on relieving hunger and prefer the “relief food” or project approach which offers temporary relief and genocidal governments which make deliberate decisions to marginalize some communities, among others. Some scholars claim that natural causes of famine have been overtaken by artificial (man-made) causes in terms of importance. “Over time, the natural causes of famine like drought, floods, pests and diseases that lead to crop failure and animal death – have become relatively less important” (Bender, 1995:55).

### **1.1.6 Impact of Famine on Communities**

Countries and communities have to adopt various famine coping strategies which complement each other since there is no single solution to the problem. Some of the most important strategies include ensuring adequate food supplies in terms of quantity, quality and variety of food, optimizing stability in the flow of supplies and securing sustainable access to available supplies by all who need them (Okoth, 2006).

Famines retard progress by interfering with social and economic activities that enhance community development as indicated by this newspaper extract: "SIX MPs have urged the Government to revive the school feeding Programme due to a looming famine in Ukambani. They said yesterday the Programme would keep students in school...Unless this is done; there will be massive drop-out in schools" (The Standard, Thursday June 19<sup>th</sup>, 2008).

### **1.1.7 Dependency Syndrome and Food Security**

The study is based on the assumption that external stakeholder strategies (Top-down) strategies have also lacked community participation and hence suffered apathy, lack of ownership and consequent unsustainability. Concentration on relief food distribution is assumed to have caused dependency in the local community and breakdown of community (Bottom-up) strategies. One of the study hypotheses is: External stakeholder strategies have led to food insecurity. This will be tested for validity or rejection.

Distribution of relief food handouts during food crises is at times necessary and desirable when done as a risk management strategy. Relief food as an emergency measure to save lives is not condemned. Both natural and/or artificial disasters do occur and call for emergency relief operations which involve provision of food, tents for temporary shelter, blankets, and other basic necessities. What exacerbates food insecurity is when external stakeholders who issue relief food do so as a business, so to speak, and continue distributing food even when there is no emergency. This encourages communities to phase out their own homegrown coping strategies and renders reliant on the relief food which is inadequate.

Some NGOs also issue relief food even when the communities have ample harvest in order to ensure they remain in employment. This has raised heated debates with Ministry of Agriculture (MoA) staff that disseminate technologies to empower rural peasants. It is also worth noting that recipient communities are not consulted on type of relief food they would prefer. Relief food is on record as having been sold after distribution to hungry people due to unacceptability caused by lack of prior consultation with the community.

### **1.1.8 Entitlement to Food**

Producing enough food does not guarantee that the people who need it are able to get it. If people do not have enough money to buy food, or are not able to afford the factors necessary for food production (land, labour, and capital), or if natural or artificial (man-made) disasters such as drought or war prevent them from getting food, then they are at risk of food insecurity or under nutrition. Sen. (1985) refers to this situation as "entitlement to food. Lack of entitlement to food occurs even when there is an adequate food supply.

This study will evaluate strategies undertaken by internal and external stakeholders in Mwitika division of Kitui district. The division was selected as a study site because it exhibits the highest degree of poverty in the district (73%). Following the argument of poverty and food insecurity, the poorer people are, the less entitled they are to food. The community will, therefore, reveal the reasons behind persistent food insecurity in Kitui district.

### **1.1.9 Sustainable Development and Food Security**

According to Kabwegyere and Migot-Adholla (1981), three factors were found to be necessary and sufficient for any development to occur. These were identified as growth, distribution, and participation. With respect to food security, local communities need to be involved in project identification and implementation. This will harness their potential as they participate and own the process. Apathy will be minimized and sustainability will be realized. Another study assumption is that community participation has not been incorporated in external stakeholder strategies. This has led to wrong diagnosis of community problems, lack of ownership, apathy, and unsustainability of projects and programmes, resulting to persistent food insecurity situation in Kitui district.

### **1.1.10 Strategies by External Stakeholders (Top-down Strategies)**

The major external stakeholders in food security include the Government of Kenya (GoK) through the relevant Ministries and government Departments such as Ministry of Agriculture (MoA), Office of the President (OP) Department of Relief and Rehabilitation (DRR), Department of Disaster Response and Management, Ministry of Water Development, Ministry of Livestock Development (MoLD), Ministry of Fisheries Development, among others. Civil Society comprise of NGOs, CBOs, FBOs, Human



Rights Activists, Environmentalists, local communities and international agencies. Donors like the World Bank (WB), World Food Programme (WFP), IRC and the private sector, among others.

GoK, through the various implementing Ministries, provides technical support, capacity building, and farm inputs to the community whenever possible. This means that it is not always possible and as such, the community can only hope to receive relief food and other kinds of support. The Government also provides an enabling environment through appropriate supportive policies.

Other external stakeholders in food security are Non-governmental Organizations (NGOs), which are part of the civil society. They provide community services which include capacity building, famine relief food during emergency periods, as well as farm inputs. Community-Based Organizations (CBOs) provide capacity building to the communities; while Faith-Based Organizations (FBOs) provide relief food, mostly through corresponding churches.

The Catholic Church, through Catholic Relief Services (CRS), has played a major role in the fight against drought and famine in Kitui district. Assistance offered has been mainly through provision of famine relief food (Mutie, 1993). The “relief” strategy has taken precedence, perpetuating dependency in the community and led to breakdown of community mitigation measures to fight hunger.

Donors are also external stakeholders in food security. They provide funds for implementation of food security projects as well as farm inputs. Donors also “donate” famine relief food to manage food security disasters. Some of the famine relief organizations include The International Red Cross (IRC), which was founded in Switzerland in 1864. This organization mobilizes relief resources both within and between countries. The United Nations Relief and Rehabilitation Administration were established in 1945 (Encarta Dictionary, 2006). Relief is usually in form of food handouts distributed to needy communities to alleviate hunger. Their strategy will be evaluated to find out why it has not managed to solve the problem.

In July 2004, President Kibaki declared famine a national disaster in Kenya. On 26<sup>th</sup> August, 2004 an estimated 1.8 million people in Kenya were declared food insecure and were to be targeted with food aid from August, 2004 to January 2005 (FEWS/NET, 2004). Due to this crisis, 26 districts in Kenya, including Kitui, were labeled highly food insecure and were to receive food assistance from World Food Programme (WFP) in partnership with Office of the President (OP). This reflects the traditional GoK strategy of famine relief distribution. This is yet another proof of the “relief” strategies from above which serve to create dependency and weakening of community coping strategies. It is not a community strategy and as such lacks ownership and sustainability. The only form of participation is in queuing up to receive the relief food handout. It is an exhibit of unsustainable food security strategies from above. No community participation was solicited.

The private sector also contributes in the fight against hunger as an external stakeholder. Merchants provide supplies and inputs required by farmers. They also purchase their farm produce. They do so within an environment regulated by market forces of supply and demand. Market forces are in turn dictated by prevailing policy framework, which affects food prices, among others. “The private sector will be called upon to steer development especially in marketing, credit provision and other services” (KDDP, 2002-2008:31-32). The corporate agencies also make their “relief” contributions when hunger strikes. These activities are referred to as “social responsibility”.

External stakeholders mainly adopt the relief food distribution strategy. Relief food on its own is not adequate and affected communities and governments need alternative sustainable mitigation measures. As recently as July, 2004, a Presidential appeal was made to the Donor community to give famine relief food to Kenya. The local community has apparently not been sensitized enough to fend for themselves. They have also not been involved in making the “relief” decisions which include preferred type of relief food, quantity, delivery points, and proportions. Community participation has been minimal and as a result, a chronically food insecure community has persisted from independence to date. Development is defined as an “expansion of choices” (UNDP, 1980) and as such, it cannot occur when choices are not there to be made during famine situations.

### **1.1.11 Strategies by Internal Stakeholders (Bottom-up Strategies)**

Communities, likewise, also resort to their own coping strategies in order to fight hunger. Community strategies are referred to as: “bottom-up strategies”, “strategies from below or “internal strategies”. The local community has a role to play by providing cooperation, participation, ownership, and cost- sharing, either in cash or kind. They should also be involved throughout the whole process of fighting hunger and achieving sustainable food security. Internally developed strategies are self-perpetuating and enjoy support and participation from the affected community members. The community has ownership and hence feels obliged to sustain them.

In the most recent development blueprint for Kenya (Kenya Vision 2030:1), participation and consultation have been emphasized and the government involved “Kenyans from all parts of the country”. The *Vision* is based on three pillars namely: The Economic, The Social, and The Political. Overall development means that the three factors must improve. Social development is impossible to achieve without achieving food security. The point of departure for this study is based on the assumption that external strategies have failed to achieve sustainable food security and it is high time rural community strategies were given a chance; identified, given due recognition, supported , and disseminated to the wider food insecure communities in the country.

### **1.1.12 Community Potential in Rural Development**

Community potential if identified and harnessed could achieve sustainable development. External stakeholders have not encouraged participation so that lessons learnt from specific projects can be wider disseminated for higher impact and long lasting effects. Releasing community potential or empowering the community to solve their own problems (Bottom-up approach) is an approach that is gaining popularity the world over after Top-down approaches have failed to realize sustainable development. According to Daily Nation, Monday 15<sup>th</sup> September, 2008 page 9 entitled *Villagers switch on the power*: “When residents of a remote village in failed to convince the state-owned power company to supply them with electricity, they did not despair –they built their own power plant”. This shows that communities can go to great lengths to achieve their goals and when they do not get what they want, they resort to homegrown mitigation measures. No wonder then that charcoal burning, sand harvesting and deforestation have cited as food insecurity coping

strategies in Kitui district. Through bonding (linkages within the local community) and bridging (inter-linkages with external stakeholders), a strong social capital will be created and synergy of the two strategies will be realized. This will consequently achieve sustainable food security.

### **1.1.13 Synergy of Top-down and Bottom-up Strategies**

The second hypothesis in this study is: Supporting community strategies leads to sustainable food security. This study will evaluate food security strategies undertaken by local communities in Kitui district. Top-down (strategies by external stakeholders) and Bottom-up (strategies by internal stakeholders-the local community) approaches will be assessed in order to identify those that support or undermine sustainable food security. The study hypothesis will be tested and possible synergy will be considered.

## **1.2 Problem Statement**

Since Kenya's independence (1963), the four major development goals of national importance were: Eradication of poverty, hunger, disease, and illiteracy. The Millennium Development Goals (MDGs) currently reiterate the high ranking of poverty and hunger as major hindrances to overall development. Indeed, MDG number one reads "Eradication of Extreme Poverty and Hunger". This is evidence that the goals have never been achieved, more than forty years after independence.

Hunger (food insecurity) is a community problem that has remained unsolved as cited in the chronology of famines in Kitui District (Akong'a, 1985). "Food is the most basic of human needs, and mechanisms to cope with periodic food shortages are features of the earliest social systems" (Bender, 1995:55). The communities in Kitui District have been experiencing a condition of chronic food insecurity due to persistence of drought and famine. Food supplies have been persistently insufficient to provide adequate nutrition for all members of the community (Akong'a, 1985 and Mutie, 1993). Food is one of the most basic human Right and this being the case, this community has experienced the food insecurity problem from pre-independence to date.

### **1.2.1. External Stakeholders and the Project Approach**

Kitui district remains food insecure despite the efforts made by external stakeholders in food security. These include NGOs, FBOs and GoK, among others. The presence of World Food Programme (WFP), Action Aid, United Nations Development Programme (UNDP), CARE- Kenya.), World Vision, Kenya Red Cross , Kitui Agricultural Project ( KAP), Kitui Integrated Development Project (KIDP), Eastern Province Horticultural and Traditional Food Crops Project (EPHTFCP), Integrated Tree Crops into Farming Systems Project (ITCFSP), and Arid Lands Resource Management Project (ALRMP), Danish International Development Agency (DANIDA) which is funding and implementing the Agriculture Sector Programme Support (ASPS), to mention but a few, has not been successful in achieving sustainable food security in Kitui district. These players have persistently used the “Project Approach” to avert crises as they arise.

The Project Approach been used to solve community problems with little participation of the beneficiaries in decision making. The Approach has consequently suffered lack of ownership and apathy and leaves the community with little to show upon expiry of the project period. This is not in tandem with the principles of sustainable community development. “Top-down “strategies need to be evaluated to find out what causes discontinuity of the food security situation and resultant futility.

The Project approach is not to be wished away in the fight against hunger. If accurate problem identification is done and the community involved in solving it, the projects will be self perpetuating and will be replicated even after expiry of the project term. The reasons why this has not happened are the point of departure for this study.

### **1.2.2 External Stakeholders and Relief Food Strategy**

According to Mutie (1993), the Catholic Church, through Catholic Relief Services (CRS) played a conspicuous role in an attempt to alleviate famine or food insecurity in Kitui. However, community involvement was only at recipient level and hence their participation was minimal. This did not solve the problem and food insecurity in Kitui district is still a challenge.

Food insecurity in the study area is exhibited and handled in the same manner as it was in past (famine relief food handouts and appeals to Donors for aid). Communities continue to use available resources to get food but their strategies have been weakened by the dependency syndrome. Meanwhile, overall national development is retarded. This situation calls for urgent attention. In view of these sentiments, this study is timely. It is a natural desire for human beings to search and find food in order to fulfill the physiological need of hunger. We all want “access to food by all people at all times” (FAO/WHO, 1992).

Top-down strategies cited above have been unsuccessful. They have, instead, created a growing dependency and a community that waits to be bailed out of hunger if and when it strikes. This has resulted to negative effects on food security, causing the community to resort to fatalistic and environmentally destructive coping strategy. There is also the uncertainty about availability of the food in future needy situations. Human development has been described as an expansion of choices (UNDP, 1999). No wonder then that it is said that “beggars are not choosers”. Free food handouts have led to breakdown or weakening of community famine coping strategies, reducing them to “dependent beggars” for food aid. This is one of the major points of emphasis in this study, and it will be probed to establish its validity or otherwise.

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Despite many efforts using top-down food security strategies (strategies by external stakeholders), food insecurity continues to plague many ASAL communities in Kenya, including those in Kitui district. Famine, or severe food insecurity, causes devastating effects through untold human suffering, which at times leads to loss of life for both human beings and livestock. Many studies have been done on drought and famine in Kitui by a number of scholars. These include Mutiso (1979), Goldschmidt (1981), Adholla (1980) Akong’a (1985), Awuondo (1990, 1994), Muhwang’a and Leparteleg (2004), Mutie. (1993), and Yambo (1992), among others

### **1.2.3 Internal Stakeholders’ (Community) Strategies**

The community in Kitui district has also undertaken their own internally developed strategies to address the persistent food insecurity. Community coping strategies are referred to in this study as Bottom-up strategies or “Strategies from below”. These range from charcoal burning, making and sale of sisal products (Akong’a, 1985), sand harvesting,

deforestation (for firewood and timber), prostitution (Mutie, 1993), among others. Bottom-up strategies are participatory, voluntary and enjoy ownership; they are also sustainable in that they are self-driven and do not need coercion. However, it is noted that communities will get food at whatever cost, even if, unfortunately some of those ventures turn out to be socially undesirable or environmentally destructive. This vibrant effort to survive is powerful and could overcome food shortages if deliberately harnessed.

GoK has recognized the importance of community participation in sustainable development. According to the most recent Kitui District Development Plan (KDDP), district planning has been undertaken to supplement the District Focus for Rural Development (DFFRD) strategy which is currently being revitalized “to ensure that an effective bottom up delivery system that facilitates two-way communication between the community and development partners through the administrative hierarchy in the district as well as that at the national level is established. In order for this Plan to be more effective than before, communities will be actively and fully involved in the entire planning process from selection, implementation, monitoring and evaluation” (KDDP, 2002-2008).

Akong'a (1985) cites charcoal burning as a community famine-coping strategy which was nicknamed “Yua ya makaa”. There is no mention of a community initiative to replant trees and restore status quo. This strategy is not sustainable and is environmentally destructive. In the recent wake of the effects of global warming and climate change, the community strategy is undesirable. In the Proposed New Constitution of Kenya, environmental conservation is highlighted as the right for every person to “promote conservation and secure ecologically sustainable development and use of natural resources, while promoting economic and social development” (Kenya Gazette Supplement, 2005: 43). Environmental conservation is also emphasized in MDG number 7: Ensuring Environmental Sustainability.

Mutie (1993) cites prostitution by women in Kitui as a strategy to secure food for their families. The strategy was nicknamed it “Yua ya mukate”. This is unacceptable behaviour among the Akamba community and was only undertaken as a last resort in the desperate attempt to get money to buy food. It is evidence of social norms breakdown and not a desirable strategy. Increasing incidence of HIV/AIDS, malaria and waterborne diseases are

highlighted as some of the constraints to agricultural growth which results to food security (SRA, 2004:18). Prostitution, as a food security strategy, will exacerbate infection and affection by HIV/AIDS, leading to deterioration in health and consequently undermining overall community development. The extent of prostitution as a coping strategy will be investigated.

Entitlement to food by the community is one of concepts in the study hypotheses. Sen (1985) posits that people starve when they lose their entitlement to food. This mainly occurs due to poverty, though poor food distribution, policies and infrastructure are also among significant contributing factors. Thus, a sudden increase in food prices, a drop in laborers' incomes, or a change in government policy can create hunger for millions even in the absence of the more familiar causes of food shortage: droughts, floods, pests or armed conflict. A change in food security strategy is needed and this starts with evaluation of external and internal strategies.

The Mwitika community members exhibit 73% poverty and are most vulnerable to hunger and famine due to their lack of entitlement to food (Sen, 1987). This study is an attempt to find out why this community has lacked food entitlement from independence to date.

#### **1. 2.4 Possibilities of Synergy**

Both strategies from above and those from below have been found wanting since they have not managed to arrest the food insecurity situation in Kitui district. Strategies from above have addressed the problem mainly through distribution of free food handouts during major food crises or famines as was experienced in 1961 and 1965 (relief food was distributed by GoK helicopters and the community nicknamed the famine "Yua ya ndeke"; followed by "Yua ya atta" when atta flour was dished out as famine relief food (Akong'a, 1985). Community participation has been minimal except as recipients of relief food. Though agricultural research and extension services have been operational since independence, sustainable food security in Kitui district has not been realized and we are yet to see the green revolution in Kenya. Coordination of the multiple players in food security has not been implemented for cost-effectiveness and greater impact.



### **1.3. Research Questions**

The study will attempt to answer the following research questions:

- 1) What are the food security strategies undertaken by the community in dry areas?
- 2) To what extent are food security mitigation measures by external stakeholders successful?
- 3) Which strategies should be adopted to ensure sustainable food security in dry areas?

### **1.4 General Objective**

The general objective of the study is to evaluate food security strategies in Kitui district.

#### **1.4.1 Specific Objectives**

- 1) To evaluate food security strategies undertaken by rural community in Kitui district
- 2) To evaluate food security strategies used by other stakeholders in the district
- 3) To find out which strategies should be adopted to solve the food insecurity problem

### **1.5 Justification**

Food insecurity or famine is a problem that has persisted in Kitui district since independence. The effects are more pronounced in the areas with high poverty incidence as the poor members of the community are more vulnerable and have less entitlement to food (Sen, 1985). External stakeholders who have worked in Kitui district and some still working in the study area (Mwitika division) include: GoK through Kitui Agricultural Project (KAP), Kitui Integrated Development Project (KIDP), Integrated Tree Crops into Farming Systems Project (ITC/FSP), African Medical Research Foundation (AMREF), African Development Bank (ADB), Adventist Development for Relief Everywhere (ADRA), National Agriculture and Livestock Programme (NALEP) funded by Swedish International Development Agency (SIDA) and Njaa Marufuku Kenya (NMK) project funded by the World Bank, among others. The food insecurity problem has been with the community from pre-independence to post-independence (Akong'a, 1985).

The Government continues to spend a lot on purchase and distribution of relief food, not to mention time and human resource engaged in this activity at the expense of other

development ventures. GoK, FBOs, NGOs and the community have all been fighting a losing battle against hunger in Kitui district and evaluation of internal and external strategies to identify strengths and weaknesses is urgent.

A recent policy document highlights the food insecurity situation in the country and sheds light on how much it costs the Government to give relief food to the food insecure communities in Kenya. "The incidence and prevalence of food insecurity is more severe in ASALs due to lack of adequate resources endowment. For their survival, the food –poor depend on the relief food provided by the government and non-governmental organizations (NGOs). It is estimated that the government spends around US\$ 40-65 million annually on famine relief; and the figure is even much bigger when famine relief support by NGOs is taken into account" (SRA, 2004). There is a justifiable need to feed the Kitui community using environmentally friendly, socially acceptable and economically viable strategies. Policies have been based on relief distribution during famine, projects have addressed the symptoms rather than the disease and community strategies have lacked the necessary support needed to flourish. All this has led to a cyclic food insecurity situation in Kitui district. There can be no community or national development without food as it is one of the most fundamental human Right.

Food insecurity has remained a community and national problem which is yet to be solved. Since food is a basic human right, the food security crises must be urgently addressed from a different perspective before the situation gets out of control. There can be no development without food security. Timberlake (1986:207) appreciates the skills and indigenous knowledge and experience of the farmers over the years. "So, just as the skills and resourcefulness of peasant farmers are beginning to be appreciated, just as it is becoming clear that Africa cannot develop without them, there may be less aid available to back up their efforts, less aid to get practical research applied to their real needs, less aid to protect their lands and to guard the health and nutrition of their families."

In Kenya, the National Cereals and Produce Board (NCPB) has not been able to avert food crises as envisaged. There is an urgent need to store food in both large scale capacity by GoK, as well as small scale efforts by the local community in Kitui. Situation of severe food shortage and at times starvation as was experienced in 1980s ("Nikwa ngwete") due to

poor food distribution should be avoided at all costs. This calls for external and internal interventions.

The study justifies the need to evaluate and food security strategies undertaken by the community and other stakeholders in order to find out why both strategies have not attained a food security situation in Kitui district from independence to date. Emphasis will be laid on community participation and ownership of either strategy to ensure sustainability. Evaluation of the two strategies will reveal what requires to be done as well as identify areas of strengths and weaknesses in both mechanisms. The overall goal is to identify and recommend strategies that will be socially acceptable, environmentally friendly and those that will also stand the test of time in their effectiveness, that is; sustainable.

## **1.6 Scope, Limitations and Assumptions**

### **1.6.1 Scope**

The study focused on evaluation of food security strategies in Mwitika division of Kitui district. Past and current food security strategies undertaken by internal stakeholders (community), as well as those used by external stakeholders were investigated. Factors contributing to failure of the strategies were identified. The study attempted to find out which strategies could be further developed to achieve food security. . Samples were drawn from all the sub-locations of two out of four locations in Mwitika division. The results were generalized to the rest of Kitui district. The study findings could not be extrapolated to all the ASAL districts of the Kenya since the area covered was not representative of all ASAL districts in the country and other communities adopt different strategies.

### **1.6.2 Limitations**

The study will be limited to food security strategies undertaken by the community and external stakeholders in Kitui district, using indicators as identified by USAID, 1999. This study is limited by time, finances, and personnel and will therefore rely mostly on quantitative data that will be collected from the farming community and key informants representing GoK, NGOs, FBOs and community leaders in the Mwitika division. Mwitika division represents communities that face food insecurity under 73% poverty levels, which is the highest, recorded in the district (see Table 2).

### **1.6.3 Assumptions**

- 1) The major assumptions of the study include:
- 2) External food security strategies lack community participation and ownership
- 3) External food security strategies focus on giving free food handouts and have created dependency in the community
- 4) Internal food security strategies ensure community participation and create ownership
- 5) Ownership of food security strategies by the community creates sustainability
- 6) In areas where the community is organized and mobilized to combat food insecurity collectively, sustainable food security has been achieved
- 7) Synergy of the existing strategies has not been realized

### **1.7 Definition of Key Terms**

- 1) “External Strategies”: food security strategies undertaken by other stakeholders apart from the community (strategies from above, top-down strategies)
- 2) “Internal Strategies”: food security strategies used by the community to fight hunger (strategies from below, bottom-up strategies)
- 3) Enhancing: Strengthening through giving support either through material, financial or enabling environment
- 4) Bonding: Community members forming linkages with other members from within in order to fight hunger
- 5) Bridging: Community members forming linkages with other external stakeholders in food security
- 6) Social Capital: Bonding and Bridging
- 7) Sustainable: Long lasting, long term, able to duplicate
- 8) Food Security: When all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life (USAID, 1999).
- 9) Poverty: The inability to meet basic needs, such as food, shelter, clothing and medical services (KDDP 2002-2008:22)
- 10) Famine: Acute food insecurity

- 11) Relief Food: Food that a household acquires from sources outside their food economy (normally Government, the UN, NGO, FBO, etc) and is a handout, creating dependency-not sustainable
- 12) Food-For-Work: Food-for-Work programs use food aid as payment for laborers in public works programs designed to build and maintain local infrastructure (e.g., roads, dams, wells, latrines, schools).
- 13) Release (Empower): Increase the ability of the community to cope with the difficulties of life e.g. accessing food, water, shelter, health, education, etc.
- 14) Sustainable Development: Development that takes care of the needs of the present generation without compromising the ability of future generations to meet their own needs (Bruntland, 1987)
- 15) Food Insecurity: Lack of food and entitlement (absence of permanent source of income to buy food). Food insecure households are the poor and the destitute that depend on rain-fed agriculture, hence get affected by drought repeatedly
- 16) Famine: Severe shortage of food generally affecting a wide area and a large number of people
- 17) Community Self-Reliance: The ability of the community members to depend on themselves for most of their needs and requirements both socially and economically
- 18) Household: A group of persons who normally live and eat together, whether or not they are related by blood or marriage (Akong`a, 1985).
- 19) Coping Mechanisms: Responses of an individual, group or community to challenging situations to minimize risks or loss (Young 1998). In this study, the term refers to activities undertaken by the community to fight hunger
- 20) Food Security Strategies: same as coping mechanisms and refer to measures undertaken to achieve food security or fight hunger (famine)
- 21) Disaster: The occurrence of a sudden or major misfortune, which disrupts the basic fabric or the normal, functioning of a society or community. An event or a process that gives rise to casualties and or damage to property, life and infrastructure or means of livelihood on a scale that is beyond the normal capacity of the affected communities to cope unaided (Davis and Wall, 1998)
- 22) Dependency: The reliance on handouts by the community from GoK, NGOs, FBOs, or others, to meet socio-economic needs especially with regard to food security

- 23) Food Crops: Maize, beans, sorghum, millet, cassava, sweet potatoes, cowpeas, pigeon peas and green grams
- 24) Livestock: These comprise of cattle, goats, sheep, chicken and donkeys
- 25) Impact: Results which occur at the beneficiary-level and can be directly attributed to external stakeholder or community strategies, rather than external factors
- 26) Indicators of Food Security: Based on food availability, food access and food utilization
- 27) “Yua”: Famine, extreme or severe food shortages

## 2.0 CHAPTER TWO: LITERATURE REVIEW

### 2.1 Previous Studies on Food Security

Literature review involves getting familiar with work done by others to avoid re-inventing the wheel, leaving gaps, and getting insights on suggested further research areas.

Mutiso, (1979) carried out a study in Kitui district and observed that “development” in the dry areas has been in form of treatment of the symptoms of the problem while not addressing the real causes. Activities like de-stocking, controlled grazing, borehole sinking and philanthropic “famine relief” dished out to the people have all been temporary in famine alleviation. This is due to lack of the sustainability element, which can only be effective with people’s participation at the onset of problem solving.

The uncritical replication of programmes, only suited for the wet climate (Goldschmidt 1981, Migot – Adholla, 1980) have led to increased ecological degradation, lowering of the water table, loss of water points, springs, salt licks and primary vegetation and desertification in general. The project approach to solving the famine problem is, therefore, unsatisfactory and ineffective.

A study on the food security situation in Turkana district, external interventions and drought and famine management strategies was conducted by Kareithi, (2000). Some of the community’s coping strategies identified included nomadic migration of people and their herds, storage of food and fodder, diversification of economic activities, seeking relief from Donors like GoK, relatives and friends, placing some household animals under the care of other households, and splitting the family to put some members under the auspices of better-off households. However, when households were asked about their main sources of subsistence during the last famine, most of them (more than twice as many) looked up to government and donor agencies for support (28.2%) as compared to 11.5% who relied on friends and relatives. This reflects “dependency” as opposed to community self-reliance.

Kareithi, (2000) also recommended proactive management of drought and famine, taking advantage of good years to reduce severity of famine impact during bad years. This, he noted, should be the core of development planning. Since then, policies have been

formulated and strategies implemented but food insecurity still persists in Turkana today, as in Kitui, West Pokot and in many other ASAL districts in Kenya.

Blanket distribution of relief food was discouraged and proper identification of the needy was emphasized. For this purpose, Kareithi (2000) suggested free relief food, food-for-work and subsidized food as the categories necessary for fair distribution. Free relief food was only for those who were too weak to engage in food-for-work projects or too poor to afford subsidized food.

Awuondo, (1987: 18) identified various “non-pastoral pursuits” as coping strategies among the Turkana. Some of these include trading with other people where they would barter cattle for sorghum, migration, pawning of women, fighting as paid mercenaries, and sale of female children. Awuondo, (1987:2) noted that “During the 1979 – 80 droughts the Turkana and Kitui Kamba were among the worst – hit victims.” He further noted that droughts and famines are expensive in terms of crop failures, human and livestock deaths, as well as costs incurred in famine relief procurement and distribution. Social costs are highlighted as the most devastating.

With respect to man – made causes of famine, Awuondo, (1987: 3) identifies various factors that need to be urgently addressed. These include review of Africa’s food policies, academic studies to provide data for use in planning and restructuring of food production methods, improvement of storage facilities, strengthening of food distribution networks, as well as systematic studies on drought and famines with particular emphasis on pastoralism. In view of the above concern, this study is timely.

Famine relief is an indirect cause of famine persistence as it contributes to dependency syndrome. It causes more vulnerability (Muhwang’a and Leparateg, 2004). Awuondo, (1987:21) agrees by stating that “The evidence in the literature suggests that outright gift of food to the famished families was never an efficient mechanism for weathering the food crisis”.

The Project Approach to development has been found wanting by both Kareithi, (2000) and Mutie (1993). Kareithi, (2000: 250) states “...general experiences of development projects



In the district show an overwhelming dependency on outsiders through donor funding. This dependence has led to discontinuities in long-term development programmes when donors decide to withdraw their support. Furthermore, this trend gives donors an upper hand to determine the local priority areas to develop, which may not be consistent with the national priorities for such regions. For example, all the livestock projects started in the mid – 1980s were abandoned in 1990 when NORAD, (the main donor), withdrew funding following Norway’s criticisms of Kenya’s human rights record”. Physical infrastructure was also cited as a constraint as this limited access to the projects. It also affected interaction and linkages between the district and other regions of the country.

Mutie, (1993) notes the persistence of droughts and famine as one of the factors responsible for the ‘low standards of living’. The Akamba community goes as far as naming their children after major famines to remind themselves that this particular child was born during a famine or drought period. Some of these names include Wayua, Munyasya, Munyao, Komu, Kanyaa, Mumu, Mumo, among others. Muthama was a name used to indicate “shifting” and people migrated in search of food. Migration today is not viable due to population pressure and land fragmentation. This is the reason why coping mechanisms suitable for sedentary livelihood have to be developed.

Awuondo, (1987:136) concluded by emphasizing that drought and famine were issues of national importance and a national institution should be put in place to monitor famine situations and alert relevant authorities in time. It is worth noting that this has already been implemented and Kenya now has a Famine Early Warning Systems Network (FEWS/NET) as well as a policy draft on ASAL areas, not to mention the national and district level institutions that have been set up for drought early warning and monitoring.

## **2.2 National Policies and Food Security**

After independence, the first two decades were of rapid economic growth of key sectors like agriculture, industry and services. The benefits did not, as envisaged, automatically trickle down to the people. This was the view that informed policy direction for years, and is one of the major reasons for the high increase in income inequality and poverty in Kenya (Wambugu and Kibua, 2004:1). Poverty is in essence lack of entitlement to food and poor people are more vulnerable to famine and food insecurity in general.

The nine National Development Plans (NDPs) from independence to-date all targeted achievement of rapid economic growth to raise the standard of living. This was to be achieved through sustainable socio-economic development which was to address self sufficiency in food at household, community and national level, among others. Going by recent occurrences in the country with regard to food security, this is far from being achieved. No country has ever achieved the “developed” status without being able to feed its citizens. Kenya’s economy is still dominantly reliant on agriculture and the importance of sustainable food security cannot be over-emphasized.

In the Strategy for Revitalizing Agriculture (SRA 2004-2014, 2004:1), a recent policy being implemented by the Ministry of Agriculture, it is clearly stated that the famine problem still exists and is current: “The strategy envisages improved standard of living of Kenyans, and hopes to reduce substantially the number of people now suffering from hunger, famine or starvation, which is one of the goals of the Millennium Development Goals pledged to be achieved by the United Nations (UN) member countries, by the year 2015”.

Another important document that has been prepared to chart out the way forward in development for Kenya is: Kenya Vision 2030. This policy document is in agreement with ideas brought out in this study which point towards a food insecurity situation that is exacerbated by socially constructed reasons. The three key pillars are identified an economic, political and social. The Social strategy is based on “investing in the people of Kenya” where all citizens will enjoy “equitable social development in a clean and secure environment”. Indeed the importance of the community is more than emphasized. Further, it is accepted that some communities need, deserve, and are entitled to “special provisions” since they were “previously marginalized” (Kenya Vision 2030:16). This is a big leap towards community development if implemented as envisaged.

It is evident that from independence to date, the war against hunger is far from over. Kenya is still food insecure and planning to distribute famine relief as a food security strategy.

### 2.3 The Famine Phenomenon

According to Bender (1995:54), studies of major modern famines in human history are recorded as famine in the Soviet Union (1932-1934), the Bengal Famine in India (1943), famine in China (1958-1961) and famine in Ethiopia (1972-1973 and 1984-1986). It is noted that famines can and do occur even when food is available. This happens when large numbers of people lose their capacity to produce, purchase, exchange, or receive food (Sen, 1985). "Famines are created by policies, not by pests or droughts" (<http://allafrica.com/stories/200610170484.ht>).

According to Sen (1987), The Entitlement Approach views famine as not arising from a lack of availability of food, but instead it arises from a lack of command over food. He argues that it is due to entitlement failure that famine has persisted in Sub-Saharan Africa. He further compares grain availability per person and observes that it was about the same as in India, where he notes that famine has been successfully averted so far.

The Indian Famine Commission of 1883 established the best example of a large-scale successful Famine- Prevention System more than a century ago. India has a higher population than Kenya. The active ingredient of that system is jobs (Bender, 1995:204). Bender continues to explain how in this system, during an emergency, the government invokes the basic measures of famine-prevention and guarantees paid employment to all able-bodied people without an income. This is in support of community participation and government support through paid employment and not free food handouts. Further, the government also increases stockpiled food to ensure that grain is readily available at a reasonable price.

It is notable that relief food is not the major food security strategy undertaken by the government. Providing jobs during food crises is an example of community empowerment through government facilitation, hence synergy of strategies.

It is worth noting that the Bengal famine of 1943 was followed by the Green Revolution and India moved on from a relief-reliant country to a food exporting one. Why this has not happened in Kenya and Kitui is the basis for evaluation of what could be the problem with our strategies.

Raikes (1988:69), examines food shortages and famine, how they occur, where and to whom. The famine problems in sub-Saharan Africa “are serious and most agree that it is growing”. The famine situations spell suffering and not just lack of food. They involve breakdown of social set up and loss of human dignity. Coping mechanisms reflect loss of self-pride ( Raikes ,1988:70), when terms like “forget your wife” and “sale of children” by which the Tuareg commemorate past famines. This is also confirmed by Awoundo (1987), Akong’a (1982), Kareithi (2000), and Mutie (1993), who cite pawning of women, sale of female children, and prostitution, as famine coping strategies.

## 2.4 Chronology of Major Famines in Kitui District

Some of the major famines that have occurred in Kitui district are tabulated below. The food security strategies (coping strategies) used to combat famine by various stakeholders are also highlighted.

**Table 1: Chronology of Major Famines in Kitui District**

Year	Local Name of Famine	Cause of Famine	Food Security (Coping ) Strategies
1949/1951	Yua ya “Makonge” (sisal)	Major drought	Sisal products made and sold, free maize flour in exchange for goats, food for work on dam roads
1952		Persistent drought	
1960/1961	Yua ya “Ndeke” (aeroplane)	Insect (nguti) invasion, drought, and floods.	Relief maize (yellow) delivered by helicopters
1965	Yua ya “Atta” (Atta flour)	Persistent drought	Atta flour as famine relief food
1968	Yua ya “Makaa” (charcoal)	Too much rain	Famine relief food both permanent and occasional, charcoal burning
1970/1972		Drought	Relief food, free Katumani seed, irrigation schemes, use of fertilizers and pesticides
1975		Failure of rains	Relief food, relief seed

1980/81	"Nikwa ngwete", "yua ya "mukate" - (Mutie, 1993)	Poor food distribution	Prostitution by women to get money to buy bread ("mukate")
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**Source: Akong'a, (1985) and Mutie, (1993)**

According to Akong'a (1985:73) and O'Leary (1979:84), food shortage is a serious and persistent problem in most of Kitui district. Citing the district's Social-cultural profile, food security strategies have assumed two patterns and they are classified as: Top- down or external strategies (strategies from above). These are the strategies undertaken by other stakeholders apart from the community. The others consist of community strategies and are referred to as internal strategies, strategies from below, or Bottom- up strategies.

External stakeholders' strategies include those from GoK, NGOs, FBOs, Donors, among others. They usually give "relief" during food crises (e.g., *yua ya ndeke*, *yua ya muvunga*, *yua ya atta*), after which they withdraw when the situation normalizes. Sometimes food distribution and not lack of food per se, is the problem. An example is the famine of 1980s (*Yua ya nikwa ngwete*).

Internal strategies include adaptive measures or coping mechanisms undertaken by the community to achieve food security. These include making and selling of sisal products (*Yua ya makonge*), gathering and sale of bones (*Yua ya mavindi*) charcoal burning (*Yua ya makaa*), prostitution (*Yua ya mukate*), sale of female children and pawning of women, among others.

Rampant sand harvesting, deforestation, charcoal burning, prostitution, and other strategies labeled destructive all reflect the potential power of communities to achieve their goal. This energy could be harnessed and turned around to translate into sustainable food security through supportive policies or alternative survival mechanisms. People behave rationally; what would you choose? Sell your female child for food and you both live, or retain her and you both die? Another tough decision: pawn your wife for food and you both live, or retain her and you both starve to death? These are some of the questions that will lie in the

background as respondents are interviewed. Social evils committed because of hunger should be addressed and not merely condemned.

The community used different strategies during different famine periods. This shows that they are able to assess situations and “cope” in the best way possible under the prevailing circumstances. Strategies from above have on the contrary mainly stuck to issuing relief food despite the lack of success of this method. Other Top-down strategies include water harvesting, soil conservation and issuing of farm inputs, especially relief seed. Sometimes relief seed issued is not suitable for the agro-ecological zone. This defeats the “relief” purpose.

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## **2.5 Current Drought Management Strategies and EWS in Kenya**

According to Muhwang’a and Leparteleg (2004:11), the key institutions and organizations that should be involved in the development of food security and drought management policies include: The national emergency coordinating organization(s), appropriate government ministries, appropriate financial institutions, the national Red Cross, voluntary agencies, foreign government missions typically involved in emergency relief and the UN agencies. These agencies focus on famine relief food distribution only during times of famine disasters. Notably, it is the very nature of their strategy and timing that has caused increasing dependency. The saving culture and the continuous fight against hunger have been reduced to “spot checks”. This is the major concern of this study.

The current national level-institutional framework for food security and drought management in Kenya is set up under various committees. These are:

### **2.5.1 The Kenya Food Security Meeting (KFSM):**

It includes all stakeholder organizations at the national level, which have interest in drought management and food security. These encompass Ministries, Donors, UN agencies and NGOs. “Membership of the KFSM is open to all relevant agencies and the GoK encourages participation of all partners” (Muhwang’a and Leparteleg, 2004:15-16).

### **2.5.2 The Kenya Food Security Steering Group (KFSSG):**

It is a sub- group of KFSM and is composed of technical representatives from NGOs, UN agencies, Donors and GoK. It provides technical advisory services to all stakeholders on

issues of drought management and food security. The KFSSG also meets monthly and has restricted membership.

### **2.5.3 The Inter-Ministerial Committee on Drought and Food Security (IMCDFS):**

It is a GoK Committee formed in June 1999, chaired by Office of the President. Members include Ministry of Agriculture, Ministry of Health, Ministry of Environment and Natural Resources, Ministry of Water Resources and the Arid Land Resources Management Project (ALRMP). It coordinates relevant GoK Ministry activities and acts as a two-way channel between the OP and the relevant Ministry in matters concerning food security and drought management. The committee meets as required.

### **2.5.4 Geographical Review Teams (GRTs):**

These are small teams of technical personnel from the GoK, NGOs and UN agencies. These teams were formed in March 1999, while acting upon recommendations from the KFSSG. Currently, they meet on a monthly basis to assess, make recommendations and plan response activities, which mainly consist of relief food distribution. This, again, perpetuates dependency.

GoK has its own internal coordination framework for food security and drought management. The main ones include:

### **2.5.5 The National Food Security Executive Committee (NFSEC):**

Cabinet committee made up of Ministers concerned with food security. The President, who is the final authority on drought management and food security in Kenya, chairs it. It has been proposed that this committee be enlarged to deal with all disasters. The committee assists in decision making on when to declare food insecurity as national disasters and authorize distribution of relief food to victims as well as making international appeals to Donors.

### **2.5.6 The National Food Security Coordinating Committee (NFSCC):**

Committee made up of Permanent Secretaries of key Ministries, chaired by the Head of the Public Service and meets as required.

### **2.5.7 Disaster Management Team / Office of the President (DMT/OP):**

A committee composed of Arid Lands Resource Management Project (ALRMP), Relief and Rehabilitation (R&R) and National Operation Centre (NOC). Its main tasks and responsibilities include: strategic planning and management of emergencies such as famines, floods and sudden onset disaster preparedness, information management and rapid reaction and the integration of relief operations with drought management, among other duties.

### **2.5.8 District Level Structures:**

These include District Steering Groups (DSGs) which are a sub-committee of the District development committee (DDC). The DSG may constitute standing technical working groups.

It is evident that the necessary structures are in place but ironically the community continues to suffer food insecurity. An evaluation of the strategies is necessary to find out how existing structures within the external stakeholders and the community can be utilized for synergy to achieve sustainable food security.

## **2.6 Theoretical Framework**

“A theory is a general statement of fact couched in a way that it is refutable. It is a mental picture of how society is structured, works and changes” (Odegi-Awuondo, 1993:63).

### **2.6.1 Dependency Theory and the Dependency Syndrome**

The dependency theory was developed during the 1960s and 1970s by a group of social scientists in Latin America and the United States. Major proponents include Peter Evans (1979), who raised objections to the modernization theory. *Dependencistas (dependency theorists)* argued that the cause of low levels of development in less economically developed countries is due to their reliance and dependence on the more economically developed countries. It brings out the exploitative nature of developed countries over developing countries. It was later developed to show that dependent development can actually occur when developing countries take advantage of existing structures and resources within their communities.



Following the same argument in food security, communities that continuously rely on other stakeholders to bail them out of their misfortunes will remain unable to tackle their problems in the absence of the anticipated “aid”. The dependency syndrome is an attitude that needs to be eradicated in the Kitui community and replaced with one of “do-it yourself”, which is a more sustainable approach to food security and community development.

External and internal stakeholder strategies have not solved the food security problem in Kitui district. Strategies by both stakeholders have their strengths and weaknesses. The study assumes that synergy of the two strategies has not been realized. Another assumption is that external stakeholder strategies have concentrated on relief food distribution causing dependency in the community and leading to food insecurity. Community coping strategies enjoy ownership and participation. These are the major ingredients of sustainable development.

This study will investigate community strategies which could be enhanced by external stakeholders for synergy and wider dissemination. It is also noted that some community strategies are socially unacceptable and environmentally unfriendly, for example prostitution and charcoal burning respectively. These need alternative coping mechanisms and policy direction. Under normal circumstances, the communities do not indulge in the practices like migration, pawning of women, sale of female children, prostitution, and fighting as paid mercenaries (Awuondo, 1987, Kareithi, 2000, Mutie, 1993) and they only use these strategies as a last resort to fight severe hunger.

The study is based on evaluating internal and external food security strategies undertaken by the community and other stakeholders concerned with food security in Kitui district respectively. Evaluation of the strategies will give an insight into opportunities, strengths and weaknesses of the approaches, with an aim of finding a sustainable solution to the problem. It is assumed that community participation and ownership, as well as support for “homegrown” strategies by the community have been lacking, leading to dependency, apathy, and food insecurity. The study will also explore an integrated approach to community development whereby the possibility of synergizing both strategies will be investigated. This study is based on the assumption that external food security strategies

have leaned towards relief food distribution, leading to erosion of community strategies and consequently causing dependency and food insecurity. On the other hand, community coping strategies have been overlooked by external stakeholders. This has resulted to lack of community participation, apathy, lack of ownership and consequent unsustainability and persistent food insecurity.

### **2.6.2 Theory of Entitlement**

This study will also be guided by the Theory of Entitlement (Sen, 1987). The theory explains that communities do not starve because of lack of food. Rather, they starve due to their lack of entitlement to food. It further alleges that communities or people have starved and sometimes died in an environment where there is plenty of food. This was caused by poverty which renders the food unavailable to them and unaffordable by them. This situation is referred to as “deprivation”. Poverty is used as a food security index alongside the concept of food entitlement. The poor are always more vulnerable to famine and consequently less entitled to food (Sen, 1987). Thus, poverty, poor food distribution mechanisms and lack of empowerment are identified as the major causes of food insecurity.

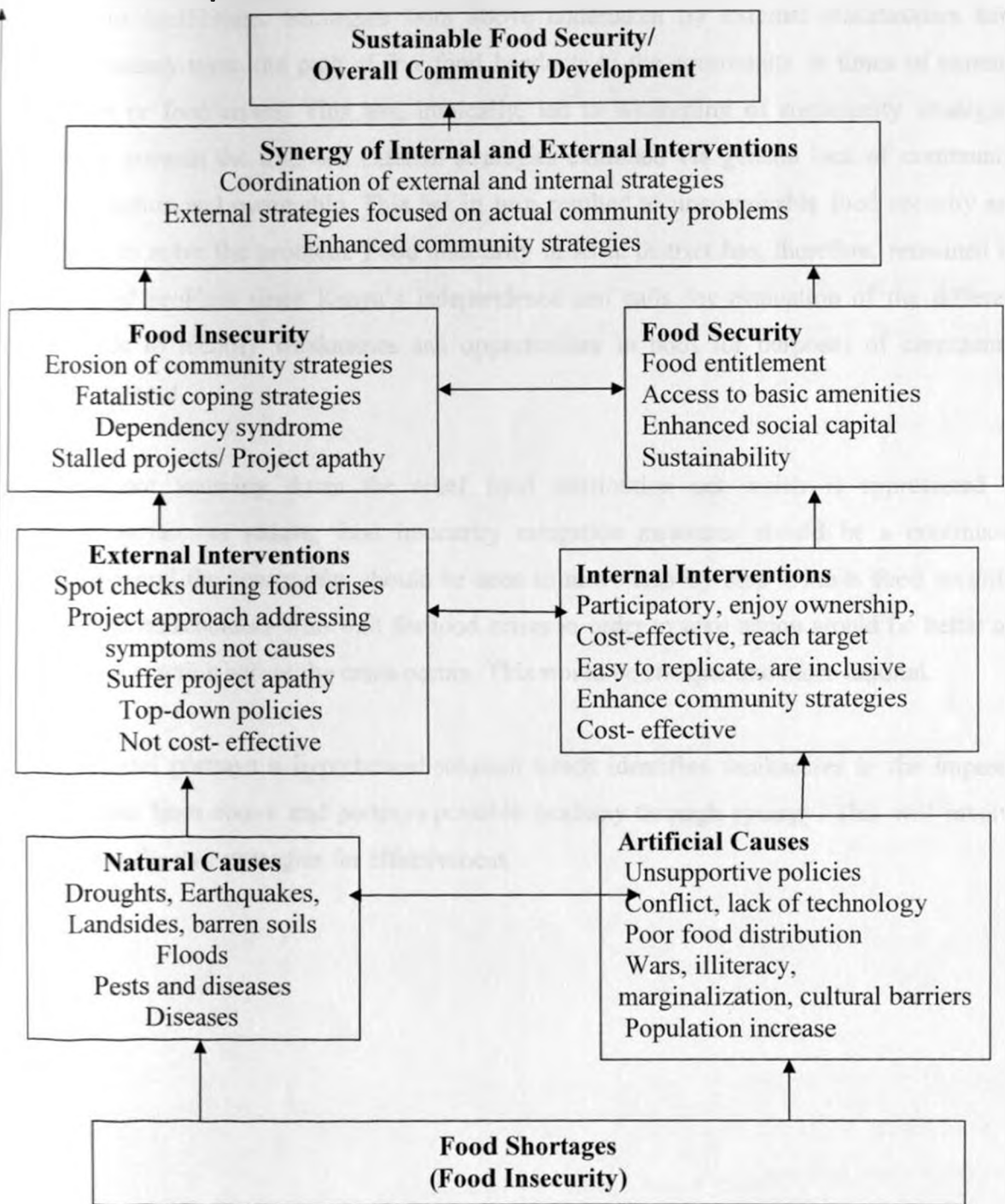
### **2.6.3 Sustainable Development Theory**

The theory highlights the importance of development strategies which are long lasting and replicable. Strategies undertaken must be inclusive and participatory in order to enjoy ownership. It is a school of thought that is gaining rapid popularity worldwide. Graaf, Musters and Keurs (1992:3), note that in adopting agenda 21 (UNEP, 1992), most of the world’s governments have acknowledged that “the ecosystems on which we depend to sustain life on earth” are in danger, and that national policies should be directed towards sustainable development. What is needed now is a policy change aimed at “a development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). This will require various actors to create the necessary conditions to meet the needs and wants of all the people involved, wherever they may be, both for now and in the future.

## 2.7 Conceptual Framework

The concepts under study include external and internal food security strategies which are undertaken by other stakeholders and the rural communities respectively. In this study, the problem is food insecurity which is addressed via the various interventions identified as the external and internal food security strategies. These strategies form the independent variables.

**Figure 1: Conceptual Model: Bottom-up Approach to Community Development**  
**2.7.1 Conceptual Model: Bottom-up Approach to Community Development**



The effect or outcome forms the dependent variables which include dependency, apathy, lack of participation and ownership, unsustainability, as well as the reverse of the same, that is: self-reliance, participation, ownership and sustainability. This study mainly focuses on the "artificial" causes of food insecurity which have been cited earlier as having outweighed the "natural" causes (Bender, 1995:55).

### **2.7.2: Explanation of Conceptual Model**

Food insecurity in the community attracts attention and reaction from within and without the community. Reactions are in form of strategies to fight hunger and bring the system back to equilibrium. Strategies from above undertaken by external stakeholders have continuously taken the path of free food handouts to the community in times of extreme hunger or food crises. This has, ironically, led to weakening of community strategies, apathy towards the imposed external strategies exhibited via general lack of community participation and ownership. This has in turn resulted to unsustainable food security and failure to solve the problem. Food insecurity in Kitui district has, therefore, remained an unsolved problem since Kenya's independence and calls for evaluation of the different methods to identify weaknesses and opportunities in both for purposes of community development.

While not watering down the relief food distribution act which is appreciated as humanitarian in nature, food insecurity mitigation measures should be a continuous exercise and the community should be seen to move step by step towards food security. External stakeholders who wait for food crises in order to take action would be better off taking the action before the crisis occurs. This would be cheaper and more rational.

The model portrays a hypothetical solution which identifies weaknesses in the imposed strategies from above and portrays possible headway through synergy. This will involve merging the two strategies for effectiveness.

## 2.8 Research Hypotheses

**Hypothesis 1:** Strategies by external stakeholders have led to food insecurity

**Hypothesis 2:** Supporting community strategies leads to sustainable food security

## 2.9 Operationalization of Variables

**Table 2: Operationalization of Variables**

**Hypothesis 1:** Strategies by external stakeholders have led to food insecurity

Study Hypotheses	Type of Variable	Study Variable	Variable Indicators
<p><b>H<sub>1</sub></b> Strategies by external stakeholders have led to food insecurity</p>	<p>Dependent Variable</p>	<p>Strategies by External Stakeholders</p>	<p>Number of external stakeholders in the area Strategies used to fight hunger, Number of food security projects / programmes, Number of successful projects Number of stalled projects Number of times relief food is distributed Reported relief food that does not reach target beneficiaries Level of education Amount of relief food distributed Number of people receiving relief food Number of respondents</p>

	Independent Variable	Food insecurity	<p>expecting cash handouts</p> <p>Number of community strategies that have disappeared. Increased number of people engaged as casuals during famine. Increased number of people who sell charcoal to buy food</p> <p>Increased number of people who fetch and sell water to buy food</p> <p>Increased number of people who sell firewood to buy food</p> <p>Increased number of people relying on food aid</p> <p>Increased number of food theft cases</p> <p>Increased number of reported cases of malnutrition</p> <p>Reduced number of community strategies.</p>
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**Hypothesis 2:** Supporting community strategies leads to sustainable food security

<b>Study Hypotheses</b>	<b>Type of Variable</b>	<b>Study Variable</b>	<b>Variable Indicators</b>
<p><b>H<sub>2</sub></b> Supporting community strategies leads to sustainable food security</p>	Independent variable	Strategies by Internal Stakeholders (Community)	<p>Financial and material support for community strategies from external stakeholders</p> <p>Increased number of people consulted by external stakeholders</p> <p>Community participation in project identification</p> <p>Supportive policies for community strategies (charcoal, sisal, timber, bone)</p> <p>Rural infrastructure to support community strategies (electricity, water, roads)</p>
	Dependent Variable	Sustainable Food Security	<p>Cottage industries to harness community labour</p> <p>Reduced prostitution</p> <p>Increased number of meals taken per day.</p> <p>Increased community participation.</p> <p>Increased amount of food crops harvested, sold and stored</p>

			<p>Reduced post-harvest losses</p> <p>Increased contact with agricultural extension agents</p> <p>Cost-sharing in provision of rural infrastructure</p> <p>Increased number / type of livestock reared</p> <p>Increased number of people relying on livestock</p> <p>Year-round access to food</p> <p>Reduced malnutrition cases</p> <p>Cease of international food aid</p> <p>Mushrooming rural industries</p> <p>Increased employment</p> <p>Increase of household food reserves</p> <p>Increased incentives to community (Policy, financial, farm inputs, infrastructure)</p>
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## **3.0 CHAPTER THREE: METHODOLOGY**

### **3.1 Type of Research and Research Methods Used**

According to Nachmias and Nachmias (1996:13) "A scientific methodology is a system of explicit rules and procedures upon which research is based and against which claims for knowledge are evaluated."

#### **3.1.1 Type of Research**

The research was evaluatory in nature and sought to evaluate various food security strategies undertaken by different categories of stakeholders in Kitui district. The study focused on evaluation of internal and external food security strategies by the community and other stakeholders respectively, with an aim of identifying strengths, weaknesses and opportunities as well as success or failure of the two strategies. Possible synergy was also investigated.

#### **3.1.2 Research Methods Used**

The study used Survey research method which was quantitative in nature, as well as qualitative research method which involved observation method. Quantitative data was collected during the survey and qualitative data was accessed using Focus Group Discussions (FGDs). The study used purposive and simple random sampling methods, which is a combination of probability and non-probability sampling procedures. Sample size was a total of 100 respondents, comprising of 90 farmers and 10 key informants. The key informants were representatives of local leaders, NGO and MoA staff in Kitui district.

### **3.2 Site Description**

The study was conducted in Kitui district which is one of the ASAL districts of Kenya. ASAL districts are food insecure and suffer food shortages due to both natural and artificial causes. Kitui district covers an area of approximately 20,000 sq km, which includes about 6,300 sq km of the Tsavo National Park. It has a population of about 550,680 people. The annual population growth rate is 2.21% with an average population density of 80 persons per sq Km and 103,902 households. The greater part of the district is ASAL (66%) with an average annual rainfall of 500-800 mm. The medium potential areas receive 900-1100 mm. The district is divided into eight (8) administrative divisions namely Central, Chuluni,

Matinyani, Mutonguni, Yatta, Mutitu, Mwitika and Mutha. Kitui district has high poverty levels (about 60%), with **Mwitika division** exhibiting the highest poverty incidence of 73%. Kitui district is also subject to regular crop failure, especially in the low potential areas, and due to this characteristic, it is prone to frequent famine.

### **3.3 Site Selection**

Kitui district was purposively selected because it is one of the ASAL districts in the country, hence vulnerable to famine. In addition, personal and professional interests of the researcher took precedence. The researcher is an employee of the Ministry of Agriculture (MoA) and the study was sponsored by MoA through a scholarship from the Directorate of Personnel Management (DPM). This study was found relevant and was to be integrated with on-going work on food security by Arid Lands Resource Management Project (ALRMP) and Early Warning Systems (EWS) in Kitui district. The study site was selected on basis of the poverty index (73%) which is the highest in the district, following the entitlement argument which posits that people starve; not because of lack of food, but due to lack of entitlement to food. The poorer they are, the less entitled (Sen, 1985). Sustainable development theory further backs the theoretical framework due to the situation of food shortages in spite of interventions (see table 3 below).

The study site was Mwitika division of Kitui district. Although Mwitika division consists of 4 locations (Endau, Malalani, Mwitika, and Kyamatu), only two locations of Mwitika division were selected to form the study site. This was because of proximity challenges as Endau and Malalani are about 80km and more from the Mwitika divisional headquarters and resources were limiting.

**Table 3: Poverty Incidence by Division (Kitui District)**

<b>Division</b>	<b>Population(2001)</b>	<b>No. of Poor</b>	<b>% Poor</b>
Central	129,332	75,007	58
Mutonguni	61,556	35,703	58
Matinyani	42,577	24,695	58
Yatta	43,524	28,726	66
Chuluni	75,604	43,850	58
Mutha	40,902	29,040	71
<b>Mwitika</b>	<b>26,860</b>	<b>19,608</b>	<b>73</b>
Mutitu	24,935	17,704	71
<b>Ikutha</b>	<b>45,439</b>	<b>33,171</b>	<b>73</b>
Mutomo	47,850	33,974	71
Total	490,729	323,875	66

**Source: Kitui District Development Plan (KDDP) 2003-2008**

Please note that Mutomo district was recently carved out of Kitui district and it went with Ikutha as one of its divisions. However, these changes are not reflected in the current Kitui District Development Plan (KDDP) 2003-2008.

### **3.4 Sampling Frame, Design, and Procedure**

“Sampling is the process of selecting a subset of cases in order to draw conclusions about the entire set” Singleton (1988:63). The sampling frame was the entire ASALs in Kenya of which Turkana and Kitui districts rank first and second respectively, in terms of aridity (see Table 4 below):

### 3.4.1 Sampling Frame

**Table 4: ASAL Districts classified by Extent of Aridity**

Category	Districts	% Total ASAL
A: 100% ASAL	Turkana, Moyale, Marsabit, Isiolo, Wajir, Mandera, Garissa, Ijara	62%
B: 85-100% ASAL	Kitui, Makueni, Tana River, Taita Taveta, Kajiado, Samburu	25%
C: 50-85% ASAL	Machakos, Mbeere, Tharaka, Laikipia, West Pokot, Kwale, Kilifi, Baringo, Meru North	8%
D: 30-35% ASAL	Lamu, Narok, Malindi, Keiyo, Marakwet	3%
E: 10-25% ASAL	Nyeri( Kieni), Rachuonyo, Suba, Kuria, Thika, Koibatek	2%

**Source: ASAL Development Policy (1992)**

Table 4 above shows the sampling frame of this study. ASALs are vulnerable to food insecurity (famine) due to their ecological disadvantages for farming. Among these include drought which is a constraint for rain-fed agriculture.

### 3.4.2 Sampling Design and Procedure

Data was collected from two locations of Mwitika division namely; Kyamatu and Mwitika locations. Further, samples were drawn from all the sub-locations in the two locations. The sites in Kyamatu location consisted of 3 sub-locations namely: Muthungwe, Kyamatu and Nzanzu sub-locations; while Mwitika location sites included Kilaa, Makongo, Kikuu, Kavingo, and Katikoni sub-locations. Sample population (Mwitika division) is approximately 38,200 people (1999 Census). Out of this, 100 respondents were interviewed, out of which 90 were farmers of different social status and 10 were key informants representing NGOs, MoA, and opinion leaders of the local community. Out of

the 90 farmers, 45 were from Mwitika location and the other 45 from Kyamatu location. This was a 50% distribution of chosen respondents in the two selected locations. The target population is the population of the entire Kitui district which has a population of approximately 550,000 people; with about 104,000 households. This is where study results will be extrapolated or generalized.

### **3.5 Sources and Types of Data**

The study used Survey Research (quantitative method) as well as Key Informant Interviews (qualitative method). Two types of data were collected, quantitative and qualitative data. The data was collected from both primary and secondary sources. Primary data was collected from farmers and key informants. Secondary data was sourced from available records from external stakeholders (MoA, NGOs, newspapers, internet, and reports, Development Plans), Policy documents, among others. Qualitative data was obtained from focus group discussions (FGDs) with community leaders and other and key informants.

### **3.6 Data Collection Methods and Tools**

#### **3.6.1 Data Collection Methods**

Data collection methods used included both quantitative and qualitative methods. Kothari, (2004) defines quantitative research thus: "Quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity". Kothari, (2004), also defines qualitative research as "concerned with qualitative phenomena, i.e. phenomena relating to or involving quality or kind...Qualitative research is specially important in the behavioral sciences where the aim is to discover the underlying motives of human behavior".

Quantitative methods were used to collect primary data from a number of external and internal stakeholders. Face-to face interview method was used to collect primary quantitative data. The data included number of famines experienced, number of malnutrition cases and number of food thefts, quantity of food crops harvested, sold and stored, number of projects in the area, number of external stakeholders, number of livestock reared, number of food conflicts, number of organized groups, number of people relying on relief food handouts and amounts of relief food distributed, and number of

livestock and human deaths due to famine, number of people using various coping strategies, among others.

Secondary data review method was also used. This data consisted of amount of money spent on relief food, amount of money disbursed to Kitui district for water harvesting, number of major famines that have occurred in the area from independence to date, and number of projects and external stakeholders, among others.

Qualitative methods, on the other hand, were used to gather information about external and internal perceptions about food aid, persistence of food insecurity, who should solve the food insecurity problem, external and internal famine coping strategies, to mention but a few. This method involved physical observation of respondents, observation of livelihood standard indicators and other symptoms of poverty, malnutrition and hunger. Focus group discussions (FGDs) were also used.

### **3.6.2 Data Collection Tools**

Data collection tools consisted of structured questionnaires and observation checklists. Questionnaires were had both open and closed-ended questions. The questionnaires were administered to the 90 farmers. For the 10 key informants, FGDs were held using key-informant interview guidelines (checklist). The interviews dwelt on collecting data on food security strategies undertaken by external and internal stakeholders with the aim of evaluating their success or failure. Observations checklists were used to gather qualitative data through observation of the respondents' reactions when answering questions and during discussions. Since the subject matter was food shortages, tell-tale symptoms of malnutrition and hunger like body emaciation, general weakness and poor health, distended stomachs and discolored hair by children under five years were observed.

### **3.7 Units of Analysis and Observation**

According to Singleton, 1993:241, a unit of analysis is "the entity about who or which a researcher gathers information". It refers to what the study seeks to find out. The study units of analysis were the food security strategies undertaken by internal and external stakeholders. The units of observation were the 90 farmers from the two locations of

Mwitika division, and 10 key informants who included 3 GoK and 3 NGO staff, as well as 4 opinion leaders of the local community.

### **3.8 Methods of Data Analysis**

According to Baker (1994:373), descriptive statistics are simple statistical methods, which do not support or falsify relationships between variables but simply help in the description. Data analysis methods included both descriptive and inferential statistical methods.

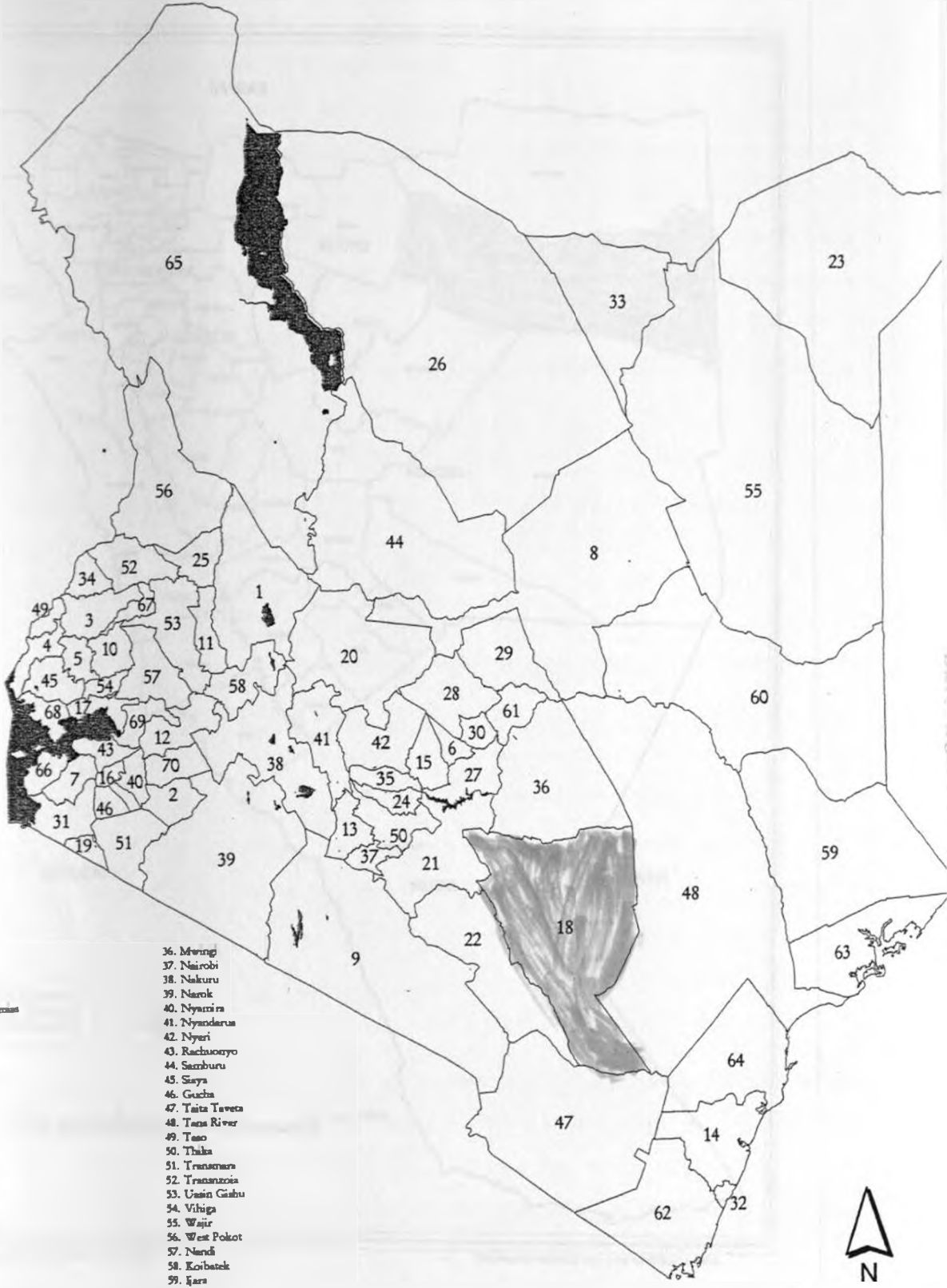
#### **3.8.1 Quantitative Analysis**

Quantitative data was analyzed using measures of central tendency (mean, mode and median), measures of distribution (skewness) and measures of dispersion (range comparison). The study used frequencies and percentages because of their ability to distribute the respondents according to the various values of the study variables. Mean, mode, percentages, and tables were used to organize, summarize and present data. Questionnaires were cleaned by removing outliers and rogue values to ensure that answers were accurate, complete and consistent. Responses were coded into various categories before tabulation after which totals and percentages were calculated. The study hypotheses were tested using Statistical Package for Social Scientists (SPSS).

#### **3.8.2 Qualitative Analysis**

Qualitative data was analyzed using the open coding method whereby themes and patterns were identified. Themes and patterns were derived from responses given by key informants who included local leaders, NGO and MoA staff, during FGDs and also from answers to open -ended questions posed to them. The data was thereafter classified into categories which were further re-examined to establish their linkages and inter-linkages using the axial coding technique. Results obtained from open and axial coding were compared to find out whether the research hypotheses were validated or rejected.

# DISTRICT BOUNDARIES

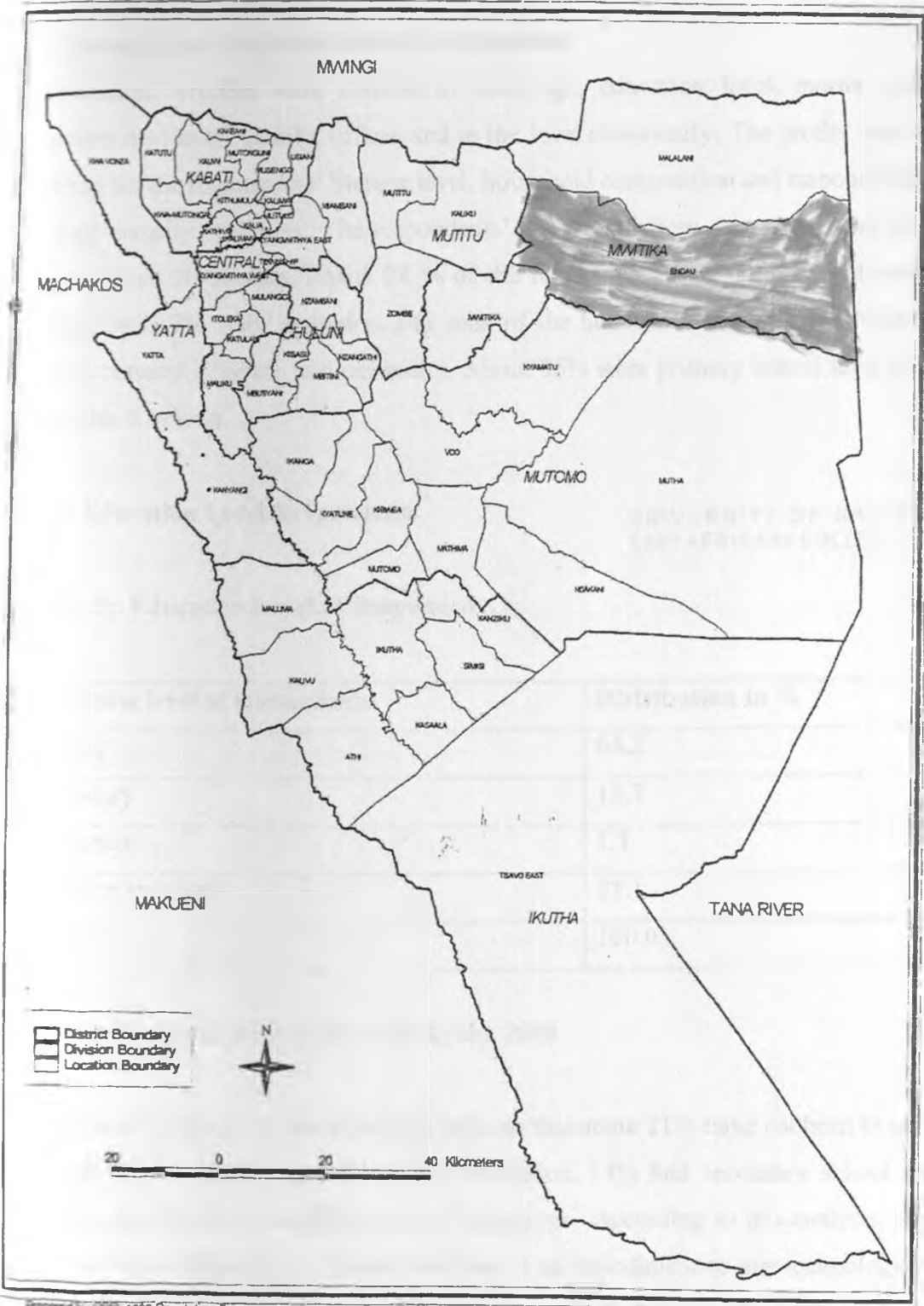


- |                  |                   |
|------------------|-------------------|
| 1. Baringo       | 36. Mwingi        |
| 2. Bomet         | 37. Nairobi       |
| 3. Bungoma       | 38. Nakuru        |
| 4. Busia         | 39. Narok         |
| 5. Butere/Mulenn | 40. Nyamira       |
| 6. Embu          | 41. Nyandarua     |
| 7. Homa Bay      | 42. Nyeri         |
| 8. Isiolo        | 43. Rachuonyo     |
| 9. Kisumu        | 44. Samburu       |
| 10. Kakamega     | 45. Siaya         |
| 11. Kericho      | 46. Garissa       |
| 12. Kisumu       | 47. Taita Taveta  |
| 13. Kilifi       | 48. Tana River    |
| 14. Kirinyaga    | 49. Tana          |
| 15. Kiambu       | 50. Thika         |
| 16. Kericho      | 51. Transmara     |
| 17. Kisumu       | 52. Transnzoia    |
| 18. Kitui        | 53. Uasin Gishu   |
| 19. Kisumu       | 54. Vihiga        |
| 20. Lamu         | 55. Wajir         |
| 21. Machakos     | 56. West Pokot    |
| 22. Malindi      | 57. Nandi         |
| 23. Mandera      | 58. Koibatek      |
| 24. Maragua      | 59. Jara          |
| 25. Marakwet     | 60. Garissa       |
| 26. Meru Central | 61. Tharaka Nithi |
| 27. Meru North   | 62. Kerale        |
| 28. Meru South   | 63. Lamu          |
| 29. Migori       | 64. Malindi       |
| 30. Mombasa      | 65. Turkana       |
| 31. Moyale       | 66. Suba          |
| 32. Mt. Elgon    | 67. Lugari        |
| 33. Murang'a     | 68. Bondo         |
|                  | 69. Nyando        |
|                  | 70. Buret         |

NB. - Nandi District has been further sub-divided into two districts.



# KITUI DISTRICT (Administrative Boundaries)



## 4.0 CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS AND DATA ANALYSIS.

### 4.1 Demographic Characteristics of Respondents

Respondents' profiles were defined by their age, education level, marital status and positions held in the family, offices and in the local community. The profile was intended to bring out the respondents' literacy level, household composition and responsibilities held in food security strategies. The respondents' age varied from one respondent to another ranging from 20-80years. About 94 % of the respondents were family heads (mother or father) while 7% were daughters and sons of the household heads. The education level ranged between illiterate and university. About 85% were primary school level and below (see table 5 below):

#### 4.1.1 Education Level Respondents

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**Table 5: Education Level of Respondents**

Education level of respondents	Distribution in %
Primary	64.2
Secondary	13.7
University	1.1
Not been to school	21.1
Total	100.0

**Source: Research findings by A.M.Kyalo, 2008**

From table 5 above, research findings indicate that about 21% have not been to any formal school, 64% had primary school level education, 14% had secondary school education while only 1% have university level of education. According to this analysis, significant 21% of the community is illiterate and this is an impediment to any technology adoption and implementation.

#### 4.1.2 Marital Status of Respondents

**Table 6: Marital Status of Respondents**

<b>Marital status</b>	<b>Percentage distribution</b>
Married	80.0
Divorced	1.1
Single	3.2
Separated	1.1
Widowed	14.6
Total	100

**Source: Research findings by A.M.Kyalo, 2008**

About 80% of the respondents are married, while 15% are widowed. The number of widows/widowers is significant and could be related to food insecurity. This forms an area of further research.

#### 4.2 Presentation of Research Findings

**Table 7: Number of Meals Taken per Day**

<b>Number of meals taken per day</b>	<b>% Distribution</b>
One	13.5
Two	33.3
Three	53.1
Total	100.0

**Source: Research findings by A.M.Kyalo, 2008**

Research findings indicate that about 53% of the sample population takes three meals a day while 47% take two meals or less per day. The study had defined food security indicators

as based on food availability, food access and food utilization. These results therefore are a clear indication of food insecurity. Further analysis revealed that approximately 32% of the respondents had reported cases of malnutrition this reflects a high indicator of nutritional insecurity. Research findings further indicate that about 77% of the community does not have adequate access to food throughout the year. One of the definitions of food security in this study is “access to food by all people at all times” (FAO/WHO, 1992). The community has therefore been found to be food insecure.

#### 4.2.2 Number of Famines Witnessed

**Table 8: Number of famines witnessed**

Number of famines witnessed	% Distribution
One	5.2
Two	8.3
Three and more	86.5
Total	100.0

**Source: Research findings by A.M.Kyalo, 2008**

The study findings revealed that about 87% of the respondents have witnessed three famines or more. This is a high indication that famine is a persistent problem in the area. This is an indication that coping strategies have not effectively addressed the food security problem.

#### 4.3 Food Security Situation

Under normal circumstances, the community engages in agricultural activities to earn their livelihood. These include livestock rearing and growing of food crops. About 88% of the respondents have food storage facilities, while 59% access agricultural extension services from the Ministry of Agriculture. Local NGOs also provide complementary extension services even though their participation is only about 4%.The following tables and charts (Table 9 and 10, Chart 2 and 3) below show the food crops grown and livestock reared in the study area in the last season (2007).

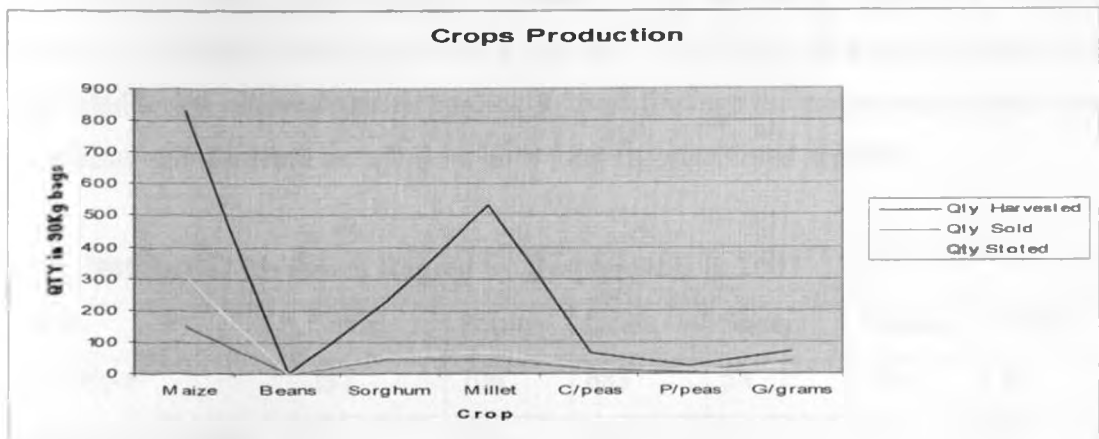
**Table 9: Food Crop Production in 2007**

Food crop	Maize	Beans	Sorghum	Millet	Cow peas	Pigeon peas	Green grams
Quantity harvested (90kg bags)	828.2	0.4	229.26	531.62	63.01	23.46	71.37
Quantity sold (90kg bags)	151.56	0	46.02	45	13.65	5	40.59
Quantity stored (90kg bags)	306.8	0.2	53.5	67.22	18.665	11.735	21.025

Source: Research findings by A.M.Kyalo, 2008

The figures above reflect household food crop production in the year 2007. The figures clearly indicate that under normal circumstances the community is food secure since they have enough to eat sell and store. This further indicates that the critical factor in food security is in the area is drought. This is the aspect that should be addressed by both external and internal stake holders to achieve sustainable food security.

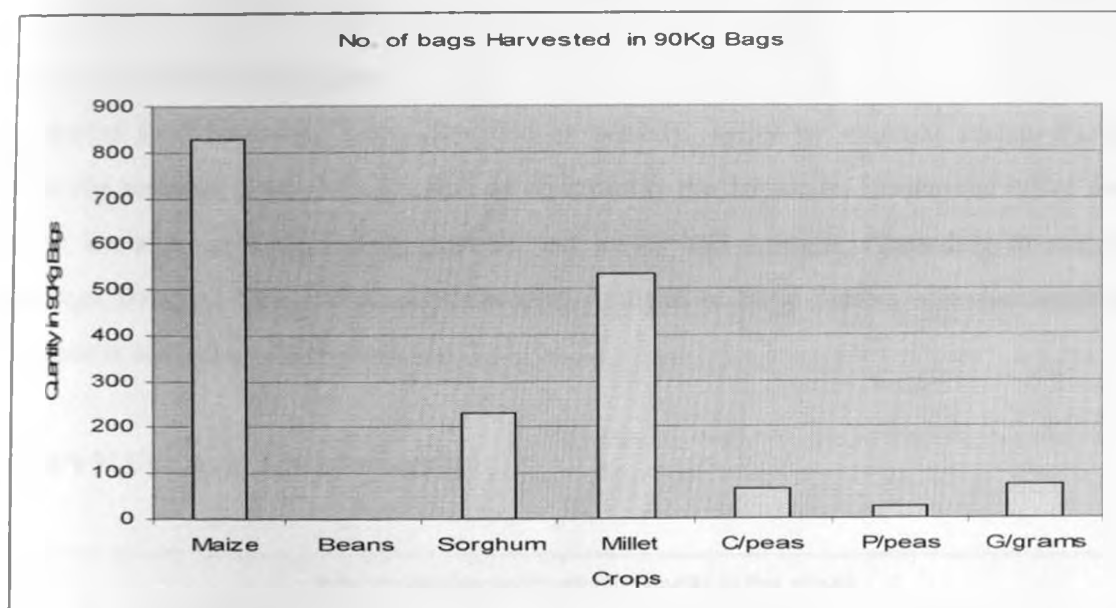
**Chart 1: Food Crop Production in 2007**



Source: Research findings by A M. Kyalo, 2008

According to Chart 1 above, average household maize production was 17 bags (90kg bags) in 2007, followed by millet and sorghum also recorded high production while small quantities of legumes (cowpeas, pigeon peas and green grams.) were harvested in the same season. This indicates that during normal seasons the community is food secure.

**Chart 2: Food Crop Production in 2007**



**Source: Research findings by A.M.Kyalo, 2008**

According to Chart 2 above, maize production was the highest which confirms the staple of the community. Millet and sorghum production also recorded substantial harvests compared to the legumes. Beans production was zero. These findings explain malnutrition cases reported by the respondents. According to these findings the community exhibits low protein intakes and therefore suffers from both food and nutritional security.

**Table 10: Number of Livestock Reared by Respondents in 2007**

Livestock	Cattle	Poultry	Goats	Sheep	Donkey	Others
Total Number	257	706	683	53	128	41
Average per household	5	15	14	1	3	1

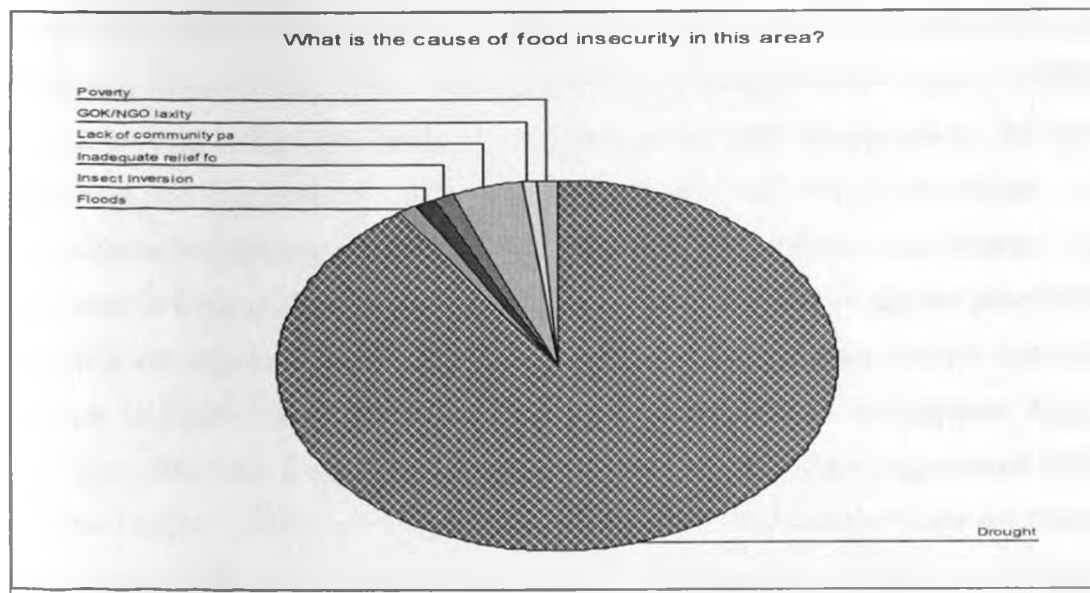
**Source: Research findings by A.M.Kyalo, 2008**

The above figures reflect household livestock production in the year 2007. These findings reveal that the community rears livestock. Upon further analysis, the community uses livestock enterprises as a food security coping strategy during food crises. It was noted that sheep rearing is not popular in the area as compared to other livestock enterprises (an average of 1 per household). The Akamba community has a cultural resentment to sheep rearing. This qualifies as an area of further research.

#### 4.4 Causes of Food Insecurity

Causes of food insecurity were identified as poverty, laxity by external stakeholders to solve the problem (GoK/NGOs), lack of community participation, inadequate relief food, insect invasion, poverty, floods, post-harvest losses and drought. According to research findings, 80% has been attributed to drought. Analysis of these factors was conducted and the results are reflected below (Chart 3).

**Chart 3: Causes of Food Insecurity**



**Source: Research findings by A.M.Kyalo, 2008**

The most critical factor established was drought accounting for 80%, followed by lack of community participation 15%. This suggests that all efforts towards eradicating food

insecurity should be directed towards addressing drought and community participation respectively. The other factors like poverty, GoK/NGO laxity, inadequate relief food, insect invasion and floods were found to be insignificant causes accounting for the remaining 5%.

The second major cause of food insecurity was identified as lack of community participation. According to research findings, only 21% of the respondents have been consulted on how to solve food security problems by external stakeholders such as GoK, NGOs, and Church organizations. A further cross tabulation indicates that during severe food insecurity (famine), 42% of the respondents reported loss of livestock, and a further 6% lost family members. Food theft was reported by 13% of the respondents at a frequency ranging between one and three times a year. This confirms that during food crises the community is pushed to the verge of stealing food. This reflects the gravity of the problem.

## **4.5 Stakeholder Analysis**

### **4.5.1 External Stakeholders**

External stakeholders in food security in Kitui district include: GoK (through MoA and other relevant Departments), NGOs like Adventist Development Relief Agency (ADRA) which was working in Ikutha division of the recently carved out Mutomo district, Religious organizations and International agencies through Donors and Environmentalists. Arid Lands Resource Management Project (ALRMP) is a major World Bank funded project that is operational in Kitui district, though not working in the study site. Prominent government programmes and projects in the area include: National Agriculture and Livestock Extension Programme (NALEP) which is funded by Swedish International Development Agency (SIDA), Njaa Marufuku Kenya (NMK) a World Bank-funded project, Agricultural Sector Programme Support (ASPS) which is funded by Danish Agricultural Development Agency (DANIDA) and African Development Bank (ADB). Previous Government/Donor-funded projects include: Kitui Agricultural Project (KAP) and Kitui Integrated Development Project (KIDP).

Some of the NGOs operating in the area include; World Food Programme (WFP) Plan International, World Bank (WB), Catholic Relief Services (CRS), Catholic Diocese of



Kitui, International Monetary Fund (IMF) and German Technical Cooperation (GTZ), AMREF, Green Belt Movement, Help Age Kenya, among others. Despite the past and present efforts of the above external stakeholders, food security in Kitui district remains a challenge.

#### 4.5.2 Internal Stakeholders

Internal stakeholders in food security include the entire community which consists of individual farmers, registered and unregistered farmers' groups and Community-Based Organizations (CBOs).

### 4.6 Findings on Coping Strategies

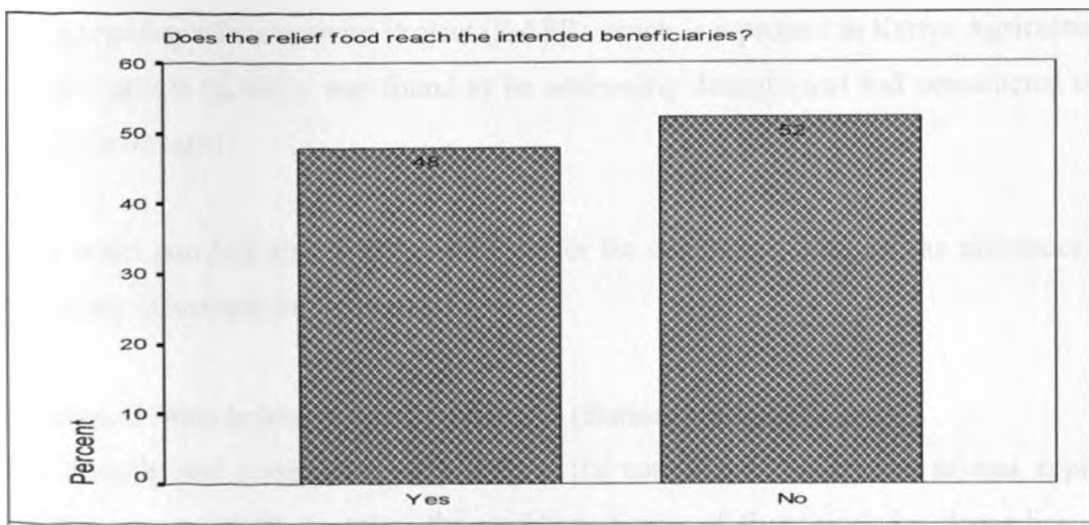
#### 4.6.1 External Stakeholder Coping Strategies (Top-down approaches)

During food crises, external stakeholders undertake various interventions which include initiation and implementation of projects and programmes like food-for-work, relief food distribution, distribution of farm inputs such as seeds and fertilizers, extension services and financial assistance. The most significant coping strategy adopted by external stakeholder was found out to be relief food distribution.

#### 4.6.2 Relief Food Distribution

The study findings show that about 80% of the respondents receive relief food from external stakeholders. The relief food received is however inadequate and has not solved the persistent food crises.

**Chart 4: Relief Food Distribution**



Source: Research findings by A.M. Kyalo, 2008

Research findings indicate that 70% of the respondents receive information about relief food, however only 48% of them receive the actual relief food. About 52% of the relief food goes to the non-target beneficiaries. This indicates the inefficiency of the relief food distribution systems and ineffectiveness of the strategy to solve the food security problem. About 59% of the respondents believe that the community can do without relief food with a further 41% convinced that they can not do without relief food. This indicates the dependency syndrome is evident in the community, further supporting the Dependency theory.

#### **4.6.3 Other Coping Strategies**

Help Age Kenya was found to be active in the study site with activities geared towards support of widowed, orphaned and the aged. Their strategy was to give material support like farm implements (ox-plough and draught animals).

The Green Belt movement was engaged in distribution planting of forest tree and fruit trees seedlings.

AMREF was involved in water and sanitation projects. The community provides labour and digs the trenches and AMREF provide the water pipes. AMREF was also actively involved in water and sanitation Programme whose activities included sale of drinking water during times of extreme drought, construction of toilets and water tanks in schools.

Kenya Agricultural Productivity Project (KAPP) which is a project in Kenya Agricultural Research Institute (KARI), was found to be addressing drought and had constructed one water pan in the area.

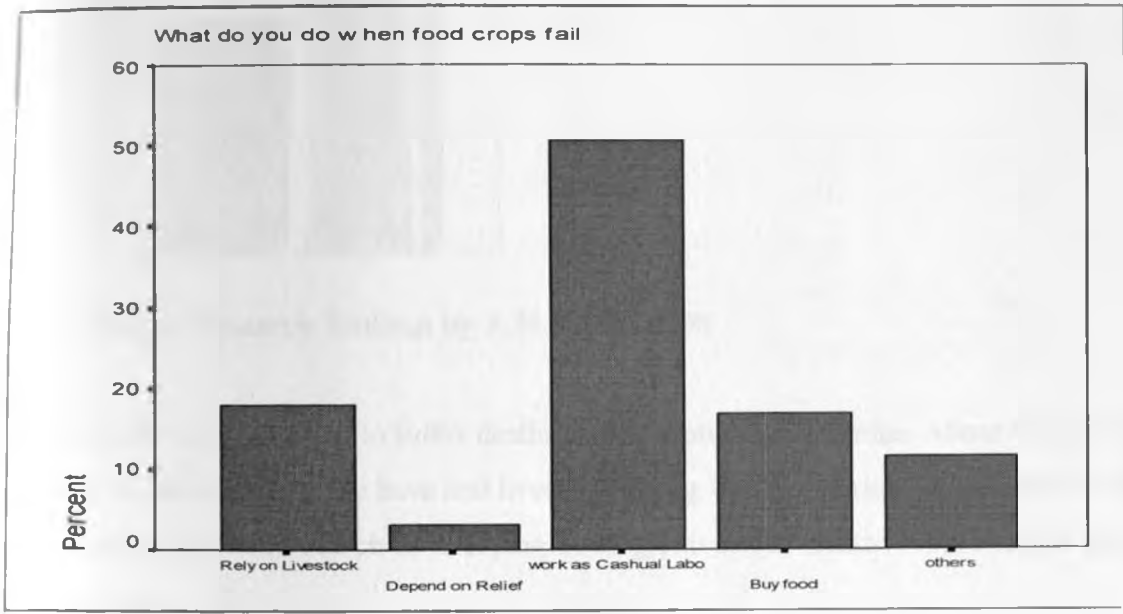
Another water pan had also been constructed for the community through the assistance of Constituency Development Fund (CDF).

#### **4.6.4 Internal Stakeholder Coping Strategies (Bottom-up approaches)**

During drought and consequent crop failure, the community undertakes several coping strategies in an attempt to solve the problem. Some of these include: depending on

livestock, depending on relief food, working as casual labourers, buying food and others (fetching and selling of water, burning and selling of charcoal and prostitution). Approximately 40% of the respondents seek off-farm employment as a coping strategy.

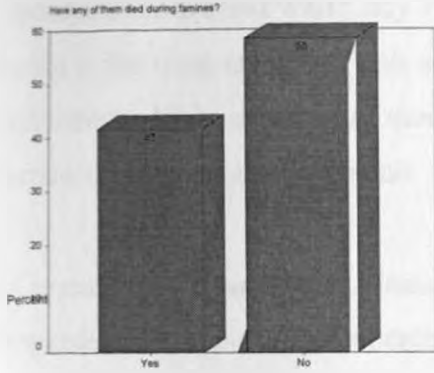
**Chart 5: Coping Strategies during Crop Failure**



**Source: Research findings by A.M.Kyalo, 2008**

According to the study findings, all the internal coping strategies have been observed to be significant, and the most prominent of them being working as casual labourers, accounting for over 50%. In as much as the external stakeholders have greatly invested in relief food as a coping strategy, study findings indicated that it is the least depended on by the respondents accounting for less than 5%. This observation suggests that the most popular external stakeholder strategy (relief food distribution) has led to food insecurity. Reliance on livestock and buying of food were equal and second in order of importance accounting for about 18% each. This suggests that is an area that both internal and external stakeholders need to redirect their efforts and resources in order to address food security problem.

## Chart 6: Livestock Deaths Caused by Famine



Source: Research findings by A.M.Kyalo, 2008

Livestock has been observed to suffer deaths during drought and famine. About 42% of the respondents indicated that they have lost livestock during drought periods. Since 18% of the community relies on livestock as a coping strategy, livestock deaths would render them food insecure.

Some of the community coping strategies are environmentally and socially destructive. Among these include; deforestation in search of firewood for sale, charcoal burning for sale and bush clearing leaving the land vulnerable to soil erosion, and prostitution which erodes the social values.

Table 11: Prostitution as a Famine Coping Strategy

Is prostitution used as a famine coping strategy?

Response	% of the respondents
Yes	14.6
No	85.4
Total	100.0

Source: Research findings by A.M.Kyalo, 2008

According to study findings, about 15% of the respondents reported that prostitution is used as a coping strategy. This indicates that the community social fabric is still strong as confirmed earlier confirmed by the marital status demographic data which indicates 80% of the respondents are married while only 1% is separated and a further 1% divorced.

The family is the most important unit and forms the origin of a society. It is inferred that the community exhibits a peasantry mode of production whereby the nucleus family is the basic production and consumption unit.

#### **4.6.5 Community Organization (Social Capital)**

The respondents in this study indicated that the area residents have formed organized groups in an attempt to address food security problems. About 69% of the respondents are members of organized groups. Some of the activities that the groups engage in include: selling of livestock and farm produce, soil conservation, seeking donor assistance and pooling of farm labour.

This study found out those farmers in the area practice subsistence agriculture (peasantry mode of production) which does not adequately address food insecurity. In response to this, external stakeholders promote education, drought resistant seeds, relief food distribution and appropriate farming methods to combat food insecurity with voluntary community participation.

It was observed that projects and programmes undertaken by external stakeholders who include: DANIDA, World Bank, AMREF, SIDA, CRS, ADB, ADRA:who have implemented or are still implementing projects and programmes like NALEP,NMK, ASPS, Orphaned Crops Programme by KARI, Katumani, to mention but a few, have not been successful in addressing the food security problem in Kitui district. Reasons for their failure have been identified as adopting the wrong strategy like relief food distribution instead of addressing drought, lack of support for community strategies like charcoal burning and sisal industry, lack of rural infrastructure (water, roads and electricity) to harness abundant labour (most significant community coping strategy was off farm employment as casual labourers ) in the rural areas through rural industries and growing dependency as evidenced by the number of respondents who said they cannot do without relief food. There is also the blame game whereby stakeholders blame each other for failure

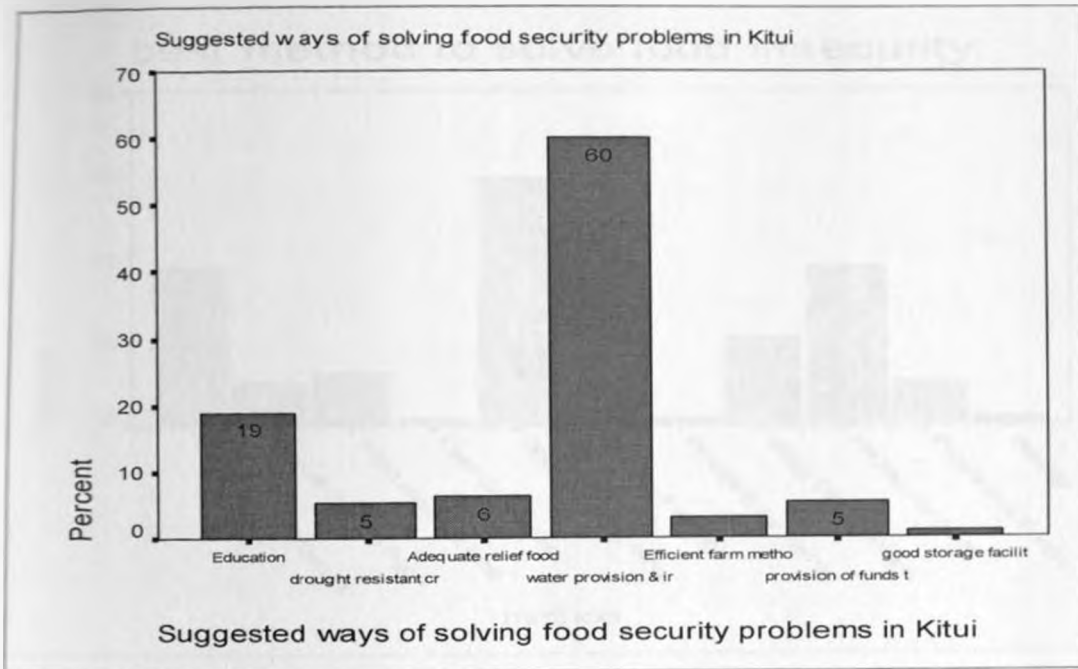
to achieve their goal. Some respondents said the problem should be solved by the government.

According to respondents, AMREF are initiating water tank construction, water piping systems and sanitation (construction of toilets). This seems to be in line with the findings of this study that drought is the most significant cause of food insecurity. However their impact is yet to be felt as the project is at its initial stages of implementation. Ministry of Agriculture has also addressed drought through funding of water harvesting activities like construction of water pans. According to the District Budget Allocation Book (MoA-2008/09) last financial year (2007/08), MoA disbursed KShs 850,000 for water pan construction through the NALEP/GoK, and a further KShs 3, 551,038 for the same activity through NALEP/SIDA. A further KShs 5,648,975 was disbursed to Kitui district for water pans construction in this financial year, 2008/09 through NALEP/SIDA. DANIDA disbursed KShs 47, 406,975 in 2007/08 and a further KShs 40, 251,350 this year, 2008/09. This is evidence that something is being done about the drought problem. However; the impact on the community is not significant though the effort is appreciated. This is the rationale behind synergy.

#### **4.6.6 Suggested Strategies for Solving the Food Insecurity Problem**

The respondents suggested several ways of tackling food insecurity in the area which include; training of farmers on appropriate farming methods, growing drought-resistant crops, provision of adequate relief food, dam construction, provision of seeds and insecticides, irrigation, soil and water conservation, provision of funds to invest in agriculture and better food storage facilities.

**Chart 7: Suggested Ways of Solving the Food Insecurity Problem**

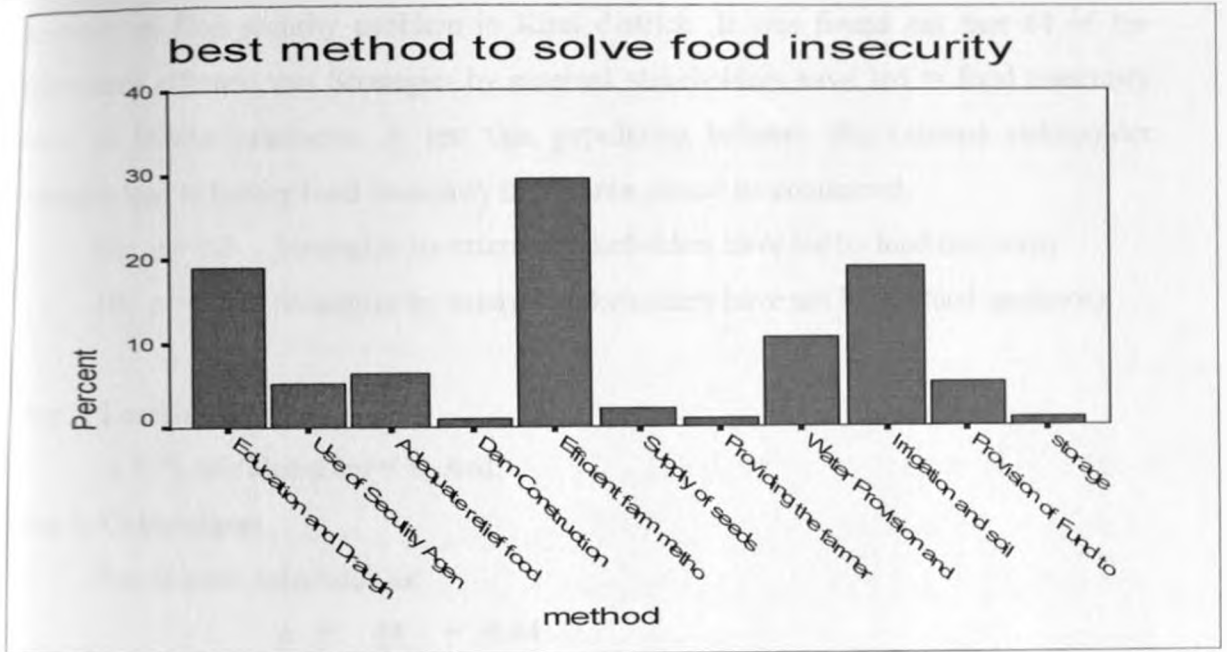


**Source: Research findings by A.M.Kyalo, 2008**

From Chart 7 above, the most significant strategy was found out to be provision of water for irrigation which confirms the earlier findings that drought is the major cause of food insecurity in the area. The second most significant strategy suggested is the provision of education. As earlier indicated, the education level in the area is low with 21% having not been to any formal school (illiterate) and a further 64% having only accessed primary school education. Study findings further indicated that addressing education was the only strategy that the external stakeholders have been addressing and the respondents deemed important.

Though the external stakeholders have concentrated on provision of relief food, the strategy was found to be insignificant in addressing food insecurity (Chart 7 above).

## Chart 8: Best Methods of Solving the Food Security Problem



Source: Research findings by A.M.Kyalo, 2008

The chart above reveals that the critical strategies to achieve sustainable food security should be geared towards:

1. Training farmers on appropriate farming methods
2. Irrigation and soil conservation
3. Provision of water
4. Provision of education

The above strategies need to be supported by road and communication infrastructure. According to the respondents, provision of relief food, supply of seeds, cash hand outs and provisions of farm inputs rank the least effective with less than 10% score each.

### 4.7 Hypotheses Testing

The hypotheses were tested both qualitatively and quantitatively. Qualitative testing involved use of themes and patterns derived from responses given by key informants who included local leaders, NGO and MoA staff. FGDs and also open-ended questions posed to them while quantitative testing involved using the null and alternative testing procedures.



## 1.1 Hypothesis 1: Strategies by external stakeholders have led to food insecurity

### Step 1: The null ( $H_0$ ) and the alternate ( $H_A$ ) hypotheses

A randomly selected sample of 100 respondents was questioned on the external stakeholder strategies on food security problem in Kitui district. It was found out that 44 of the respondents affirmed that Strategies by external stakeholders have led to food insecurity while 56 believe otherwise. A test that population believes the external stakeholder strategies lead to further food insecurity in the area should be conducted.

$H_0: p = 0.5$  Strategies by external stakeholders have led to food insecurity

$H_a: p > 0.5$  Strategies by external stakeholders have not led to food insecurity

### Step 2: Level of significance

A 95% confidence level is used.

### Step 3: Calculations

Test statistic calculates as:

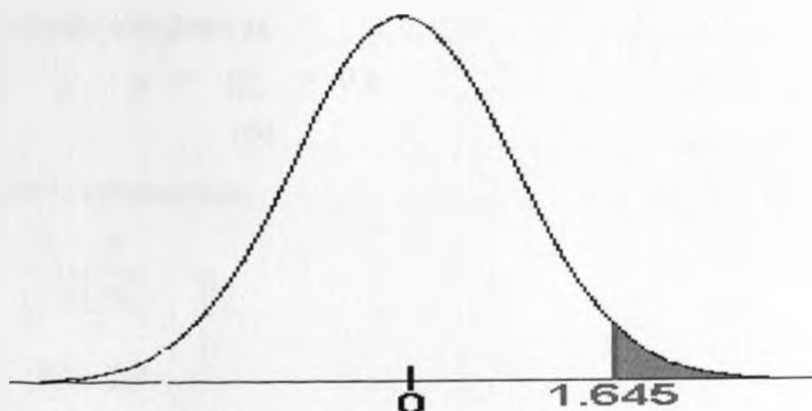
$$p = \frac{44}{100} = 0.44$$

Z statistic calculates as:

$$z = \frac{\hat{p} - p}{\sqrt{\frac{p(1-p)}{n}}}$$

$$\begin{aligned} Z &= \frac{0.44 - 0.5}{\sqrt{0.44(1 - 0.44)/100}} \\ &= -1.21 \end{aligned}$$

**Step 4: Compare the observed value of the statistic to the critical value obtained for the chosen alpha**



Since a 95% level of significance with a one tailed test is being used,  $Z_c = 1.645$ . The rejection region is shown above and the observation made is that  $-1.21$  does not lie in the rejection region.

### Step 5: Decision making

Since  $-1.21$  does not lie in the rejection region; we fail to reject the null hypothesis. We say that there is sufficient evidence to make a conclusion that strategies by external stakeholders have led to food insecurity.

## 4.7.2 Hypothesis 2: Supporting community strategies leads to sustainable food security

### Step 1: The null ( $H_0$ ) and the alternate ( $H_A$ ) hypotheses

A randomly selected sample of 100 respondents was questioned on the stakeholder strategies on food security problem in Kitui district. It was found out that 40 of the respondents affirmed that strategies by community-based groups have led to food insecurity while 60 believe otherwise. A test hypothesis that the population believes that community strategies lead to further food insecurity in the area is required.

$H_0: p = .5$  Supporting community strategies leads to sustainable food security

$H_a: p > .5$  supporting community strategies does not lead to sustainable food security

### Step 2: Level of significance

A 95% confidence level is used.

### Step 3: Calculations

Test statistic calculates as:

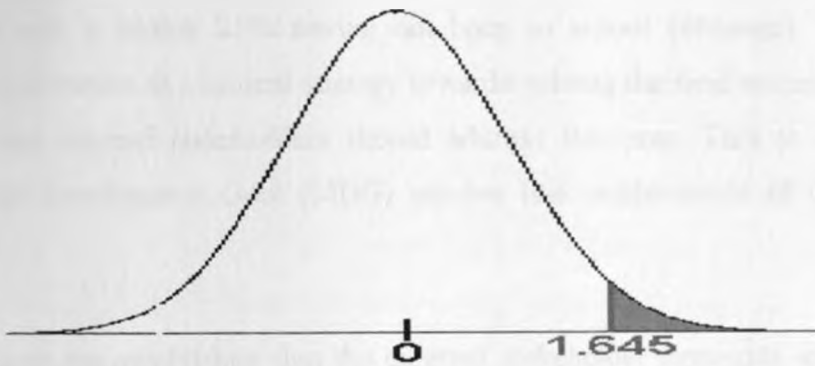
$$p = \frac{60}{100} = 0.6$$

Z statistic calculates as:

$$z = \frac{\hat{p} - p}{\sqrt{\frac{p(1-p)}{n}}}$$

$$\begin{aligned} Z &= \frac{0.6 - 0.5}{\sqrt{0.6(1 - 0.6)/100}} \\ &= 0.129 \end{aligned}$$

**Step 4: Compare the observed value of the statistic to the critical value obtained for the chosen alpha**



Since a 95% level of significance with a one tailed test is being used,  $Z_c = 1.645$ . The rejection region is shown above and the observation made is that 0.129 does not lie in the rejection region.

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#### **Step 5: Make a decision**

Since 0.129 does not lie in the rejection region, we fail to reject the null hypothesis. There is sufficient evidence purporting that community-based groups lead to food security in this area.

#### **4.7.3 Hypotheses Conclusion**

These two analyses help us establish that whereas the strategies adopted by external stakeholders in addressing food security problems in the area are greatly recognized, 44% of the respondents believe that the strategies are not effective.

Further testing establishes that strategies adopted by community-based groups contribute greatly to food security in study area with 60% of the sample population confirming this position. This study therefore suggests that a strategy combination from both external and internal stakeholders would help solve the food security problem in Kitui district. Chart 8 below indicates the critical strategy priority areas that both external and internal stakeholders should address to achieve food security.

### 5.1 Summary of Research Findings

Level of education is directly proportional to technology adoption and implementation. Study findings indicate that 64% of the respondents have only attained primary level of education with a further 21% having not been to school (illiterate). The respondents applauded education as a critical strategy towards solving the food security problem. Both external and internal stakeholders should address this area. This is in line with the Millennium Development Goal (MDG) number two: achievement of universal primary education.

This research has established that the external stakeholder strategies in place are set to address the symptoms of food insecurity and not the causes. The major cause of food insecurity is drought while the strategies address hunger; and therefore inclined towards relief food distribution. This only gives a temporary relief and hence not sustainable. The three major food security strategy suggested by this study are:-

1. Provision of water
2. Provision of education
3. Community participation

According to the finding, the community is food secure in terms of food crops and livestock production. It is only during drought periods that the community suffers food insecurity. About 88% of the respondents have food storage facilities (granaries) a strong indicator of food security. However, 71% of the respondents suffer post-harvest food crop losses even after bumper harvests. This area needs further attention.

During famine 68% of the community seeks help from the external stakeholders; they have recognized the food insecurity problem and have collaborated with the local community to overcome the famine problems the area. The external stakeholders provide relief food, cash hand outs, provision of seeds for planting, and training of farmers on appropriate farming methods. Study findings indicate that these strategies are ineffective and do not address the priority needs. The research findings have established that provision of water is the most critical cause of food insecurity and should therefore be given priority over the other strategies.

The dependency syndrome has been observed to be prevalent in the area of study with about 65% of the respondents reporting having received relief food handouts and 40% believe they cannot do without relief food.

The study also established that relief food does not always reach the intended beneficiaries with 70% receiving information and only 52% receiving the actual relief food.

This reflects inefficiency in relief food distribution leading to the ineffectiveness of the strategy. The local community does not participate in making the "relief" decisions which include preferred type, quantity, delivery points, and proportions. Community participation has been minimal and as a result, this strategy is ineffective.

Nutritional insecurity was also observed to be prevalent in the study area with about 33% of the population having reported malnutrition cases. The food crop production pattern does not reflect adequate legume production and consequent protein intake is inadequate hence leading to nutritional insecurity. The stakeholders should therefore address nutritional security along food security.

## **5.2 Summary of Coping Strategies**

1. About 40% of seek off -farm employment as a coping strategy. This is a strong indicator of adequate labour force in the community which could be utilized for rural cottage industries. This is in line with the theory of entitlement whereby communities work for cash to buy food.
2. Prostitution has been observed as a coping strategy with about 15% of the respondents reporting use of prostitution for food security. However further analysis indicated that the strategy was at insignificant and is not a community problem.
3. Charcoal burning was also observed as a coping strategy over the years. This being an environmental hazard needs to be addressed at policy level to promote re-planting of trees for sustainability.
4. The community has organized groups as a coping strategy. About 69% of the respondents are members of such groups. These groups engage in several enterprises like sale of livestock and crop produce, soil conservation, seeking funds from external stake holders and pooling of labor in their respective farms.

### **5.3 Limitations**

1. Samples could have been taken from more locations in order to be more representative but resources were limiting. Endau and Malalani locations of Mwitika division posed communication (distance) challenges
2. Findings will be generalized to the rest of Kitui district but, may not be a representative sample for the whole of Ukambani.
3. The research focus was on social evaluation of food security coping strategies. However, in-depth analysis of specific strategies was not done e.g. charcoal burning and its effect on income generation and environmental degradation.
4. Rural access roads were a challenge during collection of data.
5. Due to financial and time constraints, the sample size was limited to 100 respondents only.
6. Illiteracy levels being high challenge in completing the questionnaires were experienced.
7. Telephone networks are non-existent in the study area and as such coordination during data collection was a challenge.

### **5.4 Recommendations**

1. The study shows that drought ranks as number one cause of food insecurity in the study area. In view of this the GoK, Donor agencies, NGOs, and any other external stakeholders should address the drought situation in Kitui and give more emphasis to water provision projects and programmes.
2. Relief food distribution should not be a continuous exercise even during times of bumper harvest. This sends the wrong message to the community and encourages laxity in homegrown food security strategies. Relief food should only be used to complement other more sustainable and continuous measures.
3. Substantial crop produce is lost after harvest. The extent of post-harvest losses needs to be evaluated and more technologies developed and disseminated to farmers in Kitui district. Market development in the area is urgent in order to address infrastructure, value addition and access to other outlets. This will reduce post-harvest losses.
4. Laxity on the part of the Government of Kenya has been identified as one of the causes of food insecurity in the area. This calls for redefining of government strategies and priorities in resource allocation towards addressing food insecurity in Kitui district.

5. Livestock keeping has been a critical coping strategy to the community, thus the stakeholders in the area should revitalize this sector in order to win the fight against hunger. Relief food distribution should be integrated with distribution of relief fodder for livestock since a significant number of the respondents indicated they rely on livestock during famine periods.
6. The study indicates that casual labour is a significant food security coping strategy, and community labour is, therefore, readily available. This can be utilized in rural cottage industry for employment creation and income generation. This will lead to poverty alleviation and community development.
7. Charcoal burning is still being used as a food security coping strategy and a policy intervention to promote re-planting of trees is urgently needed to avert further deforestation.
8. Community participation has been found to be a positive factor leading to food security and external stakeholders should have it as a component in all food security projects.
9. The project approach should be used to address causes of food insecurity lie drought and not symptoms such as hunger. With community participation sustainable food security will be realized.
10. Technologies for dry land farming are appreciated but inadequate. The Government should invest more on dry land farming to ensure farm inputs (especially planting material) is enough for the rural peasants.
11. External stakeholders should synergize their activities for effectiveness and sustainability in food security projects and programmes. In this respect, a national coordinating body should be formed.
12. Programmes and projects are not disqualified as problem solving tools. However, community participation should be enhanced to ensure proper problem identification and ownership for sustainability.
13. Some community coping strategies have disappeared for instance, sisal product making. There is potential for rural cottage industries and stakeholders should consider creating an enabling environment for development of this industry.
14. Sheep rearing is unpopular although sheep are hardy animals and suitable for the zone. Community sensitization should be done to promote this enterprise.

## 5.5 Conclusion

In conclusion, the study has established that the strategies adopted by both internal external stakeholders to address food insecurity in Kitui district have so far achieved minimal success. External stakeholder strategies have persistently addressed the symptoms arising from food insecurity and not the major cause which was identified to drought. Internal food security strategies have also intermittent success, with community members achieving temporary food security when there is adequate rainfall.

Community potential should be tapped and directed towards productive food security strategies. Bonding (linkages between community members) and bridging (linkages with external stakeholders) should be enhanced in order to amplify the effect of food security mitigation measures. Human resource is available to fight as paid mercenaries and do charcoal burning. The same potential could be used to re-plant trees and work in rural industries if necessary infrastructure is put in place (water, roads, telephone network and electricity, among others). This will reduce poverty and give them “entitlement to food” Sen. (1985).

For sustainable food security to be achieved synergy of both stakeholder strategies needs to be exploited. For synergy to be realized, community participation is a critical factor as it also enhances ownership of initiated programmes and projects. Various external stakeholders were found to be undertaking disjoint activities on similar community problems. These should be harmonized for cost effectiveness and greater impact.

Finally, an appeal is made to all stakeholders in food security in Kitui district and the country at large to lay emphases on bottom-up approaches in order to correctly diagnose community problems and solicit community participation for ownership and sustainability. On the other hand rural communities are called upon to cooperate with other stakeholders in order to realize the envisaged synergy. The overall result will be sustainable community development which will translate into overall national development.



## **5.6 Suggestions for Further Research**

1. A comparative study on provision of irrigation water versus relief food distribution in Kitui district.
2. Charcoal burning as a food security coping strategy in Kitui district and its impact on environmental degradation.
3. Factors influencing strong family ties despite food insecurity in Kitui district.
4. The relationship between the widows/ widowers and food insecurity in Kitui district.
5. Akamba community perspectives on sheep rearing in Kitui district.

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## 7. APPENDICES

### 7.1 Farmers' Questionnaire

#### A social Evaluation of Food Security Strategies in Kitui District

Good day! My name is Agnes Kyalo, a graduate student at the University of Nairobi. I am conducting a research on Evaluation of Food Security Strategies in Kitui district for my Master of Arts degree in Sociology (Rural Sociology and Community Development). I kindly request you to allow me to ask you some questions on food security strategies in this area. Please feel free to participate; knowing that your responses will be held strictly confidential and will only be used for purposes of this study.

#### Background Information

Location \_\_\_\_\_

Sub- location \_\_\_\_\_

Date \_\_\_\_\_

#### Personal Information

Name \_\_\_\_\_

Age \_\_\_\_\_

Marital Status: a) Married ( ) b) Divorced ( ) c) Single ( ) d) Separated ( )  
e) Widowed ( )

Educational level: a) Primary ( ) b) Secondary ( ) c) University ( )

d) Not been to school e) other (specify) \_\_\_\_\_

Position held in the household

a) Father ( ) b) Mother ( ) c) Son ( ) d) Daughter ( ) e) Other (Specify) \_\_\_\_\_

1) What do you do to get food after crop failure?

---

2) How many meals do you take per day? a) One ( ) b) Two ( ) c) Three ( )

d) Other (specify) \_\_\_\_\_

---

3) Have you had any malnutrition incidences? a) Yes ( ) b) No ( )

---

4) How many famines have you witnessed? a) One ( ) b) Two ( ) c) Three ( )

d) Other (specify)

---

5) Who should solve the famine problem? \_\_\_\_\_

6) Have you received any help during food shortages? a) Yes ( ) b) No ( )

If yes, from who?

---

7) What kind of help did you get?

---

8) Have you received relief food handouts? a) Yes ( ) b) No ( )

9) Does relief food reach the intended beneficiaries? a) Yes ( ) b) No ( )

10) Does the information about relief food reach the recipients? a) Yes ( ) b) No ( )

11) Is the type of relief food acceptable to the community? a) Yes ( ) b) No ( )

12) Can this community do without relief food handouts? a) Yes ( ) b) No ( )

13) What do you do with excess food after a bumper harvest?

---

14) Do you have a food storage structure? a) Yes ( ) b) No ( )

15) Do you get any extension advice? a) Yes ( ) b) No ( )

If yes, from who? \_\_\_\_\_

16) How many members of your household are employed off-farm?

---

17) How far is the nearest market?

---

18) Do you suffer any post-harvest food crop losses? a) Yes ( ) b) No ( )

If yes, how much did you lose last season?

---

19) Do you have any on-farm income generating activities? a) Yes ( ) b) No ( )

If yes, please identify them

---

20) What is the cause of food insecurity in this area?

Drought ( ) Floods ( ) Insect invasion ( ) Inadequate relief food ( ) Lack of community participation ( ) GoK/NGO laxity ( ) Poverty ( ) Large family size ( ) Post-harvest food crop sales ( ) others (specify) \_\_\_\_\_

21) Have you ever been consulted on how to solve the food insecurity problem?

If yes, by who? \_\_\_\_\_

22) Were your views included in the external stakeholder strategies? a) Yes ( ) b) No ( )

)

23) How much food did you harvest last season and how was it utilized?

Food crop	Amount harvested Bags (90Kg )	Amount sold Bags (90Kg )	Amount stored (90kg bags)
Maize			
Beans			
Sorghum			
Millet			
C/peas			
P/peas			
G/grams			

24) Are you a member of an organized group? a) Yes ( ) b) No ( )

25) Do you fight hunger as a group or community? a) Yes ( ) b) No ( )

If yes, how? \_\_\_\_\_

26) What do you sell to buy food? a) Charcoal ( ) b) Sisal products ( ) c) Sand ( )

d) Firewood ( ) e) other (specify) \_\_\_\_\_

27) Have you suffered any food thefts? a) Yes ( ) b) No ( )

If yes, how many times? \_\_\_\_\_

28) Have there been any food conflicts? a) Yes ( ) b) No ( )

If yes, how many? \_\_\_\_\_

34) Is prostitution used as a famine coping strategy? a) Yes ( ) b) No ( )

29) How many members of this community are HIV positive? \_\_\_\_\_

30) Have you ever been in a food-for work Programme? a) Yes ( ) b) No ( )

31) What strategies are used by external stakeholders to fight hunger?

\_\_\_\_\_

32) Have these strategies been effective? a) Yes ( ) b) No ( )

33) Has any member of your household died of hunger? a) Yes ( ) b) No ( )

34) Have you had any malnutrition problems in this area? a) Yes ( ) b) No ( )

If yes, how many? \_\_\_\_\_

35) Do you have enough food throughout the year? a) Yes ( ) b) No ( )

36) Which and how many livestock do you keep?

Cattle \_\_\_ Poultry \_\_\_ Goats \_\_\_ Sheep \_\_\_ Donkey \_\_\_ others (specify)

37) Have any of them died during famines? a) Yes ( ) b) No ( )

If yes, how many? \_\_\_\_\_

38) Have you had any cases of food theft? a) Yes ( ) b) No ( )

If yes, how often? \_\_\_\_\_

39) Which is the best method to solve food insecurity problem in Kitui district?

Thank you for your cooperation

## 7.2 Interview Guide for MOA Staff

### Background Information

Location \_\_\_\_\_

Sub- location \_\_\_\_\_

Date \_\_\_\_\_

Name \_\_\_\_\_

Position held in the office \_\_\_\_\_

1) What are your views about food security in this area?

2) What are the views of the community about food security?

3) Identify other stakeholders dealing with food security in this area?

4) What are their views about food security?

5) Which strategies are used by MoA to fight hunger?

6) Which strategies do other stakeholders use to achieve food security?

7) How do farmers respond to a bumper harvest in food crops?

---

8) What are the views of the community concerning relief food handouts?

---

9) What strategies have been used by farmers to fight hunger?

---

10) Which of these strategies are effective?

---

11) Are there any community strategies you consider socially undesirable?

---

If so, please identify them

---

12) Are there any community strategies you consider environmentally destructive? (Please identify them)

---

13) Has GoK collaborated with other stakeholders in food security? (please identify them)

---

14) Has the collaboration been effective? a) Yes ( ) b) No ( )

---

Please comment

---

15) Please comment on GoK food security strategies since independence

---

16) Comment on community participation in food security projects

---

17) Have GoK projects in food security been successful in this area?

---

18) Have projects on food security by other stakeholders succeeded in this area?

---

a) Yes ( ) b) No ( )

---

Please explain your answer

---

19) What are your views about GoK's response to famine disasters?

---

20) Who should solve the famine problem?

---

21) Are GoK food security policies effective in addressing food security?

22) Any lessons learnt from your experience?

Thanks a lot for your cooperation.

### 73 Interview Guide for NGO Staff

#### Background Information

Location \_\_\_\_\_

Sub- location \_\_\_\_\_

Date \_\_\_\_\_

Name \_\_\_\_\_

Position held in the office \_\_\_\_\_

1) What are the major activities of NGOs in this area?

2) What are the objectives of NGOs in this area?

3) Does your NGO collaborate with GoK on food security matters \_\_\_\_\_?

4) Has the collaboration been successful? (a) Yes ( ) (b) No ( ). If not, why?

---

5) Suggest possible ways of ensuring successful collaboration

---

6) Please comment on NGO's achievements in food security so far

---

7) Give an overview of farmers' cooperation and participation

---

8) What are the constraints experienced during service delivery?

---

9) What improvements do you think are necessary?

---

10) Does your NGO distribute famine relief food?

a) Yes ( ) b) No ( ) If yes, how much?

---

11) What kind of food do you issue to the community?

---

12) Is the food acceptable to the people?

a) Yes ( )                      b) No ( )

13) How do you identify target beneficiaries?

---

14) Why has food insecurity persisted in this area?

---

15) Who should solve the famine problem in this area?

---

16) Has your organization succeeded in the fight against hunger in this area?

a) Yes ( )                      b) No ( )

Give reasons

---

17) How many groups do you deal with?

a) 1- 10 ( )    b) 10-20 ( )    c) other (specify) \_\_\_\_\_

18) How effective is this approach? \_\_\_\_\_

19) Please comment on individual versus group approach in combating hunger

---

20) How long have you been operating in this area?

---

21) Are there plans to leave this area? a) Yes    b) No ( )

If yes, when \_\_\_\_\_

22) Please comment lessons learnt from experience

---

Thank you very much for your cooperation.



## 7.4 Interview Guide for Opinion Leaders

### Background Information

Location \_\_\_\_\_

Sub- location \_\_\_\_\_

Date \_\_\_\_\_

Name \_\_\_\_\_

Position held in the group or community a) Chairperson ( ) b) Secretary ( )

c) Treasurer ( ) d) Member ( ) e) other (specify) \_\_\_\_\_

1) How many registered groups operate in this division?

2) How many unregistered groups are there?

---

3) Have the groups succeeded in fighting hunger?

a) Yes ( ) b) No ( )

Please explain your answer \_\_\_\_\_

4) What are the current food security strategies used by these groups?

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5) What are the past food security strategies undertaken by the groups?

---

6) Comment on group versus individual approach in achieving food security

---

7) How large is your group? \_\_\_\_\_

8) How long has your group been involved in fighting hunger?

---

9) Has your group received any help during food crises? a) Yes ( ) b) No ( )

If yes, from who? \_\_\_\_\_

10) Has the aid received been adequate? a) Yes ( ) b) No ( )

If not, what do you do to complement it? \_\_\_\_\_

11) Can this community do without food relief handouts? a) Yes ( ) b) No ( )

Please explain your answer \_\_\_\_\_

12) How do non-members fight hunger?

---

13) Whose methods are more effective?

a) Group ( ) b) Individual ( ) c) Other (specify) \_\_\_\_\_

14) What suggestions do you have for improvement?

---

15) Has your group received extension services to combat hunger?

a) Yes ( ) b) No ( )

If yes, from who? \_\_\_\_\_

16) Who should solve the food insecurity problem?

17) Do you have a group savings strategy? (Bank, post office, treasurer's kitty etc)?

a) Yes ( ) b) No ( )

If yes, give details

18) How do NGOs assist the community to achieve food security?

19) How does GoK help the community to combat hunger?

20) Has this group received relief food?

a) Yes ( ) b) No ( )

Please comment \_\_\_\_\_

21) How does your group deal with excess food during bumper harvest?

22) Is this community capable of solving the food insecurity problem?

a) Yes ( ) b) No ( )

Please explain your answer \_\_\_\_\_

23) Comment on persistence of hunger in Kitui district

24) Has this group received extension services to combat hunger? a) Yes ( ) b) No ( )

If yes, from who? \_\_\_\_\_

25) Has any group been successful in achieving food security? a) Yes ( ) b) No ( )

Please give details \_\_\_\_\_

26) Suggest ways of making community strategies sustainable

27) Suggest ways of achieving sustainable food security \_\_\_\_\_

Thank you for your cooperation.