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## Women and Household Food Security in Kenya: A Theoretical Review

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### Abstract

*The role of women in agriculture as producers and providers of food cannot be over emphasised. In Kenya, just as in many other regions throughout the developing world, women are a critical link in achieving food security. This paper aims at examining the role of women in ensuring household food security in Kenya. Challenges experienced by women in their participation in household food security are also highlighted. A systematic review of literature on both published and unpublished materials was used to examine the fundamental roles women play in ensuring food security in the family. The paper explores the critical link between women and food security in the Kenyan context by assessing some of the influences on household food security and specifically addressing women's roles and constraints within that framework. It reviews effective strategies that can be adopted by women to maximize household food security with policy implications especially for the implementation of the Kenya Constitution, 2010, Article 43 (1)c on Social and Economic Rights. The central argument in this paper is that women play a vital role in providing and producing food for the family and that empowering women through investing in their education is the single most important strategy to enhanced household food security; education allows women to access and control more resources. The paper concludes by making key recommendations for policy change towards women's participation in household food security.*

**Keywords:** women, household food security, Kenya

### 1.0 Introduction

In African societies, women play a fundamental role in ensuring food security<sup>1</sup> in the family and community. Their role in economic development cannot be underscored. Women account for 60

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<sup>1</sup> The World Food Summit of 1996 defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”. Commonly, the concept of food security is defined as including both physical and economic access to food that meets people's dietary needs as well as their food preferences.

percent of the labor force in agricultural activities and they occupy a central position in economic production (Blackeden & Bhanu, 1998). As estimated by (Jiggins 1989), about 30 percent of rural households in the world are headed by women who contribute about 80 percent of agricultural produce; almost 60 percent of the food consumed by rural household; and generate more than a third of all household incomes.

The majority of women based in the rural areas assume the role of men as household heads. The traditional African system where males and females generally had separate and definite responsibilities related to the household are no longer the same. Furthermore, in the African cultural context, men used to be considered the sole family heads and providers of food. Recently, there has been an increase in the number of female-headed households with women as the sole breadwinners due to multiple factors such as death, divorce, separation and out migration. Women have filled the gap left by their men as household heads (Waswa 1998). It is estimated that one third of the households in Africa are headed by women (Stomquist 1998). Their productive roles and community management have a great impact as they reduce mobility, time, and energy available to carry out farming activities (Buluku 2002). It is documented that women are controllers of large sectors of the economy and the producers of food and cash crops for the population (Byekwaso-lubega. 1990). Therefore, one can rightly say that women and especially those in rural areas are the backbone of the economy and greatly contribute to economic development in many societies of developing countries. Studies conducted in Africa have found out that households with women controlled incomes may be more food secure than those with male controlled incomes (Food and Agriculture Organization 1997)

Natural disaster such as prolonged drought is one cause of the breakdown of the balance maintained in natural resource use leading to a breakdown of a traditional mechanism of self-insurance against food insecurity that places the poor households to greater famine risks (Kareithi, 2001). As highlighted by (IPCC 2007), the yields from rain-fed agriculture could be reduced by up to 50% in some countries by 2020 . Agricultural production including access to food, in many African countries is projected to be severely compromised. This would further adversely affect food security and exacerbate malnutrition. By 2080, an increase of 5-8% of arid and semi-arid land in Africa is projected under a range of climate scenarios (IPCC 2007). This is partly because these areas are least able to cope with the effects of climate change due to lack of proper technology. Kenya has witnessed an alarming upsurge in the incidence and severity of extreme climatic events caused by climate change. Floods, droughts, flash floods and landslides have ravaged virtually all parts of Kenya (Republic of Kenya, 2009).

Despite overall growth, global food security has not been achieved. The number of chronically hungry people in developing countries as a whole started to increase from the late 1990s, and by 2001–2003 the total number of undernourished people worldwide had increased to 854 million (FAO 2008b). The recent rise in malnutrition (estimated at 40 million in 2008) to some 963 million people can, at least partly, be attributed to rising food prices.

Kenya is classified by the Food and Agriculture Organization (FAO) as a low income food deficit country (FANTA 2000). Over the past decade, the incidence and intensity of hunger and malnutrition has increased significantly and food availability has not kept pace with the rapidly growing population (Government of Kenya 1999). Just like most of Africa, agriculture substantially contributes to the national economy and to the assurance of food security in Kenya. Being an agrarian country, 78 percent of Kenyan population participates in agricultural activities while only 20 percent and 12 percent are in the industry and tertiary sectors respectively (World Bank 1989). Despite the involvement of a large proportion of Kenyan population in agriculture, food insecurity is still a persistent problem (Government of Kenya/ UNICEF 1998). The situation worsens during drought years. Kenya is situated in the Eastern part of the African continent lying between 5° degrees south latitude and between 24 and 31° east longitude and bisected by the equator. Approximately 80 percent of its size is arid or semi-arid, while 20 percent is arable land. These arid and semi-arid areas are inhabited by both agriculturalists and nomadic people, and are characterized by frequent droughts and food insecurity. The key question of this paper is: how can food security be ensured? Central to this study is the role that women may play towards this and if they are empowered.

## **2.0 Women and the Food Security Problem**

Household food security constitutes a major challenge to the population and especially to women, since most households depend on both foods produced from their own farms or purchased food for their daily intake (M'Kaibi 2003). Without adequate food supply the lives of people are "jeopardized" especially that of children. In their multiple roles which include, production, procurement, preparation, cooking and distribution of food to family members, women play a key role in ensuring food security (Buluku 2002; Chirwa 2003). In spite of women playing a crucial role in enhancing food security, most women are resource poor as compared to their male counterparts. They lack access to resources such as income, credit, and land, which are essential in agricultural production and purchase of food. The reproductive role and community management roles have a great impact as they reduce mobility, time and energy available to carry out farming activities. There are also legal and cultural obstacles that limit women's right to access credit (Food and Agriculture Organization FAO 1998).

Kennedy and Hoddad (Kennedy and Haddad 1992) stated that women's control of income and other resources have positive effects on household food security. According to (Food and Agriculture Organization 1997), income in the hands of women has more significant influence on household food security than that in hands of men. Women are more vulnerable to poverty than men. In Kenya, 69 percent of the active female population work as subsistence farmers compared to 43percent of men. Given that subsistence farmers are among the very poor, this relative dependence of women upon subsistence farming explains the extreme vulnerability of women (Government of Kenya 2000). Given that most population particularly women live in rural areas and are dependent on subsistence farming, it is important to explore their level of vulnerability and how to improve their food security. This will inform policy in Kenya on some

of the interventions that could improve food security and nutrition at the household level and the national achievement of the Millennium Development Goals (MDGs).

This paper examines the fundamental roles, women play in ensuring food security in the family. Thus, the findings will inform relevant policy on some of the interventions that could improve food security and nutrition at the household level and the national achievement of the Millennium Development Goals (MDGs). The objectives of this paper are to:

- a) Examine the current role of women in ensuring food security.
- b) Determine the effective strategies that can be adopted by women to maximize household food security.
- c) Examine constraints experienced by women in their participation in household food security.

### **3.0 Methodology**

This paper used a qualitative research design to answer each of the study objectives outlined above. Data collection was mainly depended on the secondary data sources. The research team conducted a systematic desk review of literature on both published and unpublished materials was used to examine the fundamental roles women play in ensuring food security in the family. These materials were largely identified using keyword searches of electronic databases. Keywords used included women, food security or insecurity, and households. Searches identified the critical link between women and food security in the Kenyan context by assessing some of the influences on household food security and by addressing specifically women's roles and constraints within that framework. The review also dwelt on effective strategies adopted by women in their pursuit to maximize household food security.

### **Conceptual Framework**

Household food security is the ability of a household to produce or purchase enough food to last the entire year round or from one season to another and it depends on adequate income and assets, including land and other productive resources (Food and Agriculture Organization 1997). It is thus, determined by household, income, household size and intra-familial income distribution and food prices among others. Over the past decade, incidences and intensity of hunger and malnutrition has increased significantly and food has not kept pace with the rapidly growing population (Government of Kenya 1999). Food insecure households are concentrated among the female headed household in rural areas (Government of Kenya/ UNICEF 1998). Women are often the worst affected when food security deteriorates. They may have to spend long hours outside their homes to raise extra money to buy food (Neeja and Mukharijee 1997). Women play a key role in maintaining food production and acquisition thus boosting household food security.

The conceptual framework for this paper is adopted from a framework used by (UNICEF. 1998) to explain mild malnutrition. Figure 1 highlights some factors that contribute to household food security. While not exhaustive, the framework shows the relationship between the various factors and the centrality of women's roles to household food. Household food security focuses on the family's capacity to produce and acquire food. In rural Kenyan households, the food consumed is either produced or purchased. However many households are not able to produce enough food to carry them through to the next harvest and have to rely on the purchasing power (World Bank 1990). Financial ability is among the sources that are necessary for most of the household to be able to meet their food deficit. Direct access to credit by women has potential to reduce poverty and to increase household food security. Access to credit increases adoption of new technologies such as improved seeds and chemical fertilizers, which in turn may increase crop output. As highlighted by (Babu 2001), formal credit accessibility for both production and consumption purpose is necessary to increase household income and therefore reduce poverty and malnutrition.

The assumption in this model is that with favorable political, ideological and economic well being, women will have access to the basic contributing factors such as resource control, ownership and use. Household's production or purchase is a function of the household's available resources, such as capital (e.g., land), labour, income, and time. Women's access to credit, land ownership and income can strengthen the underlying factors leading to increased land size, adequate labor and capital, improved technology and increased household income. This will lead to increased food production and purchase, which are related in that, with the increase in food production there is a decreased food purchase and vice versa. It is documented that food produced and purchased will influence the dietary intake and with a strong possibility of improved health and secured food security (Howath and Joseph 1999). The opposite of the above will lead to low dietary intake and poor health. In the long – run, this may lead to increased morbidity or mortality in the context of the household / family level or the community as a whole.

### **Indicators of Household Food Security**

Indicators of household food security can be delineated in a number of ways. Process indicators reflect both food supply and food access, and outcome indicators which serve as proxies for food consumption. Outcome indicators can be grouped into direct or indirect indicators. Direct indicators of food consumption include those closest to actual food consumption measured by household consumption surveys while indirect indicators include storage estimates (Maxwell and Frankenberger 1997). Household, food security status can also be determined by food storage estimates especially in communities that produce much of their own food. Household budget surveys can be used to determine the money spent on food by a household. Nationally, 55 percent of the Kenyan population lives below the poverty line. Among the rural population,

5.9percent of the children under - five years are wasted while 43 percent are stunted. In urban areas, 3.6 percent are wasted while 36 percent are stunted. Stunting and wasting are also indicators of household food insecurity (Maxwell and Frankenberger 1997).

#### **4.0 Food Security in Kenya**

Food security is affected by factors such as poverty, health, food production, political stability, infrastructure, access to markets, and natural hazards. In order to improve food security, it is important for the government to reduce population experiencing hunger and poverty, and spur economic development. It is under this premise that during the Millennium Summit in 2000, 192 United Nations member states and at least 23 international organizations set to achieve eight development targets, the Millennium Development Goals (MDGs) by the year 2015. One aim of the Millennium Development Goals is to reduce by half the proportion of people suffering from hunger by 2015. Currently, 820 million people are affected by hunger in developing countries and numbers are not falling quickly enough to achieve the goal, particularly in Africa and Southern Asia.

#### **Arid and Semi-Arid Areas of Kenya**

Hunger and malnutrition have positively been identified as rampant in the developing countries. In Kenya food insecurity has been a national issue of grave concern (Bulukuku 2002). Drought and famine are very regular in the country. The regions that are associated with hunger are mainly the arid and semi-arid areas Eastern and North-Eastern parts of the country due to the frequent recurrent of drought. These arid and semi-arid areas occupy the country's largest portion of land which is estimated to be 569,250 square kilometers out of 582,650 square kilometers of the entire country. The rest 13,400 square kilometers is occupied by water (Food and Agriculture Organization 1997). These areas are mainly occupied by Nomads/pastoralists who move from one place to another in search of water and pasture. Population migration among these communities in search of greener pastures for their livestock is therefore inevitable. Quite often, ethnic conflicts sparked by competition for water and pasture flare up, leaving behind a trail of death and destruction not to mention deep rooted animosity. This has often led to unending food insecurity and destruction in these regions. In January 2006, the Kenyan government declared the drought emergency a national disaster. According to the media report (Stylus Media 2006), the worst hit Districts were Samburu, Moyale and Marsabit. Nearly all rivers had dried up and the few that were left were too filthy. This left only the boreholes as the main source of the precious commodity - water.

#### **5.0 Constraints Experienced by Women in their Participation in Household Food Security**

Women have been observed to operate under greater constraints than men leading to insufficient use of production resources with the consequent effect of sub-optimal level of agricultural production (Government of Kenya 2000). They lack access to resources such as income, credit and land, which are essential in agricultural production and purchase of food. There are also

legal and cultural obstacles that limit women's right to access credit (Food and Agriculture Organization FAO 1998). Most resources (land, capital, buildings etc) are under the control of men (Kibira and Nzioka 1993). Also the terms on which they participate in paid work including the returns to their efforts do little to improve their subordinate status in the family. Women have a higher rate of unemployment and tend to be among the lowest paid (Buluku 2002). This puts many households at the risk of food insecurity. Related to this is lack of access to credited facilities by women due to lack of collateral, higher levels of illiteracy, poor managerial skills and lack of information technical know-how impacting negatively on food security of most households (Food and Agriculture Organization FAO 1998; Njiru 2002). The fact that most women in developing countries are often over-worked, dominated by their male counterparts and denied equal access to economic resources for production, render women helpless and acutely affected by the effects of poverty (Food and Agriculture Organization 1997). Positive results on households food security can however be recorded if women had access to and control over their incomes and other resources.

### **Women Burdens**

Women constitute the largest percentage of the world's poorest people and the most affected by water scarcity (Brody, Demetriades and Esplen 2008). Despite this, it is paramount to note that gender roles affect economic, political, social and ecological opportunities and constraints faced by both men and women (United Nations Environment Programme 2010). It is evident that women suffer disproportionately in nearly all disasters. In times of scarcity of natural resources, while stress and hardship rise for everyone, it is women who are most burdened with the increased workload as they struggle to compensate. Women remain overlooked in decision-making on the access to and the use of bio-diversity resources (*Ibid.*). Their contribution to development in developing countries is not quite appreciated (Mazonde 2001). In rural settings, women and men are often involved in multiple activities and different contractual arrangements simultaneously (Stonehill 2008). A closer examination of the division of tasks both within the household and the community reveals that there is more than merely the physical strength of the women in the division of such tasks; men use this division of labour to safeguard their cultural status (Mazonde 2001)

For communities that are dependent on natural resources women are likely to bear disproportionate hardship to the effects of climate change since the changes will impact sectors that form the basis of livelihoods for which women are responsible, for example, agriculture, and nutrition, water and energy supplies (Care International 2009). Findings by (Population Action International 2011; World Bank 2002) indicate women, in particular, will be most affected by these additional burdens. Women and girls in developing countries are largely responsible for obtaining family water supplies and may have to walk long distances to reach a water source.

### **Women in Agriculture**

Studies carried out in Gambia, Kenya and Rwanda by the International Food Policy Research Institute (IFPRI) showed that the absolute level of income is a key factor in household food security (Food and Agriculture Organization 1997). It was also found out that in Africa income controlled by women is more likely to be spent on food. At similar income levels, households with women controlled incomes were found to be more food secure than those with male controlled incomes (Food and Agriculture Organization 1997). Women's control of income and other resources has positive effects on household food security (Kennedy and Haddad 1992). Since women are responsible for three quarters of the agricultural work and all domestic work, poverty affects them in a very distinct manner. In most low- income households, women's work includes reproductive work, productive work and community management work (Chirwa 2003). Women contribute higher labor inputs than husbands and children, they perform 50 percent of all agricultural activities and all domestic tasks but men control decision making on household expenditure and this constrains women's ability to make strategic investment choices hence food insecurity (Government of Kenya 2001). Studies have shown that women put more hours of labor in agriculture than men. They contribute 84percent more of the family labors than men in Kenya (Food and Agriculture Organization FAO 1998).

### **Land/Property Ownership**

Land has been recognized as a factor in social status, economic well-being and empowerment. Therefore, women's right to land is very critical. As a basic source of livelihood, land provides employment, acts as a key agricultural input, and it is a major determinant of a farmer's access to other productive resources and services. Furthermore, land is a social asset, crucial for cultural identity, political power and participation in local decision-making processes. It is worth noting that women's access to other natural resources, such as water, firewood and forest products not only determines their standards of living in the society, but also their role in food security situation in the country(Federation of Women Lawyers FIDA 2007). This is particularly true as land becomes increasingly scarce and access becomes a growing problem.

Women's right to property has been unequal to those of men in Kenya for a long time. Their right to own, inherit, manage and dispose of property are under constant attack from customs, laws and individuals who believe that women cannot be trusted with or do not deserve property. The devastating effects of property rights violations including poverty, disease, violence and homelessness harm women, their children and Kenya's overall economy (Federation of Women Lawyers FIDA 2007). Gender discrimination is one of the factors that constrain sustainable use of land in Kenya. In many Kenyan communities, women have access (right to use) to family land but lack control and ownership, which prohibits them from using land as a form of collateral, to access other resources. A land title deed (for areas with land tenure) remains the major form of collateral security required when requesting credit from banks if one has no formal employment. This has negative impact on women's socio economic status.

With the passing of the new Constitution on August, 4<sup>th</sup>, 2010 and the establishment of the National Land Policy, the situation should effect change in Kenya. The new constitution addresses inequities that had hitherto limited women's socio-economic and political progression. The document recognizes the need for equal rights for both women and men to hold and use property as cornerstone of social and economic gender equality. Despite the odds of slow traditional transformation, this is expected to strengthen women's land rights under both formal and informal systems by anchoring them in the new Constitution. Some of the key principles on land ownership and use in the Constitution include security of land rights, equitable access and elimination of gender discrimination in law, customs and practices related to the resource.

### **Women and Culture in Kenya**

It is generally accepted that one is either born a male or a female; women in general have been looked upon as a species with inherited handicaps. Women of all races are legally inferior to men and African women are the most disadvantaged (Abuno 2002). In sub-Saharan Africa women are oriented towards motherhood. Traditionally, a woman is expected to marry early and give birth to and rear (many) children. Indeed, a woman's status is measured largely by her capacity to produce and maintain children. Little girls learn early in life to look after babies (Population Studies and Research Institute 1986). In the traditional tenure system "women are with few exceptions ascribed inferior tenure rights to men." While men have primary rights, women have secondary rights; while men get access to and through their lineage or clan women usually get access to land through their husbands, who are obliged to allocate land to their wives. (Kajoba 2002) states that women do not inherit because they hold only secondary rights.

In many cases, women are constrained from making strategic decisions like selection of the part of the land to cultivate even when the man is away. In many households, property is registered in the name(s) of male(s). Even until very recently, where women have some visibility in ownership, traditions in many societies do not give women the right to own property or to have property registered in their names (Government of Kenya 2000) . A study (Kajoba 2002) done in Zambia indicated that most women suffer from insecurity in land since they do not have secure title deeds to land under customary tenure. The results of the study further showed that women farmers (62percent) were not allocated land directly by headmen but got land through a male contact. Consequently roles were ascribed for women based on the assumption of their nature and abilities. This is what has led to the continuing subordination of women in development. Currently, in parts of Africa including Kenya, there are signs of women actively engaging in planning and decision making. However, women are still lagging behind in decision making matters that would contribute toward improved food availability.

### **Access to Inputs**

Agricultural productivity increases dramatically when women get the same amount of inputs men get (International Food Policy Research Institute 2002). In Sub-Saharan Africa women's access to technological inputs such as improved seeds, fertilizers and pesticides is limited. They

are frequently not reached by extension services and are rarely members of co-operatives, which often distribute government subsidized inputs to small farmers. In addition, they lack the cash income needed to purchase inputs even when they are subsidized. When women obtain the same levels of education, experience, and farm inputs that currently benefit the average male farmer, they increase their yields for maize, beans, and cowpeas by 22 percent. In Western Province of Kenya, most women access credit from informal sources such as rotating credit and savings to spend on farm inputs in order to achieve realized increased maize output (Milkalitsa 2010).

Women's lack of access to farming extension programs and information, education and communication (IEC) about agricultural techniques puts them at a major disadvantage and prevents them from producing food and income. In a study on "gender-specific constraints affecting technology use and household food security in western province of Kenya", Milkalitsa (2010) found that only 21 percent of women demonstrated the inability of the current extension system to disseminate existing and new technologies to smallholders. According to the World Survey on the Role of Women in Development (United Nations 2009), agricultural extension services which include advisory services, information and training, and access to production inputs such as seeds and fertilizers are critical for increasing the productivity of farm activities. Despite their critical roles in agriculture, women farmers have largely been ignored by extension services in many areas.

### **Women Education**

Educational opportunities for women have been widely recognized as a key determinant of household food security (Quisumbing 1996; Quisumbing and Meinzen-Dick 2001; Smith and Haddad 2000). Empirical studies by International Food Policy Research Institute (IFPRI) documents a positive link between women empowerment, particularly education and household food security. Female education provides additional direct and indirect effects on nutritional status. As explained by (Mukudi 2003), education has a key role in accessing public information, especially concerning health, nutrition, and hygiene. With the help of mass media such as radios which is widely spread in rural population, people with a minimum level of education can properly capture and elaborate that information. Girls who attend school and obtain at least the basic skills can teach appropriate health and hygienic practices to their children once they become mothers. Women's education also leads to lower fertility and child mortality (Smith and Haddad 2000). Educated women acquire skills on how to avoid and face illnesses and are therefore more knowledgeable about food requirements of the sick member of the family. Skills such as following right hygienic practices are essential to prevent diseases like diarrhea. Further, maintaining a well balanced diet is needed in order to build a stronger immune system and avoid morbidity and mortality.

Improving women's education is therefore the single most important policy instrument to improve food security and reduce poverty. Despite this, in many poor countries, notably in Sub-Saharan Africa, women's educational levels are still low. It is documented that in Kenya, a year

of primary education provided to all women farmers would boost maize yields by 24 percent (International Food Policy Research Institute 2002). A study in Nigeria found that women's education has a strong impact on the various indicators of household food security (frequency of meals, households which run out of basic food items and number of times households run out of food in a year) (International Food Policy Research Institute 2002).

## **6.0 Strategies that can be Adopted by Women to Maximize Household Food Security**

### **Women Groups**

Women groups in Kenya have existed since the pre-independent period (Wignaraja 1990). The self-help group movement has been regarded as an important tool in institutional building which is a key factor to realizing the various objectives of development efforts in rural areas. They represent the primary decision-making outlet for women in Kenya and the potential for community driven development. The self-help movement is an all-encompassing grassroots efforts to meeting the people's needs. Its characteristics include local identification of needs, local level mobilization of resources and local level implementation of projects which appear to solve the local needs.

In the earlier days, the groups were informal in nature and functioned as mutual aid groups but today, some of these groups have more defined organizational structure and carry out activities which meet group felt needs and at times, those of the community at large (Kilavuka 2002). These groups therefore, came into existence in response to the urgent need of women, which included poverty and inadequate supply of life necessities such as household basics including water, health services and food (Chitere and Mutiso 1992). This collective response to a needy situation can be traced within the traditional division of labor framework based on the distinct gender division of labour. As a strategy women groups are involved in merry-go-round activities which extend to labor associations in farming, credit circles, benefits, rewards and money shared equally among the members (Thomas 1995). Although these groups pose a latent development vehicle including food security, they are characterized by resource inadequacies.

Income generation as a strategy for earning has been used among many women groups to increase food consumption and improve the quality of diet hence improving household food security and household diet. Given the women responsibilities at the household level, they are the worst affected if food security deteriorates as they may have to spend long hours outside the house to raise extra money to buy food (Neeja and Mukharjee 1997). Currently, the number of registered women groups in Kenya has been increasing at an alarming rate. Table 1 demonstrates this increment and may be interpreted to mean that women have realized the accrued benefits of such groups in their daily needs at the household level and community level.

**Table 1: The Trend of Registered Women Groups in Kenya from 2001 to 2005**

<b>Year</b>	<b>Number of registered groups</b>
2001	115,884

2002	122,441
2003	127,951
2004	133,135
2005	135,294

*Source: Ministry of Planning and National Development Economic Survey, 2006*

It is also evident that women groups have not been performing well in income generating irrespective of their activities (projects). The poor performance has been attributed to poverty, landlessness, small sizes of land holdings, and low rate of employment in both the formal and informal sectors among women (Rogers 1985). This has also been attributed to inadequate financial assistance, susceptibility to manipulation and women's lack of necessary managerial skills, and efficient marketing options. Women's additional domestic, and farm responsibilities and their reliance on rudimentary production technologies also contributed to failed projects (Chaiken 1997)

History and tradition agree that most resources (land, capital, buildings, etc) are under the control of men (Kibira and Nzioka 1993). Given that women groups are known to contribute substantially in activities related to food production, these constrains put many households at the risk of food insecurity. It is possible to assume that if women groups had access to and control over their incomes and other resources, household food security could be improved. According to (Mutoro 1997), women groups are better positioned to have, more access to credit than an individual woman does because commercial banks find it hard to advance loans to individual women because they lack collateral.

### **Food Storage and Processing for Household Food Security**

At the national and local levels, food storage is very important for ensuring food security as it stabilizes households' demand and supply for food. The seasonality of food production at the household level may determine food availability in places where little to no food preservation is practiced. In most of developing countries, storage facilities are inadequate and ineffective. It is estimated that over 85percent of the food consumed by poor households in rural setting is obtained from the farm (Dauda and Oladoyin 2009) and close to one-fourth of all food produced is lost due to spoilage, insects and rodents. In Kenya, huge losses of farm produce occur mainly due to absence of on-farm storage facilities (Maritim 1985). Lack of sufficient on-farm storage facilities has forced families to sell their food at harvest time only to buy back later in the season, often at higher prices. Studies have shown that close to 80percent of producers lack adequate storage facilities to store their maize and/or could not afford to store maize for more than two months. Consequently, there has been a reduction of their food reserves and inability to bridge the time gap between harvests.

At the local level, gender plays an important role in food processing and storage. Women could benefit from improved storage methods and facilities. Improvements in traditional systems of storage and food handling could make a major contribution to food security in terms of stabilizing supplies and helping to maintain the nutritional value of stored and processed foods (Dey J 1984). In Kenya, milling is an example of local based technique for food processing. Such processing, which can be done on an individual or group basis, provides employment for millions of rural people and is often one of the sources of income for rural women (Voices Africa Media Foundation 2010). Strategies are now available for preservation of crops that would otherwise be discarded so that they can be consumed after the fresh season is over; with the support of donors and non-governmental organizations (NGOs), a number of village groups are now processing fruits and vegetables themselves.

### **Remittances**

Due to high population growth rates, increasing pressure on the land and fragmentation of landholdings, many households in sub-Saharan Africa allocate their labor resources between rural and urban areas to diversify risks and maximize income. In most cases the husband in a rural area migrates to an urban area while his wife and family remain in the rural areas. The family maintains a rural home and an urban home. These migrants leave their rural areas in search of more remunerative employment opportunities in urban areas. As a result, there has been a significant growth in the number of female-headed or managed households who, to varying degrees, benefit from remittance income.

Generally, remittances are important source of income for receiving households. As a result, food security is directly affected by remittances. A large proportion of all remittances sent are spent on basic needs like food. Thus, migration and remittances are often seen as poverty reduction strategies depending on the particular circumstances of a household. Most transfers usually in the form of money and goods occur within social networks such as nuclear families or close families. In Kenya, 42.4percent of the remittances are from husband to wife (Rogers 1985). A study done in Siaya showed that for one-third of the women respondents, remittances were the household's major source of income (SIDA 1987).

### **7.0 Recommendations**

Based on the findings, this paper makes the following recommendations as strategies to enhance the capacity of women for the provision of household food security.

- i. First, special attention needs to be paid to increasing the economic viability of women's groups. Women should be encouraged to work more with other women on projects they find empowering- in production or in mutual support groups. Acting collectively tends to reinforce women's activities as compared to a single woman acting on her own.

- ii. Second, national and county governments should adopt policy measures aimed at increasing women's physical and human capital. Many studies continue to show that women's ability to produce food can be enhanced by improving their access to resources, technology, and information. Technical assistance and capacity building for women will increase their productivity.
- iii. Third, there is the need for policy makers to promote female education. There is need to embark on strong public education programmes that targets improvement of literacy level among women. Free and compulsory basic education should be given to all female children as it is vital in reducing the level of household food insecurity. More resources should be allocated to education and emphasis must be placed on education that encourages women empowerment at both local and national levels.
- iv. Fourth, women should be allowed to own family properties such as land and have equal rights before marriage (in cases of inheritance) during marriage and during its dissolution. This would ensure security of tenure for women and as a result lead to increased investment in land and decreased poverty. Land ownership by women could expand their access to formal credit that requires land as a collateral.
- v. Finally, there is need for further research to determine coping strategies for women and food security. It is critical to also document the indigenous skills for food storage and processes in the process of harnessing long-term food security.

## 8.0 Conclusion

In conclusion, the overall access to food by household members is contingent upon the work of rural women and men. Women farmers produce the majority of food and are also responsible for ensuring that their families' basic needs are met. Women's access to financial services, agricultural extension, education, health care and human rights are, therefore, key to assuring food security for all. Ensuring stability and ability of women groups may contribute toward solutions of food security in Kenya, especially in rural areas particularly the Semi-Arid areas.

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