

Livelihood Profile

Karamoja Region, Uganda

Karamoja Livestock Sorghum Bulrush Millet Livelihood Zone¹

May 2010²

Zone Description

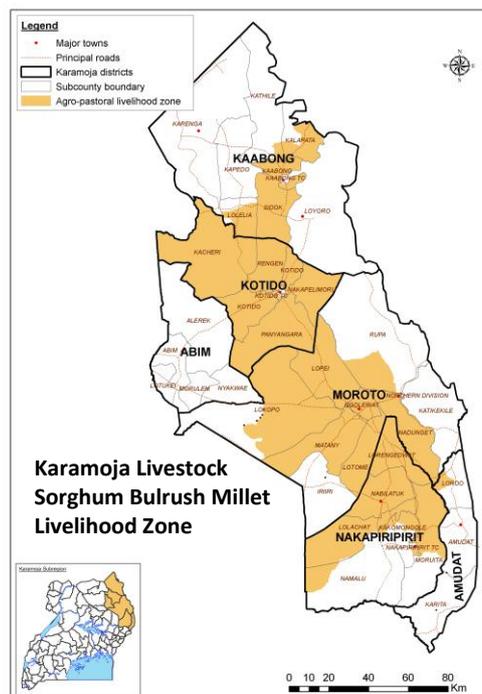
The Karamoja Livestock Sorghum Bulrush Millet Livelihood Zone is the agropastoral area that stretches through the central part of Karamoja Region from the border of southern Sudan into the northern part of Nakapiripirit; it includes parts of Nakapiripirit, Moroto, Kotido and Kaabong districts in Karamoja Region. The Karimojong, Matheniko, Pian, Bokora, Dodoth, Tepeth and Jie all occupy the zone, with an estimated population of 613,300.³

Grasslands with scattered shrubs and acacia trees cover the landscape. Soils are predominantly sandy loams (*ekitela*), with some black clay (*aroo*) soils. Sandy clay alluvial soils are found in the valleys and plains. Undulating plains with seasonal rivers and gullies are typical in the southern areas of the zone; northern parts in Kaabong are hillier. Seasonal rivers include Nabilatuk and Lolachat in Nakapiripirit; the Omaniman River in Moroto and Nakapiripirit; Lopei and Nadunget rivers in Moroto; and Dopeth and Komuria in Kaabong and Kotido districts.

The rainy season is from March to September and is less reliable than in western parts of Karamoja Region, with an annual average of 500-800 mm. Areas of higher elevation receive more rainfall than in the plains. It is typical for a short period of dryness to occur during the rainy season, especially in the months of June and July.

The zone is highly dependent on livestock and is renowned for its livestock production. Cattle, goats, and sheep predominate, with some poultry. Donkeys are used to provide transportation in rural areas, especially to take goods to and from markets. According to the livestock census⁴ carried out in 2008 and published in 2009, Nakapiripirit District was recorded as having the highest number of goats in the country, followed by Kotido and Kaabong districts. Karamoja sub-region as a whole registered 19.8% of the total national cattle population, and Kotido recorded the largest number of sheep in the country. Cattle are milked by the men and youth; sheep and goats are milked by children under the age of 18. Women raise the poultry and care for the sick and milking animals that are left behind during the dry season livestock migration. Free range grazing is practiced for all livestock types. The government established the protected kraal system in 2005/2006 as a response to insecurity emanating from cattle raids by different groups. The system entailed keeping livestock in kraals protected by government forces during the day while grazing and at night in the kraals. As of 2009 the program was disbanded because of numerous problems related to restricted grazing hours, distances to grazing areas, and concentrations of livestock leading to increased disease outbreaks and deaths. Now herders generally only take their animals for protection at UPDF detachments at night.

Rain-fed crop production is practiced throughout the zone, although the environment and climate are more conducive to livestock rearing than crop production. Crops grown include sorghum, maize, millet, groundnuts,



¹ In the FEWS NET livelihood zoning workshop of 2009, this was recorded as UG23.

² Field work for the current profile was undertaken in May 2010. The information presented refers to August 2008 – July 2009, a relatively bad year by local standards (i.e. a year of poor crop production and rural food security, when judged in the context of recent years). Provided there are no fundamental and rapid shifts in the economy, the information in this profile is expected to remain valid for at least five years (i.e. until at least 2015).

³ (Kaabong District: 173,700; Kotido District: 183,100; Moroto District: 181,700; and Nakapiripirit: 74,800) Uganda Bureau of Statistics (UBOS) 2002 Census, projected to 2010.

⁴ A summary report of the 2008 national livestock census – May 2009 – Ministry of Agriculture Animal Industry And Fisheries (MAAFS) and UBOS.

sunflower, cowpeas and beans. Small amounts of tobacco are grown for local sale and home use. Households use hand hoes and oxen for ploughing. Tractor cultivation has been introduced in some areas by the government and supported by a number of organisations to open large fields for the multiplication of planting materials (especially for cassava). The most common planting practice is to broadcast and intercrop sorghum with sunflower, beans, cowpeas and some cucurbits. Groundnuts are planted as a single stand and millet is intercropped with maize. Fertilisers and manures are not typically applied, despite the abundance of livestock residue.

This is a food deficit livelihood zone in two out of every three years (on average). The majority of households depend on food purchases from the market, supplemented by food from their own crop production, and milk, meat and sometimes blood from their own livestock. In good years, own crops can cover a large portion of annual household food needs. Wild foods (roots, vegetables, fruits and wild game) are a normal part of the diet in both good and bad years; their consumption should not be seen as an indicator of stress on its own.

Markets

The road network linking large towns and leading outside the country to neighbouring Sudan and Kenya is fairly well-developed, allowing for a steady flow of goods to enter and leave the zone. However, poorly maintained roads sometimes limit access to markets during the wet season. Another factor that limits access to markets is the long distances to trading centres. Sometimes insecurity prevents communities from accessing the markets because road ambushes are planned at times to coincide with market days. Nonetheless the zone is served by well structured weekly markets for livestock and other commodities, especially when compared to the neighbouring pastoral zone.

The main markets in this zone are located in district headquarters. For Moroto District there are markets in Moroto town, Matany, Kangole and Iriri. Kotido District has markets in Kotido town, Lokitelaebu, Losakucha (in Kacheri) and Kanawat (the biggest in Kotido). In Nakapiripirit District there are markets located in Nakapiripirit town, Namalu, Lolachat and Nabilatuk. Kaabong District has Kaabong town market and Kapedo. The larger markets are supplemented by smaller trading centres and shops. The mobile telephone network is reasonable compared to similar areas in other parts of the Horn of Africa, providing access to information on market prices to traders operating within the zone.

The zone is a net importer of crops and a net exporter of livestock. Cattle, sheep and goats are the main livestock sold. Livestock sales are continuous throughout the year, but sales peak in the hunger season, from March to June, when household food reserves are low. Livestock traders make arrangements with their local focal points and are able to purchase and transport livestock out of the zone to places like Kitgum, Gulu, Mbale, Soroti, southern Sudan and Kampala. The same traders usually bring various food crops and non-food goods for sale to households within the zone. Most food crops are imported from Mbale, Soroti, Kitgum, Pader and Lira.

Seasonal Calendar

The zone has one long rainy period, usually from March through September, with a short interruption in June/July. The dry season lasts from October to February. Land preparation for most crops begins in March after the onset of rains. Planting and land cultivation are sometimes carried out at the same time. Harvesting takes place from July/August to September/October. Prior to 2006, livestock migrated seasonally to dry season grazing lands, leaving home areas in October and returning in February/March. Since 2006, livestock have stopped migrating far from home because of insecurity and the introduction of the government's protected kraal system.

The hunger season generally runs from March to July, coinciding with peak livestock sales (especially by poorer households) and a heightened search for agricultural labour. Firewood and charcoal sales occur throughout the year, but peak from December to April. Cutting poles and brick making are mostly carried out from November to February. Grass sales (by women and girls) take place from September to January. Wild foods consumption occurs mostly from October through February, although some wild vegetables are also consumed from March to July.

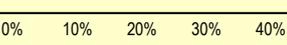
Although there is some green consumption in June/July, the main consumption year runs from August to the following July. The reference or baseline year chosen for this study was August 2008 – July 2009 (the most recent full consumption year at the time of the assessment in May 2010).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainy Seasons	Dry		Wet			Dry Spells		Wet		Dry		
Livestock												
Peak livestock sales												
Peak milk production												
Livestock diseases	low		high						low			
Legend	LP = Land Prep P = Planting W = Weeding GC = Green Consumption H = Harvest											
Crops												
Sorghum												
Maize												
Millet												
Beans												
Sesame												
Ground nuts												
Peak crop sales												
Other												
Grass Sales												
Charcoal/firewood	peak				low							
Pole cutting/brick making												
Casual labor peak												
Wild food consumption												
Human disease												
Hunger season/food purchase												

Note: The seasonal calendar is for a typical year. The last three years in the zone were characterised by below normal rainfall and prolonged dry spells that led to failure of most crops.

Wealth Breakdown

The number of livestock – and especially cattle – a household owns determines its wealth in this zone. Livestock ownership is a male domain but all wives have a share in the milk, meat, and cash from livestock sales, and they have access to ox ploughing (if the man owns oxen). Sheep and goats are commonly kept, with more sheep in northern areas and more goats in southern areas. In some areas poultry is kept for eggs and meat, but their contribution to income and food needs is relatively low compared to cattle, sheep and goats. In addition, chickens are highly vulnerable to Newcastle disease, which can wipe out entire holdings. The number of donkeys increases with wealth, with very poor households having none, and better off having 2 -4. The poor and middle fall in between these extremes.

	Wealth Group Information				
	HH size	Wives per man	Land area cultivated	Livestock (per wife)	Oxen
Very Poor 	5-7	1	0.25-1 acres	cattle: 2-5; goats: 3-8; sheep: 2-5	0
Poor 	5-8	1 - 2	1-2.5 acres	cattle: 5-10; goats: 8-15; sheep: 5-17	0-1
Middle 	7-8	2 - 3	2-3 acres	cattle: 15-40; goats: 10-35; sheep: 15-35	1-2
Better-off 	7-9	3 - 5	2-4 acres	cattle: 25-55; goats: 20-60; sheep: 20-55	1-2
					

Note: Figures for percent of households in the above table represent midpoints not absolute figures. All figures refer to a household headed by a woman.

Herd sizes are constrained by endemic diseases, raids and the need to sell off livestock in bad years in order to purchase food. The last three years have been difficult for households in this livelihood zone. Abnormally high livestock deaths were registered in the reference year due to the spread of disease associated with concentrations of animals in protected kraals. Since access to animal health services is directly related to purchasing power, better off

households are more successful at responding to limiting deaths among their herds. A new disease called PPR⁵, which affects sheep and goats, was particularly devastating in the reference year.

Another factor limiting the size of any one man's herd is the practice of taking on a new wife once his herd has increased to a certain size. He is required to pay for her dowry in livestock, thereby redistributing some of his livestock to another household. Very poor and poor men usually have one wife, middle men have 2-3 wives and the better off have 3-4 wives. Some of the wives are considered 'not official' or 'informal' because their marriage procedures (mainly payment of dowry) have not been finalised, but they share the man's resources with official wives.

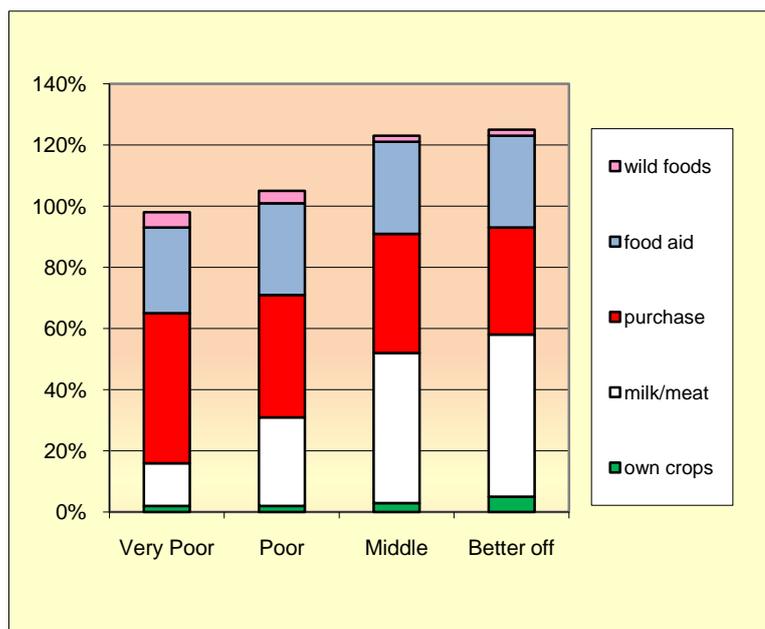
The amount of land cultivated by a household is determined in part by its access to oxen and ploughs; these are mostly owned by better off households. Poorer households tend to have less labour and limited access to oxen; the better off plough larger fields and hire labour for farming activities. Households often cultivate more than one plot in different locations. Some tobacco is grown near the homestead for home consumption or for selling to neighbours. Very poor households in southern parts of the zone cultivated slightly more land than the same wealth group in northern parts of the zone.

Social support is high and comes in the form of better-off households hosting children from poor households. In fact, poorer households tend to have fewer people living at home because they have members staying with better off relatives; better off households tend to be larger as a result. Other social support is in the form of gifts of meat and milk from the better off to the poor.

Sources of Food – A bad year (2008-09)

Milk and meat, purchased food, own crops and wild foods are typically the main sources of food in this zone. In the reference year, own crops were minimal and food aid contributed significantly. All groups covered 100% of their minimum annual food needs (based on 2100 calories per person per day) except the very poor who fell very slightly below this level.

Purchased grains include sorghum (more in the north than south, where it is found in Acholi market), maize (more in the south than north, from Elgon sub-region). Beans are also commonly purchased. In a better year, the proportion of food coming from own crops would be larger, and the proportion from purchase would have been smaller. Poorer households rely more heavily on purchased grains than better off households, who can draw more successfully on their own production.



In the graph, food access is expressed as a percentage of minimum food requirements, taken as an average food energy intake of 2100 calories per person per day.

Milk and meat⁶ combined contribute substantially to household food income, up to about half of annual household food needs for better off households. The better off have more livestock than the poor, allowing them to take advantage of this productive resource.

Relief food was an important source of food for all households in the reference year and included both school feeding for children and general food distributions. Food assistance was targeted to drought and flood affected households in 2008 but extended to all households in 2009.

⁵ *Peste des petits ruminants.*

⁶ It is normal for households to consume meat from animals that have died from natural causes.

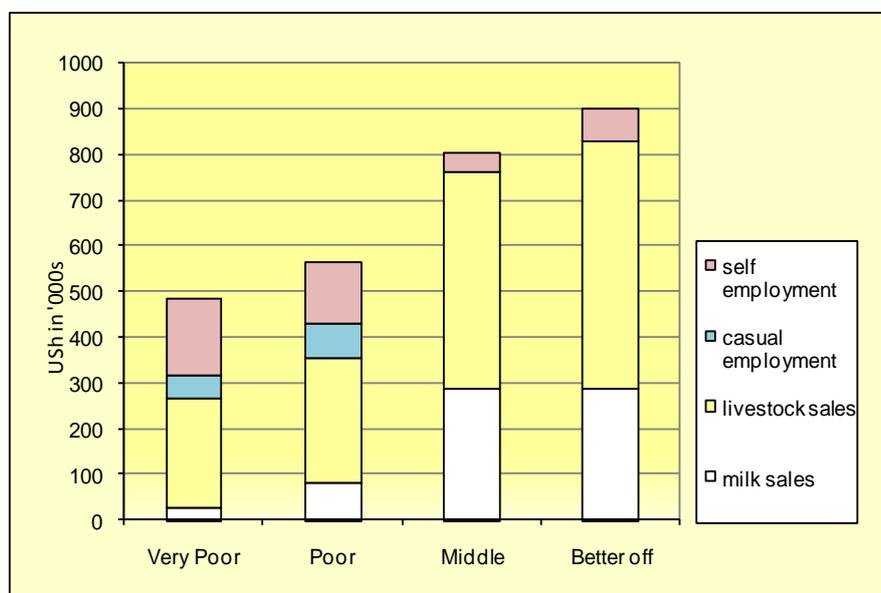
Wild foods - including wild fruits (e.g. tamarind), mushrooms, tubers, white ants, game meat and wild vegetables - are consumed by all wealth groups; the poor and the very poor consume more than other groups. Hunting increases in the dry season and tapers off in the wet season.

Labour in direct exchange for food was not common in the reference year because better off households, who normally hire poorer households, did not have enough surplus to use for payment.

Sources of Cash – A bad year (2008-09)

Livestock sales are the main source of income for all wealth groups, followed by milk sales for middle and better-off households. More milk is sold in areas close to trading centres than in remote areas

All wealth groups sell natural products (especially firewood and charcoal) every year, increasing the quantities sold in bad years. In bad years, charcoal is also exported out of the region to other parts of Uganda. With increasing supplies of firewood and charcoal in bad years, prices decrease, leaving people with less of a return on their time investments. Charcoal and firewood sales are an important income source for women from all wealth groups, who may not have easy access to the cash from livestock sales (a transaction generally controlled by men).



The graph shows annual cash income by wealth group in US\$.

Annual income (US\$)	450000-500000	500000-600000	750000-850000	850000-950000

Self-employment is especially important for poorer wealth groups, comprising mainly firewood, charcoal, grass and pole sales. Agricultural labour and some milk sales also contribute to poorer group cash income. In bad years the poor are forced to sell more livestock than they can afford, undermining their ability to maintain a viable herd.

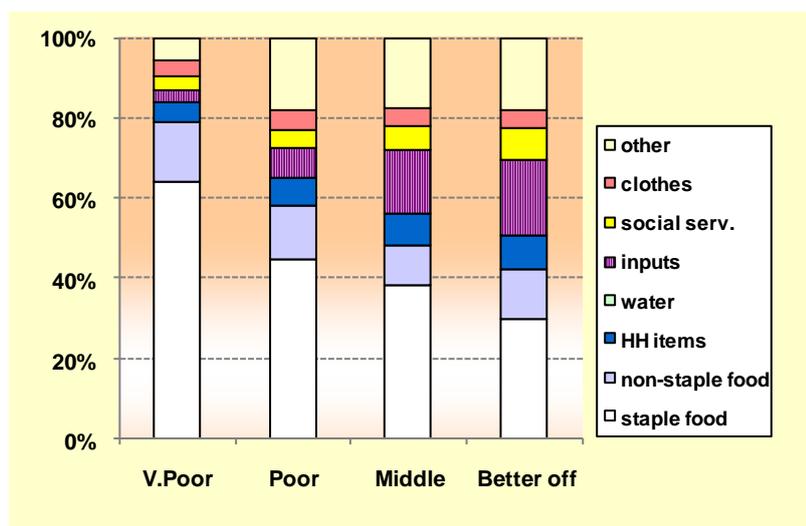
Better off households earn most of their cash selling sheep and goats, local beer, grains and, as a last resort, cattle. Brewing was a minor income source (included in 'self employment') for better off households in the reference year, but is practised more extensively in average and good years, when more crops are available to make the beer. In bad years, beer is imported into rural areas from small trading centres, towns and market centres.

In good years, crop sales provide income for all wealth groups. Sorghum, sesame and groundnuts are sold, usually from September to December.

Expenditure Patterns – A bad year (2008-09)

Food purchases - mainly of sorghum, maize, beans and sesame - make up a significant proportion of expenditure for all wealth groups in the reference year. Very poor households devoted almost 80% of their available cash to food, and even better off households spent over 40% of their cash on food, making up for the poor own crop production. For poorer households, very little income remains for other basic items like health and education. Food prices tend to be higher in northern parts of the zone compared to southern parts.

'Inputs' in the graphic below includes expenditure on seeds and simple tools like hoes and machetes (*pangas*) for poorer groups and ox ploughs and young breeding stock for better off households.



Money spent on social services (education and health) is minimal across all groups, increasing from poor to better off.

The graph provides a breakdown of total cash expenditure according to category of expenditure.

Hazards

Insecurity - in the form of cattle raids, road ambushes and indiscriminate killings - is a major hazard in the zone. Livestock and crop diseases, crop pests and drought add to the factors undermining livelihoods for local households.

Common diseases affecting livestock include tick borne diseases, worm infections, *contagious bovine pleuropneumonia* (CBPP or *loukuoi*), *contagious caprine pleuropneumonia* (CCPP), bacterial infections and *peste des petit ruminants* (PPR), an emerging disease that has affected goats in the last two years. Poultry are often wiped out by Newcastle Disease (local people refer to the disease as *cholera* of poultry).

Common crop pests include birds and weevils. Birds are mostly scared away manually using labour. Sorghum is affected by honey dew disease (*ergot*), black smut (*esinai*) and shoot fry (*eremonu*); maize stalk borer and maize streak (*emuron ekidikidi*) reduce maize yields. The *striga* weed has been affecting cereal yields in last few years. There were no serious measures to combat these diseases in the reference year.

Coping Strategies

Common household response strategies to deal with hazards include the following.

Switching of expenditure – Reduced expenditure on non-essential items and on more expensive food items is a strategy pursued by all wealth groups in bad years, so that they can purchase cheaper staple foods like maize and sorghum.

Increased bush product collection and sale – The sale of firewood and charcoal is intensified in bad years. Charcoal is exported out of Karamoja to other regions within the country. The environmental implications of this strategy are likely to be damaging.

Labour migration – Members of poorer and, to some extent, middle households travel to Soroti, Mbale, Lira and Pader in search of labour opportunities in both rural and urban areas.

Increased livestock sales – Households from the better off wealth group sell additional livestock to cover food and other essential purchases in bad years. Even for the better off, however, the extent to which this strategy of increased livestock sales can be pursued without damaging future livelihoods is quite limited.

Treatment of livestock diseases – Better off households sometimes purchase livestock drugs to treat their herds. The government and its development partners have been providing free vaccinations.

Increased consumption of wild foods – Most households collect and consume wild foods in normal years. In bad years, households increase the amounts collected and consume them over a longer period of time.

Key Parameters⁷

The following are the key parameters – or significant aspects of the local household economy – that need to be monitored every year, either through ongoing monitoring systems or through periodic assessments

Item	Key Parameter – Quantity	Key Parameter – Price
Crops	<ul style="list-style-type: none"> • Sorghum • Maize • Millet • Sunflower • Groundnuts • Cowpeas • Beans 	<ul style="list-style-type: none"> • Sorghum • Sesame • Groundnuts
Livestock production	<ul style="list-style-type: none"> • Cattle • Shoats • Milk • Meat 	<ul style="list-style-type: none"> • Cattle • Shoats • Milk
Other food and cash income	<ul style="list-style-type: none"> • Agricultural labour • Charcoal • Firewood 	<ul style="list-style-type: none"> • Labour rates • Charcoal • Firewood
Expenditure		<ul style="list-style-type: none"> • Staple food (sorghum and maize)

⁷ Key parameters are food or income options that make up at least 5% of any two wealth groups' annual sources of food or income; or 10% of any one wealth group's annual food/cash income.