

# Assessment of Household Status and Determination of the Measures Used to Overcome Food Insecurity in Kuria East Sub-County, Migori County, Kenya

Pauline W. Nyamohanga\*

Department of Geography, Egerton University, P.O. Box 536, Egerton, Kenya

Francis N. Wegulo

Department of Geography, Egerton University, P.O. Box 536, Egerton, Kenya

Kennedy N. Ondimu

Department of Geography, Egerton University, P.O. Box 536, Egerton, Kenya

## Abstract

The issue of food security has been of fundamental importance in the world. As a basic need, food has been a major discussion issue in many round tables held by food organizations like FAO, WFP and governments in Kenya. The aim of this paper is to assess household food status and determination of the measures used to overcome food insecurity in Kuria East Sub County, Kenya. A sample of 316 households was picked through systematic sampling technique from Kegonga and Ntimaru divisions. A structured questionnaire was used to collect the required data from household heads. The assessment of household food status was assessed based on the proportion of household land under food production and the measures used to overcome food insecurity situation was assessed based on various means used by household to acquire food during food shortage. The assessment of household food status was analysed by descriptive analysis (cross tabulation and percentages) while the measures used to overcome food insecurity situation was analysed using descriptive analysis (percentages). The data analysis showed that majority of households owned small proportion of land (1.1-2.0 acres) under food production. 83.9% (majority) offered labour services in return for food, 81.9% sold cash crop/livestock to buy food while 66.9% purchased food by selling their assets, 66.9% bought food from their fellow farmers and 43.7% borrowed food from their neighbours and relatives. The study recommended that the County government to create adequate employment opportunities both on-farm and off-farm so as to improve food purchasing power among households in the study area.

**Keywords:** Food security, Households, Food Production

## 1.0 Introduction

Food is fundamental to human survival everywhere in the world. Currently it is estimated that, more than one billion persons or one out of seven people on the planet Earth is hungry and/or malnourished. In the second half of the twentieth century, steady progress was made in increasing per capita food availability in the world. However, despite the increase in food production, hunger and food insecurity are still major problems that beset this world (Castaneda, 1999). We are living in a world where Eight hundred and forty two million (842) people do not have enough to eat (FAO, 2003) and the vast majority of hungry people (827 million) live in developing countries, where 14.3 percent of the population is undernourished yet the world produces enough food to feed everyone with at least 2,720 kilocalories per day (FAO, 2006) which is well above the Food and Agriculture Organization of the United Nation's recommended minimum of 2250 kilocalories (FAO, 2003a). Ironically food insecurity remains globally widespread and stubbornly high .

Achieving food security in its totality continues to be a challenge not only for the developing nations, but also for the developed world (Angela, M 2004). In developed nations such as the USA, the problem is alleviated by providing targeted food security interventions, including food aid in the form of direct food relief, food stamps, or indirectly through subsidized food production.

In sub-Saharan Africa, the number of undernourished people and persistent chronic nature of food problem has been increasing from 169 million in 1992 to 206 million in 2003, and by 2015, the FAO (2006) estimates that the region was to be around 30 percent of the undernourished people in developing world, compared with 20 percent in 1992. Three-quarters of those affected live in rural areas and include those who have been displaced by civil conflicts and also those who scratch their living from dry lands where adequate rainfall for crop production is a constant challenge (FAO, 2003; 2006). West Africa sub-region; for example in Liberia, Sierra Leone and Nigeria are among those countries with the highest rate of undernourished in the continent (Babatunde et al., 2007). Fortunately, governments and development partners around the continent have put in place various rural development programs that seek to subsidize farm inputs such as affordable fertilizer costs in order to make them widely available to the farmers (FAO, 2002).

Food security in Kenya has worsened since 1970 and the proportion of the malnourished population has remained within the 33 to 35 percent range in Sub-Saharan Africa (Rose grant et al., 2005). The country has been facing severe food insecurity problems yet the fulfillment of Millennium Development Goal Number One (MDG-1) was to contribute to reduction of poverty, hunger and food insecurity among poor communities in Kenya by the year 2015 (MOA, 2006). A further process was needed to agree and develop development goals from 2015-2030. The goals of MDGs set by United Nations back in the year 2000 to; eradicate poverty, hunger, illiteracy and disease were concrete, specific and measurable and therefore helped establish some priority areas of focus in International Development (UN, 2014). But that was one of the biggest criticisms that led to the development of the seventeen Sustainable Development Goals, which sought to take all the failings of MDGs into account. SDGs focus explicitly on food by seeking to end hunger, achieve food security and improved nutrition and promote sustainable agriculture.

Official estimates by Kenya food security steering group (KFSSG) indicate that over 10 million people are food insecure with majority of them living on food relief. Migori County and Kuria East sub-County in particular faces household food insecurity and approximately 60 percent of the arable land is under cash crop, 30 percent under food crop and 10 percent is left fallow. The large non arable land is due to the unreliable rains in some constituencies such as Nyatike and Kuria (Migori County First County Integrated Development Plan, 2013-2017). This situation has been attributed to food shortage among others like land tenure system, land size, household size, monthly income among households and Soil fertility has declined due to continuous cropping and this has a negative impact on food production as most crops are associated with low yields (Makhuna et al., 2001, Olwande and Mathenge, 2010). The above constraints causes farmers to undertake their farming activities sub optimally particularly food crop production thus becoming food insecure.

## **2.0 Research Methodology**

### **2.1 Study Area**

Kuria East Sub-County is located in Migori County in southern part of Nyanza Region. It lies in the latitude of 0°15' north and 1°45' south and longitudes of 35°15' East and 34° west. It occupies a total area of 173.1 km<sup>2</sup> (Kuria East District Development Plan, 2008-2012). Topographically, the sub-County has undulating hills interspaced with a few stretches of flat land with altitude ranging between 1400 metres and 1887 metres above sea level. The area generally experiences annual temperatures range between 27°C to 31°C and rarely fall below 18°C. Annual rainfall averages between 1500 mm and 2600mm. The main agro-ecological zones are UM<sub>2</sub> (Upper Midland), UM<sub>3</sub> and LM<sub>4</sub> (Lower Midland). There is intensive agricultural activity in upper midland zone (UM<sub>2</sub>) while LM<sub>4</sub> is more suitable for livestock production. Kuria East sub County had a population of 81,833 persons covering an area of 188 square kilometres and a population density of 435 persons per square kilometres (RoK, 2009). The Sub-County altitude varies between 1400 metres-1887 metres above sea level.

### **2.2 Data Sources and Sample Size**

Primary data was collected from a defined group of household heads using a structured questionnaire. The concept of adequate food is important to household food security. Food is recognized as a basic human right, and lack of or inadequate food production has a serious implication on livelihood (Pohl *et al.*, 2006). However, information on household food status was collected based on the mitigation measures used by various households to overcome food shortage. The assessment of household food status was based on purchasing, working for food and borrowing from neighbours and relatives.

The study conceptualized land use for food (maize) production. Therefore data was collected based on the measures taken by farming households to obtain food during food insecurity situation. The sampling frame comprised all farming households in Kuria East sub County. The sampling unit was the household heads. A total of 316 households were picked by use of systematic random sampling from sub-locations.

### **2.3 Methods of Data Analysis**

Data was analyzed by use of descriptive statistics using Microsoft Office Excel and SPSS software's. Data analysis involved generation of statistical summaries such as percentages which assisted in description of the mitigation measures used by farming households to overcome food shortage situation.

## **3.0 Results and Discussion**

### **3.1 Household food security status**

This section addresses the household food status in Kuria East sub-County. The study assessed household food status where the respondents were asked whether the maize produced in each season was able to take them up to the next season. Respondents gave varied responses; 69 % indicated that they were food secure while 31% were food insecure as shown in Table 1.0. This research findings compare well with other studies conducted by Koloi *et al.*, (2005) in Mwingi district who found that, 62% of households in Mwingi District were food secure while

38% households were food insecure; Kumba (2015) conducted in Kisii Central sub-County found that majority of the households (77.5%) were food secure while 22.5 % were food insecure.

**Table 1.0: Household food status in Kuria East sub- County**

Household food status	Frequencies	Percentages (%)
Food secure households	218	69
Food insecure households	98	31
Total	316	100.0

Source: Research Data (2015)

Households who were food insecure used the various mitigation measures whenever they were faced with food shortage. Survival depended largely on the ability to minimize the risk associated with total lack of food. Respondents reported various household mitigation measures to overcome food insecurity situations. 83.9% (majority) offered labour service for food, 81.9% sold cash crops and livestock to buy food, 66.9% of the household sold assets to buy food and 66.9% bought food from other farmers during food shortage. However, 56.3% of the households did not borrowed food from their neighbours/relatives although a substantial number bought as shown by Table 1.0. Key: C-Counts, %-percentage

**Table 1.2: Mitigation Measures used to Overcome Food Insecurity in the study area**

Statements	Yes		No	
	F	%	F	%
Buying food from other farmers	214	67.7	102	32.3
borrowing food from neighbours	138	43.7	178	56.3
Offering labour service for food	265	83.9	51	16.1
Selling cash crops/livestock to buy food	261	82.9	55	17.4
selling assets to buy food	214	67.7	102	32.3

Source: Survey Data (2015)

Based on this result, it's clear that during the periods of maize failure households do source for an alternative means of accessing food that is; their wealth status forms the other important source of livelihood for their households. These findings corroborate those of Kang'ara et al (2001) in Embu who noted that livestock contribute to households' economy in different ways, e.g. as a source of cash income and source of supplementary food. Besides, livestock are considered a means of security and means of coping during crop failure and other calamities. FAO (1999) reports that employment in off-farm and non-farm activities are essential for diversification of the sources of farm households' livelihoods; it enables households to modernize their production by giving them an opportunity to apply the necessary inputs, and reduces the risk of food shortage during periods of unexpected crop failure through food purchases. Studies by Devereux (1993); Maxwell & Frankenburger (1992) argue that in Africa, diversification of sources of income has long been a survival strategy which allows household heads to reduce the risk of starvation for themselves and their families during periods of chronic or transitory food insecurity. In this study, households diversify their incomes by selling their assets and working on-farms as daily labourers in order to buy food.

#### 4.0 Conclusion and Recommendation

Household food insecurity remains a challenge to most households who use other means of obtaining food apart from practicing food crop farming. On assessing the current food status in the study area and what households actually do when faced with food shortage, the study draws the following conclusions: First, majority of the households (69%) were food secure and 31% were food insecure. It is therefore concluded that most households which were food insecure used various mitigation measures to minimize the risks associated with total lack of food. There is need for concerned agencies to use this information to come up with long- lasting interventions to food security in the study area.

#### 5.0 References

- Ati O.F., Stigter C. J. and Oladipo E.O. (2002). *A Comparison of Methods to Determine The Onset of the Growing Season in Northern Nigeria*. International Journal of Climatology, 22: 731–742.
- Barbatunde R.O, Omotesho O.A. Sholota O.S. (2007). *Socio-economic characteristics and food security status of farming households in Kwara state*, North-Central Nigeria.
- FAO (2002). The state of food insecurity in the world, 2002.FAO, Rome.
- FAO (2003). Trade Reforms and Food Security. Commodities and Trade Division, Rome.
- FAO (2003b). An Inter-Agency Initiative to promote Information and Mapping Systems on Food Insecurity and vulnerability. Proceedings 66 on Measurement and Assessment of Food deprivation and under nutrition. International Scientific Symposium, Rome, 26 – 28 June 2002.
- FAO (2006). The State of Food Insecurity in the World. Eradicating world hunger –taking stock ten years after the World Food Summit.

- Kaloi E., Tayebwa, B., & Bashaasha, B., (2005). Food Security Status of Households in Mwingi District, Kenya. *African Crop Science Conference Proceedings*, 7:867-873.
- Kumba J. K., Wegulo, F. & Otieno, J., (2015a). The Influence of Agricultural Land Use on Household Food Security Situation in Kisii Central sub-County, Kenya. *Economics and Sustainable Development* 6(6):147 – 152.
- Kuria East District Development Plan (2008-2012).
- Migori County First County Integrated Development Plan (2013-2017)
- MOA (2005). Kenya Strategy for Revitalizing Agriculture (2004-2014), Nairobi Kenya.
- Najafi B. (2003). *An Overview of Current Land Utilization Systems and Their Contribution to Agricultural Productivity*. Report of the APO Seminar on Impact of Land Utilization Systems on Environmental Change Unit, University of Oxford.
- Najafi B. (2003). *An Overview of Current Land Utilization Systems and Their Contribution to Agricultural Productivity*. Report of the APO Seminar on Impact of Land Utilization Systems on Environmental Change Unit, University of Oxford.
- Olwande J. and Mathenge M. (2010). *Market participation among poor Rural Households in Kenya*. Forthcoming working paper No. 42/2011. Tegemeo Institute of Agricultural Policy and Development, Nairobi.
- Pohl B. and Camberlin P. (2006) Influence of the Madden-Julian Oscillation on East African rainfall: II. March-May season extremes and interannual variability. *Quarterly Journal of the Royal Meteorological Society*, 132:2541-2558.
- Rosegrant M.W., Paisner M.S., Meijer S., Witcover J. (2005). *2020 Global Food Outlook: Emerging Trends, and Future Alternatives*. IFPRI, Washington.
- Schroeder C., Onyango K.T., Ranabhat N.B., Jick N.A., Parzies H.K. and DC Gemenet D. C. (2010). *Potentials of Hybrid Maize Varieties for Small-Holder Farmers in Kenya: a review based on swot analysis*.
- UN (2013). *The Future We Want*, Outcome document of the United Nations Conference on Sustainable Development, retrieved 26 February 2013.
- UN (2014). *Press release - UN General Assembly's Open Working Group proposes sustainable development goals*, 19. July 2014.
- UN (2015). *"Transforming our world: the 2030 Agenda for Sustainable Development"*. United Nations - Sustainable Development knowledge platform. Retrieved 23 August 2015.
- Van der Veen M. (2010). Plant remains from Zinkekra - early evidence for oasis agriculture. In D. J. Mattingly (ed.) *The Archaeology of Fazzan. Vol. 3: Excavations of C. M. Daniels*. London: Society for Libyan Studies, Department of Antiquities, pp. 489-519.