

## Research Application Summary

### Food poverty among pastoral communities in dryland Kenya

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#### Abstract

The dryland area of Kenya has the highest poverty incidence compared to other areas in the country; this is why poverty reduction has been a key government policy goal especially in these areas. These regions are predominantly inhabited by pastoralists and agro-pastoralist communities. The combination of food poverty and lack of alternative livelihood made them vulnerable to extreme climatic condition and change. This study was carried out in larger Baringo District to examine food poverty and the coping mechanisms employed by agro-pastoralists and semi-nomadic pastoralist in dryland Kenya. Results reveal that there is a high poverty incidence and severity among the two communities. At the peak of the food shortage, agro-pastoralists sell their assets and reduce the number of meals (90.8% and 82.3%) respectively. Compared to their counterparts during the same period, they mostly buy food on credit (71%) and ask for help from friends and relatives (60.9%). This study recommends more investment in livestock economics and supporting livelihood diversification.

**Key words:** Dryland, food shortage, livelihood diversification, livestock economics

#### Résumé

La zone aride du Kenya a la plus forte incidence de la pauvreté par rapport à d'autres régions du pays. C'est pourquoi, la réduction de la pauvreté est devenue un objectif clé de la politique du gouvernement, en particulier, dans ces domaines. Ces régions sont principalement habitées par des communautés des pasteurs et d'agro-pasteurs. La combinaison de la pauvreté alimentaire et le manque de moyens de subsistance alternatifs les rendaient vulnérables aux conditions climatiques extrêmes et aux changements. Cette étude a été menée dans le district de Baringo afin d'examiner la pauvreté alimentaire et les mécanismes d'adaptation utilisés par les agro-pasteurs semi-nomades et les pasteurs les dans les zones arides du Kenya. Les résultats montrent qu'il ya une forte incidence de la pauvreté et de la gravité entre les deux communautés. Au plus fort de la pénurie alimentaire, les agro-éleveurs vendent leurs actifs et réduisent le nombre de repas (90,8% et 82,3%) respectivement.

Comparativement à leurs homologues au cours de la même période, ils achètent surtout la nourriture à crédit (71%) et demandent de l'aide auprès d'amis et des parents (60,9%). Cette étude recommande d'investir davantage dans l'économie d'élevage et à l'appui la diversification des moyens de subsistance.

Mots clés: zones arides, la pénurie alimentaire, la diversification des moyens de subsistance, économie de l'élevage

## Background

Pastoral societies of East Africa inhabit dryland environments which exhibit wide variations in rainfall amounts from year to year. Droughts are recurrent hazards, as are outbreaks of diseases which affect livestock. These populations are confronted by extreme variability in the production environment. Survival in such areas therefore depends upon the ability of societies to adapt to strategies which mitigate the effects of recurrent drought and permit the long-term occupation (Campbell, 1977).

About 80% of Kenya's land area is dryland. Dryland areas of Kenya are home to close to 10 million people, roughly 25% of the country's population. Many of the more than 1.5 million who are chronically food insecure and depend on emergency relief to meet basic needs are located in these areas. The pastoral areas are characterized by high incidences of poverty, lack other productive resources apart from livestock, and are relatively marginalized from the rest of the country (Hooft and Wanyama, 2005). Therefore, poverty reduction has been a key government policy goal especially in the drylands of Kenya. This has come from the fact that the highest incidence of poverty in Kenya has been recorded in the Arid and Semi-Arid lands (ASALs) districts where the majority of the pastoralists live. Further, analysis of the 1997 welfare monitoring survey data indicated that 60% of the poor are concentrated in 17 of the 47 districts in the country (Elhadi *et al.*, 2012).

Poverty tends to be more prevalent in the dry areas than in the higher potential regions of the country. Finding ways to improve and alleviate food and nutrition poverty of household in the drylands has, therefore, become a key policy issue (Nyariki *et al.*, 2002). Therefore, strategies to reduce the number of people directly dependent upon the primary resources of the ASALs, and improve the productivity of those resources must be sought urgently. In this regard, this study was designed to examine the

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issue of food poverty among pastoral communities in the dryland of Kenya.

Over the last three decades, pastoralists of Kenya have experienced an unusual variability in climate manifested in unpredictable rainfall and drought occurrences. Pastoralists being master adaptors to climate variability and shocks, have several coping mechanisms that mitigate the adverse impacts occasioned by these cyclical climatic patterns. The whole business of being a pastoralist is dependent on one's ability to be flexible and opportunistically exploit the range lands to his advantage and be mobile enough to minimize risks from attendant calamity (Tari, 2000). However, this high adaptive capacity is weakened by poverty and insecurity most of the time. Kenya's average poverty level exceeds the 50% mark. The number of the absolute poor increased from 10 million in 1994 to 13.4 million in 1997 and by the year 2000, the overall poverty situation in Kenya was 56% of a population estimated at 30 million people (Mango *et al.*, 2004). The reasons for the worsening situation are many and varied.

Food poverty can be defined as a condition of lacking the resources to acquire a nutritionally adequate diet. However, other than food, there are several goods and services from the natural ecosystems that are crucial for the livelihoods of the rural poor (Seaman *et al.*, 2000). These include fuel wood, charcoal, fruit, gums, resins, honey, timber, traditional herbal medicine, cultural values, among others, and loss of these goods and services through environmental degradation and extreme climatic events lead to loss of livelihoods, and consequently food poverty.

According to Kristjanson *et al.* (2009) agro-pastoral zones in Kenya have experienced an increase in poverty over the past 15 years. There is, however, hope as expansion of crop agriculture and increase in market orientation have proved to be promising strategies in these areas. Development interventions such as improvement of roads and access to inputs, information and services, and lowering of communication costs facilitate these alternative economic activities, and could reduce the level of poverty in the agro-pastoral areas.

In his study in the Njemps Flats, Baringo District in Kenya, Wasonga (2009) reported more poor households under semi-nomadic land-use system (75%) than under sedentary agro-

pastoral land-use system (69%). Similarly, sedentary agro-pastoral households had more sources of livelihood (average of 3) than the semi-nomadic pastoralists (average of 2). In the contrary, semi-nomadic pastoral households had larger herds (27.24 TLUs) and more members (6.53 AEs) than their sedentary counterparts with an average of 18.02 TLUs and 5.70 AEs, respectively. This corroborates the findings of Farah *et al.* (2003) who reported a reduced labour availability for herding following sedentarisation of pastoralists around small-scale irrigation schemes in Northern Kenya. Pastoral areas in Kenya are the poorest zones and have experienced the highest increase in poverty in the recent past. This however, calls for urgent review of the efforts to improve livelihood, reduce food poverty and cushion the pastoral communities against climatic variability and environmental changes.

## Study Description

This study was conducted in the Larger Baringo District, Kenya. The study area is a dryland area located between latitude 00°30N and longitude 36° 00E within agro-climatic zone IV and V, receiving an average rainfall of 275 mm per annum and experience a hot and dry climate with an annual mean temperature above 30° C. The average altitudes of the study area is 900 m above sea level. The main vegetation classes include Acacia woodland, permanent swamp and seasonally flooded grassland and shrub grassland. The soils in the Njemps Flats are generally shallow silt loam to clay loam, with low organic matter. The main land-use practice in the study area is livestock production. Sedentary agro-pastoralism is the main land-use on the west, south ad eastern parts of the study area, while semi-nomadic pastoralism dominates on the northernwest and northern parts. The area is inhabited by three principal ethnic groups namely the Pokot, Tugen and Il Chamus.

A baseline survey was carried out to identify the target sample size namely, sedentary agropastoralists and semi-nomadic pastoralists. The final sample size of 200 households (HH) was systematically selected, 125 from sedentary agro-pastoralists and 75 from semi-nomadic pastoralists. The data collected were analyzed using the Statistical Package for the Social Sciences (SPSS). Data collected through personal interviews were subjected to descriptive analysis. The information on general trends in social and economic status of the two groups (pastoralists and agro-pastoralists) was summarized in terms of means, modes, frequency tables, charts and graphs.

## Research Application

The problem of determining an appropriate poverty line, and thus identifying those who are classified as poor, has always been one of the principal methodological issues in the analysis of poverty. Various procedures have been developed, based on alternative concepts of poverty. This study used the food energy intake and the cost of basic needs approaches to establish the food poverty. The study also used the P-alpha equation of Foster-Greer and Thorbecke (FGT) to assess poverty incidence, gap and severity. Poverty analyses were done to compare the status within and between agro-pastoral and pastoral communities.

Food poverty analysis indicated that all poverty indicators (i.e., poverty incidence, gap and severity) were high among semi-nomadic pastoralist compared with their counterpart agro-pastoralists. The two communities used different strategies to cope with food shortage which is considered as a stage of food poverty as indicated in Table 1.

**Table 1. Coping mechanisms among pastoral communities.**

Coping mechanisms	Agro-pastoralist		Semi-nomadic	
	Beginning of shortage %	Peak of the shortage %	Beginning of shortage %	Peak of the shortage %
Buying food on credit	35	17.1	41	71
Borrowing food	7	16	5.9	29.8
Reduction of meal size	21.7	82.3	38.7	14.8
Reduce meals numbers	67	16.7	12.7	10.8
Skipping some meals	80.4	17.6	17.6	34
Working for wealthier people	6.1	21.4	4.5	39.4
Ask for help from friends and relatives	2	6.6	41.9	60.9
Sell of household assets	13.3	90.8	7.7	10

\* These numbers do not add up to 100% because more than one coping mechanism was cited.

At the beginning of food shortage most agro-pastoralists used the strategy of skipping meals and reducing the meal size (80.4% and 67%, respectively). At the peak of the food shortage however, they sell their assets and reduce the number of meals (90.8% and 82.3%, respectively). On the other hand the semi-nomadic pastoralists mostly buy food on credit (71%) and ask for help from friend and relatives (60.9%). This however, shows the limited choice that these communities have in hand to deal with food poverty. The study therefore, recommends more investment in livestock economics and supporting livelihood diversification.

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