

**SOCIO-ECONOMIC FACTORS THAT INFLUENCE FAMINE  
VULNERABILITY IN KIBWEZI DIVISION MAKUENI DISTRICT  
KENYA.**

**BY**

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A thesis submitted to the Institute of African Studies University of Nairobi, in partial fulfilment of the requirements of the Degree of Master of Arts in Anthropology

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This thesis has been submitted for examination with my approval as the University Supervisor.

Wanakayi Omoka  
DR. WANAKAYI OMOKA

## **DEDICATION**

Dedicated to my late brother Fred Musyoka Kyanganga who always, had my interests at heart.

## ACKNOWLEDGEMENTS

I would firstly like to express my gratitude to my supervisor Dr. W. Omoka, who despite his busy schedule, spared time to provide me with academic and perceptive comments and or criticisms, which went along way to improving the final document.

I would also like to thank the Catholic Academic Exchange Programme of Germany (Katholischer Akademischer Auslander – Dienst – KAAD), for offering me a full scholarship for the two years I spent doing my MA course. My sincere thanks also go to Fr. Dr. Thomas McDonald C.S.S.P, for all the support and encouragement he has given me for the period I have known him.

Special thanks also to my parents; Mr. Joseph K. Nthuli and Alice Munyiva Kyanganga. Their parental love and consistent encouragement and wise counsel has seen me this far. I cannot also forget my brothers and sisters whose contribution to my school and University education is immeasurable.

Finally my sincere gratitude goes to Jacinta Mueni (Atho) who did not tire to type this work.

## ABSTRACT

The study attempted to unveil the major socio-economic factors influencing famine vulnerability in Kibwezi division of Makueni district.

This study was based on the presumption that food security and famine vulnerability cannot be divorced from wider concepts such as poverty and development, or lack of it. The underlying factors both social and economic, are prime in the process of attaining less vulnerable status of famine at the household level.

In chapter one, a careful study of the factors causing famine vulnerability the state of food security in the world in general and specifically in the sub-Sahara Africa was established. The responses and impact of famine are analyzed. Several theories explaining the causes of famine were discussed and credit or critique given where due. In view of this background, problem statement, objectives and significance of the study were put forward.

In chapter two, relevant literature is reviewed under the following topics; the problem of famine, causes, which include economic, socio-cultural climatic and demographic factors. Also, coping mechanisms to most human populations are examined in this chapter. The theoretical framework adopted for this study is discussed here. This is the entitlement exchange model. This model postulates that each person no matter how poor has some endowments which he or she can utilize or exchange for money or kind, and through such exchange be able to acquire utilities needed for life sustenance. It is also in this chapter that the hypotheses and operationalization of variables are formulated and discussed respectively.

In chapter three, the study design, study site, agro-ecological and demographic factors are discussed. Households education levels, financial and the general standards of living among Kibwezi residents is presented. It is in this chapter that the author shows that, 139 household heads were selected as the main source of data. Interview schedule was the major source of information while key informant and focus group discussions supplemented the information gotten from the household heads.

In chapter four, interpretation and analysis of data is presented. An attempt is made to tie together loose ends to weave a coherent picture of famine situation and its impact in Kibwezi. Chi-square, contingency coefficient, together with percentages and simple elaborative tables are used. A number of variables are co-tabulated and the above mentioned values obtained from which inferences about famine situation in Kibwezi is made.

Finally in chapter five, the findings, interpretation, conclusions and recommendations are presented. Almost ninety per cent of the reasons given by research subjects for inherent vulnerable state of household to famine was inadequate earnings. Others include low level occupations, limited educational standards, unemployment and over-reliance on relief food. These more or less result to deflated entitlement portfolio, a fertile recipe to famine vulnerability. The emergent policy implication from the findings is the crucial need to formulate policies whose aim is to aid in reducing poverty levels and enhance employment and savings. This, in the long-run results to enhanced entitlement portfolio of the households. Also campaigns should be intensified to conscientize households on how best they can meet their food requirements more independently.

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# CHAPTER ONE

## INTRODUCTION

Famine is the most horrible of the manifestations of food insufficiency. Malnutrition, starvation and death, are evident in most developing countries of the world. The poignancy of hunger and suffering in Africa is constantly projected through television screens all over the world. This study therefore, investigated the socio-economic factors which influence famine vulnerability.

The world food security is at stake. All the basic indicators of food security namely, grain production per person, carry over stocks of grains, sea food prices and grain prices, signalled a tightening situation during the nineties. With the loss of momentum in the growth of the world grain harvests since 1990, it comes as no surprise that the world grain stocks during the 1990's have dropped to their lowest level ever (Brown 1997). Incidentally, the bumper harvests of 1990 boosted carry over stocks for 1991 to 342 million tonnes. But during the six years since then, they have dropped to 240 million tonnes (Ibid)

This state of affairs with regard to world food security impacts negatively on Sub-Saharan Africa. This is a region which has experienced, and still does experience, profound economic, social, political and environmental crises. According to the World Resources Institute (1990), of all the developing regions, this region relies mostly on imported food, and also has the highest proportion of land area losing its fertility and the highest percentage of population suffering from severe malnourishment. Also, according to the United Nations Food and Agricultural Organisation (FAO) the number of the undernourished were estimated at 572 million in 1983 - 1985, it would appear, however, that over recent years, the share of population of the undernourished declined in all regions except in Africa (World Resources Report 1990).

It can be argued that malnourishment, more than ever before, results from famine which culminates from drought and man-made causes-such as war. Though Dreze (1988) claims that there is a considerable vulnerability decrease of famine in Sub-Saharan Africa due to what he calls improved quality of public intervention, a greater proportion of Africa's population cannot meet the required minimum calorific level and most of the people in his continent are undernourished.

On the home-front the situation is no more different. Kenya's grim episodes of drought and famine are succinctly highlighted by scholars such as Wisner (1977), O'Leary (1988) Herlehy (1984), Ambler (1988) and Dreze (1988). Kenyan population as in the rest of the Sub-Sahara Africa, majority of it live in the rural areas and a higher percentage depend on agriculture for their livelihood. To meet their requirements, most people produce rather than purchase their food. Apparently, this has received a greater appreciation, more than ever before, because conditions which guarantee high yields have not yet been conducive.

Food production, and more specifically, by rural inhabitants is a crucial factor. With regard to this, questions have arisen regarding the extent of food availability and security in Kenya. It is in this context that the growing concern over famine can be understood. The analysis of famine, however, cannot be done fruitfully without taking into consideration the issues of poverty and underdevelopment.

The concept of underdevelopment has received tremendous attention and comments in various literature. According to Addo (1995), development is a human issue. This issue dwells on the ability and capacity of the individual to realise their inherent potential and effectively cope with the changing circumstances of their lives. Development also implies the total mobilization of society, changing the institutions, it involves the movement of the whole social system upwards (Myrdal 1968). Importantly, development denotes a "shift from an outward to self-reliant position with regard not only to processes of decision making, but more significantly to the pattern and style of production and consumption" (Mabogunje 1980:46). Anything which is a direct opposite of this then, denotes underdevelopment.

Hunger and poverty, on the other hand, are two issues which cannot be divorced from one another. Hunger is the issue, poverty is the cause (Rahamato 1991). Rahamatto argues that the root to alleviation of poverty and hunger in terms of eco-development principles is clear; share out more fairly the unprocessed food resources that are already available and expand employment opportunities. Hussain (1985) is of the opinion that poverty is not just a statistical fact at a point in time; it is a human condition that is systematically generated by particular forms of production organisation. Therefore, in examination of the state of poverty vis-a-vis famine vulnerability, the structures of production relations which brings affluence to the few and poverty to many need thorough examination.

With the awareness of the relationship among the these three variables, viz; famine vulnerability, poverty and under development, many studies have been conducted in Kenya. These include Mbithi and Wisner (1972), Akonga (1985, 1986), Awuondo (1990) and Mutie (1993).

## 1.0 THE AKAMBA: AN ETHNOGRAPHY

The Akamba occupy four districts in Eastern Province; viz Machakos, Kitui, Makueni and Mwingi Districts. According to Ndeti (1972: 25-27) the Akamba people, along with other Bantu communities migrated to their present day settlement from present day Tanzania – specifically Mt. Kilimanjaro region. The Akamba themselves, often through folklore and myth explain their origin with closeness to aforementioned theory for they have close similarity with coastal people such as the Giriama and the Taita.

The basic social organisation among the Kamba rotates around the kinship. Anthropologists conventionally classify kinship systems according to the way in which people reckon descent, (Mair 1974). According to this pioneer Anthropologist, many societies and especially in Africa trace their descent lineally, that is through father to father's father or from mother to mother's mother; as far back as they can reckon. Among the Kamba however, they trace their lineage through the former. In view of the afore mentioned observation, "Musyi" literally meaning "family" and "home" thus combining residence, affinal and consanguinal relations, is the smallest unit of the Akamba social organisational network.

The Akamba family can either be monogamous or polygamous depending on the wealth and social standing of the household head. In special cases a "wife" may be acquired by another female so that she can bore her children with a view that the family name will be sustained. This is done without the expectation that the couple concerned will engage in physical relationship Ndeti (1972: 67-68). The children of the "iweto" (wife) have social not biological paternity in the family. This can be compared to surrogate motherhood in the contemporary society (Musila 1993)

A family unit among the Kamba may consist of one or two or as many as four generations members, that is, siblings, parents, grand parents and great grand parents and collateral relatives who live in some kind of symbiosis. Besides the economic alliance the family carries the other vital functions of human development for example education and religion (Mbiti 1969). The reason for designating "musyi" as the best transmitter of Akamba basic heritage for practical living was to make sure that faith was actualised.

From "Musyi" the second in line in the social organisation among the Akamba is "Mbai". "Mbai" (Clan) is larger in size and more powerful. It should be noted that "Mbai" constitutes the first sign of the Akamba government. Among the Kamba there was no centralized government. The concept of the Akamba government depended on the understanding on the principles upon which the Akamba society was organised. The government operations of the Akamba were so much that it was impossible to pinpoint the real locus of power (Ndeti 1972). The clan "Mbai" were responsible for major decision making affecting the community (Musila 1993)

The principle of decentralization of power among the Kamba worked through common laws of the society. For instance one fundamental operating maxim of "Mbai" is that, "he who disregards the collective conscience of the "Mbai" has no right to expect protection from it". "Mbai" and the community at large takes the responsibility of protecting itself against out-laws. There are more than 25 major clans, most of which are exogamous among the Kamba. Each of them traces its name and descent from a known hero and usually identifies itself with a totem (Ndeti 1972). Within the Mbai itself, there are various stages with distinct designations.



For instance after a male was born before circumcision, he is a boy or “Kivisi” but nowadays the practice is not taken as seriously as it used to be because it is even done at birth. After circumcision one entered to the stage of “Mwanake” (pl Anake) then to “Nthele” an advanced stage of “Mwanake” (in years). A “Nthele” however was not supposed to attend dances attended by young men. Both “Nthele” and “Anake” acted as warriors and were equivalent to Maasai morans. From “Nthele” the next stage was “Mutumia” (elder) (pl Atumia). Eldership positions among the Kamba are given below in terms of seniority.

“Mutumia wa Kisuka”	-	Ordinary elder
“Mutumia wa Nzama”	-	Elder of the council
“Mutumia wa Ithembo”	-	Elder of the sacrificial ceremony.

Traditionally, the elders were very powerful politically and socially, they transmitted wisdom to the young and presided over disputes at the family and clan levels.

In the economic realm, ownership of property was and is still entrusted to male members of the family or clan. Collective ownership of property especially and cattle could not be disposed off without the approval of the senior males in the family (Musila 1993: 52). The Kamba practised both sedentary farming and livestock keeping which is also prevalent today. The Kamba were long distant traders long before the colonialists came. They traded with the Kikuyu and the coastal people, the Mijikenda. Although the Kamba were mobile people a large segment of the population were and still are agriculturalists. They once kept large herds of cattle, but due to scarcity of grazing land, this mode of existence has diminished considerably although occasionally one may run across sizeable herds of cattle, goats and sheep (Ndeti 1972).

With regards to food insecurity and or famine, the Kamba resulted to long distance trading in pursuit of food. Other coping mechanisms among the Kamba included migration, inter-household co-operation and sharing in the kinship circles and austerity. Some of these adaptive measures are still prevalent to date.

Upon this background, this study is an attempt to investigate socio-economic factors that influence famine vulnerability in Kibwezi Division of Makueni District.

## 1.1 PROBLEM STATEMENT

Famine is extreme and protracted shortage of food, causing widespread and persistent hunger, emaciation and increase in death rate, (Encyclopaedia Britannica 1993).

Famines can be classified according to who is affected and where the affected population is located. General famine affects all classes and groups within the region or country of food shortage. Regional famine is concentrated in a certain area in which all groups suffer, while class famine, discusses a situation in which certain population groups suffer the greatest hardship in a country short of food regardless of the geographical Concentration of famine (Encyclopaedia Britannica 1993).

Attempts to understand famine have not, as yet been conclusive. The spectre of famine has refused to be exorcised once and for all. This can be attested by the recurrent episodes of famine in sub-saharan Africa generally and in Kenya specifically. Famine is a complex socio economic and ecological problem for which no single factor has been cited as a sole cause. For this reason it has been viewed as one of the most prominent problems in Sub-saharan Africa (Dreze 1991).

In Kenya, the problem is exacerbated by the government's Agricultural development strategy, which Mbithi and Wisner (1972), argue that is skewed towards wetland farming. Their considered opinion is that, this has led to regional disparities in terms of food security, relative deprivation and marginalisation of some regions. The end result is prevalent under-nutrition and malnutrition incidences. Keusch (1990:10), argues that malnutrition is a disorder that occurs when the body lacks in necessary nutrients, under-nutrition on the other hand is caused by lack of enough food. Common diseases associated with these deficiencies include Kwashiorkor, Marasmus and retarded growth.

Since famine may occur where food is not completely scarce but is unavailable to a particular sector of the population for example the Welo Province famine in Ethiopia (1972- 1974), (Encyclopaedia Britannica 1993), this study aimed at explaining why there may be differential impact of famine in Kibwezi Division.

This research will attempt to explain Social and economic factors that influence famine vulnerability in this region. More specifically the study attempted to answer the following questions:-

- i) Do income levels influence vulnerability?
- ii) Is there a direct relationship between occupation and the degree of famine vulnerability of the household?
- iii) Is famine relief a positive or negative intervention in terms of famine vulnerability?

## 1.2 OBJECTIVES OF THE STUDY.

### GENERAL OBJECTIVE

The main objective of this study was to investigate the socio-economic factors that influence famine vulnerability in Kibwezi Division of Makueni District.

### SPECIFIC OBJECTIVES

- i) Assess the impact of income levels on famine vulnerability.
- ii) Investigate the effects of household head's occupation on famine vulnerability.
- iii) Assess the impact of famine relief intervention programmes on food security and famine vulnerability.

## 1.3 SIGNIFICANCE OF THE STUDY

More than ever before, the occurrence of famine in the modern world is an incontrovertible sign of failure of public intervention at the right time with the right resources. More emphasis should be put on preventive mechanisms rather than rushing to tackle the disaster after it has occurred. More so, the frequency with which famine episodes are recurring in Makueni District and other rural areas in Kenya generally, call for up-to-date, detailed and relevant information on the phenomenon. The view is

reinforced by the fact that even when other regions are experiencing quite a comfortable degree of food security, the people of Makueni wallow in poverty and famine.

In relation to the above argument, there was a need to examine various factors apart from the ecological ones, which also influence the proneness of famine in this region.

D'Souza (1987), observes that, not only does famine bring about social disruption, their costs to the national economies are quite monumental. The cost may be in the form of direct costs, that is what governments incur in alleviating the burden of famine over the affected population, primarily through famine relief. Other costs arise from production losses - value not added to the economy because activities which farmers have invested money, time and labour fail, especially when such famines are particularly due to drought (Mbithi and Wisner 1973). There are also social costs to nations. These are measured by increased nutritional problems and nutritionally related diseases, family and community disruption, misery and loss of human dignity (Ibid)

The main purpose of this study was to yield information that will bring revelations which hitherto have not been seriously considered as being part and parcel of this scourge or if considered, not seriously addressed. This will be achieved through arguing that , successful formulation and implementation of policies relating to eradication of famine, must be based on the sound understanding of the local social, cultural and economic dynamics within which such programmes and or policies are introduced. This study hoped to yield information that will aid in the attainment of such an objective.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK**

#### **2.1 LITERATURE REVIEW**

Food is the first basic need for all humans. Deficiency in its intake is one of the best indications of a country's poverty levels or under-development (Njeru and Macharia 1992). Famine, from which this deficiency may result is a complex social problem for which no single factor has been cited as a sole cause. As a result it is looked upon as one of the worst tragedies to befall humans and more adversely in the developing world.

In this section, an attempt will be made to review the available literature on famine. The aim is to pinpoint gaps inherent in this literature which the present study aims to fill. The relative literature is reviewed under the following sub-headings:-

- a) The problem of famine;
- b) Causes of famine;
- c) Coping mechanisms

#### **2.2 THE PROBLEM OF FAMINE**

Drought and famine are not un-usual in Sub-Saharan Africa. Episodes of drought and food shortage are regularly recurring events.

Famine is one phenomenon which has baffled scholars. Various theories have been advanced to explain the origin or causes of famine. These range from the ethics in the world political order through capitalism, poverty, colonialism to ecological factors (Rahamato 1991).

Rahamato goes on to disapprove some of these theories. He argues that, famine has occurred in the same country, region or geographical zone, before, during, and after colonialism. The evidence now available, for example, shows that, the earliest recorded famine occurred in West Africa in the 15th Century. Also, in the Sahel region, one of the most serious famines is known as "The seven years famine", which occurred in the first decade of the 18th Century, again before the appearance of the Europeans. He further argues that, famines have occurred in countries which were not seriously integrated in the world capitalism. He cites the Ethiopian famine in 1974 and that of Bangladesh in the same year. Further, he is of the opinion that, famines have occurred in countries which for many years, were guided by socialist policies such as the 1919-1921 and 1933 famines which the Revolutionary Russia experienced (Rahamato 1991).

Though causality may be attributed to diverse factors, famines result in One common problem; the breakdown of both economic and social structures. This renders the society's adaptive capability shaky, leading to mass migration, family break-ups and other social evils (Harrison 1988). This state of affairs compounds the problem of poverty which though it can be cause of famine, can eventually be an effect of the same. Poverty here is not about levels of income; is about much wider concepts such as security, autonomy and self-esteem (Baulch' 1969). It goes without saying that, when people have to beg for what to eat, they cannot claim to be autonomous, to have security or self-esteem (Mbithi and Winser 1972).

### 2.3 CAUSES OF FAMINE

The causes of decline in food production relative to the need, are not always understood. The issues are undoubtedly complex combining economic, social, cultural and ecological factors along with growing population pressures (Ndegwa and Fenwick 1986).

### 2.3.1 ECONOMIC FACTORS

The consequent malnutrition which mainly affects the poor, reinforces the causal connection between famine and economic factors. Masons (1985) sees malnutrition and under-nutrition as a consequence of poverty and identifies such conditions of poverty as inadequate food purchasing power, bad health and lack of resources. Todaro (1984), concurs with Mason's argument. The World Food Programme (WFP), blames the structural adjustment programmes (SAPS), for causing declines in real incomes in some developing countries, thereby eroding the purchasing power of the people (Njeru and Macharia 1992) thus, making poor people vulnerable to famine. Rampel (1984) argues that where poverty exists, a country's capacity to produce is tremendously reduced.

Policy formulation and implementation in the agricultural sector may impact negatively or positively in alleviating the problem of food insecurity. However according to the Kenya's National Development Plan (1997-2001), the agriculture sector expenditure as a percentage of the total government expenditure throughout the 1980s and early 1990s has been declining (GOK 1997). This does not augur well for food security. Sen (1981) argues that food insecurity and famines can be analysed as entitlement failures, hence it is by protection of these entitlements - that is incomes and other non-monetary endowments that food security is reinforced (Dreze 1988).

Clough (1985) and Saul (1987) both document complex crop advance systems organised by local merchants, the tying of markets in money, grain labour and speculative activity and market collusion by wholesalers reproduce local patterns of vulnerability for the rural poor. Clough (1985) identifies distinct rhythms of seasonal grain acquisition and disposal by class; poor peasants are compelled to sell early and take interest bearing loans, later in the season a pattern of distress sales and purchase intensified during famines.

### **2.3.2 SOCIO-CULTURAL FACTORS**

Desai (1988) argues, and rightly so, that, a much deeper aspect of the socio-political system, kinship, religious taboos and many other aspects of culture will determine how the food is shared out and at what level of social aggregation. For instance, culture is used as the framework for apportioning roles; it also determines the rewards which these roles command (Wolf 1973). With regard to the preceding argument, there is a contention that African women produce roughly seventy percent of staple food. However, women in many African cultures are allocated field from their fathers' or husbands' land and are responsible for specific crops and operations. The darker side of this situation is that most land registration and land settlement schemes result in fathers and husbands registering as sole owners (WRI, UNEP & UNDP 1990). This practice, which is rooted in the patriarchal supremacy belief of most African cultures plays a negative role in the attainment of food security (Suda 1991). This institutionalised lack of recognition of women's reproductive roles partly explains limited access to the reproductive resources necessary for increased agricultural productivity. Productive resources, such as land, credit facilities, extension services and training programmes need to be made more accessible to women farmers in order to increase their efficiency and their leverage in production (ibid). Whitehead (1990), contends that food crises have arisen because economic changes of the twentieth century, have tended to place rural women within an underresourced subsistence sector of small-scale agriculture. Gender subordination embedded and culturally reinforced, in the social relations of the society prior to the famine, explains why women are neglected and abandoned in the interest of male survival (Watts 1981).

### **2.3.3 CLIMATIC FACTORS**

Seasonal variations in weather which some experts think are becoming marked, have an immediate and significant impact on food production (Sasson 1990). Droughts, floods, hail, and frost can cause considerable damage and even the loss of an entire harvest. A combination of temperature, rainfall, and the soil, create the physical environment within which agricultural production occurs (U.S.A. 1988).



Moreover, temperatures and rainfall have the most direct influence on other characteristics of ecosystems and thus greatly influence agricultural output.

According to the world resources report (1990), the effect of climate change in agriculture could be double edged; by altering production in the main food production areas, climate change could weaken our ability to manage food crises, and by making growing conditions worse in food deficit nations, it could increase the risk of famine. Mbithi and Wisner (1972), argue that, to deal effectively with drought-related problems it is important to build upon local patterns of adjustment to drought, which have grown up in different ecological zones of the country, fostering those which seem to be successful and introducing new ones which are cost-effective.

The arid and semi-arid regions of Africa are areas of extremely variable rainfall and often severe drought. Sasson (1990), observes that, ecosystems in these regions are so vulnerable to over exploitation of their resources that prolonged drought can undermine their regeneration or any return to biotic equilibrium. This is a fertile recipe for occurrence of famines.

#### **2.3.4 DEMOGRAPHIC FACTORS**

Population is one of the intervening variables between food production and food security. To Malthus and his contemporaries, it seemed self evident that when population growth outstrips growth in food production, starvation, sickness and excesses in mortality result. Though other factors impinge on the relationship of these two variables, the observation is partly true.

Though the notion of unreliable population statistics is raised by Ndegwa and Fenwick (1986), Werblow (1997) argues that despite the forecast slow down in population growth of around 2.3 per cent, the population of sub-Saharan Africa is set to more than double by the year 2020.

The gloomy picture of food security in this region is painted by the world resources report (1990), which reveals that, this region mostly relies on imported food and it has the highest proportion of its land losing fertility. Come the year 2020 and the region will be in a worse situation.

Since the theory of food security admits no mono causal explanation (von Braun 1997), population growth rate is one factor that cannot be dismissed.

## 2.4 COPING MECHANISMS

Major famine indicators include migration, asset losses, human and livestock mortalities. However a population which suffers famine will make adjustments which are aimed at ameliorating the situation, that is, cope with the adversity. Such social coping mechanisms will include migration, assets disposal, food for labour in the kinship circles and relief food. Of interest here is relief food for it seems to be the most prominent way of coping with famine in most marginal areas (Awuondo 1990:99).

Relief food refers to various food stuffs like maize, beans, rice, wheat and oil which are distributed to famished communities without the requirement of some work being done first (Mutie 1993; 171). George (1980:6) notes the role played by such food assistance in sustaining life even though it is neither a permanent nor a structural solution to the problem of hunger.

It is important to emphasise that the incapacitating effect of famine does not automatically disappear with famine. In fact, there is a strong reason to believe that one famine condition will render the affected population more vulnerable to famine. This issue of relief food, therefore, does not reinforce self-sufficiency despite its importance in ameliorating the effects of food shortage. Awuondo (1990:99) observes that it has now become customary in marginal lands to depend heavily on famine relief, though this charitable exercise is not conducive to self-reliance, over reliance to this charity may continue to kill the drive for self sustenance. Mutie (1993:172) and Awuondo (1990), further note that the methods of identifying the "Havenots" have been found to be suspect. This has led to wasteful and haphazard distribution of relief food, often enriching those who are charged with that responsibility, by selling the same relief food they are supposed to distribute to the famine stricken poor people.

Mbithi and Wisner (1972), seem to offer a solution to the problem of relief food. They argue that, the target groups of relief food, who include children, pregnant mothers, invalids and the aged, should be incorporated into government welfare policy and not famine relief policy.

## 2.5 THEORETICAL FRAMEWORK

The study adopted one theoretical framework. The basic function of any Theory is to explain and predict relationships between variables affecting a given phenomenon. The Phenomenon considered in this study was famine vulnerability and the socio-economic factors influencing it.

### 2.5.1 ENTITLEMENT EXCHANGE MODEL.

This conceptual framework was pioneered by Amartya Sen in his book "Poverty and Famines" (1981). This model postulates that each person, no matter how poor, has some endowments. They may consist of personal attributes such as age, sex, race, height, weight and more exclusive qualities such as charm and beauty. In terms of economic measures, every person has at least his capacity to work, that is, his or her labour power, unless too young, too old, infirm or severely handicapped. Others may have additional endowments such as land, money, durable property and financial assets, among others (Desai 1988:110). These endowment are what Sen (1981) calls "entitlements".

According to Cliffe *et al.* (1989), famines are about politics and the exercise of power, specifically the power to command food through a variety of market and non-market institutions. As one commands a bigger bundle of ownership of these "entitlements", the more power one has. The authors further argue that, it is when this bundle of ownership collapses that vulnerability to famines is exacerbated, which implies that starvation can occur in a population that suffers "entitlement shortage" (Watts 1991).

This theory has been chosen as the organizing rubric for a variety of reasons. First; while famines involve and are typically initiated by starvation, many people die in fact not from starvation per se, but from various epidemic diseases unleashed by famine. This is aggravated by the ensuing loss of entitlements (Dreze 1991). Second, to understand famine and its impact, it is important to place various economic groups of the population in relation to the food growing economy (Sen 1981).

The entry point, therefore, in the analysis of famine vulnerability is to study the entitlement system in relation to individuals' command over food and other resources. Therefore, whatever the macro-economic or socio-cultural dimensions of food shortage, the micro level incidence of starvation would depend on how individuals households are placed in terms of their endowments, their entitlements.

## 2.6 HYPOTHESES

The following hypotheses have been derived for the study based on the research problem, objectives of the study and the literature reviewed.

- 1) Low income levels impact negatively on famine vulnerability.
- 2) The household head's occupation has a direct relationship with the degree of famine vulnerability in the household.
- 3) Famine relief reinforces famine vulnerability.

## 2.7 OPERATIONALIZATION OF VARIABLES

### 1. INDEPENDENT VARIABLES

#### i) Income Levels

Refer to total monthly income to the family from various sources.

#### ii) Occupation

Refers to the main source of livelihood income of the household head.

**iii) Famine Relief**

Refers to free food rations by the government or other aid agencies to famine stricken household.

**2. DEPENDENT VARIABLE**

**Famine Vulnerability**

In this study, this refers to the degree to which households are cushioned to famine situations.

# **CHAPTER THREE**

## **METHODOLOGY**

### **3.0 INTRODUCTION**

This chapter discusses the methodological techniques used in the study. It defines the study site, climate, demographic and agricultural potentialities of the study area, infrastructural facilities sampling frame, selection techniques, research instruments, framework for analysis and limitation of the study.

### **3.1 SITE**

#### **3.1.1 LOCATION AND SIZE**

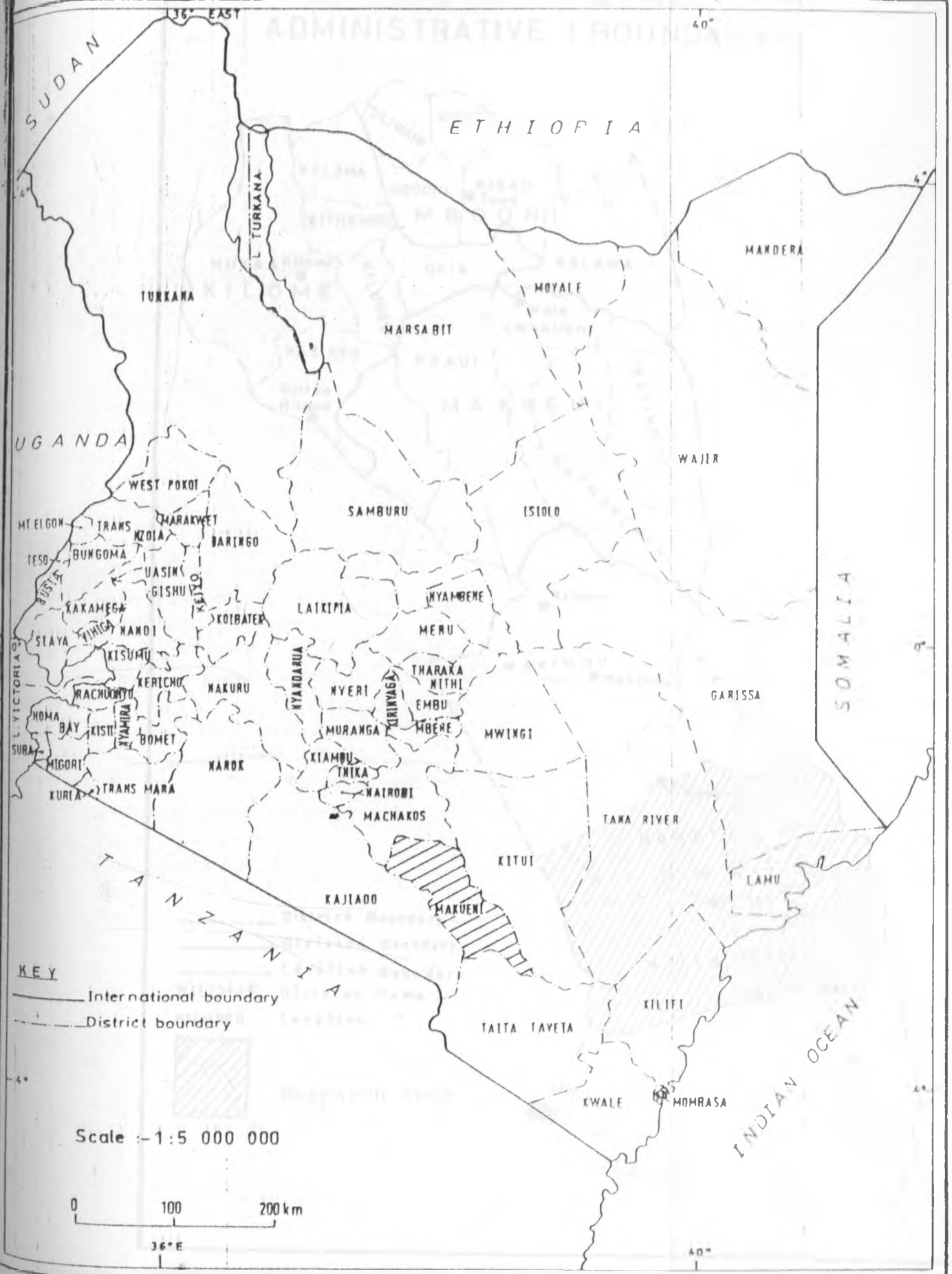
Kibwezi is one of the administrative division of Makueni District. It lies between latitude 1'35' south and Longitude 37'10' East. To the West the district borders Kajiado District, Taita-Taveta District to the South and Machakos to the North.

#### **3.1.2 CLIMATE**

Generally, the district is low-lying and rises from 600M above the sea level at Tsavo and reaches 1900m above sea level in Kilungu Hills.

Rainfall and precipitation are scarce and vary with altitude. The average annual rainfall is slightly over 1000mm in the areas with higher altitudes, such as Mbooni and Kilungu Hills, whereas the low-lying areas, such as Makindu and Mtito-Andei, receive 800mm-1200mm of rainfall per year (GOK 1992).

# LOCATION OF THE DISTRICT



# MAKUENI DISTRICT ADMINISTRATIVE | BOUNDARIES

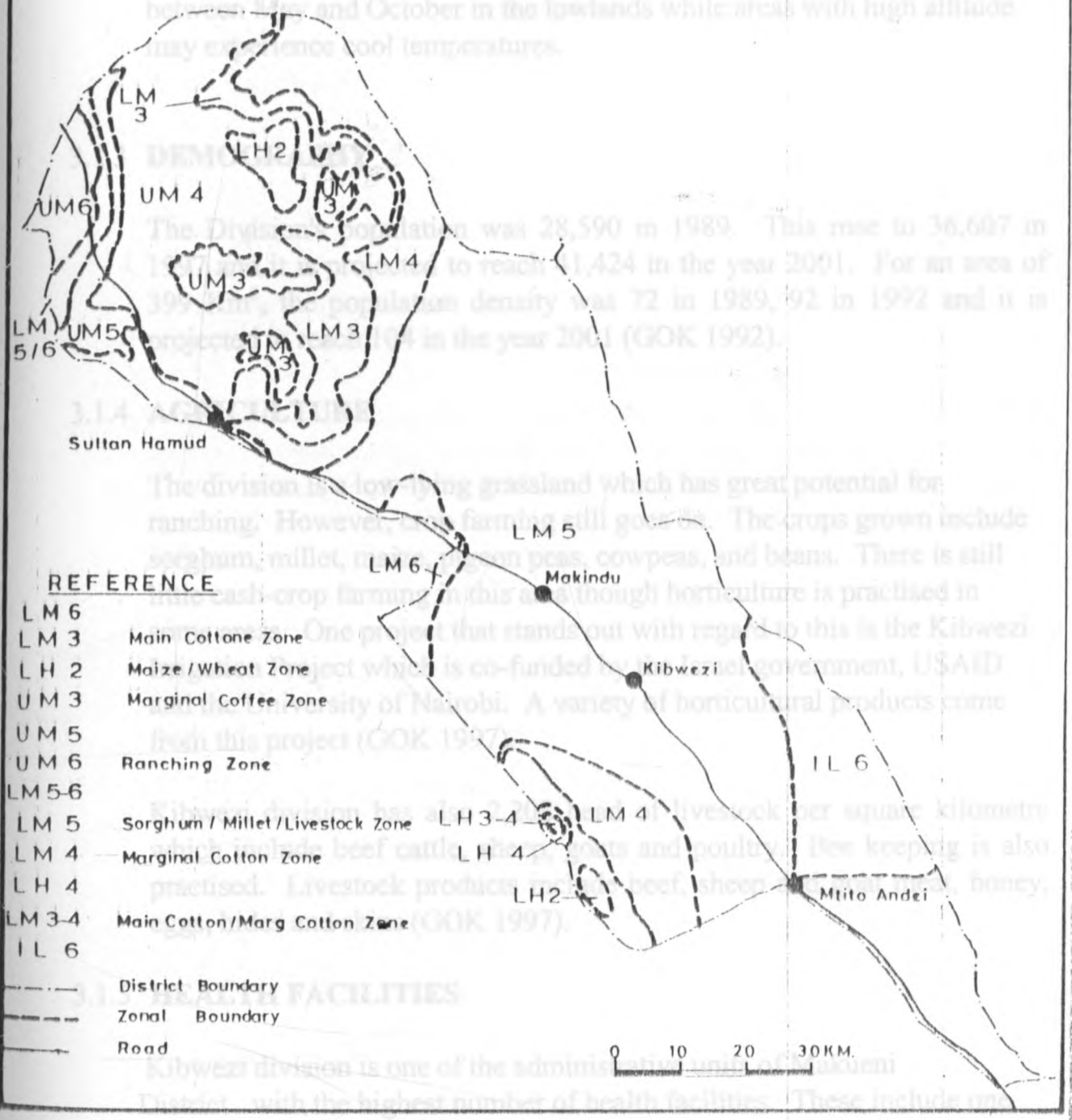


Source: Makueni District Development Plan 1997-2001



# MAKUENI DISTRICT

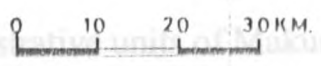
## AGRO-ECOLOGICAL ZONES



**REFERENCE**

- LM 6
- LM 3 Main Cotton Zone
- LH 2 Maize/Wheat Zone
- UM 3 Marginal Coffee Zone
- UM 5
- UM 6 Ranching Zone
- LM 5-6
- LM 5 Sorghum / Millet / Livestock Zone
- LM 4 Marginal Cotton Zone
- LH 4
- LH 2
- LM 3-4 Main Cotton/Marg Cotton Zone
- IL 6

- District Boundary
- - - Zonal Boundary
- Road



Source: Makueni District Development Plan 1997-2001

The district experiences high temperatures during the day and low temperatures at night. Extreme heat is experienced during the dry season between May and October in the lowlands while areas with high altitude may experience cool temperatures.

### **3.1.3 DEMOGRAPHY**

The Division's population was 28,590 in 1989. This rose to 36,607 in 1997 and it is projected to reach 41,424 in the year 2001. For an area of 399 Km<sup>2</sup>, the population density was 72 in 1989, 92 in 1992 and it is projected to reach 104 in the year 2001 (GOK 1992).

### **3.1.4 AGRICULTURE**

The division is a low-lying grassland which has great potential for ranching. However, crop farming still goes on. The crops grown include sorghum, millet, maize, pigeon peas, cowpeas, and beans. There is still little cash-crop farming in this area though horticulture is practised in some areas. One project that stands out with regard to this is the Kibwezi Irrigation Project which is co-funded by the Israel government, USAID and the University of Nairobi. A variety of horticultural products come from this project (GOK 1997).

Kibwezi division has also 2,208 head of livestock per square kilometre which include beef cattle, sheep, goats and poultry. Bee keeping is also practised. Livestock products include beef, sheep and goat meat, honey, eggs, hides and skins (GOK 1997).

### **3.1.5 HEALTH FACILITIES**

Kibwezi division is one of the administrative units of Makueni District with the highest number of health facilities. These include one hospital, 4 health centres and 3 dispensaries (GOK 1997).

### **3.1.6 EDUCATIONAL FACILITIES**

The division is poorly covered in terms of education facilities. It has 151 pre-primary schools, 141 primary schools, 14 secondary schools and 5 polytechnics (GOK 1997).

### **3.2 SAMPLE POPULATION**

The study focused on household heads, including single mothers, as the unit of analysis. Single mothers were included, like their male counterparts, because they make decisions on matters relating to property ownership.

Also interviewed in this study were key informants who included village elders, administrators (Chiefs and Headmen), Agricultural Officers, Community Development Workers, health personnel and church elders. Focus group discussions of different households categories based on income levels were also held. This stratification on income basis provided a cross-structural information about famine. Key informants and focus group discussions were vital in that they offered the researcher an opportunity to probe further the information obtained from the interview schedule.

### **3.3 STUDY DESIGN**

The study was designed to investigate the social and economic factors that influence famine vulnerability in Kibwezi Division. Data was collected from 4 sources. The first one involved household heads, the second key informants, the third focus group discussions and the last was information from secondary sources such as relevant literature and documentaries.

Household heads were important for they control to a great extent the property rights of every individual in the household, hence they have a veto on all decisions which border on food security.

### **3.4 SAMPLE SIZE**

A total of 170 individuals were involved in the study. 139 out of these were drawn from 139 selected households, the rest featured as key informants and in the focus group discussions.

### **3.5 SAMPLING PROCEDURE**

Due to shortage of time and funds, this study interviewed only a sample as a representative of the entire population. The researcher selected 5 sub-locations from 3 locations of Kibwezi Division.

A simple random sampling was done to achieve this. Further, a systematic sample of every 10th household in each Sub-location was used to obtain 69 households from Mtito Andei location, 32 from Nthongoni and 38 from Ngwata locations respectively. At the sub-locational level, 34 respondents were interviewed from Kathekani, 32 from Ndaranjani, 30 from Kambu while 18 and 25 were interviewed from Mang'etele and Muthingiini respectively.

In a systematic sampling elements are selected from the population at a uniform interval, that is, measured in time, order or space. Systematic sampling differs from simple random sampling in that each element has an equal chance of being selected but each sample does not have an equal chance of being selected. Systematic sampling has its own advantages even though it may be appropriate when elements lie in a sequential pattern, this method may require less time and sometimes results in lower costs than the simple random sampling method.

### 3.6 METHODS OF DATA COLLECTION

The data in the study were derived from both primary and secondary sources. Secondary sources were from pertinent ethnographic materials and documentaries.

Primary data was generated from field research which was carried out in Kibwezi division of Makueni district. This area was chosen for its proneness to famine episodes in which the people are adversely affected.<sup>24</sup>

The researcher made use of interviews, focus group discussions and observation. Interviews were conducted using both structured and unstructured questionnaires. A total of 139 household heads responded to the structured questionnaires. English was used on the questionnaire items, but were translated into mother tongue during interview for those who could not understand English. Interviews using unstructured questionnaires were made with key informants who were mainly local leaders, business people and teachers. Important among these were agricultural officers, social workers, administrative officers such as chiefs, their assistants and headmen.

Three focus group discussions were carried out schedules were pre-arranged with people the researcher felt had more insights on the problem of famine. The first one consisted of 10 members derived from mainly farmers. The format of discussion here was akin to a mini-symposium in which the researcher acted as the moderator. Various issues here were discussed which included causes of famine, statuses of vulnerability levels and perceived solutions to the problem. Majority of the participants revealed that they realise low yields due to adverse weather conditions necessitating low incomes. This is because they mostly depend on agricultural activities for their source of income and when there is dismal rain performance, they are likely to face it rough during times of famine.

Another focus group discussion comprised the employed in Kibwezi. This one included people like teachers, social workers, church leaders and government officials. This group consisted the elite members of Kibwezi people. They felt that despite the vagaries of weather and poverty, there lacked on the part of the government and the local leadership, the political

will to make famine in Kibwezi and indeed in the whole of Ukambani a thing of the past. They argued that the government and other interested institutions such as NGOs and CBOs should work towards poverty alleviation a major pre-requisite to the solution of famine problem in any part of the world.

The third focus group discussion was assorted in terms of composition. It comprised participants from different occupational background and the unemployed. This one comprised of 2 farmers, 1 teacher, 2 unemployed university graduates, 2 secondary school unemployed graduates, 2 businessmen and 1 community development officer. This final focus group discussion was aimed at sourcing for diverse opinions from the said participants. The logic here was that since they face a common problem of famine, they could, due to their diverse inclinations, have different perceptions on the problem. This group, however, echoed the same sentiments voiced by the afore mentioned groups. They suggested that one of the major ways of dealing firmly with the problem of famine is to initiate income generating activities which are sustainable. This they argued would reduce the level of dependency on relief food.

Through these methods it is the feeling of the researcher that, the subject matter of the study was covered adequately and the data emanating there of was reliable and valid.

### **3.7 PROBLEMS ENCOUNTERED DURING THE STUDY**

Various problems were encountered by the researcher in the field. For instance, due to lack of access roads from the main road, the researcher had to walk long distances or hire a bicycle to reach some of the sampled households. This coupled with hot sun was a major hindrance to the smooth carrying out of the research.

Another problem the researcher faced was research apathy among Kibwezi residents. These people argued that, a lot of studies have been carried out in this region while things have continued to remain more or less the same. Though some of the respondents were initially unwilling to participate, the researcher persuaded them and eventually accepted to be involved in the research.

During the time of field research, there was a cholera outbreak in Kibwezi. This necessitated the researcher to suspend the study for about two weeks. Another problem was getting the household heads at home. Some of them were said to be out either in the nearby towns or in their farms. The researcher therefore had to book appointments for a return visit. This led to increased cost of research in terms of money and time.

### 3.8 FRAMEWORK FOR ANALYSIS

Primary data were coded and entered into the statistical package for social sciences (SPSS) and cumulative frequencies percentages, chi-square and contingency coefficient values were obtained. The frequencies and percentages were tabulated into simple elaborative tables and results discussed. Qualitative data were also presented for analysis.

Chi-square was actually chosen as the major method of analysis because, it allows the researcher to do a lot more than just test the equality of several proportions. It is used to determine whether two variables in question are independent of one another. (Levin and Rubin 1991). Chi-square is a widely used data analytic technique. It is non-parametric in that it does not require one to make assumptions about the population from which the sample is selected. The only requirement is that the sample must be probabilistic (random). This kind of sample is one in which each and every member of the population is given an equal and non-zero chance of being selected in the sample.

In parametric statistical methods, the assumption is that the body of data to be examined must fit, or approximates to normal distribution curve. When the data is markedly skewed, however, it is often advantageous to effect a comparison in terms of frequency distribution, even if the mean and standard deviation values are available in absolute terms. Chi-square is the method, therefore, by which such comparison may be made. This method is relatively easy to apply and the only requirement is that the data must be in form of frequencies and not in absolute values.

Sometimes in research also it is impossible to obtain absolute values though it is usually possible to allocate each response to a category which consists a range of values. In view of this chi-square methods comes in handy.

Contingency coefficient values were obtained to determine the degree of strength and direction of the relationship between the values in question. Contingency coefficient is a numerical measure or an index that will be at the maximum when the correlation is perfect or strong and reduce to minimum when the correlation weakens. It is usually represented by a big **C**



## CHAPTER FOUR DATA PRESENTATION, ANALYSIS AND DISCUSSION

### 4.0 INTRODUCTION

In this chapter, data presentation and analysis will be done by the use of both quantitative and qualitative methods. Chi-square, percentages, simple elaborative tables and figures will be used to explain logical findings as revealed by the study. Each hypothesis will be looked into independently for clarity purposes.

### 4.1 DISTRIBUTION OF RESPONDENTS BY LOCATION AND SUB-LOCATION

Respondents were sampled in terms of locations and sub-locations. Three locations were sampled viz; Mtito-Andei, 69 respondents were interviewed while 32 and 38 were interviewed in Nthongoni and Ngwata respectively.

### 4.1.2 GENDER DISTRIBUTION IN THE SURVEY BY SUB-LOCATION

In Mtito-Andei, 2 sub-locations were sampled. These are Kathekani and Ndaranjani. In Kathekani 44.1% of the respondents were males while 55.9% were females. In Ndaranjani 55.6% were males while 44.4% were females. In Ngwata location, only one sub-location was sampled. This is Kambu. Out of all the respondents sampled here, 46.9% were males while 53.1% were females.

Finally in Nthongoni location, two sub-locations were sampled, Mang'lete and Muthingiini. In Muthingiini, 69.2% were males while 30.8% were females. In Mang'lete, 76.0% were males and 24.0% were females.

**Table 1**

**Location: Mtito-Andei**

Sub-location	Gender			
	Male		Female	
	Row%	Col%	Row%	Col%
Kathekani	44.1	42.9	55.0	55.9
Ndaranjani	55.6	57.1	44.4	44.1
Kambu	-	-	-	-
Mang'lete	-	-	-	-
Muthingiini	-	-	-	-

**Table 2**  
**Location: Ngwata**

Sub-location	Gender			
	Male		Female	
	Row%	Col%	Row %	Col%
Kathekani	-	-	-	-
Ndaranjani	-	-	-	-
Kambu	46.9	100.0	53.1	100.0
Mang'elele	-	-	-	-
Muthingiini	-	-	-	-

**Table 3**  
**Location: Nthongoni**

Sub-location	Gender			
	Male		Female	
	Row%	Col%	Row%	Col%
Kathekani	-	-	-	-
Ndaranjani	-	-	-	-
Kambu	-	-	-	-
Mang'elele	76.0	67.9	24.0	60.0
Muthingiini	69.2	32.1	30.8	40.0

#### 4.1.3 DISTRIBUTION OF THE RESPONDENTS BY MARITAL STATUS

There were 139 respondents in the sample who comprised both males and females. Their marital status are presented in table 4 below.

MARITAL STATUS	FREQUENCY	%
Single	3	2.2
Married	112	80.7
Divorced	2	1.4
Widowed	20	14.3
Separated	2	1.4
Total	139	100

Of the sampled respondents 3 (2.2%) were single. 112 (80.7%) were still married. Out of the respondents also, 2 (1.4%) and 20 (14.3%) were divorced and widowed respectively. Finally 2 (1.4%) were separated from their spouses. It can be noted from table 4 that majority of the respondents were married. This is probably because in Ukambani as in other many African societies marriage is not between the two individuals but between families. This practice ensures stability in marriage.

#### 4.1.4 EDUCATION LEVELS

On the side of education, 45 (32.4%) of the respondents had attained primary level while 50 (36.0%) had reached secondary school level. None of the respondents had attained university level of education while the rest 44 (31.7%) had no education at all.

Table 5

Educational Level	Frequency	%
Primary	45	32.4
Secondary	50	36.0
University	0	-
None of the above	44	31.7
Total	139	100.0

This study has also shown that, those households headed by women show high degree of entitlement deprivation. Also it has shown that famine vulnerability at the household level is genderized. In view of the existing gender hierarchies and differential power relations between men and women at the household level, it is women who bear the brunt of the bias of differential resource allocation. In this regard, women are more affected by famine which is manifested in various ways such as ill-health and malnutrition. It is most important that the government and other institutions develop policies that have positive impact for women in the rural areas and especially Kibwezi.

## 4.2.0 FAMINE VULNERABILITY AND INCOME FACTORS IN KIBWEZI

### 4.2.1. EMPLOYMENT AND INCOME

There is an assumed affinity between famine vulnerability and income levels. This affinity seems to me so vital and apparent such that, the conception of the former without the latter is a hollow conception. Low levels of income, presuppose vulnerability to various disasters and its almost impossible to adequately conceptualize vulnerability to whatever crisis without taking into cognisance, incomes, investment portfolios, savings and other income related factors.

The structure of incomes in Kibwezi is immensely varied. The composition of incomes in this division reflects to a large extent, the occupational state of individuals. They are generally low and highly skewed with only a few households boasting humble income while the rest wallow in blighting poverty.

The first hypothesis of this study, states that, levels of income influence famine vulnerability. In testing this hypothesis a number of variables, both independent and dependent were involved. Variable income levels”, the influencing variable was measured by the following:

- (i) Employment status
- (ii) Ownership of livestock
- (iii) Ownership of property
- (iv) Earnings per month.

Famine vulnerability on the other hand was measured by:-

- (i) Famine recognition levels.
- (ii) Response on the frequency of famines
- (iii) Response on prior preparation to famines
- (iv) Response on the perceived solutions to the problem of famine.

To prove the affinity and the relationship between famine vulnerability and incomes, contingency tables were derived by cross-tabulation. The dependent variable, that is, famine vulnerability, was cross- tabulated with all the independent variables. The chi-square values yielded, attained significance level at 01 level. Now let us look at the selected contingency tables to interpret the emerging relationships.

The relationship between famine recognition and employment status attains significance with respect to employment levels and subsequently with incomes accruing from such employment.

**Table 6: The relationship between famine Recognition by employment.**

Count Exp.val Row pct Col pct Tot pct	Employed?		Row
	Yes	No	Total
Famine is a problem	40 42.1 32.8%	82 79.9 67.2%	122 87.8%
Strongly agree	83.3% 28.8%	90.1% 59.0%	
Agree	8 5.9 47.1% 16.7% 5.8%	9 11.1 52.9% 9.9% 6.5%	17 12.2%
Column Total	48 34.5%	91 65.5%	139 100.0%

$\chi^2$  1.34433 D.F. 1 P> .01

Contingency coefficient .09787 sig. 0.24627

The relationship between famine recognition and employment status, is shown by chi-square 1.34433 emerging from the above cross-tabulation. With 1 degree of freedom, this chi-square attains significance of .24627 which is greater than .01 probability level. This, therefore means that there is an association between the variables in question. The degree to which these variables are related or associated, is indicated by the contingency coefficient .09787. The statistical value of the table, therefore, lends support to the hypothesis.

It can also be observed from the table that, 65.5% of the respondents were unemployed while only 34.5% were employed. Of all those who were un-employed 90.1% strongly agreed that famine is a problem in Kibwezi as compared to only 9.9% who just agreed without much emphasis. On the other hand those who said were employed, 83.3% strongly agreed that famine is an acute problem in Kibwezi as opposed to 16.7% who just agreed.

From the foregoing exposition, the probable explanation is that those who are unemployed, are more likely to recognise famine as more acute than those who are employed. The logical reason is that, Kibwezi is a marginally dry area and most incomes in this region will accrue from employment rather than agricultural activities. Those who are employed are more cushioned to famine situations for they have stable and disposable incomes, by which they can purchase food. When one is in employment, his or her entitlement portfolio is enhanced subsequently reducing vulnerability to minimal level. This argument is also supported by the trends emerging from tables 7 and 8. These tables show that, the extent to which households own various properties is indicative of the vulnerability level of those households.

**Tables 7 and 8. The Relationship between Famine Recognition and ownership of properties.**

**Table 7**

Count Exp. val Row.pct Col.pct Tot.pct	Do you own a bicycle?		Row
	Yes	No	
Famine is a problem in Kibwezi	90 87.9 75.0%	30 32.4 25.0%	Total 120 87.6%
Strongly Agree	90.0% 65.7%	81.1% 21.9%	
Agree	10 12.4 58.8% 10.0% 7.3%	7 4.6 41.2% 18.9% 5.1%	17 12.4%
Column Total	100 73.0%	37 27.0%	137 100.0%

$\chi^2$  1.97659 D.F 1 P> .01

Contingency coefficient .11926

Table 8.

Count Exp. val Row pct Col pct Tot pct	Do you own a wheelbarrow?		
	Yes	No	Total
Famine is a problem in Kibwezi	31	90	121
	28.1	92.9	87.7%
Strongly Agree	25.6%	74.4%	
	96.9%	84.9%	
	22.5%	65.2%	
Agree	1	16	17
	3.9	13.1	12.3%
	5.9%	94.1%	
	3.1%	15.1%	
	.7%	11.6%	
Column	32	106	138
Total	23.2%	76.8%	100.0%

$\chi^2$  3.26018 D.F1 P> .01

Contingency coefficient .15192

Though the extent to which households own properties is indicative of entitlement exchange potential. The disposal of such assets may not be that straightforward. This is because during famines, households may put the same properties on sale constraining the market as a result of oversupply and low demand. As law of demand and supply stipulates, this may lead to undervaluation of the assets. The end result may be the enhancement of vulnerability degrees at the households.

Table 7 shows that majority of the households in Kibwezi own bicycles. From the table, 73.0% of the households own bicycles as opposed to 27.0% who do not. The recognition level of famine among those who own bicycles is slightly higher than those who do not. Of those who own bicycles 90.0% strongly agreed that famine is a problem in Kibwezi as compared to 81.1% of those who do not. Those who just agreed and said they own bicycles were 10.0% and 18.9% respectively.

The relationship between famine recognition and bicycle ownership is indicated by a chi-square of 1.97659. With 1 degree of freedom, this chi-square value attains a significance of .15975 which is greater than .01 probability level. This definitely, shows the existence of an association between the two variables. The degree to which these variables are related is indicated by the contingency coefficient .11926. The statistical value of this table further, supports the hypothesis.

One, however, may want to ask why there is a high recognition level of famine among those who own bicycles? The only probabilistically plausible explanation is that bicycles are poor people's assets. The reason why majority of the households in Kibwezi own at least a bicycle is due to the fact that, bicycles are used as the only convenient and low-cost means of transportation by the poor. For instance water points in Kibwezi are far apart and people use bicycles to fetch water. On the other hand, bicycles are used to transport food from the markets, used to transport vending wares and others have even commercialized them for human transportation at a certain fee per distance.

Conversely, the relationship between recognition levels and ownership of wheelbarrow, paint an opposite picture from that of a bicycle. Those who do not own a wheel barrow, exhibit high famine recognition levels as compared to those who do. A chi-square of 3.26018 with 1 degree of freedom attained a significance of .07098 which obviously is greater than .01 probability level. The degree to which these variables are related is indicated by a contingency coefficient of .15192. This statistical value also lends support to the hypothesis. The probable explanation for the difference between those who own bicycles and those who own wheelbarrows is because the two categories of assets designate different income levels. While a bicycle is indicative of a poor man's property and subsequently low levels of income, a wheelbarrow is a farm implement which only a few households in Kibwezi can afford. It is only those who are employed or those with businesses or humble sources of income who can afford, (see table 8). Owing to high unemployment level in Kibwezi and blighting poverty, most households cannot afford farm implements. This shortage of farm implements and inputs such as fertilizers and certified seeds constrains production capacities leading to low yields. Even when there is plenty of rainfall, lack of agricultural inputs or constrained access to them, works against the poor households enhancing their vulnerability to famine, even more.



The relationship between employment status vis-a-vis vulnerability, is succinctly highlighted in table 9. It can be seen from the table that those who are unemployed, and through their other sources of income do not earn enough to feed their households are more likely to see famine recurring more frequently than those who have humble incomes. This can be interpreted to indicate vulnerability levels between these two categories.

**Table 9: The Relationship between famine frequency and Employment status:**

Count Row pct Col pct Tot pct	Are you employed?		
	Yes	No	Total
Frequency	12	22	34
After a year	35.3%	64.7%	24.5%
	25.0%	24.2%	
	8.6%	15.8%	
	23	37	60
After 2-3 years	38.3%	61.7%	43.2%
	47.9%	40.7%	
	16.5%	26.6%	
	13	32	45
After 4-5 years	28.9%	71.1%	32.4%
	27.1%	35.2%	
	9.4%	23.0%	
Column	48	91	139
Total	34.5%	65.5%	100.0%

$\chi^2$  1.02610 D.F. 2 Sign. .59867 Conti. Coeff. .08560

Those who do not earn enough to feed their families, are more likely to see famine recurring more frequently than those who are employed or have a humble source of income.

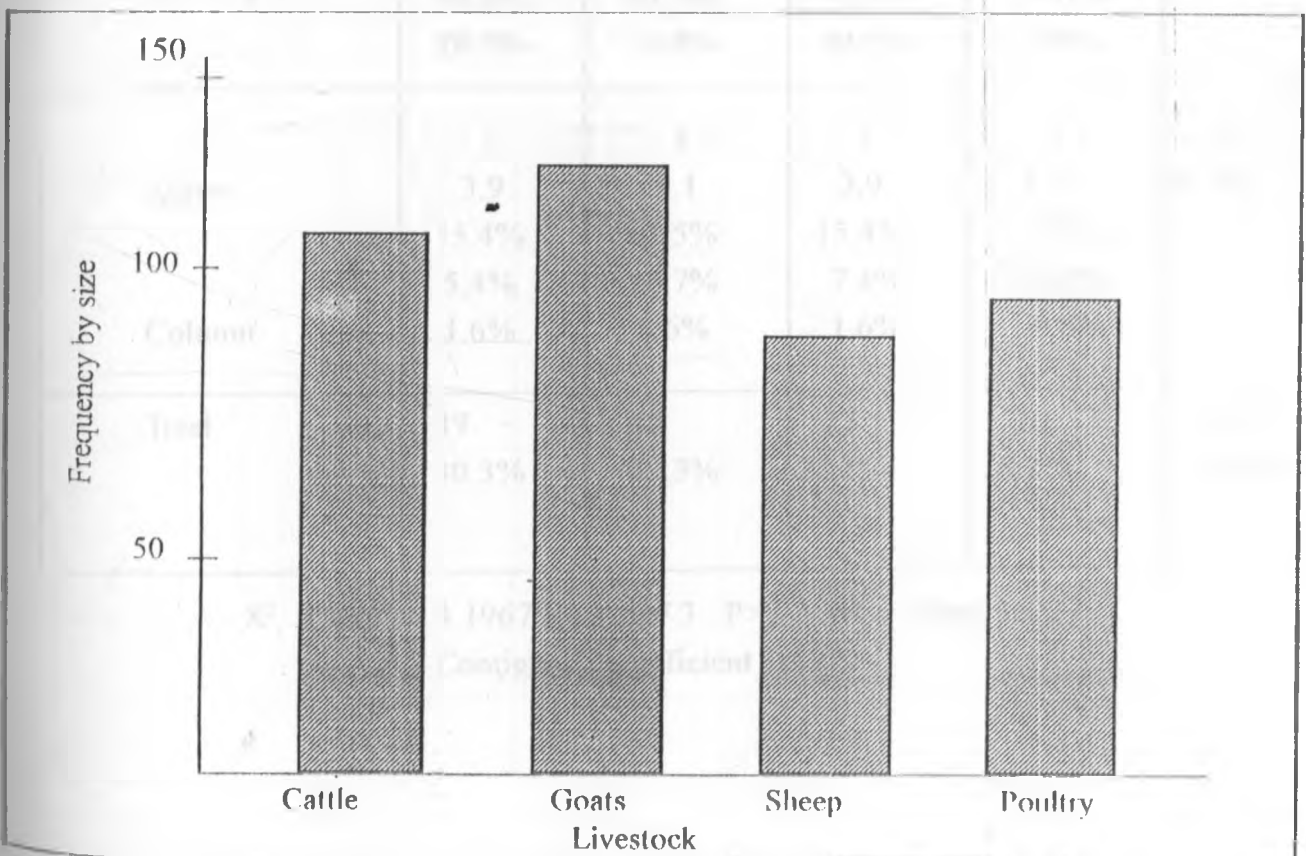
From table 9, the relationship between famine vulnerability and employment is shown by a chi-square value of 1.02610 and a contingency coefficient of .08560 at 01 significant level. It can be observed that out of the 139 respondents interviewed, 34 (24.5%) placed the frequency of famines annually while 60 (43.2%) after every 2-3 years. 45 (32.4%) placed the frequency after every 3-4 years. Also out of the 139 respondents, 48 (34.5%) said were employed while 91 (65.5%) were unemployed.

One could, therefore argue that majority of the respondents see famine occurring after every 1-3 years 94(67.7%) as compared to 45 (32.4%), whose frequency of famine is after every 4-5 years, are the poor, unemployed residents of Kibwezi. However, though everybody in Kibwezi recognizes famine as a major problem, the placement of famine recurrence by the two categories show a marked discrepancy and this discrepancy, can only, logically be interpreted to indicate vulnerability levels between these two categories.

#### 4.2.2. LIVESTOCK AS A SOURCE OF INCOME

This study through the interview schedule, key informant and focus group discussions found out that, livestock keeping is one of the major income generating activities in Kibwezi (see map 3). Its also found out that goats are the favoured kind of livestock in Kibwezi (see fig.3).

Fig.3 Distribution of livestock ownership in the sampled households in Kibwezi.



This could be because when droughts strike, they fair far much better than other kinds of livestock. This could be attributable to decreased disease risk and lower parasite burden in goats, than in other types of livestock. Though livestock and especially goats have always been instrumental in ameliorating the impact of famine in Kibwezi, they have not been effective as such. This has been due to underdeveloped marketing outlets and low demand as compared to supply. During famine periods, sales tend to be opportunistic and depend on those people who have disposable incomes such as few civil servants, teachers and those who work in urban centres.

**Table 10: The Relationship between famine recognition and ownership of goats:**

Count	Number of goats owned				
	1-4	4-8	8-12	Over 12	Total
Exp. val					
Row pct					
Col pct					
Tot pct					
Famine is a problem	35	40	25	9	109
	33.1%	42.9	24.1	8.9	89.3%
Strongly Agree	32.1%	36.7%	22.9%	8.3%	
	94.6%	83.3%	92.6%	90.0%	
	28.7%	32.8%	20.5%	7.4%	
Agree	2	8	2	1	13
	3.9	5.1	2.9	1.1	10.7%
	15.4%	61.5%	15.4%	7.7%	
Column	5.4%	16.7%	7.4%	10.0%	
	1.6%	6.6%	1.6%	0.8%	
Total	37	48	27	10	122
	30.3%	39.3%	22.1%	8.2%	100.0%

X<sup>2</sup> 3.19679 DF 3 P> .01 sign. 36227  
Contingency coefficient .15979

From table 10, majority of goat owners recognize famine as a major problem in Kibwezi. 109 respondents (89.3%) strongly agree that famine is a problem.

It can also be seen that those who have small herds of goats have greater percentage of recognition, than those with large herds. Also according to the table most households in Kibwezi (see map 3) own between 1-8 goats, a combined percentage of (69.6%). With a chi-square value of 3.19679 and a contingency coefficient of .15979 at .01 significant level, it was observed that there is a formidable support to the hypothesis. The pattern emerging in table 10 is also supported by the pattern emerging in table 11. Majority of those who own goats, rely more frequently on famine relief by the government or by any other agency as a mitigation against famine. Though those who own between 8 and over indicate that they may save money or store food, their situation, changes very little when it comes to relief food or the level of ignorance in terms of advance preparation. This shows that, although livestock is the unrivalled income generating activity in Kibwezi, this has not changed the vulnerability of famine situation at the household level significantly. The plausible argument for this situation is that, as observed earlier, the sales of livestock in this region are opportunistic due to underdeveloped marketing outlet for livestock and especially during food crises.

**Table 11: The Relationship between prior preparation to famine and ownership of goats:**

Count Row pct Col pct Tot pct	Number of goats owned				
	1-4	4-8	8-12	over 12	Total
Prior preparation to famine	7 24.1%	15 51.7%	4 13.8%	4 10.3%	29 23.8%
Store enough food	5 18.9%	6 31.3%	4 14.8%	2 30.0%	17 13.9%
Save money	5 13.5%	6 12.5%	4 14.8%	2 20.0%	17 13.9%
Rely on relief	22 38.6%	19 33.3%	13 22.8%	3 5.3%	57 46.7%
Nothing one can do	3 8.1%	8 16.7%	6 22.2%	2 20.0%	19 15.6%
Column Total	37 30.3%	48 39.3%	27 22.1%	10 8.2%	122 100.0%

X<sup>2</sup> 7.59669 D.F. 9 Significance .57524

P > .01 Contingency coefficient .24211

Table 11 shows that majority of livestock owners rely on famine relief food even when asked what they do to prepare themselves against famine situations. Out of 122 respondents 57 (46.7%) indicate that they rely on relief food as their prior preparation to famine. 29 (23.8%) indicated that they store food while only 17 (13.9%) indicated that they prepare themselves by saving money. To compound the problem, 19 respondents (15.6%) did not know what to do except to rely on relief food.

With a chi-square value of 7.59669, a significance value of .57524 and a contingency coefficient of .24211, the relationship between livestock keeping and famine vulnerability cannot be gain said. However, since survival rates are low during famine/drought, livestock owners opt to sell them leading to high supply and low demand. The income which is generated from the sales cannot, therefore, sustain the households and that is why they have to revert to famine relief as the only solution to the problem of famine. This compounds the problem of famine vulnerability further. In the final analysis, the vulnerability situation in the household remain more or less the same as when famines strike, household heads opt to dispose their livestock to the market, depleting their entitlement portfolios further, a fertile recipe to famine vulnerability. Thus, so long as the cycle does not change, households in Kibwezi will always be vulnerable to famine.

#### **4.2.3. OF - THE FARM FAMINE MITIGATION STRATEGIES**

As earlier stated, unemployment coupled with low income is rampant in Kibwezi. During the key informant interviews and focus group discussions, these two were cited as the major drawbacks to the general development of the area apart from water scarcity.

Due to these three factors, emerging househeads have limited access to factors of production, or where they have access, they have constrained ability to utilize them to the fullest potential because of ignorance or low levels of education and poverty. The end result has been that chances of emerging household heads securing jobs, particularly for inexperienced unskilled locals, are almost nil and if any, they are payed peanuts or so little such that the wages they get cannot afford to feed their families adequately.

People in this region, therefore have devised other informal ways of supplementing their incomes. These among others include activities such as brewing of the illicit traditional beer, vending vegetables in the nearby market centres, hawking wares and hiring their labour either to the rich rural folks or in the nearby market centres and towns.

Though a little extra income may accrue out of the activities, they cannot off-set the income deficit of the household as some are illegal while others are rudimentary in their nature. In view of the above fact, one cannot make a breakthrough when engaged in them. Although these piecework opportunities cannot be dismissed in ameliorating the degree of famine vulnerability at the household level, they have tended to impact negatively on the production potential of the poor households. This argument is supported by the fact that, these piecework opportunities have tended to be plenty during the wet season. This is also the time when people are supposed to be either planting or weeding their farms. Rural poor households are, therefore, placed in a precarious situation. The poor are lured for tasks such as planting or weeding in the farms of the rich. This more often than not, has led the poor to neglect their farms at crucial times only to realize low yields during harvest time. This scenario enhances poor households vulnerability to famine even more.

#### 4.3 FAMINE VULNERABILITY AND OCCUPATIONAL FACTORS IN KIBWEZI

The burden of famine falls disproportionately on various occupations. The poor, more often than not, assume low category, low paying and informal occupations such as peasantry, charcoal burning, hawking and vending. This is because initially, they are disadvantaged in their access to education and subsequently income. This bias is accentuated in times of famine leading to extreme impact among these occupations. Moreover, food shortages tend to exacerbate the fragility of the households, headed by individuals who belong to these category of occupations.

**Table 12. Frequency of Occupations in Kibwezi**

Occupation	Frequency	%
Teacher	15	11.0%
Farmer	51	37.5%
Nurse	5	3.7%
Religious leader	6	4.4%
Businessman/woman	15	11.0%
Others	44	32.4%
	136	100.0%

From table 12, it can be seen that, of those interviewed 136, 16 (11.0%) were teachers, 51(37.5%) farmers, 5(3.7%) nurses, 6 (4.4.%) religious leaders 15(11.0%) business people and finally 44 (32.4%) belonged to the “others” category which designate informal occupations such as hawking, charcoal burning, brewing of the illicit traditional beer and vending among others. The revelation here is majority of the household heads in Kibwezi are either farmers or belong to the informal sector. These occupations are also the preserve of low incomes.

This study has found out that members from households headed by a person in the informal or low category occupations, face a definite structural barrier in terms of educational achievement, and as such, they are further constrained in their access to opportunities which could foster their occupational statuses. The resultant effect is increased vulnerability when disasters such as famine strike.

#### 4.3.1 FAMINE RECOGNITION VIS-A-VIS OCCUPATION

It is clear from table 13 that though majority across the occupations recognise famine as a major problem in Kibwezi, farmers and respondents who belonged to the “Others” category are the ones who emphasized, through the total percentages that they strongly agree that famine is a problem in Kibwezi. If we look at the total percentages on those who strongly agreed that famine is a problem, farmers recorded 33.8% and “others” category recorded 27.9% as compared to teachers recording 10.3%, nurses 2.2.%, religious leaders 2.9% and business people 10.3%.

The emerging differences in terms of recognition shows that the impact of famine varies with the capacity to cope and this capacity to cope is differentiated across occupations. That is why there is a high recognition level among farmers and people in other informal occupations than among nurses or teachers and business people.

**Table 13: The Relationship between famine recognition levels and occupation.**

Count Exp. val Row pct Col pct Tot pct	Household head's occupation						
	Teacher	Farmer	Nurse	R. header	B. Man	Others	Total
Famine is a problem	14	46	3	4	14	38	119
	13.1	44.6	4.4	5.3	13.1	38.5	87.5%
Strongly Agree	11.8%	38.7%	2.5%	3.4%	11.8%	31.9%	
	93.3%	90.2%	60.0%	66.7%	93.3%	86.4%	
	10.3%	33.8%	2.2%	2.9%	10.3%	27.9%	

	Teacher	Farmer	Nurse	R. header	B. Man	Others	Total
Agree	1	5	2	2	1	6	17
	1.9	6.4	.6	.8	1.9	5.5	12.5%
	5.9%	29.4%	11.8%	11.8%	5.9%	35.3%	
	6.7%	9.8%	40.0%	33.3%	6.7%	13.65	
	.7%	3.7%	1.5%	1.5%	0.7%	4.4%	
Col Total	15 11.0%	51 37.5%	5 3.7%	6 4.4%	15 11.0%		136 100.0%

$X^2$  7.16232 D.F. 5  $P > .01$  Sign. 20885

Contingency coefficient .22367.

From the above cross-categorization, we have a chi-square value of 7.16231. With 5 degree of freedom, this chi-square attains a significance of .20885 which is greater than the .01 probability level. This shows that there is an undeniable association between the two variables in question. The degree to which famine recognition (read vulnerability) is associated with householdhead's occupation is shown by a contingency coefficient .22367. The statistical value of table 13 lends support to the hypothesis that the household-head's occupation has a direct influence on the degree of famine vulnerability in the household.

The reason why there is a difference in famine recognition in terms of occupation is that famine occurs not only in time but also in space. Certain categories of occupations appear to be more affected, almost totally while others only peripherally. The reason being some occupations are more rewarding than others, thus when it comes to incomes and property ownership, certain professions are better placed than others.

#### 4.3.2 RECURRENCE OF FAMINE AND PRIOR PREPARATION IN RELATION TO OCCUPATION

The arguments advanced in the preceding sub-topic are also valid here. This is because when respondents were asked pointer questions regarding their perceptions in relation to the recurrence of famine and what they do to prepare themselves against such eventuality, stark differences emerged in relation to occupational status. Table 14 and 15 indicate these differences.



Table 14. The Relationship between the frequency of famine and occupation.

Count Row pct Col pct Tot pct	Occupation						Total
	Teacher	Farmer	Nurse	R. Leader	B. Man	Others	
After a year	4	12		1	6	10	33
	12.1	36.4		3.0	18.2	30.3	24.3%
	26.7	23.5		16.7	40.0	22.7	
	2.9	8.8		.7	4.4	7.4	
After 2-3 years	6	27	3	2	6	15	59
	10.2	45.8	5.1	3.4	10.2	25.4	43.4%
	40.0	52.0	60.0	33.3	40.0	34.1	
	4.4	19.9		1.5	4.4	11.0	
After 4-5 years	5	12	2	3	3	19	44
	11.4	27.3	4.5	6.8	6.8	43.2	32.4%
	33.3	23.5	40.0	50.0	20.0	43.2	
	3.7	8.8	1.5	2.2	2.2	14.0	
Column Total	15	51	5	6	15	44	136
	11.0%	37.5%	3.7%	4.4%	11.0%	32.4%	100.0%

$X^2$  9.66522 D.F 10  $P > .01$  Sign: .47034

Contingency coefficient . 25759

Table 15. The Relationship between occupational earnings and advance preparation to famine.

Count Row pct Col pct Tot pct	Whether enough or not Occupational income		
	Yes	No	Total
Advance preparation	4	26	30
	13.3%	86.7%	21.9%
	2.9%	19.0%	
Store food	7	14	21
	33.3%	66.7%	15.3%
	38.9%	11.8%	
Save money	5.1%	10.2%	
	6	54	60
	10.0%	90%	43.8%
Rely on relief	33.3%	45.4%	
	4.4%	39.4%	

	1	25	26
	3.8	96.2%	19.0%
	5.6	21.0%	
	.7	18.2%	
Column total	18	119	137
	13.1%	86.9%	100.0%

X<sup>2</sup> 9.99055 D.F. 3 P> .01 Sign: .01865  
 Contingency co-efficient .26071

The contents of table 15 show that, though majority of the respondents placed the frequency of famines in Kibwezi after every 2-3 years, majority of those who placed the occurrence on annual basis were either farmers or those who belonged to occupations in "Others" category. Very few teachers or nurses placed the frequency of famine on annual basis, but after every 2-3 years or 4-5 years.

In table 15, when the respondents were asked whether in their occupations they earn enough to feed their families and or households and what they do to prepare themselves in advance to famine situations, the emerging pattern was that, only 18(13.1%) of the respondents indicated that in their occupations they earn enough while 119 (86.9%) said they do not. Majority of those who earn enough, indicated that, in prior preparation to famines, they either store food or save money. Conversely majority of those who indicated that they do not earn enough in their occupations, either rely on relief food or there is nothing they can do. A few try to store food but in most cases it is not enough.

According to tables 14 and 15, majority of those who do not earn enough are either farmers or people in "others" category of occupations. Because most of the people in these two categories are poor, they are not well cushioned against famine, hence, any small food crisis affects them quite adversely. That is why they are more likely to rely on relief food or fate and see famine occurring more frequently than people in the other occupations.

From the above cross - classification; the hypothesis that household heads occupation has a direct relationship to the degree of famine vulnerability in the household is supported. With a chi-square value of 9.66522 and 10 degrees of freedom, this value reaches a significance level of .47034 which is greater than .01 probability level. Thus, the contents of table 14 statistically prove association of the two variables while their degree of association is attested by a contingency coefficient of .25759.

Similarly, the cross-tabulation values of table 15, also lends support to the above mentioned hypothesis. This is proven by a chi-square value of 9.99055 and a contingency co-efficient of 2.6071. This chi-square value reached a significance of .01865 which is greater than the .01 probability level.

### 4.3.3 PERCEIVED SOLUTIONS TO FAMINE VIS-A-VIS OCCUPATION

Individuals in Kibwezi are differentiated in terms of occupations and academic inclinations. Thus, they see their world through different eyes. The way they perceive, respond and deal or cope with the adversity of famine is based more or less on income, education, gender, personal experiences among others.

It should also be realized that perceptions about any phenomenon are socially framed and therefore what the respondents indicated as their solutions to the problem of famine in Kibwezi, is a reflection of their inclinations towards a variety of causal explanations. These inclinations are also differentiated across certain categories of occupation.

**Table 16. The Relationship between occupation and perceived solutions to the problem of famine.**

Solutions	Occupation						Total
	Teacher	Farmer	Nurse	R. Leader	B. Man	Others	
Expansion of farming land		10 66.7% 20.0% 7.8%			1 6.7% 7.7% 0.8%	4 26.7 9.8 3.1	15 11.7%
Create Employment	14 18.9% 93.3% 10.9%	22 29.7% 44.0% 17.2%	4 5.4% 100.0% 3.1%	5 6.8 100.0% 3.9	11 14.9% 84.6% 8.6%	18 24.3% 43.9% 14.1%	74 57.8%
Famine Relief	1 7.7% 6.7% 0.8%	6 46.2% 12.0%				6 46.2% 14.6% 4.7%	13 10.2%
Dont know		12 46.2% 24.0% 9.4%			1 3.8% 7.7% 0.8%	13 50.0% 31.7% 10.2%	26 20.3%
Total	15 11.7%	50 39.1%	4 3.1%	5 3.9%	13 10.2%	41 32.0%	128 100.0%

X<sup>2</sup> 28.97607

D.F 15 Sign: 0.01620 P> .01

Contingency coefficient .42964

Table 16 above has a chi-square value of 28.97607. With 15, this chi-square, reaches a significance of .01620 which is greater than .01 probability level. This, therefore indicates an association between occupation and perceived solutions to the problem of famine. The degree to which these two variables are related is highlighted by a contingency coefficient of .42960. The statistical value emerging out of this table, therefore, supports the hypothesis that household head's occupation, has a direct relationship with the degree of famine vulnerability in the household.

This is so because, though majority of the respondents have cited the creation of employment as the pragmatic solution to food crisis in Kibwezi, there was a discrepancy in perception to some of the suggested alternative solutions, which were more or less, designed to test the ignorance levels among various occupations in this region. The emerging pattern, however, showed that ignorance level was high among low category occupations such as farmers and Jua Kali artisans, than either among teachers or nurses or even business people.

From table 16, it is evident that majority of those who suggested expansion of farming land, famine relief or said outrightly that they do not know what solution they could offer, were mostly people in the Juakai sector or farmers. Their suggested solutions are, therefore, indicative of their ignorance levels which can only be translated into vulnerability during the occurrence of any disaster including famine

#### **4.4. FAMINE VULNERABILITY AND RELIEF FOOD**

Despite the much documented and publicised integrated and adaptable nature of African societies, in meeting peoples' needs, this ability may be overwhelmed during times of severe societal strain or distress (Raul 1991:27).

This severe societal strain is what for a long time has been experienced in most areas of Ukambani and especially Kibwezi. The scorching sun in this region, coupled with unpredictable erratic rains has made the realization of food security in this region impossible.

For the most part, farming activities have been seriously hampered by the semi-arid weather conditions. When rains fail, crops wither and this not only demoralises farmers but also makes it impossible for any ordinary farmer to make any meaningful impression in terms of yields. The most striking picture of Kibwezi is, therefore, of people who cannot feed themselves adequately.

During times of drought and or famine, people's purchasing power is eroded as prices of maize and other cereals shoot up while those of livestock fall drastically. The underdeveloped livestock market makes it difficult to quickly translate the herds into food at critical times. The ramifications of these conditions have been that, the region has more and more become reliant on famine relief food as a development strategy to combat low food production.

This research found out that, much of what is sent to famine stricken areas and more specifically to Kibwezi is not enough at all. This may be due to the fact that the response of famine in terms of relief food by the government is not necessarily based on whether or not people are hungry, rather, on decisions about whether or not, there is evidence of hunger, perceptions of the government of the day and more importantly, the relationship between the target population and the government. This view is also shared by Raul (1991; 78). He argues that the nature of response is not apolitical and the choices that influence relief response occur within a wider political and economic context.

Through interview schedule, focus group discussions and key informant interviews, this study found out that people of high status occupations such as politicians, traders and civil servants among others, are not among those found at famine relief collection centres. This is a pointer to the fact that famine, is more of a class issue and those affected severely by famine are predominantly the poor households. These have come to rely over whelmingly on relief food as the only possible remedy to famine.

**Table 17: The Relationship between famine recognition and Reception of Famine Relief Food.**

Count Exp val Row pct Col pct Tot pct	Do you receive famine relief		Row
	Yes	No.	Total
Famine is a problem	101	20	121
	100.0	21.0	87.7%
Strongly Agree	85.5%	13.5%	
	88.6%	83.3%	
	73.2%	14.5%	
Agree	13	4	17
	14.0	3.0	12.3%
	76.5%	23.5%	
	11.4%	16.7%	
Column Total	9.4%	2.9%	
	114	24	138
	82.6%	17.4%	100.0%

$X^2$  50846 D.F. 1 Significance .47581

$P > .01$  Contingency coefficient .06059

The relationship between famine recognition and reception of famine relief, is shown by table 17. With a chi-square value of .50846 and a contingency coefficient of .06059 at .01 significant level, it is observed that, the relationship between famine recognition and famine relief food reception are therefore associated.

From the above table, it is evident that out of the 138 respondents interviewed, 121 (87.7%) strongly agreed that famine is a major problem and majority of these 101(73.2%), indicated that they do receive famine relief. If we take the recognition level as being indicative of vulnerability level, then those who receive famine relief food are therefore more affected by famine and oftenly, they do not have alternative ways of survival. Their recognition level will, therefore, be higher than those who do not receive those relief rations.

When probed further, it was found that majority of those who receive famine relief are members of the poor households, and are also the ones who are affected by famine more. The degree to which one is vulnerable to any kind of disasters will also be reflected on the recognition level of the same. The above argument is also supported by the relationship between famine recognition level and the quantity ratings of the famine relief rations received.

**Table 18. The Relationship between famine recognition levels and the ratings of famine relief rations received.**

Count Exp. val Row pct Col. pct	Ratings in terms of quantity			
	Enough	Little	V. Little	Total
Tot pct				
Strongly Agree	10 8.9 100.0% 8.7%	31 31.0 88.6% 27.0%	61 62.1 87.1% 53.0%	102 88.7%
Agree	0 1.1 .0% .0% .0%	4 4.0 30.8% 11.4% 3.5%	9 7.9 69.2% 12.9% 7.8%	13 11.3%
Column total	10 8.7%	35 30.4%	70 60.9%	115 100.0%

X<sup>2</sup> 1.44339 D.F.2 Significance .48593

P> .01 Contingency coefficient .11134

The relationship between recognition level of famine and the quantity ratings of the famine relief rations received, is shown by a chi-square value of 1.44339 and a coefficient of .11134 at .01 significant level. It can be seen from the above table that majority of those who strongly agreed that famine is a major problem in Kibwezi, also indicated that the rations of famine relief they received were either little or very little. Though very few indicated the rations were enough, majority of the respondents held the opposite view.

As earlier stated, the disbursement of relief food by the authorities and other agencies is not without politics and other socio-economic aspects. For instance inadequate relief food may be sent to a famine stricken area, so that politicians can take advantage of the vulnerable masses and manipulate them to do for them, their dirty political errands. This is a common occurrence in Ukambani especially during election time. The statistical evidence adduced in table 18 show that those who indicated that the relief rations they receive are very little, are those without access to alternative means of survival and majority of the households in Kibwezi belong to this category.

It is also important to note that such inaccessibility to alternative means or strategies of survival is exacerbated by the fact that people in this region, have come to overrely on famine relief and thereby spent alot of productive man-hours sitting and waiting for food at famine relief collection centres instead of engaging in productive activities. This is clearly depicted in table 19. Here the relationship between hours spent in famine relief collection centres and activities geared towards prior preparation to famine, confirms the foregoing argument.

**Table 19: Prior preparations to famine and Hours spend at Famine Relief Centres**

Count Row pct Col pct Tot pct	Hours spend		Row
	Under 3 Hrs	Over 3 Hrs	Total
Prior preparation	4 16.0%	21 84.0%	25 21.6%
Store food	13.8% 3.4%	24.1% 181.1%	
Save money	3 25.0% 10.3% 2.6%	9 75.0% 10.3% 7.8%	12 10.3%
Rely on Relief	17 31.5% 58.6% 14.7%	37 68.5% 42.5% 31.9%	54 46.6%
	5 20.0% 17.2% 4.3%	20 80.0% 23.0% 17.2%	25 21.6%
Colum Total	29 25.0%	87 75.0%	116 100.0%

$\chi^2$  2.62321 D.F. 3 Significance .45344  
 $P > .01$  Contingency coefficient .14871

The relationship between the two variables is shown by a chi-square value of 2.62321 and a contingency coefficient of .14871. With 3 degrees of freedom, this chi-square value attains a significance of .45344 which is greater than .01 probability level. Now that the association between the two variables cannot be gainsaid, it follows that majority of those who indicated that they spend more than three hours at famine relief collection centres, either rely on relief or have left their survival to fate.

One could, therefore, conclude that a lot of productive hours are spent at these centres leading to low productivity. This exacerbates the degree to which households are vulnerable. It is high time, therefore, relief food policy was formulated to guard against overreliance on relief as this may lead to overkill of productive initiatives in this region.

The pattern emerging from table 19, is reinforced by the statistical pattern emerging from table 20.

**Table 20: Quantity retainings of famine relief rations and frequency of famines**

Count Row pct Col pct Tot pct	Famine Relief Rations			
	Enough	Little	V. Little	Total
Frequency of famine	3	4	23	30
	10.0%	13.3%	76.7%	26.1%
After a year	30.0%	11.4%	32.9%	
	2.6	3.5%	20.0%	
After 2-3 years	5	10	31	46
	10.9%	21.7%	67.4%	40.5%
	50.0%	28.6%	44.3%	
	4.3%	8.7%	27.0%	
After 4-5 years	2	21	16	39
	51.0%	53.8%	41.0%	33.9%
	20.0%	60.0%	22.9%	
	1.7%	18.3%	13.9%	
Column total	10	35	70	115
	8.7%	30.4%	60.9%	100.0%

$X^2$  16.00293 D.F 4 Significance .00302

$P > .01$  Contingency coefficient .34951



The relationship between perception on the frequency of famine and the quantity ratings of famine relief rations is another indicator of how those who overrely on relief food as the only mitigating strategy to famine, can be seen to be vulnerable.

With a chi-square value of 16.00293 and a contingency coefficient of .34951 at .01 significant level, the relationship between frequency of famine and quantity ratings of famine relief rations supports our hypothesis that famine relief reinforces famine vulnerability. From the table, it can be seen that majority of those who indicated the frequency of famine to either occur annually or after every 2-3 years, also indicated that the famine relief rations they received were either little or very little. This is because, those who rely on relief food during famine, are more likely to see famine occurring more frequently than those who have alternative sources of livelihood.

In this regard, as the rural folks become more and more dependent on relief food, they consistently lose their ability to produce or purchase food. This is due to inherent laxity on their part to maximumly and sustainably utilize the resources and the potential at their disposal. Moreover, owing to their marginal positions in terms of resource endowment, their very edge of survival is minimized resulting to increased vulnerability.

#### THE CONCEPT AND SCOPE OF FAMILIARITY

The concept of familiarity is generally defined as the state of being acquainted with or knowing someone or something. It is a feeling of being comfortable and confident in the presence of someone or something. Familiarity is often associated with a sense of safety and security. It is a feeling that is often developed through repeated exposure to a person or thing. Familiarity is a complex phenomenon that is influenced by a variety of factors, including the frequency and duration of exposure, the nature of the exposure, and the individual's personality and experiences. Familiarity is a subjective experience that varies from person to person. It is a feeling that is often associated with a sense of safety and security. It is a feeling that is often developed through repeated exposure to a person or thing. Familiarity is a complex phenomenon that is influenced by a variety of factors, including the frequency and duration of exposure, the nature of the exposure, and the individual's personality and experiences.

#### ADVANTAGES OF THE FAMILIARITY CONCEPT

The concept of familiarity has several advantages. First, it is a simple and easy-to-understand concept. Second, it is a concept that is widely used in a variety of fields, including psychology, sociology, and education. Third, it is a concept that has been extensively studied and researched. Fourth, it is a concept that has been found to be a useful predictor of a variety of outcomes, including the likelihood of a person or thing being liked or disliked, the likelihood of a person or thing being remembered, and the likelihood of a person or thing being used. Fifth, it is a concept that is easy to measure and assess. Sixth, it is a concept that is easy to apply in a variety of contexts. Seventh, it is a concept that is easy to communicate and explain. Eighth, it is a concept that is easy to use in a variety of applications. Ninth, it is a concept that is easy to integrate with other concepts. Tenth, it is a concept that is easy to use in a variety of settings. Eleventh, it is a concept that is easy to use in a variety of ways. Twelfth, it is a concept that is easy to use in a variety of situations. Thirteenth, it is a concept that is easy to use in a variety of environments. Fourteenth, it is a concept that is easy to use in a variety of circumstances. Fifteenth, it is a concept that is easy to use in a variety of conditions. Sixteenth, it is a concept that is easy to use in a variety of environments. Seventeenth, it is a concept that is easy to use in a variety of circumstances. Eighteenth, it is a concept that is easy to use in a variety of conditions. Nineteenth, it is a concept that is easy to use in a variety of environments. Twentieth, it is a concept that is easy to use in a variety of circumstances. Twenty-first, it is a concept that is easy to use in a variety of conditions. Twenty-second, it is a concept that is easy to use in a variety of environments. Twenty-third, it is a concept that is easy to use in a variety of circumstances. Twenty-fourth, it is a concept that is easy to use in a variety of conditions. Twenty-fifth, it is a concept that is easy to use in a variety of environments. Twenty-sixth, it is a concept that is easy to use in a variety of circumstances. Twenty-seventh, it is a concept that is easy to use in a variety of conditions. Twenty-eighth, it is a concept that is easy to use in a variety of environments. Twenty-ninth, it is a concept that is easy to use in a variety of circumstances. Thirtieth, it is a concept that is easy to use in a variety of conditions. Thirty-first, it is a concept that is easy to use in a variety of environments. Thirty-second, it is a concept that is easy to use in a variety of circumstances. Thirty-third, it is a concept that is easy to use in a variety of conditions. Thirty-fourth, it is a concept that is easy to use in a variety of environments. Thirty-fifth, it is a concept that is easy to use in a variety of circumstances. Thirty-sixth, it is a concept that is easy to use in a variety of conditions. Thirty-seventh, it is a concept that is easy to use in a variety of environments. Thirty-eighth, it is a concept that is easy to use in a variety of circumstances. Thirty-ninth, it is a concept that is easy to use in a variety of conditions. Fortieth, it is a concept that is easy to use in a variety of environments. Forty-first, it is a concept that is easy to use in a variety of circumstances. Forty-second, it is a concept that is easy to use in a variety of conditions. Forty-third, it is a concept that is easy to use in a variety of environments. Forty-fourth, it is a concept that is easy to use in a variety of circumstances. Forty-fifth, it is a concept that is easy to use in a variety of conditions. Forty-sixth, it is a concept that is easy to use in a variety of environments. Forty-seventh, it is a concept that is easy to use in a variety of circumstances. Forty-eighth, it is a concept that is easy to use in a variety of conditions. Forty-ninth, it is a concept that is easy to use in a variety of environments. Fiftieth, it is a concept that is easy to use in a variety of circumstances.

## CHAPTER FIVE

### SUMMARY CONCLUSION AND RECOMMENDATIONS

#### 5.0 INTRODUCTION

This final chapter involves the exposition of the salient findings of the study. The conclusions and recommendations which derive from the findings pose challenges to the ultimate goal of realization of food security in Kibwezi, and indeed to the whole nation. These challenges, boil down to the need of developing a strong conceptual and analytical framework on the subject of recurrent famines in Kenya.

As Dirks (1980) asserts, famines have both biological and social dimensions with physiological and interpersonal implications. These implications impinge on our very heart of survival. Food, like water and air, is the stuff of life. When we have less than we require, we are hungry, our growth is stunted, and our capacity to deal with living itself is, needless to say, impaired. It is, therefore, imperative to study the causes of vulnerability to famine and other disasters, so that we can be in a better position to deal with the adversities as they occur. When we are successful in this endeavour, we would realize a well fed nation, and indeed, a productive one.

#### 5.1 THE PURPOSE AND OBJECTIVES OF THE STUDY

This study, focused its attention on the socio-economic factors that influence the differential impact of famine among Kibwezi households. The main objective of this study, was to generate empirical, valid data, on the role played by social and economic factors to the degree of famine vulnerability among Kibwezi households. The analysis of these factors is a distinct departure from the darling factors attributed to famine analysis, that is, the factors associated with the vagaries of weather.

#### 5.2 SUMMARY OF THE MAJOR FINDINGS

One of the most important findings in the study, was the significant relationship between famine vulnerability and socio-economic factors such as household head's income, occupation and the issue of relief food. A particular aspect of famine vulnerability that underpins the data is poverty. Poverty here was seen to result from inadequate incomes and low production potential, particularly in agriculture and other rural income generating activities. The poor, it was found, have inadequate or constrained access to education and other services, the prerequisites of a better life. Due to their limited access to education, they have limited skills of survival and as such, when famines strike, they are left with few or even no alternative means of survival except relief food.

Since households exist as units in an open system, they impact and are impacted upon by both internal and external conditions, some of them beyond their control. Therefore, if the household is to succeed in positioning itself in an ideal competitive situation during famines, it has to look into ways of increasing its bundle of entitlements, or more importantly, strategic bundle of entitlements which are easily convertible to money during times of adversity. However, this study found out that the poor have, assets which have low productive potential and their re-sale value is either very low or non-existent. As a result of this factor alone, the poor exhibit weak ability to effectively participate in food production and other economic activities. This compounds their degree to famine vulnerability further.

From the focus group discussions and key informants meetings, one of the problems constantly highlighted was the immediate sale of harvest among peasant farmers. As low incomes prevail, most of what is harvested during good seasons immediately finds its way to the local market. This post-harvest sales increase the problem of food scarcity in Kibwezi. Perhaps one may want to ask why this is so? The major reason is that other than food, there are other needs that must be catered for and due to low income, the household heads are left with no other alternative but to dispose off whatever they have even when their prices are at their lowest ebb. This includes the food they already have in their stores.

Given the statistical information presented in this study, majority of the household heads in Kibwezi are either peasant farmers, Juakali artisans or simply unemployed. Also the study shows that majority of the households in Kibwezi rely on relief food during times of famine for survival. Though the statistical evidence adduced here, with regard to importance of famine relief food cannot be gainsaid, it has been criticized for its role of killing self-initiatives and productive capacities of the beneficiaries. This results when the targeted population of these relief rations become over dependent on the same, as the only mitigating strategy to combat food scarcity. Rather than relying on relief food and other intervention programmes, preventive instead of curative mechanisms should be developed to guard against the eventuality of famine. This could be done by creating employment opportunities to the rural people, providing credit facilities through micro-finance institutions whose credit terms are favourable among other initiatives. There should be tangible efforts geared towards sustainable food production in this region and in the whole republic.

### 5.3 CONCLUSION

It is evident from the foregoing that famine vulnerability is correlated to income levels, household heads occupation and relief food. The only logical conclusion is, therefore, since famine vulnerability has been shown to be dominantly influenced by poverty, inadequate incomes and productivities, particularly in agriculture and other rural activities, the government and other interested agencies should put in place mechanisms to obliterate poverty so that the degree of vulnerability in household, to any kind of disaster, is minimised.

Experience over the recent past has shown how severe famine can be in Kibwezi. It is imperative, therefore to adopt a multi-sectorial approach to solve the problem. There can be no single policy response to famine. Both the government and the private sector should work in concert to ensure the scourge of famine is obliterated, for the single reason that it retards development and economic growth. For instance as water is the single most important factor in achieving the elusive goal of food security in this region, the government and other agencies should prioritize the provision of water in their development agendas of the area. Further, sound strategies such as creation of employment and provision of education and or access to information regarding resource availability and utilization in the local area, will serve to increase the level of sustainable resource utilization to which in the long run results to expansion of local resource base.

Famine in Kibwezi can be avoided if there is commitment to do so. A commitment which necessarily revolves around political will as well as the allocation of resources. It is through mobilization and sustainable utilization of the local resource base and or potential that famines will be controlled to minimal levels.

### 5.4 RECOMMENDATIONS

1. The study found out that low incomes prevail in Kibwezi. Efforts, therefore, should be directed to projects which improve rural incomes. Livestock markets should be developed so that farmers can be able to immediately convert their herds to money such that they can be able to buy food.
2. The study also found out that there exists low levels of education among the household heads in Kibwezi. This translates into a poorly educated population. It is, therefore, imperative that efforts should be geared towards information dissemination to these people. This should be done either through extension services, chiefs barazas and through other organized forums such as community based organizations (CBO's) non-governmental organisations (NGO's) and established self-help groups).
3. The study revealed that most households in Kibwezi mostly rely on relief food. Research, therefore, should be directed towards education for self-reliance in food production. Policies emanating from such research, should take into consideration the importance of making people realize the need to embrace those technologies which enhance food production such as early planting, use of farm inputs such as fertilizers and manure, use of drought resistant seeds such as the Katumani variety and growing drought resistant traditional crops such as millet and sorghum.

## BIBLIOGRAPHY

AMBLER, C.H 1988

Kenya Communities in the Age of Imperialism: The Central Region in the Late 19th Century. New Haven: Yale University Press.

AWUONDO, C.O 1990

Life in the Balance : Ecological Sociology of the Turkana Nomads:  
Nairobi: University of Nairobi.

AKONG'A, J. 1985

Drought, Famine and Policy,  
The Kitui District of Kenya:  
University of Nairobi.

AKONG'A, J. 1986 Kenya Socio-cultural Profiles

Kitui District: University of Nairobi.

ADDO, S.T. 1995

Accessibility, Mobility and Development; Research Reviews, New Series  
VOL.11 No. 1 and 2  
Legon: University of Ghana.

BAULCH, B, 1996

The New Poverty Agenda: A Disputed Consensus. Editorial IDS Bulletin, 27  
(1) : 1-10

BROWN R.L. 1997

Facing the prospect of food scarcity. In state of the world 1997: A Worldwatch  
Institute Report towards a Sustainable Society  
PP 23-41.L. Starke (Ed)  
NewYork; WW Norton & Company.

CLAY, J.W 1991

Western, Assistance and Ethiopian Famine: Implications for Humanitarian Assistance. In the Political Economy of African Famine PP 147-175. R.E Downs, Donna O. Kerner and Stephen P. Ryna (Eds)  
Philadelphia: Gordon and Breach Science Publisher.

CLIFFE, L,R BUSH D. PANKHURST  
and D.LITTLEJOHN 1989

The Survival Crisis in Southern Africa  
London: ROAPE

CLOUGH, P. 1985

Grain Marketing in Northern Nigeria.  
Review of African Political Economy, 34:16-34

DIRKS, R. 1980

Social responses during severe food shortage and famine.  
In Current Anthropology Vol. 21 No. 1 February, 1980

DREZE, J. 1988

Famine Prevention in Africa  
London: Londoff School of Economics.

D'SOUZA, F. 1987

Famine, Social Security and Analysis of Vulnerability. In famine, Biosocial Society Series No.1 pp 1-56 G.A. Harrison (ed) NewYork: Oxford University Press.

GOVERNMENT OF KENYA 1997:

National Development Plan 1997-2001. Nairobi: Government printer.

GOVERNMENT OF KENYA 1997:

Makueni District Development Plan 1997-2001. Nairobi Government Printer.

GEORGE, S. 1984

I.II Fare the Land . Penguin Books.

HERLEHY, A. 1984

Historical Dimension of Food Crisis in Africa :

Surviving Famines Along the Kenya Coast 1880-1980. Working Paper No.87.

Africa Studies Centre, Boston University.

HUSSAIN, A. 1985

Squeezed out by progress. Development; Seeds of Change; Village through Global Order 1985 (3): 14-17.

HARRISON, G.A. (ED) 1988

Famine New York: Oxford University Press.

KEUSCH 1990

LEVIN I.R. and RUBIN DS. 1991

Statistics For Management 5<sup>th</sup> Ed Englewood Cliffs; Prentice – Hall International Inc.

MASON, A. 1985

Nutrition considerations in Project Planning

Journal of Food Policy, 10 (2): 109

MABONGUNJE, A.L. 1980

The Development process: A Spatial Perspective: London Hutchinson.

MYRADAL, G. 1968

Asian Dream: An Inquiry into Poverty of Nations 3: New York.

MAIR, L.P. 1974

African societies, Cambridge University Press.

MBITHI, P.M. and B. WISNER 1972

Drought and Famine in Kenya:

Magnitude and Attempted Solutions. Working Paper

No. 46: Institute for Development Studies

University of Nairobi.

MBITI, J. 1969

African Religious and Philosophy Nairobi: Heinemann

MUSILA, S.M. 1993

The impact of Irrigation on the Socio-cultural and Economic lives of Rural Community. The case of Yatta Furrow Irrigation in Machakos District Kenya.

A Masters Thesis, Institute of African Studies, University of Nairobi.

MUTIE, P.M. 1993

The Problem of Drought in Kitui District, Kenya. Contributions of the Catholic Development Unit in Response to Recurrent Food and Water Shortages UNPL

Thesis, Department of Sociology, University of Nairobi.

NDEGWA. P. and FENDWICK ANTHONY 1986

Food Crisis in Africa:

Policy and Research Issues

Paper contributed to February 1986 Meeting of the Board of Trustees of International Food Policy Research Institute (I.F.P.R.1), Nairobi.



NDETI, K. 1972

Elements of Akamba life. Nairobi: East African Publishing House.

NJERU, E.H.N and MACHARIA M. WILLIAM 1992

Social-Cultural Analyses of Childhood Malnutrition in Embu District. Social Behaviour and Health,

3: 6-18.

O'LEARY, M. 1988

Response to Drought in Kitui District, Kenya.

Disasters, 4 (3) : 315-327.

RAHAMATO, D 1991

Famine and Survival Strategies:

A Case Study from North-East Ethiopia uppsala: The Scandinavian Institute of African Studies.

RAMPEL , 1984

Food Security Options for Sub-saharan Africa

Working Paper No. 407

Institute for Development Studies,

University of Nairobi.

SASSON, A. 1990

Feeding Tomorrows World Vendome: UNESCO.

SAUL, M 1987

The Organisation of West African Grain Market.

American Anthropologist, 89:74-95

SEN.A. 1981

Poverty and Famines: An Essay on Entitlements

London: Oxford University Press.

SUDA, COLLETTE, A. 1991

Female Labour Contribution in Home Management and Agricultural production in Siaya District. In Women and Development in Kenya, PP 1-23. Gideon S. Were (Ed) Nairobi Institute of African Studies. University of Nairobi.

SWIFT, J. 1989            Why poor people are vulnerable to famine IDS Bulletin 20 (2) 8-15

TODARO, M. 1984

Economic for the Developing World.

London- Longman.

THE NEW ENCYCLOPEDIA BRITANNICA 1993 Volume 4, London Encyclopedia Britannica, 15th Edition.

U.S. GOVERNMENT 1980

Food Problems and Prospects in Sub-Saharan Africa:

The Decade of the 1980s Washington, DC: US Government Printing Office.

VON BRAUN J. 1997

Food Security for All by the year 2020. Agriculture and Rural Development, 4 (2): 14-17.

WISNER, B.G. 1977

The Human Ecology of Drought in Eastern Kenya

PHD Dissertation. Worcester: Clark University.

WOLF, ERIC R. 1973

Kinship, Friendship and Patron- Client Relations in Complex Societies.The Social Anthropology of Complex Societies. A.S.A Monographs 4, PP1-20 Michael Banton (Ed) London: Tavistock.

WATTS, M. 1991

Heart of Darkness: Reflections on Famine and Starvation in Africa. In The Political Economy of African Famine, PP 23-70. R.E. Downs Donna O Kermar and S' P. Ryna (Eds) Philadephia: Gordon and Breach Science Publishers.

WORLD RESOURCES INSTITUTE, UNEP and UNDP. 1990

World Resources Report:-

Newyork: Oxford University Press.

WERBLOW, U. 1997

A Radically Changing World: Globalization and Food Security up to Year 2020.

Agriculture and Rural Development. 4 (2)7-9.

## Appendix 1

## QUESTIONNAIRE

### INSTRUCTIONS

The following questionnaire is intended for use as a self-administered questionnaire. Each of the respondent is expected to circle the number next to their answer or fill in the space provided. However, those who cannot manage on their own will be assisted.

### SECTION A: BACKGROUND INFORMATION

1. Date the questionnaire was filled out

Day	Month	Year
-----	-------	------

(a) Division	Kibwezi Division	
--------------	------------------	--

(b) Location	_____	
--------------	-------	--

(c) Sub-Location	_____	
------------------	-------	--

2. Questionnaire	_____	
------------------	-------	--

3. Gender

Male	_____	1.
------	-------	----

Female	_____	2.
--------	-------	----

4. Age	_____	
--------	-------	--

5. Marital Status

Single \_\_\_\_\_ 1.

Married \_\_\_\_\_ 2

Divorced \_\_\_\_\_ 3

Windowed \_\_\_\_\_ 4

Separated \_\_\_\_\_ 5

6. What level of school have you attained?

Primary \_\_\_\_\_ 1.

Secondary \_\_\_\_\_ 2.

University \_\_\_\_\_ 3

None of the Above \_\_\_\_\_ 4

**SECTION B: FAMINE VULNERABILITY**

7. Famine is a problem in Kibwezi Division

Strongly Agree \_\_\_\_\_ 1.

Agree \_\_\_\_\_ 2.

Disagree \_\_\_\_\_ 3.

Strongly Disagree \_\_\_\_\_ 4.

8. How do you think most of your colleagues, relative, friends.....see famine?

Major problem \_\_\_\_\_ 1.

Minor problem \_\_\_\_\_ 2.

Not a problem \_\_\_\_\_ 3.

9. How often do you expect famine to strike?

After a year \_\_\_\_\_ 1.

After 2-3 years \_\_\_\_\_ 2.

After 4-5 years \_\_\_\_\_ 3.

10. How do you prepare yourself in advance to famine Situations?

Store enough food? \_\_\_\_\_ 1.

Save enough money \_\_\_\_\_ 2.

Rely on government for relief \_\_\_\_\_ 3.

Nothing one can do \_\_\_\_\_ 4.

11. What in your opinion do you think is a solution to the famine?

Expansion of farming land. \_\_\_\_\_ 1.

Creation of employment opportunities \_\_\_\_\_ 2.

Famine relief food \_\_\_\_\_ 3.

Don't know \_\_\_\_\_ 4.

### SECTION B: INCOME LEVELS

12. Who owns the land in which you live and farm?

Mother \_\_\_\_\_ 1.

Uncle \_\_\_\_\_ 2.

Father \_\_\_\_\_ 3.

Brother \_\_\_\_\_ 4.

I do \_\_\_\_\_ 5.

Husband \_\_\_\_\_ 6.

13. Are you employed?

Yes \_\_\_\_\_ 1.

No. \_\_\_\_\_ 2.

14. If yes, where and how much do you earn per month?

Place of employment \_\_\_\_\_ 1.

Salary/Wages \_\_\_\_\_ 2.

15. Do you think what you earn is enough for your family's food requirements?

Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

16. If what you earn is not enough, what do you do when famine Strikes?

.....

.....

17.a) Do you own any cows, goats, sheep or poultry?

Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

Give the number for each:-

b) Cattle 1-4 \_\_\_\_\_ 1.

4-8 \_\_\_\_\_ 2.

8-12 \_\_\_\_\_ 3.

Over 12 \_\_\_\_\_ 4.



17. c) Goats 1-4 \_\_\_\_\_ 1.

4-8 \_\_\_\_\_ 2.

8-12 \_\_\_\_\_ 3.

Over 12 \_\_\_\_\_ 4.

d) Sheep 1-4 \_\_\_\_\_ 1.

4-8 \_\_\_\_\_ 2.

8-12 \_\_\_\_\_ 3.

Over 12 \_\_\_\_\_ 4.

e) Poultry 1-10 \_\_\_\_\_ 1.

10-20 \_\_\_\_\_ 2.

Over 20 \_\_\_\_\_ 3.

## 18. Farm Size

a) Farm acreage \_\_\_\_\_

b) How much land is cultivated \_\_\_\_\_

c) What do you grow in the farm?

---

19. Do you own any of the following:-

a) Bicycle Yes \_\_\_\_\_ 1

No \_\_\_\_\_ 2.

b) Wheel barrow Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

c) Motor Vehicle Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

d) Radio Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

e) Sofa set Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

f) Iron roof Yes \_\_\_\_\_ 1.

-  
No \_\_\_\_\_ 2.

## SECTION C: HOUSEHOLD HEAD'S OCCUPATION

20. What is your occupation?

- a) Teacher \_\_\_\_\_ 1.
- b) Farmer \_\_\_\_\_ 2.
- c) Nurse \_\_\_\_\_ 3.
- d) Religious Leader \_\_\_\_\_ 4.
- e) Businessman/woman \_\_\_\_\_ 5.
- f) Other/specify (housewife)Driver \_\_\_\_\_ 6.

21. How many years have you completed in your present occupation? \_\_\_\_\_

22. Do you like your occupation?

Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

23. If No. in 22, can you explain.

-----  
-----  
-----

24. In your occupation, do you earn enough to feed your family even in the event of famine?

Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

25. If yes in 24 how much do you earn per month?

26.If No, in 24, why? Explain?

-----  
-----

27. What would you have liked to be instead of your present occupation? Explain why?

-----  
-----

## SECTION D: COPING MECHANISM

28. Do you receive famine relief food rations?

Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

29. If yes in 28, how would you assess these rations?

More than enough \_\_\_\_\_ 1.

Not enough \_\_\_\_\_ 2.

Little \_\_\_\_\_ 3.

Very little \_\_\_\_\_ 4.

30. Do you think famine relief rations should be increased?

Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

31. Do you think famine relief rations should be scrapped altogether?

Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

32. How many hours do you spend at the famine relief food collection centre?

1 hour \_\_\_\_\_ 1.

2 hours \_\_\_\_\_ 2.

3 hours \_\_\_\_\_ 3.

4 hours and more \_\_\_\_\_ 4.

33. Do you pay anything for these relief rations?

Yes \_\_\_\_\_ 1.

No \_\_\_\_\_ 2.

34. If yes in 33 how much do you pay and for what?

-----

-----

35. What other ways do you do to cope with famine?

-----

-----

## **APPENDIX 2**

### **KEY INFORMANT GUIDE**

- Q1. Do you think famine is a serious problem in Kibwezi?
- Q2. What do you think are the causes of famine?
- Q3. What categories of occupations are more vulnerable to famine and why?
- Q4. To what degree are the households in Kibwezi vulnerable to famine?
- Q5. Is the impact of famine genderized?
- Q6. In your opinion what do you think is the appropriate preventive and mitigating course of action?
- Q7. Is relief food a positive or negative intervention to famine? If yes; how? If no; why?
- Q8. What is the most important factor that cause proneness of famine in Kibwezi?
- Q9. Do you think the government and non-governmental organisations are doing enough to alleviate this problem? If not, what areas and ways in which they can improve on?
- Q10. In your opinion, what can be done to empower people to cope more effectively with famine?

### **THEMES OF FOCUS GROUP DISCUSSIONS**

- 1. Recognition levels of the impact of famine in Kibwezi among different occupational categories.
- 2. Perceived causes of famine in Kibwezi. What do the local people attribute the cause of famine to?
- 3. Preventive and mitigation.
- 4. Government's role and reduction of poverty programmes. How is poverty related to the degree of famine at the household level? What are the potentialities of the local people in the alleviation of poverty in this area?
- 5. Relief food. What is the impact of relief food in famine vulnerability status at the household? Is it a positive or negative intervention?
- 6. Employment and occupational statuses in the area. What categories of occupations are more prevalent in the area and why?
- 7. Solutions to the problem of famine.