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**HOUSEHOLD ECONOMY ANALYSIS BASELINE
FOR FOUR LIVELIHOOD ZONES IN SAMBURU
COUNTY, KENYA
OCTOBER 2021**



HOUSEHOLD ECONOMY ANALYSIS BASELINE FOR FOUR LIVELIHOOD ZONES IN
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ACRONYMS AND ABBREVIATIONS

FEG = Food Economy Group

FHH = female-headed household

HEA = Household Economy Analysis

HH = household

KSh = Kenyan Shillings

MHH = male-headed household

MUZ = Maralal Urban Livelihood Zone

NAWIRI = Nutrition in ASALs Within Integrated Resilient Institutions

OA = Outcome Analysis

SAP = Samburu Agropastoral Livelihood Zone

SEP = Samburu Eastern Pastoral Livelihood Zone

SNP = Samburu Northern Pastoral Livelihood Zone

USAID = United States Agency for International Development

EXECUTIVE SUMMARY

USAID Nawiri is a 5-year Development Food Security Activity (DFSA) program funded by USAID and implemented by a consortium of partners led by Mercy Corps, whose goal is to sustainably reduce levels of persistent acute malnutrition in Turkana and Samburu Counties. The program involves research for the first two years to establish *What Works* to inform the co-creation of program design and implementation.

The Household Economy Analysis (HEA) baselines, along with other research and learning inquiries conducted by USAID Nawiri, will contribute to the design of nutrition-sensitive livelihood strategies and programming as well as exploration of cost-effective options for strengthening local markets to increase local availability of nutritious foods and incomes for poor households. The baselines set out to address learning questions that enable profiling of different livelihoods and livelihood strategies, determination, and characterization of wealth groups for a better understanding of vulnerabilities and identification of key parameters for monitoring these vulnerabilities. Key variables of analysis included income sources and levels, expenditure patterns, food sources, hazards, and response strategies.

Household Economy Analysis (HEA) baselines in four livelihood zones of Samburu County was conducted in 2021 and funded through the program. The baselines are presented in this report and will be used to assess food insecurity in future seasons and to conduct resilience analysis of potential livelihood opportunities to inform program design.

HEA is a livelihoods-based framework that analyses the way different households obtain access to the things they need to survive and prosper. It analyses households' food and income needs, and identifies appropriate means of assistance, whether short-term emergency interventions or longer-term development activities or policy changes. It is based on the principle that an understanding of how people usually make ends meet is essential for assessing how livelihoods will be affected by acute or medium term economic or ecological change and for planning interventions that will support, and not undermine, their existing survival strategies and improve longer-term wellbeing.

The **HEA framework** is made up of two components: the **baseline**, which provides a detailed understanding of how different types of households accessed the food and cash they need in a recent year; and the **outcome analysis (OA)**, the process which uses the baseline plus monitoring information to model how an identified shock, such as delayed rains, will impact households' abilities to meet their food and income needs in the upcoming months. The OA can also be used to model how different interventions will impact households, which enables the user to select the most appropriate interventions. **This report covers the baseline component of the HEA framework for four livelihood zones and does not cover any aspect of outcome analysis, which will be conducted in the future.**

The **Northern Pastoral Livelihood Zone (SNP)** is located in Samburu North Sub-County. Livestock rearing is the dominant economic activity, but households from all wealth groups supplement their livelihoods with other income generating activities like charcoal production, firewood collection, local brewing, petty trade and domestic labor. The road network is generally poor in the livelihood zone and subject to insecurity. Market access is quite difficult and the zone is far from livestock markets and any large urban centers. Conflict within the livelihood zone occurs over access to pasture and water points. These three elements (road infrastructure, market

access and conflict) differentiate this livelihood zone from the Samburu Eastern Pastoral Livelihood Zone, which also has larger herd sizes. The main types of livestock kept are goats, sheep, cattle, camels, poultry and donkeys. The main determinant of wealth in this zone is livestock ownership and livestock holdings increase with wealth. Ownership of cattle, camels and donkeys is largely restricted to the middle and better off wealth groups.

The **Eastern Pastoral Livelihood Zone (SEP)** is located in Samburu East and Samburu North Sub-Counties. Livestock rearing is the dominant economic activity, supplemented by other income generating activities for poorer households which do not have large enough herds to sustain a pastoral livelihood. Cattle and goats are the dominant livestock types in this livelihood zone, with smaller numbers of camels, sheep and donkeys. Herd sizes are larger than in the neighbouring Samburu Northern Pastoral Livelihood Zone. Other economic activities include charcoal production, firewood collection and sale, construction labor, domestic labor (including fetching water, washing and herding), brewing and petty trade. Market access is challenging due to the road infrastructure and distances from urban centers, but this is less problematic than in the Samburu Northern Pastoral Livelihood Zone. The main determinant of wealth in this zone is livestock ownership and livestock holdings increase with wealth.

The **Maralal Urban Livelihood Zone (MUZ)** falls within Maralal Ward of Samburu West Sub-County in Samburu County. Livelihoods here are based around casual labor, employment, self-employment, trade and – to a small extent – agropastoralism. Households in all wealth groups are dependent on market purchases to acquire the bulk of their food needs and income from crops and livestock was small. Seasonal changes in Maralal Urban Livelihood Zone are not as important as in the surrounding rural zones. This is mostly because livelihoods for the majority of Maralal's residents are less based on own production and more based on the availability of work. Construction work, loading/unloading labor, domestic labor and formal employment are available throughout the year, as is self-employment income from trade, brewing, handicrafts and bodaboda (motorcycle taxis). Firewood and charcoal are collected and sold throughout the year, but there is a peak period from January - March. The MUZ profile contains additional information about children's role in the household economy based on separate interviews with child workers in eight villages.

The **Samburu Agropastoral Livelihood Zone (SAP)** is located in Samburu Central Sub-County. Crop production and livestock rearing are important economic activities in this zone, supplemented by other income generating activities for poorer households like various types of casual work (agricultural, domestic, herding) and self-employment (especially charcoal production and firewood collection). Off-farm income sources for wealthier households include trading activities. The main crops grown are rainfed maize and beans during the long rains season. The main types of livestock kept are cattle, sheep, goats and chickens. The main determinants of wealth in this zone are land areas cultivated and livestock ownership, both of which increase with wealth.

Female-headed households are found in each wealth groups in each livelihood zone. During field work, in-depth interviews were conducted with female-headed households from the poor wealth group. The findings show that poor female-headed households and poor male-headed households shared a very similar pattern of food access across all four livelihood zones in the reference year. Income patterns and levels were very similar in the Northern Pastoral Livelihood Zone and the Maralal Urban Livelihood Zone. Female-headed households had slightly lower income levels per person in the Eastern Pastoral and Agropastoral Livelihood

Zones. Only in the Eastern Pastoral Livelihood Zone was there a substantial difference in income sources, with less income from livestock and livestock products and more income from self employment and cash assistance for female-headed households compared to male-headed households in the same poor wealth group.

Development priorities at community level vary by livelihood zone and relate to livestock production; crop production; marketing and infrastructure; health, water, sanitation and education; access to credit and job opportunities.

The baselines presented in this report represent the starting point for Household Economy Analysis to be used in the USAID Nawiri activity design through various thematic program intervention areas.

HEA was designed as a tool for **early warning**. Seasonal information on rainfall, crops and prices, which tend to be routinely collected by government monitoring systems, along with information on livestock and labor and self-employment opportunities, are used in conjunction with the baseline data to indicate which wealth groups within a population are likely to face a deficit of how much and when. Combined with population data, the analysis allows for an estimate of the number of people that will need assistance to protect livelihoods and/or prevent extreme hunger, and the total food or cash equivalent required and of the months when it will be needed.

These HEA baselines also offer a starting point for **measuring economic resilience**. Using HEA outcome analysis, it will be possible to project whether program interventions are likely to increase or decrease household resilience by modelling the impact of a typical hazard and incorporating data on program-generated income, program costs and opportunity costs.

The HEA baselines should be seen as a starting point for future analyses. A plan will be developed by program staff to use the HEA baselines described in this report for HEA outcome analysis to 1) assess food insecurity in future seasons, 2) conduct resilience analysis of potential nutrition-sensitive livelihood opportunities for program design.

1.0 BACKGROUND

1.1 BRIEF INTRODUCTION TO SAMBURU COUNTY

Samburu County is located in northern Kenya and borders Turkana County to the west, Marsabit County to the northeast, Isiolo County to the east and southeast and Laikipia and Baringo Counties to the southwest. The county borders the Ewaso Ng'iro River to the south and touches Lake Turkana at its northern tip. It covers an area of 21,000 km² and has a population of 310,327 according to the 2019 census (increased from 223,947 in the 2009 census).

Population density in the county is low, at 15 people per square km, and this ranges from 45 in Samburu Central Sub-County to 8 and 9 in Samburu East and Samburu North Sub-Counties respectively. Maralal town, the county headquarters, is located in Samburu Central Sub-County and surrounded by agropastoral areas. Samburu East and North are mostly lowland and are dominated by pastoral livelihoods. Other towns include Baragoi, Archers Post and Wamba. The Samburu National Reserve and several conservancies managed by the Northern Rangelands Trust lie within the county.

80% of the county falls in lowland areas (of 600-1450 m above sea level), where rainfall is erratic and low (less than 700 mm per year) and temperatures are hot.¹ Areas at higher altitudes (up to 2600 masl) are cooler and receive more rainfall (up to 1000 mm per year). But less than 10% of the county has adequate rainfall to support crop production².

1.2 BACKGROUND TO THE 2021 BASELINES IN SAMBURU COUNTY

USAID Nawiri (Nutrition in ASALs Within Integrated Resilient Institutions) is a 5-year Development Food Security Activity (DFSAs) program funded by USAID and implemented by a consortium of partners led by Mercy Corps, whose goal is to sustainably reduce levels of persistent acute malnutrition in Turkana and Samburu Counties. The program involves research for the first two years to establish *What Works* to inform the co-creation of program design and implementation.

Household Economy Analysis (HEA) baselines in four livelihood zones of Samburu County have been conducted in 2021 and funded through the program. The baselines are presented in this report and will be used to assess food insecurity in future seasons and to conduct resilience analysis of potential livelihood opportunities for program design. Along with other research and learning inquiries conducted by USAID Nawiri, the HEA baselines will contribute to:

- the design of nutrition-sensitive livelihood strategies and programming that enable poor households to maintain year-round nutrition security for women and children and support the sustainable reduction of persistent acute malnutrition even in the face of shocks and stresses;
- the exploration of cost-effective options for strengthening local markets to increase local availability of nutritious foods and incomes for poor households.

Understanding the livelihoods of a given population is important to assess their ability to withstand and recover from shocks and stresses. Samburu County has experienced its share of shocks and stresses such as periodic droughts and more recently floods, locust invasion and the COVID-19 pandemic. To clarify how these shocks have affected how families obtain their food and income, HEA baselines have been conducted. These not only give an indication of how livelihoods have been affected but also point to the various coping mechanisms that have been put in place to mitigate some of these effects.

HEA is an approach that specifically responds to the information needs of USAID Nawiri Line of Enquiry No.4 Livelihoods, Poverty Graduation and Social Protection. It will directly inform gaps in understanding on how the different livelihoods of different wealth groups support (or not) household nutrition throughout the year. The study will not only establish an in-depth understanding of the current situation but will also enable USAID Nawiri to make evidence-based design decisions for proposed interventions in future seasons.

Household Economy Analysis (HEA) is a livelihoods-based framework that analyses the way different households obtain access to the things they need to survive and prosper. It helps determine households' food and income needs, and identify appropriate means of assistance,

¹ Samburu County Government and World Food Program. 2015. Samburu County Capacity Gaps and Needs Assessment. Nairobi. World Food Program.

² Success-Stories-from-Samburu-County, Regional Pastoral Livelihoods Resilience Project (Kenya), 2019.

whether short-term emergency interventions or longer-term development programs or policy changes. It is based on the principle that an understanding of how people usually make ends meet is essential for assessing how livelihoods will be affected by acute or medium term economic or ecological change and for planning interventions that will support, rather than undermine, their existing survival strategies. Therefore, in addition to informing the selection of appropriate livelihoods support, it can act as an effective early warning mechanism, triggering the need for assistance, before households have lost livelihoods or face food consumption gaps.

This particular HEA set out to address the following research questions:

Livelihood zoning:

- What are the common livelihood strategies among communities within the various geographic areas under targeted by the studies?

Wealth group breakdowns:

- How do households differentiate their levels of vulnerabilities at the household level?
- What are the productive assets common among households of different vulnerability levels?
- What are the average household sizes of households in the different vulnerability categories?
- Can household vulnerabilities be identified beyond economic considerations (female-headed households; households with particular individual vulnerabilities).

Livelihood strategies:

- How do households earn income over the course of the consumption year?
- When do households earn the income from different sources and what are the seasonal variations in those income streams?
- What are the largest expenditures for a household and when are those costs incurred?
- How much of household food consumption is produced compared to how much is purchased at market, as well as what periods of the years these proportions vary?

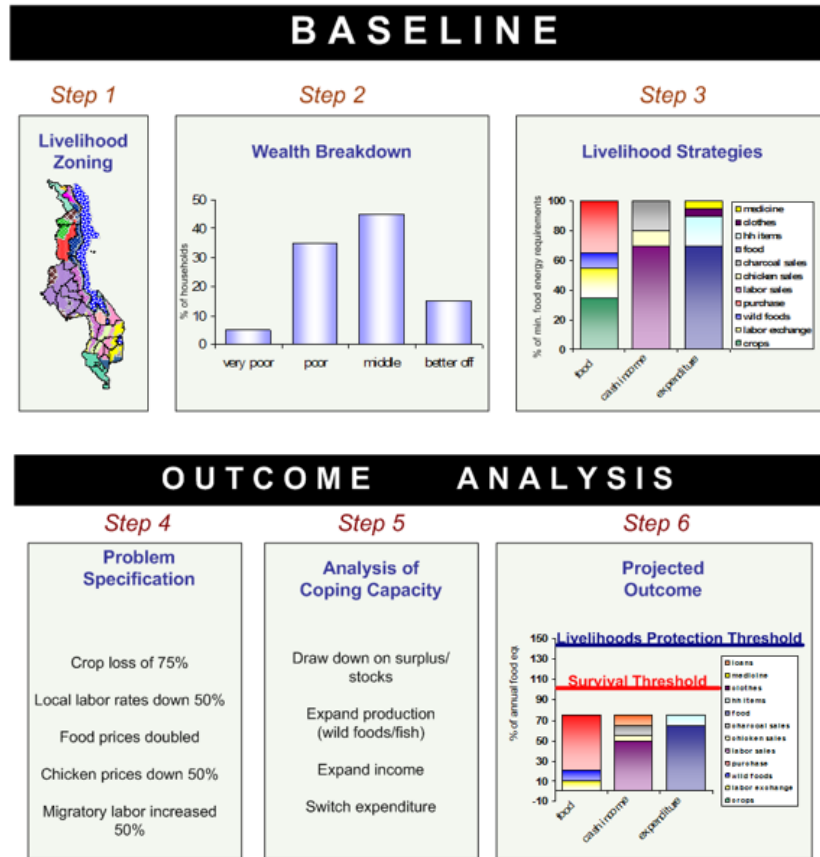
Outcome Analysis:

- What are the ‘key parameters’ that make up over 10% of household income, expenditure, or food consumption in one wealth group, or over 5% among multiple wealth groups, and how often should these KPs be collected to inform regular OA
- What are the most common shocks faced by households and quantify how the shocks impact their income, expenditures, and food access?
- When do households face food consumption gaps?
- What coping strategies can households expand during the period of consumption gaps, and how much of the gap can these strategies provide?

The HEA framework is made up of two components: the **baseline**, which provides a detailed understanding of how different types of households accessed the food and cash they need in a recent year; and the **outcome analysis (OA)**, the process which uses the baseline and monitoring

information to model how an identified shock, such as delayed rains, will impact households' abilities to meet their food and income needs in the upcoming months. The OA can also be used to model how different interventions will impact households, which enables the user to select the most appropriate interventions. The framework is summarised thus:

Figure 1: HEA Framework



There are three steps in an HEA baseline: livelihood zoning, wealth breakdown and livelihood strategies by wealth group. These are gathered for a recent 12-month period and can be reused for outcome (or scenario) analysis for 5-10 subsequent years, provided there are no fundamental changes to livelihoods. Outcome analysis also has three steps: identifying the severity of shocks or other changes (problem specification), analysis of household coping strategy in the face of those shocks, and the projected impact of those shocks on household economies.

This report covers the baseline component of the HEA framework for four livelihood zones and does not cover any aspect of outcome analysis. Outcome analysis to use these baselines to model food and livelihoods security in each future season and to analyze the resilience impact of potential livelihood programs will be conducted by the program in the future.

2.0 METHODOLOGY

The HEA baselines were conducted in the Eastern Pastoral, Northern Pastoral, Agropastoral and Maralal Urban Livelihood Zones. Team leader and team member baseline trainings were led by a consultant from the Food Economy Group (FEG). Fieldwork was conducted in March and

August 2021. Each team was led by a team leader who had previously participated in HEA baseline work in Kenya and who attended a team leader training.

Most of the field data was collected directly at village or settlement level from community key informants and focus groups through lengthy semi-structured interviews.

In HEA, the household is the basic unit of analysis. Data is collected for 'typical' households using a focus group interview approach. Participants for these focus group interviews are selected using a stratified sampling scheme, with two levels of stratification. The first level of stratification is geographical, by livelihood zone. The second level of stratification is by wealth group. Household members are selected on the basis that they are representative of typical very poor, poor, middle and better-off households in the livelihood zone. There are two steps to the process of selecting household members for interview. For both steps, a purposive sampling methodology is used.

The first step is to select villages that are typical of the livelihood zone. This is done in consultation with the local authorities. The second step is to select household members from each wealth group for interview. This is done during a 'wealth breakdown' interview at community level, which also generates valuable information on other questions relevant to the enquiry (e.g. seasonal patterns of activity). The advantages of purposive sampling over random sampling for this kind of assessment are as follows: a) the method is rapid and we are almost always tight on time; b) it does not require a complete list of locations to sample (i.e. villages in the livelihood zone) and accurate data on the population of each unit sampled. If this information is not available, or is incomplete or inaccurate or out-of-date (as is often the case), then the representativeness of a randomly selected sample is adversely affected; c) it is more efficient for small samples, since villages which are, for any reason, atypical of the livelihood zone can be avoided.

Ten villages/settlements were visited in each livelihood zone. In each village, interviews were conducted with 20-30 community leaders and with 4-5 people in each of 4 wealth groups, plus separate interviews were conducted with female-headed households from the poor wealth group in all livelihood zones and with child laborers in some livelihood zones. In total, approximately 450-500 people participated in interviews in each of the 4 livelihood zones. This sample size is not determined on the basis of statistical considerations, but on many years of practical field experience. This is the number of interviews required to generate a reasonably coherent set of data, from which most field teams are happy to draw conclusions with reasonable confidence in their accuracy and their representativeness. Interviews were also conducted with traders. The interview forms that were used in the field are listed below and available on request.

Field interview forms:

- Form 1 = Sub-County Key Informant Interview Form
- Form 2 = Market Trader Interview Form
- Form 3 = Community Representatives Interview Form (rural version)
- Form 3 = Community Representatives Interview Form (urban version)
- Form 4 = Wealth Group Interview Form (rural version)
- Form 4 = Wealth Group Interview Form (urban version)
- Form 4a = Child Worker Interview Form

Note: A digital version of Form 4 was used during interviews in the field.

Baseline analysis for each livelihood zone was conducted by the field teams in the HEA Baseline Storage Spreadsheet (BSS) and the full baseline summary has been transferred into the tools used for Outcome Analysis (the Livelihoods Impact Analysis Spreadsheet (LIAS) and the HEA Dashboard) for use in future. The LIAS is the main tool for large-scale analyses, such as national seasonal assessments. Different problem specifications can be entered for each of the 20 districts included in the LIAS, which is useful when using national monitoring systems. The HEA Dashboard can be used for real-time analysis of selected areas (provided they share the same problem) or for scenario analysis of much larger geographical areas (e.g. for the development of a contingency plan). It is the main tool for resilience analysis because interventions (IGAs, assistance) can be analysed alongside a problem specification.

For more information on the Household Economy Analysis framework and methodology, please see the following resources:

1. HEA Guide for Program Planners and Policy Makers: <http://foodeconomy.com/wp-content/uploads/2015/09/HEA-Guide-for-Program-Policy-Makers.pdf>
2. HEA Practitioners' Guide: <http://foodeconomy.com/wp-content/uploads/2015/09/The-Practitioners-Guide-to-HEA.pdf>

3.0 FINDINGS

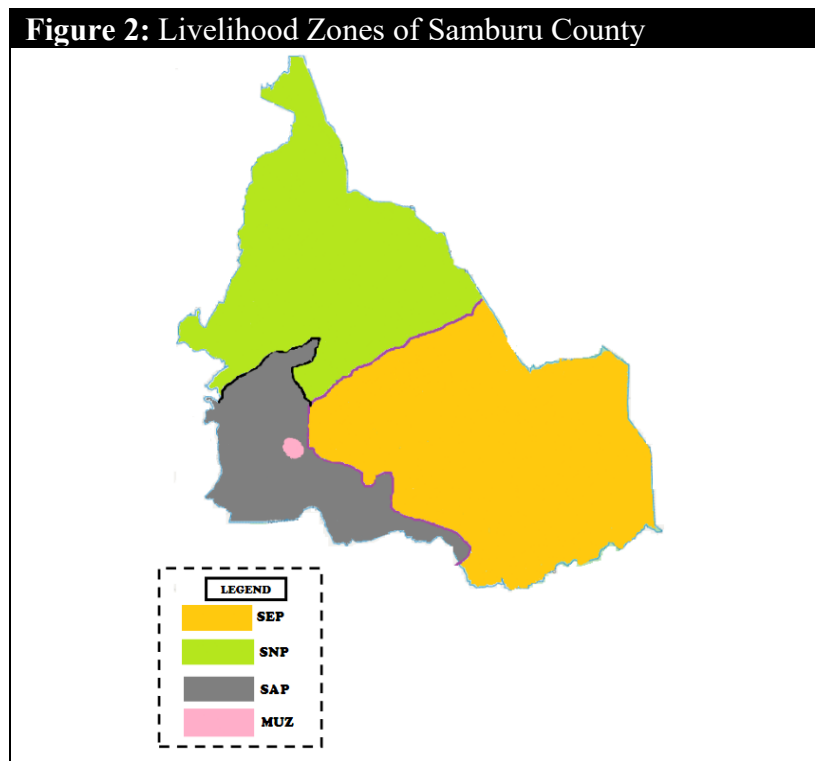
3.1 SUMMARY FINDINGS

3.1.1 Livelihood Zoning

Before starting the baseline fieldwork, a livelihood zoning exercise was conducted in March 2021 with government and partner participants. The purpose was to define common livelihood strategies among communities within the geographic area targeted by the study. The participants revisited previous livelihood zone maps to confirm if they still reflected livelihood patterns in the county.

Four livelihood zones were identified:

- Eastern Pastoral (SEP)
- Northern Pastoral (SNP)
- Agropastoral (SAP)
- Urban (MUZ)



Using population data from the 2019 census, the team split the population of each sub-county by livelihood zone, resulting in the following estimated population split for the county:

Eastern Pastoral	Northern Pastoral	Agropastoral	Urban LZ	Total
83,738	76,217	100,870	49,452	310,277

3.1.2 Livelihood Zones Descriptions

The following tables provide a brief summary of the characteristics of each livelihood zone. They are followed by a more detailed comparison of the zones. Later in this report, there is a full profile for each livelihood zone.

Livestock	Goats Sheep Camels Cattle Donkeys	Located in Samburu North Sub-County, the Samburu Northern Pastoral Livelihood Zone receives very little rain, with considerable variation from one year to the next. Pastoralism is the preferred pattern of livelihood in this relatively remote, lowland area. However, in reality most households are dependent on self-employment activities (charcoal, firewood, brewing, handicrafts, petty trade, etc) to supplement their income from livestock and livestock products.
Cash income sources	Livestock sales Milk sales Self-employment (bush products, handicrafts, trade) Domestic labor	The road network is generally poor in the livelihood zone and subject to insecurity. Market access is quite difficult and the zone is far from livestock markets and any large urban centers. Conflict within the livelihood zone occurs over access to pasture and water points. These three things (road infrastructure, market access and conflict) differentiate this livelihood zone from the Samburu Eastern Pastoral Livelihood Zone, which has larger herd sizes. Purchase was the main source of food for all wealth groups in the reference year, with very poor households spending around 90% of their cash income on food. Milk/meat from own livestock was the second most important source of food and its contribution increased with wealth. School feeding was another food source across all wealth groups.
Crops	None	Regular hazards include drought, livestock disease and insecurity.

Samburu Eastern Pastoral Livelihood Zone		
Livestock	Goats Sheep Cattle Camels	<p>Located mainly in Samburu East Sub-County, this is a pastoral livelihood zone; however, there is a notable split in livelihoods between the two upper and two lower wealth groups. The middle and better off are pastoralists who are entirely dependent on livestock production; the very poor and poor do not have large enough herds to sustain a pastoral livelihood and instead also depend on other income sources. Other economic activities include charcoal production, firewood collection and sale, construction labor, domestic labor (including fetching water, washing and herding), brewing and trade.</p> <p>Herd sizes are larger in the Eastern Pastoral Livelihood Zone compared to the Northern Pastoral Livelihood Zone and the zone has a better road network and better access to markets and is subject to lower levels of insecurity.</p> <p>Purchase was the main source of food for all wealth groups in the reference year, with very poor households spending 70-80% of their cash income on food. Milk/meat from own livestock was the second most important source of food and its contribution increased with wealth. School feeding and payment in kind (for domestic labor) were other small food sources.</p> <p>Regular hazards include drought, livestock disease and insecurity.</p>
Income Sources	Livestock sales Milk sales Self-employment (bush products, handicrafts, trade) Domestic labor	
Crops	None	

Samburu Agropastoral Livelihood Zone		
Crops	Maize Beans	<p>This livelihood zone is located in Samburu Central Sub-County, covering just over 60% of the sub-county population (as of 2019) and surrounding Maralal town. It is located at higher altitudes than the pastoral livelihood zones and receives more rainfall.</p> <p>Crop production and livestock rearing are important economic activities in this agropastoral livelihood zone, supplemented by other income generating activities for poorer households like various types of casual work (agricultural, domestic, herding) and self-employment (especially charcoal production and firewood collection). Off-farm income sources for wealthier households include trading activities.</p> <p>The main crops are rainfed maize and beans, mainly cultivated during the long rains season. Households raise sheep, goats, cattle and poultry.</p> <p>Off-own farm income sources are important, particularly for poorer households. These include agricultural labor for larger</p>
Livestock	Sheep Goats Cattle Poultry	
Income Sources	Crop sales Livestock sales Agricultural labor Self-employment (charcoal, firewood, petty trade)	


		<p>farmers, labor migration, and self-employment activities like charcoal production and firewood collection.</p> <p>Market access is relatively good compared to pastoral areas of the county, due to better quality roads, proximity to main market locations and security. However, it can still be challenging. Most of the zone is accessed by graded dirt roads, which are generally accessible during the dry season, but less so in the rainy season when some become impassable.</p> <p>Hazards include drought, livestock disease and crop pests. Locusts have been a problem in recent years.</p>
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Maralal Urban Livelihood Zone		
Income Sources	Casual labor (unskilled/skilled) Agricultural labor Salaried employment Business/shops/petty trade Charcoal and firewood sales Self-employment (e.g. handicrafts, bodaboda, brewing)	<p>The Maralal Urban Livelihood Zone includes Maralal town and nearby peri-urban settlements and is surrounded by the Samburu Agropastoral Livelihood Zone in Samburu Central Sub-County.</p> <p>Livelihoods here are based around casual labor, employment, self-employment, trade and – to a small extent – agropastoralism. Paid child labor is quite common in very poor households.</p> <p>Compared to the rural livelihood zones in Samburu County, market access in this livelihood zone is good because the road network is passable and the main county market is located in Maralal town. Households in all wealth groups are dependent on market purchases to acquire the bulk of their food needs and food or cash income from crops and livestock is small.</p> <p>Casual labor is undertaken within the town itself or in the surrounding rural area during peak periods for agricultural labor.</p>
Crops	Maize Beans	<p>Bush products are collected in the nearby Kirisia Forest and their main market is Maralal town. Livestock are sold in the Maralal livestock market and exported from the area to destination meat markets through Rumuruti livestock market. Crop production by households in this urban zone is very limited and mostly for home consumption. Any small quantities of crop sales are sold in the local market.</p>
Livestock	Cattle Goats Sheep Poultry	

3.1.3 Seasonal Calendar, Reference Year and Wealth Breakdown

The **seasonal calendar** is broadly similar across livelihood zones, with two rainy seasons: the ‘long’ rains from March to May and the ‘short’ rains from October to December, with dry seasons in between.

The timing of rainfall determines the seasonality of livestock production and livestock movements. When local pasture and browse are exhausted, the bulk of animals are moved away



from home areas (where they spend the rainy seasons) into dry season grazing areas. Livestock generally come into heat and conceive during the rains, when body condition is best. The timing of births is then determined by the length of pregnancy (camels give birth after 12 months, cattle after 9 months and sheep/goats after 5 months). Levels of milk production peak during the rains. This is the time of year when less staple food is purchased (and staple prices are lower) and few livestock are sold (and livestock prices are higher). The ‘hunger’ or lean seasons in pastoral areas generally coincide with the dry seasons, when milk production is lower.

In the agropastoral zone, maize and beans are the main crops and they are cultivated during the long rains season, with land preparation commencing before the rains begin. Planting occurs with the start of the rains, followed by a period for weeding. Beans mature first, with green consumption in June and the main harvest in July-August. Green consumption of maize starts in August, with the main harvest in September-October. The start of green maize consumption ends the lean season, which can last from February-July for the poorest households in the agropastoral zone. Staple food prices peak during the lean season.

For households with few crops and livestock, income-generating activities like firewood, charcoal and construction materials collection, handicrafts, petty trade and brewing are year-round activities.

Each baseline assessment refers to a very specific time period called the **reference year**. In HEA, the reference year is a recent consumption year, starting with the month when own household production peaks and usually marking the end of the main hunger season. The reference year in each livelihood zone was April 2019 to March 2020. This was because, in the pastoral zones, the reference year started with peak milk production, usually near the start of a rainy season. The seasonality of own production is less important in urban zones than in rural zones and the team chose the same 12 months as in the pastoral livelihood zones for the reference year in this zone.

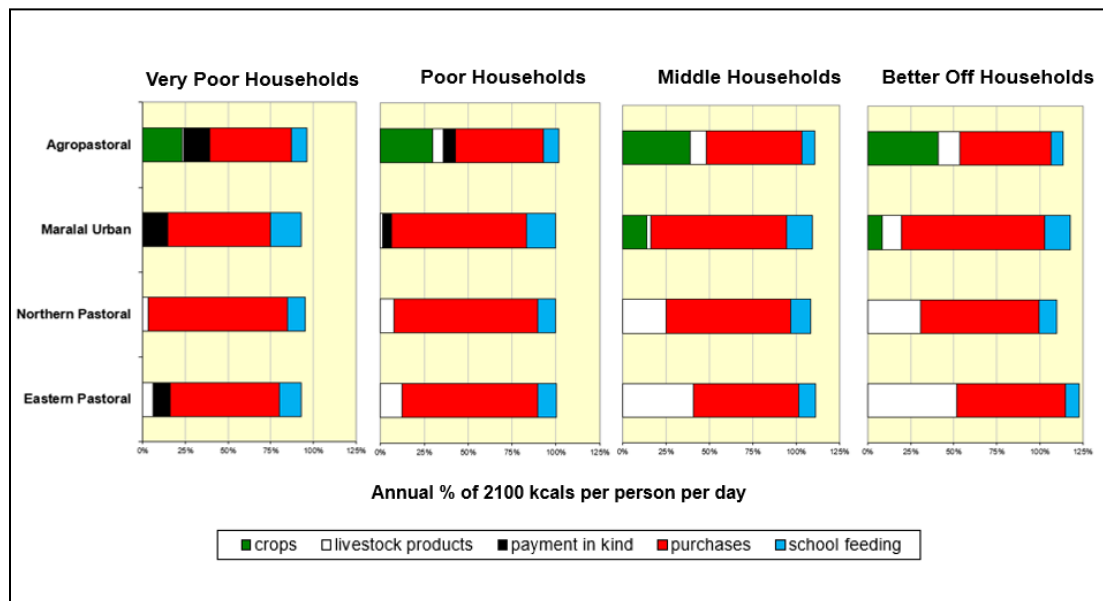
Provided there are no fundamental and rapid shifts in the economy, the information in these HEA baseline profiles is expected to remain valid for approximately five years (i.e. until about 2026).

In the pastoral livelihood zones, **wealth** is locally defined by the types and the number of livestock a household owns. Other factors affecting wealth, such as household size and composition, are considered secondary to livestock holdings. Household sizes generally increase with wealth in the pastoral zones, especially in the zones with significant livestock holdings, both because wealthier men have the option of marrying more than one wife and because additional people are required to manage larger herds.³ In the urban livelihood zone, the situation is a little different. Instead of relying on productive assets like livestock or land, urban populations instead usually rely upon trade, self-employment and employment (skilled and unskilled labor) to maintain their livelihoods; therefore, urban wealth groups are categorized primarily by their income levels.

³ For the purpose of this assessment, a household was defined as people eating from the same pot and also sharing the same resources. Household sizes take into account multiple wives and children and where relevant include live-in workers and extended family members and omit family members in the case that they are living away from the family for education or employment purposes.

3.1.4 Food sources

Figure 3: Sources of Food in Reference Year (2019-20)



The graphic above compares the **sources of food** in the reference year for households in different wealth groups in the four livelihood zones in Samburu County.

Households from all three livelihood zones obtained most of their food from a combination of market purchases, own livestock production (milk/meat) and school feeding, plus crop production in the agropastoral zone. The contribution of own livestock production increased significantly with wealth and was most important in the Eastern Pastoral Livelihood Zone. Crop production only appears as an important source in the Agropastoral Zone for all wealth groups and in the Maralal Urban Zone as a minor source for middle and better off households. Payment in kind appears in three livelihood zone as payment for agricultural or domestic labor.

In all four livelihood zones, the main items purchased were maize (grain/flour), rice, beans, vegetable oil and sugar. Small quantities of wheat flour and vegetables were also purchased in some cases.

Very poor households struggled to meet 100% of their food energy needs in all four livelihood zones.

3.1.5 Sources of cash

The graphics below compare the **sources of cash income** in the reference year for households in different wealth groups and in different livelihood zones. The first graph compares the proportions of income from different sources, while the second graph compares absolute levels of household cash income from different sources, and the third graph compares absolute levels of cash income per person (total cash income divided by household size). The scale is different for each wealth group in each livelihood zone.

Note that income sources in the Maralal Urban Livelihood Zone have not been differentiated since multiple income sources are possible at any given level of income in the urban setting.

Income in this zone is simply presented as a ‘total’ typical level. The most common income sources in this zone fall into the categories of casual labor, formal employment and self-employment.

The importance of crops (in dark green), livestock (in orange) and livestock products (in white) sales generally increased with wealth in the reference year. Milk sales are particularly important in the Northern Pastoral Livelihood Zone (for middle and better off wealth households).

The contribution of casual labor (in blue) decreased with wealth. The picture for self-employment (in purple) was mixed. It includes firewood/charcoal sales for poorer households and trading activities for wealthier households.

Middle and better off households in the Eastern Pastoral Livelihood Zones obtain all of their cash income from their livestock and livestock products, while all other wealth groups rely at least partly on other income sources.

Households with few livestock have little alternative but to rely on their own labor and by engaging in any income-generating activities that are locally available (charcoal and firewood sales, brewing, trade). Cash transfers only appeared for very poor households in the Eastern Pastoral Livelihood zone.

Cash income levels (per household and per person) were highest in the Maralal Urban Livelihood Zone and lowest in the Agropastoral Livelihood Zone.

Figure 4: Sources of Cash Income in Reference Year (2019-20)

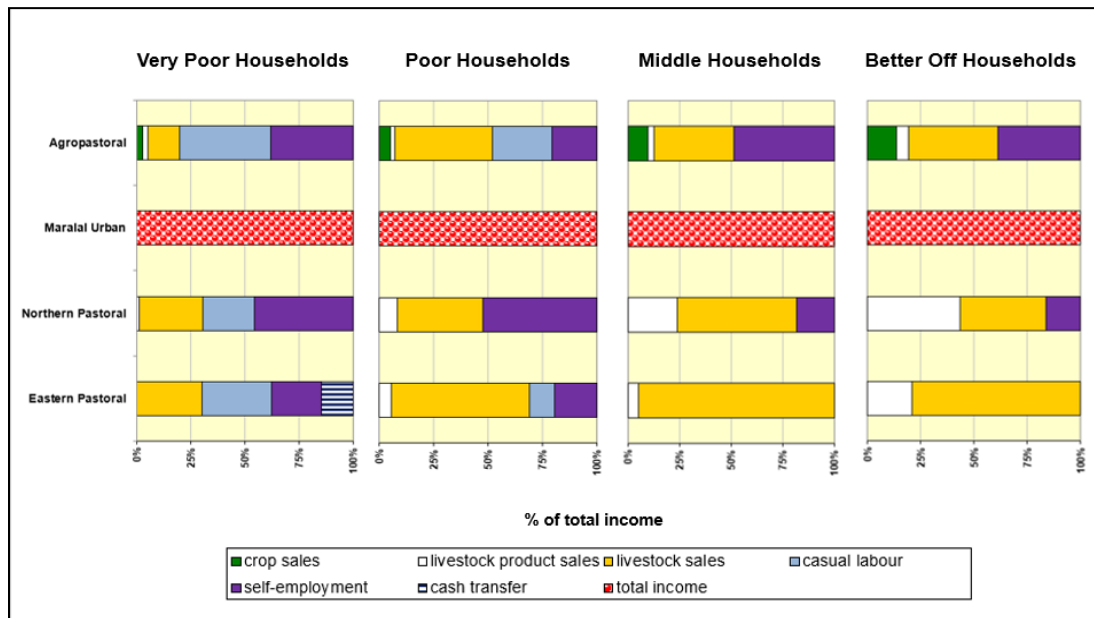


Figure 5: Sources of Cash Income in Reference Year (2019-20)

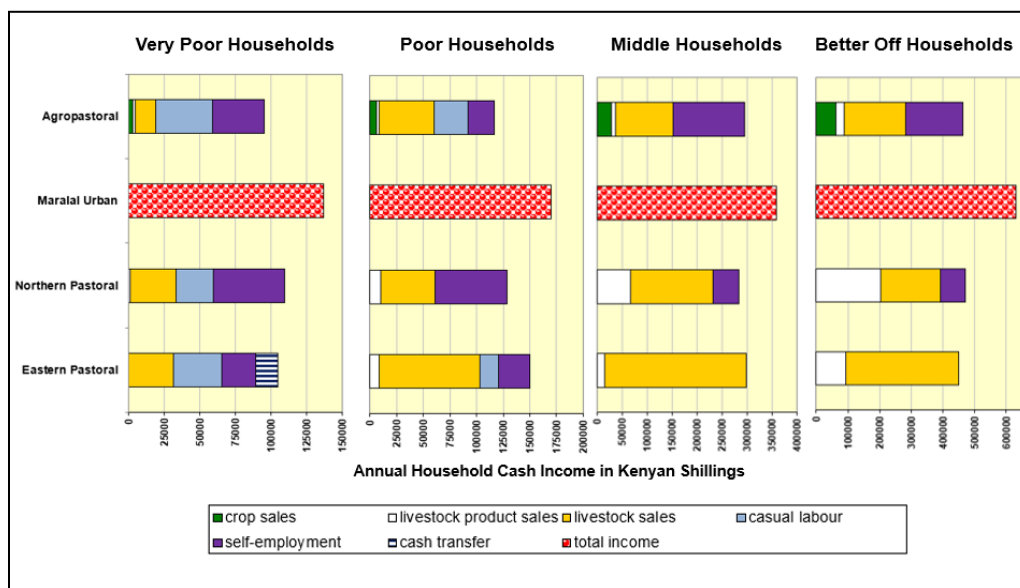
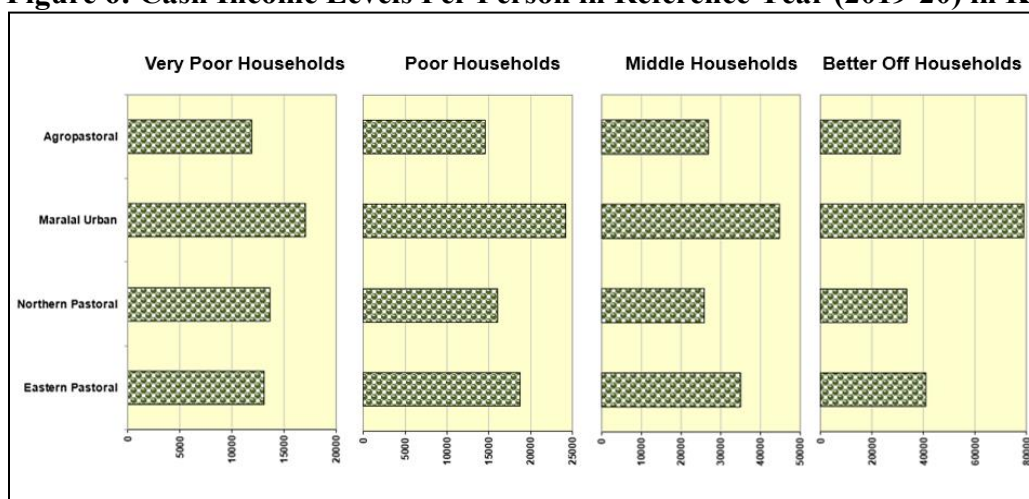


Figure 6: Cash Income Levels Per Person in Reference Year (2019-20) in Kenyan Shillings



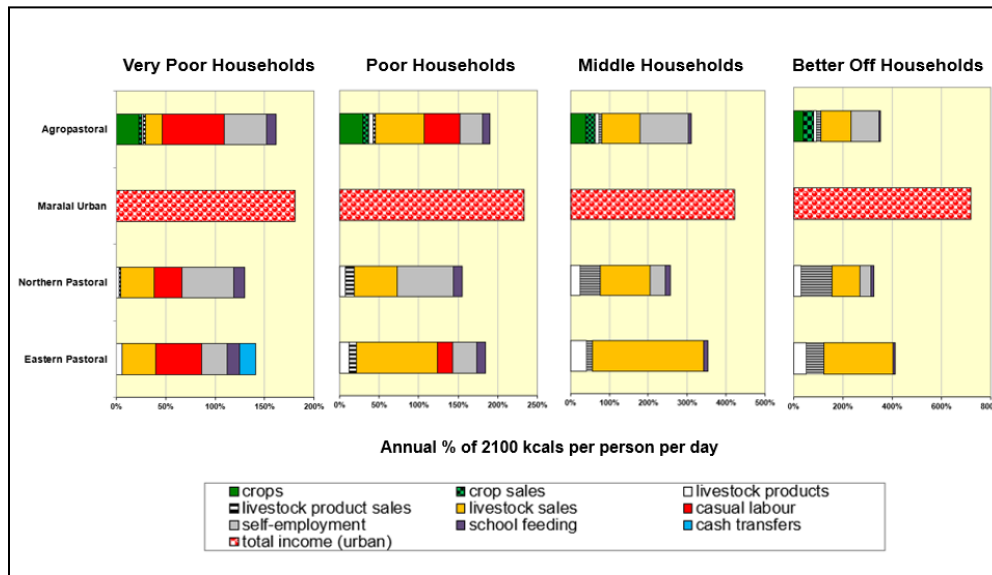
Decision making around how to spend income is generally controlled by the person who earns the money or sells the item. Men mainly control decision making around livestock income and income earned through their labor or self-employment activities, while women mainly control income from milk, chicken and egg sales and their labor or self-employment activities. This includes any cash transfers or remittances received or credit taken.

3.1.6 Total income (food + cash)

The graphic below presents total income (food plus cash) according to income source. In the second graphic, total income is presented per person in relation to minimum food needs. Total income is expressed as a percentage of minimum food requirements (2100 kcals per person per day), with cash income converted into its food equivalents based upon the amount of staple food (mainly maize) that could be purchased, assuming that all cash from each source was used to purchase staple. The scale is different for each wealth group in each livelihood zone.

Total income levels are highest in the Maralal Urban Livelihood Zone and lowest in the Northern Pastoral Livelihood Zone.

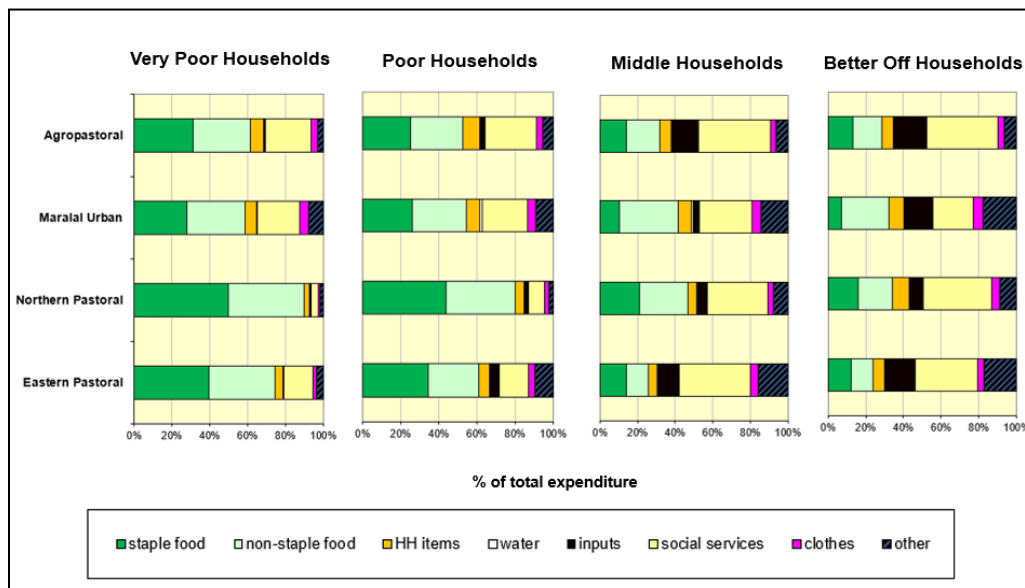
Figure 7: Total Income (Food + Cash) Per Person in Reference Year (2019-20)



3.1.7 Expenditure patterns

The graphic below compares **expenditure patterns** in the reference year for households in different wealth groups and in different livelihood zones. The proportion of income spent on food (the two green sections in the graphic) declined with wealth during the reference year within each livelihood zone. Across all livelihood zone, very poor households spent 60-90% of total expenditure on food items, while better off households spent 25-35%. Households in the Northern Pastoral Livelihood Zone spent the largest percentage of income on food, across all four wealth groups.

Figure 8: Expenditure Patterns in Reference Year (2019-20)



The 'social services' category (in yellow) includes education and medical expenses. This was a major expenditure category for middle and better off households and mostly includes education costs. 'Other' items (in blue/black hatch) include expenditure on tobacco, alcohol, transport, phone credit, festivals, house repairs and social obligations.

The proportion of income spent on inputs increased with wealth. This included expenditure on crop production, livestock drugs, salt for livestock and restocking.

3.1.8 Hazards and response strategies

Drought is the major **hazard** in the agropastoral and pastoral livelihood zones. Drought results in reduced crop production and reduced pasture, browse and water availability for livestock. This periodically affects household access to own crop and livestock production, including milk, a key source of nutrition.

Livestock diseases are another common hazard, negatively affecting herd numbers and the productivity of all livestock types. Since successful livestock production in semi-arid areas is highly dependent on mobility in search of pasture, browse and water, conflict also constrains livelihoods.

Wildlife attacks can be a problem during dry seasons, and especially during drought years, when water and forage resources are scarce and competition between domesticated and wild animals is high.

Crop pests like army worm and locusts can also devastate crops.

Households in the poorer wealth groups in all of the livelihood zones are highly dependent on their own labor to obtain cash income. Human diseases can have a damaging effect on labor availability at household level.

Although floods usually have a beneficial longer-term effect on pasture, browse and water availability, which is good for livestock keepers, in the short term they can cause significant problems, including an upsurge of livestock diseases, destruction of crops and market inaccessibility.

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

Switching of expenditure – Reduced expenditure on non-essential items such as clothes, and on expensive foods such as rice, wheat flour and sugar, is a strategy pursued by all wealth groups in bad years, so that they can purchase cheaper staple foods like maize.

Increased bush product collection and sale – The sale of firewood, charcoal and construction materials is intensified in bad years. The environmental implications of this strategy are likely to be damaging.

Increased livestock sales – Households from all wealth groups sell additional livestock in bad years. Livestock sales serve the dual purpose of increasing income to cover basic food and non-food expenses and of destocking to reduce the pressure on pasture and browse and to reduce the expenses required to maintain the herd (both in terms of livestock drugs and feed). However, the extent to which this strategy of increased livestock sales can be pursued without damaging future livelihoods is quite limited. Middle and better off households are in a better position to exploit this strategy.

Further livestock migration – If there is a shortage of pasture, browse and water, herders with their livestock migrate further than normal to locations outside their usual migration areas. This strategy poses some risks if the more distant areas are prone to conflict.

Increased casual labor and labor migration – Women especially seek out more casual work for better off households, including fetching water and cleaning. Men seek out construction labor. Members of very poor, poor and, to some extent, middle households travel to the main urban centers to look for casual work and gifts from relatives.

Increased livestock product sales – Milk is a high value commodity in relation to the foods that households purchase (especially maize). In bad years, households sell a larger proportion of their milk production. This strategy is limited in years when drought is the main hazard and production levels are very low.

Seeking gifts – Poorer households expect support from better off households in bad years, sometimes in exchange for labor. Social support is generally strong in pastoral communities, although repeated shocks put the ability to respond under pressure.

Many of these strategies are unsustainable and cannot in all cases mitigate the harsh effect of hazards and shocks, particularly during severe droughts spanning several seasons.

3.2 DETAILED FINDINGS

3.2.1 Livelihood Zone Profiles

The livelihood zone profiles that follow are divided into a number of sections:

Zone Description offers a general description of local livelihood patterns (livestock rearing, crop production, off-farm income generation etc).

Markets contains basic information on the marketing of local production and on any importation of staple food into the zone.

The **Reference Year** section explains the one-year period for which information has been gathered in each livelihood zone.

Seasonal Calendar sets out the timing of key activities during the year. This is useful in a variety of ways, e.g. to judge the likely impact of a hazard according to its timing during the year, or to assess whether a particular activity is being undertaken at the normal time in the current year.

This is followed by four sections that provide the core information on the ‘Household Economy’ of the zone.

The **Wealth Breakdown** section describes four main wealth groups (‘very poor’, ‘poor’, ‘middle’ and ‘better-off’), explaining the differences between these groups and how this affects potential access to food and cash income.

The **Sources of Food** and **Sources of Cash** sections examine patterns of food and income access at each level of wealth, relating these to the characteristics of each group. An annual picture is presented, with food expressed as a percentage of 2100 kcals per person per day.

The sources of cash income are presented in absolute Kenyan Shillings earned per year. The **Expenditure Patterns** section is of interest in showing what proportion of their annual cash budget households at the different wealth levels spend on food, on household items, on production inputs, etc.

The section on **Hazards** provides information on the different types of hazard that affect the zone, while the **Response Strategies** section describes the various strategies available to households in the zone.

The section **Key Parameters for Monitoring** suggests the key indicators to monitor in each livelihood zone, based upon an understanding of local livelihood patterns.

The final section in each profile, **Program Implications**, outlines some preliminary ideas for longer-term programming.

3.2.2 Northern Pastoral Livelihood zone

Samburu Livelihood Baseline Profile

Northern Pastoral Livelihood Zone

April 2021⁴

Summary : The Northern Pastoral Livelihood Zone is located in Samburu North Sub-County. Livestock rearing is the dominant economic activity, but households from all wealth groups supplement their livelihoods with other income generating activities like charcoal production, firewood collection, local brewing, petty trade and domestic labor. The road network is generally poor in the livelihood zone and subject to insecurity. Market access is quite difficult and the zone is far from livestock markets and any large urban centers. Conflict within the livelihood zone occurs over access to pasture and water points. These three things (road infrastructure, market access and conflict) differentiate this livelihood zone from the Samburu Eastern Pastoral Livelihood Zone, which also has larger herd sizes. The main types of livestock kept are goats, sheep, cattle, camels, poultry and donkeys. The main determinant of wealth in this zone is livestock ownership and livestock holdings increase with wealth. Ownership of cattle, camels and donkeys is largely restricted to the middle and better off wealth groups. Longer-term program implications related to livestock production; marketing; health, water, sanitation and education; access to credit.

⁴ Field work for the current profile was undertaken in March 2021. The information presented refers to April 2019 – March 2020, an average year for food security by local standards. 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 2026). All prices referred to in the document are for the reference year.

Zone Description

The zone (coded SNP in the map) is located in Samburu North Sub-County, covering 5 wards in full (El Barta, Angata Nanyukie, Nachola, Ndoto) and 1 ward in part (Baawa). It is bordered by Turkana County to the northwest, Marsabit County to the north, the Samburu Eastern Pastoral Livelihood Zone to the east and the Samburu Agropastoral Livelihood Zone to the south. Lake Turkana is located at the northernmost tip of the livelihood zone.

Livestock rearing is the dominant economic activity in the Samburu Northern Pastoral Livelihood Zone, but households from all wealth groups supplement their livelihoods with other income generating activities like charcoal production, firewood collection, local brewing, petty trade and domestic labor. It is a warm, semi-arid, lowland livelihood zone with low levels of rainfall, which means the area is not suitable for arable farming. The natural vegetation includes savannah

grasslands, Acacia trees, cactus species and two areas of thick indigenous forest in higher altitude areas at Mt Nyiro and Mt Ndoto.

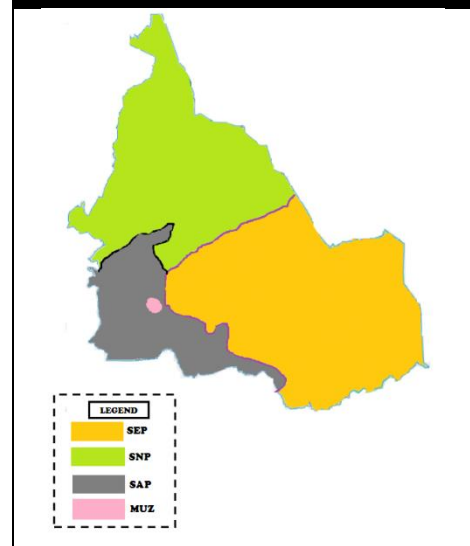
The road network is generally poor in the livelihood zone and subject to insecurity. Market access is quite difficult and the zone is far from livestock markets and any large urban centers. Conflict within the livelihood zone occurs over access to pasture and water points. These three things (road infrastructure, market access and conflict) differentiate this livelihood zone from the Samburu Eastern Pastoral Livelihood Zone, which also has larger herd sizes.

The rainy seasons run from April to June and from October to December and average annual rainfall per year is below 700 mm. The 'short' rains in October-December are perceived to be slightly more important than the 'long' rains in April-June, although both seasons are important for ensuring adequate water, pasture and browse for livestock rearing. As elsewhere in Samburu County, rainfall is unreliable and erratic. It is a food deficit area in the sense that much consumed food is purchased and imported from other parts of Kenya.

The main types of livestock kept are goats, sheep, cattle, camels, poultry and donkeys. Livestock are fed by free grazing on grass and browse. There is no purchase of feed or water for livestock. During the rainy seasons, the main sources of water for livestock are minor seasonal rivers, seasonal pools and shallow surface wells near to the home base. In normal dry seasons, water for livestock is obtained from water pans and boreholes, often at some distance from the home base in the northern and more mountainous part of the livelihood zone. Pasture is better in these areas, but insecurity can be a problem. In extremely dry years, livestock can be moved as far as Turkana, Marsabit or Laikipia Counties, depending on where water and food for livestock can be found. Men and boys migrate with the herd rather than whole households.

Livestock breeding is not controlled. Because of the usual peak of conceptions during the rainy seasons and the various lengths of gestation, camel births are most common in rainy seasons,

Livelihood Zones of Samburu County



cattle births in the dry seasons and goat births just before the start of the rainy seasons. Camels, cattle and goats are milked year-round, but production decreases during the dry seasons. Sheep are not milked during dry season. Mature female livestock are replaced from within the herds; livestock purchases are not very common. Slaughter of small stock is much more common than large.

The common diseases affecting livestock include foot and mouth, brucellosis, bovine diarrhoea and worms. Livestock vaccination campaigns are periodically organised by the Ministry of Agriculture, while livestock drugs are purchased from the market. Other constraints to livestock production include cattle raiding, drought, and limited access to distant pasture areas due to insecurity.

Other economic activities for households in this livelihood zone include charcoal production, firewood collection and sale, building materials production (bricks), brewing, handicrafts and petty trade. Most of these income sources are more common in the dry season, but are possible all year. Women are more involved with firewood collection, charcoal production, brewing and handicrafts, while men are more involved with livestock trading, herding and construction-related activities.

Food and cash assistance were not commonly received during the reference year of April 2019 to March 2020, but children from all wealth groups benefited from school feeding.

Water sources for humans include surface run-off and minor seasonal rivers in the rainy seasons, and boreholes, water pans and shallow wells in the dry seasons. Humans and livestock generally share the same water sources and there is no difference in this regard by household level of wealth. There is no payment for water in this livelihood zone. In most villages, there are no latrines or garbage disposal pits; open bush defecation and indiscriminate garbage disposal are common. Health services are accessed at dispensaries and health centers, which are sometimes long distances from villages. Services are generally available for a 20 KSh registration fee, but medical supplies and drugs are rarely available. Payment is required for referrals and for the purchase of medicines not available at dispensaries. Electricity is unavailable in the livelihood zone and most households obtain light from fires and torches, while some better off households have access to solar power or D-light. Locally collected firewood is the main fuel used for cooking. There is no access to formal credit programs and savings are mainly through merry-go-round schemes and table banking. These schemes are more used by middle and better off households. Organisations and NGOs working in the area include BOMA, ACTED, ChildFund, AMREF, WFP.

The youngest age at which boys/men generally get married is 18 years and the average age is 25 years. For girls/women, the youngest age of marriage is 14 years and the average age is 18 years. Marriage age tends to be younger for boys/men from better off households compared to poor households and the reverse for girls/women. Fathers decide when children should get married and the groom's family pays for the dowry and wedding ceremony. A typical dowry is 7 cattle, 1 camel and 2 goats/sheep and this does not vary by wealth group. Having daughters is one way to access livestock through their dowries at marriage and this contributes to girls being married off at a young age. The dowry system may also indirectly contribute to insecurity because young men from poor households are forced to raid livestock in order to pay dowries. The cost of the ceremony increases with wealth, from about 10-30,000 KSh for the very poor to 20-50,000 KSh

for the better off (or equivalent in livestock). Polygamy is common for middle and better off households. Men marry additional wives when they can afford it and need more household labor.

Markets

Market access in this livelihood zone is difficult due to the poor state of the road infrastructure and long distances from urban centers. The zone is accessed by dirt roads and informal tracks, which are generally accessible during the dry season, but less so in the rainy season. Insecurity can be a problem.

The main markets used by the population of the livelihood zone are Tankar, Illaut, Latakweny and Seren, which are all located within the livelihood zone. Livestock are exported out of the livelihood zone from these markets through livestock markets in Maralal (the capital of Samburu County) and then Rumuruti (in Laikipia County) to the main cities in Kenya (where demand for meat is high).

The main staple foods consumed in the livelihood zone are maize (grain/flour), rice, beans, sugar and vegetable oil and these are all imported from outside the livelihood zone. These sell for roughly the same price per kilo throughout the livelihood zone. Maize and beans are imported mainly from Trans-Nzoia County through Nakuru to Maralal in Samburu County and then on to smaller market towns and to village traders.

Labor migration by men exists as an income source across all wealth groups, but it is relatively uncommon. Almost all of the casual labor performed by people from the livelihood zone is undertaken within the local rural area and it is not a major source of income. Self-employment (primarily the sale of bush products and local brew) is more important than casual employment in this livelihood zone. The market for these items is local, including nearby market centers.

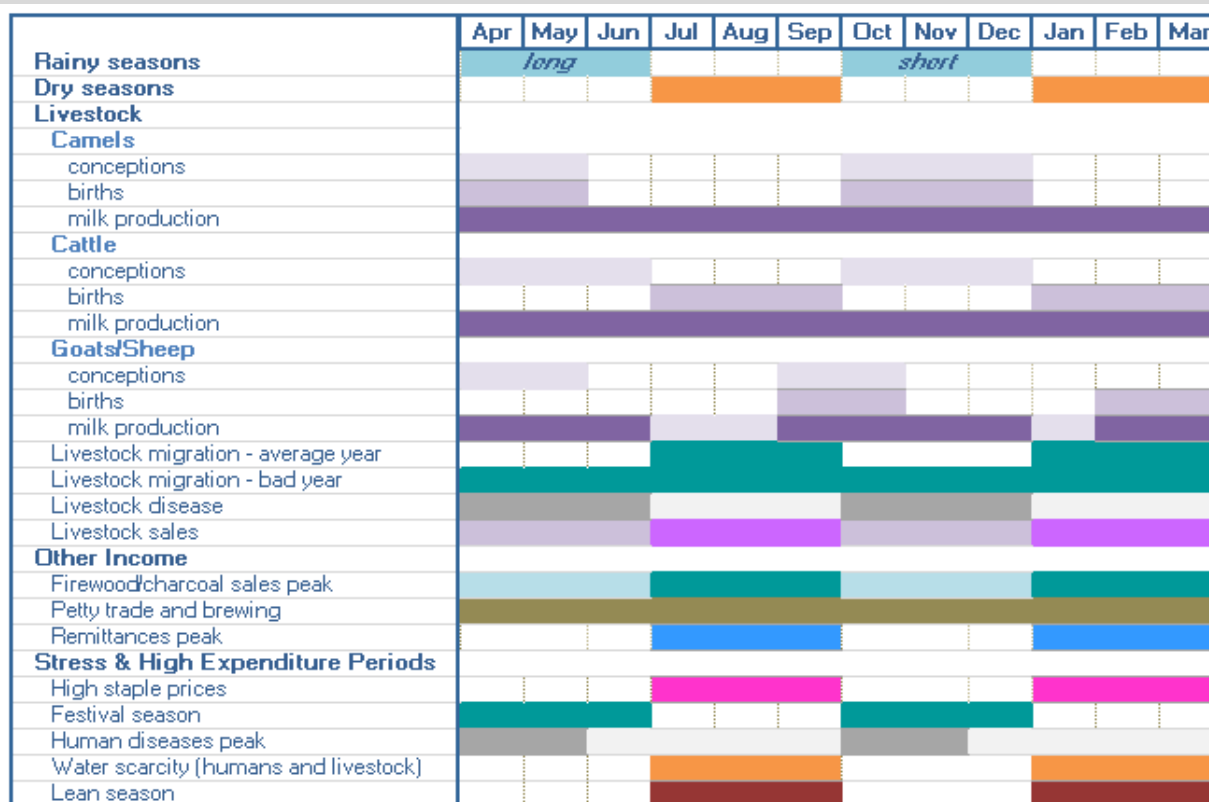
Reference Year

The information presented in this profile refers to the period April 2019 to March 2020, an average year for food security by local standards in most of the villages visited. In interviews at community level, key informants were asked to rank the seasons over the last five years, with '1' indicating a poor season and '5' indicating an excellent season for household food security. The average ranking for the long rains in 2019 was '3' and for the short rains seasons in 2019 was nearly '4'. These two seasons followed a series of less good seasons/years. The following table provides a summary of the rankings of seasons for the last 5 years, starting with the most recent season.

Year	Season	Rank	Description
2020	Short	2	Light rains, average livestock pasture and low livestock production. Locust invasion. Normal livestock migration.
2020	Long	3	Good pasture, good livestock production, heavy rains, low livestock diseases. Normal livestock migration.
2019	Short	4	Heavy rains, good pasture, high livestock production, livestock diseases, poor livestock market. Normal livestock migration.

2019	Long	3	Moderate rain, minimal migration, average livestock production, low livestock market. Normal livestock migration.
2018	Short	3	Moderate rains, good pasture, insecurity, poor livestock market. Normal livestock migration.
2018	Long	2	Light or no rains, low livestock production, poor livestock production, high insecurity, livestock diseases. Abnormal livestock migration. Cash transfers.
2017	Short	1	No rains, poor livestock production, migration to insecure areas, death of livestock. Abnormal livestock migration. Food assistance.
2017	Long	1	No rains, poor livestock production, migration to insecure areas, death of livestock. Abnormal livestock migration. Food assistance.
2016	Short	2	Light rains, average livestock production, high insecurity and livestock diseases. Abnormal livestock migration.
2016	Long	2	Below average rains, low livestock production, high insecurity, poor livestock market. Abnormal livestock migration.

Seasonal Calendar



The timing of rainfall determines the seasonality of livestock production and livestock movements. In general terms, the long rains fall from April-June and the short rains from


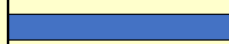


October-December. Once local pasture and browse are exhausted, the bulk of animals are moved away from home areas (where they spend the rainy seasons) into dry season grazing areas.

Livestock generally come into heat and conceive during the rains, when body condition is best. The timing of births is then determined by the length of pregnancy (camels give birth after 12 months, cattle after 9 months and sheep/goats after 5 months).

Levels of milk production peak during the rains. This is the time of year when less staple food is purchased (and staple prices are lower) and few livestock are sold (and livestock prices are higher). It appears that staple food prices respond more to local patterns of demand than to the timing of harvests in the areas of production. The ‘hunger’ or lean seasons coincide with the dry seasons, when milk production is lower.

Charcoal burning and firewood sales (the main self-employment activities) are undertaken throughout the year, but peak during the dry/lean seasons. Other self-employment activities occur throughout the year.

Wealth Breakdown

		Wealth Groups Characteristics				
		HH size	Wives	% FHH	Livestock holdings	Other
Very poor		6-10 (8)	1	40-60%	5-15 goats, 0-10 sheep, 0-15 poultry	0-1 mobile phone
Poor		6-10 (8)	1	30-50%	0-4 cattle, 10-20 goats, 3-10 sheep, 0-10 poultry	1 mobile phone
Middle		9-13 (11)	2	20-40%	2-5 camels, 3-17 cattle, 25-40 goats, 10-20 sheep, 0-3 donkeys, 0-10 poultry	2-3 mobile phones
Better off		10-20 (14)	2-3	20-30%	5-15 camels, 10-40 cattle, 35-65 goats, 15-25 sheep, 2-6 donkeys, 5-10 poultry	3-4 mobile phones
0% 10% 20% 30% 40%						

The main determinant of wealth in this zone is livestock ownership and livestock holdings increase with wealth. Ownership of cattle, camels and donkeys is largely restricted to the middle and better off wealth groups.

Household size increases with wealth, as does the typical number of wives per man. A household in this zone is the larger unit of a man and his wives and children (rather than an individual wife and her children) because resources are shared amongst the members of the wider unit. Having said this, female-headed households are quite common, particularly amongst the poorer wealth groups.

	Wealth Breakdown	
	% of HHs	% of pop ⁿ
Very	10-30	10-25
Poor	30-50	30-40
Middle	20-40	25-40
Better	10-15	10-20

The small table to the right illustrates that the percentage of households in each wealth group is different from the percentage of population in each wealth group (because of differing household sizes).

Schooling levels attained by children are different by wealth group, although there was little reported difference between boys and girls. Children from very poor households rarely go beyond primary school, whereas some children from poor households may attend secondary school. Secondary or even tertiary level education is generally restricted to middle and better off households because of the cost.

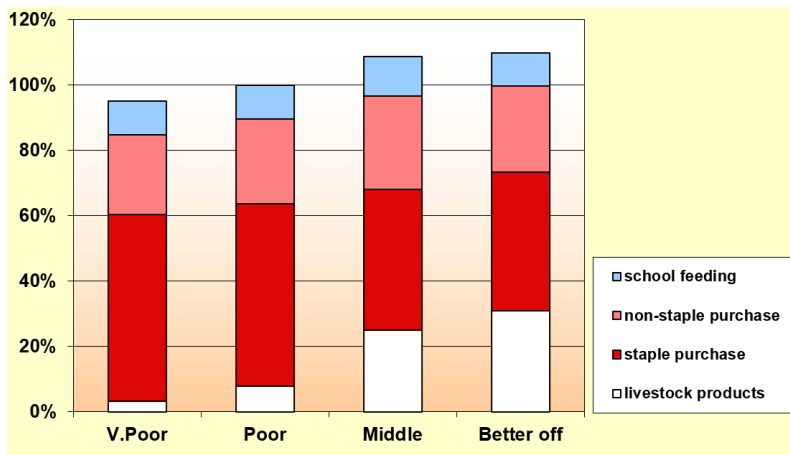
Sources of Food for the Reference Year (2019-20)

The graph below presents the sources of food for households in different wealth groups in the livelihood zone for the period April 2019 – March 2020. April represented the start of the consumption year since it was when milk production starts to peak during the long rains season.

The proportion of food obtained from own livestock products (milk and meat, in white) increased with wealth. Market purchase was the other main source of food for households in all wealth groups in the reference year. The main items purchased were maize (grain/flour), rice, beans, vegetable oil and sugar. Small quantities of wheat flour and vegetables were also purchased.

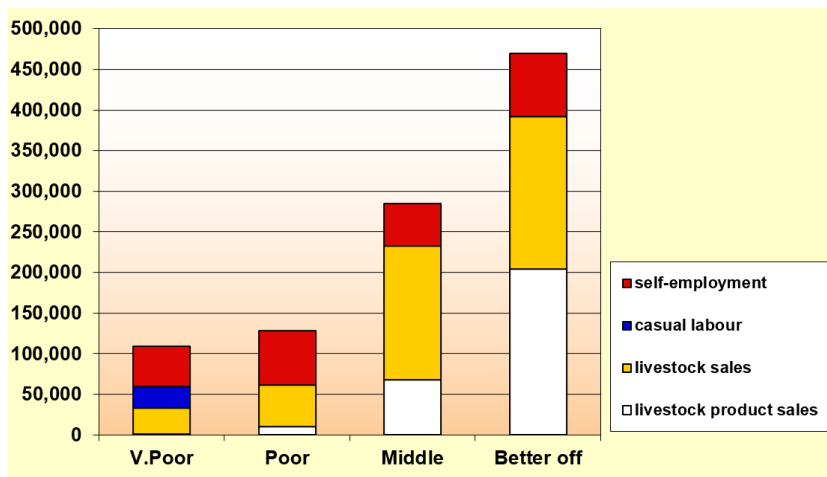
School feeding represents meals eaten by children at school.

Very poor households struggled to meet 100% of their food energy needs.



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

Sources of Cash for the Reference Year (2019-2020)



The graph provides a breakdown of total annual cash income in Kenyan shillings according to income source.

The graph presents income sources by wealth group for the reference year April 2019 – March 2020. Income from livestock and livestock product sales increases steadily with wealth and is very important for middle and better off households. Middle and better off households obtained most of their income from their livestock.

Very poor and poor households obtained most of their income from self-employment and/or labor in the reference year. The self-employment category of

	Very poor	Poor	Middle	Better off
Annual income (KSh) 2019-20	100,000 - 115,000	115,000 - 140,000	200,000 - 350,000	350,000 - 600,000

income includes firewood and charcoal sales, building material sales, handicrafts, brewing, petty trade and honey sales.

Decision making around the sale of milk and eggs is mostly made by women, based on the quantity produced, household size and needs, and access to markets. Very poor households only have access to small quantities of milk from goats and sheep and tend not to sell any. If poor households have access to a lactating cow, then they sell a small amount, generally less than 20% of the milk produced. Middle and better off households have access to larger quantities of milk and sell up to half of their production.

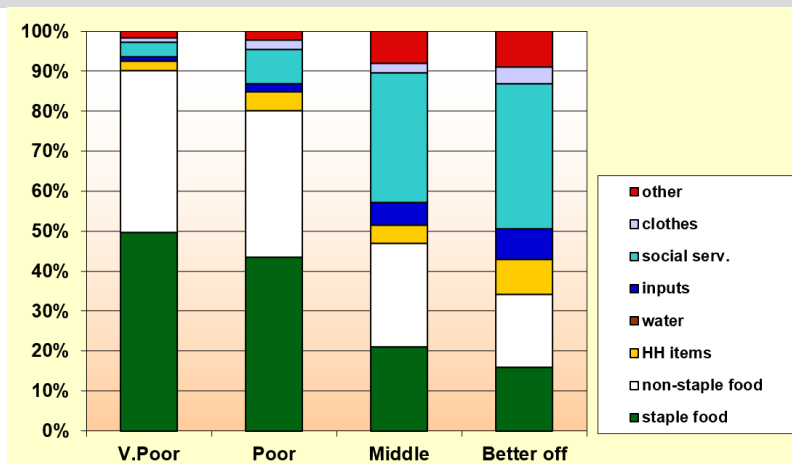
Paid work by children (under 18 years) was reported to be very uncommon in this livelihood zone, but children help with livestock rearing and domestic tasks within their households.

Labor migration by men exists as an income source across all wealth groups, but it is relatively uncommon and hence does not appear in the graph above (which illustrates ‘typical’ income sources for each wealth group). About 10-15% of households have a household member who migrates in average years, increasing to about 20-25% in bad years. Destinations include Nairobi, Mombasa, Nakuru, Maralal, Rumuruti, and Nyahururu and the migrating man tends to stay away for 3-9 months. Remittances to the household are about 1-2,000 KSh per month in average years, but increase to 2-3,000 KSh per month in bad years.

Decision making around how to spend income is largely controlled by the person who earns the money or sells the item. Men control decision making around livestock income and income earned through their labor or self-employment activities, while women control income from milk, chicken and egg sales and their labor or self-employment activities. This includes any cash transfers or remittances received or credit taken.

Expenditure Patterns for the Reference Year (2019-2020)

The graph presents expenditure patterns for the reference year April 2019 – March 2020. While total expenditure increased with wealth, the expenditure breakdown by percent in this graph demonstrates how much was spent on different categories. The proportion of expenditure on staple food (which is mostly cereals, in dark green in the graph) decreased with wealth from very poor households to better off households, from almost 50% of annual



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

expenditure to around 15%. Combining staple and non-staple food, very poor households spent around 90% of their income on food, which is extremely high, while the better off spent about 30-40%.

The main household items purchased (in yellow) were tea, salt, soap, cooking fuel (for the better off) and utensils. Water was generally not purchased in this livelihood zone. The ‘social services’ category (in pale blue) includes education and medical expenses. This was a major expenditure category for middle and better off households and mostly includes education costs. ‘Other’ items (in red) include expenditure on tobacco, alcohol, transport, phone credit, festivals, house repairs and social obligations. The proportion of income spent on inputs increased with wealth. This included expenditure on livestock drugs, salt for livestock and restocking.

Key informants were asked if there are food items that households want to purchase that are not available in the market on a seasonal basis. Vegetables and fruit are more expensive during the dry season and less available, as traders generally do not transport them then. Food items that households would like to purchase more of, but find unaffordable, include wheat flour, sugar, rice, potatoes, beans, tomatoes, cooking oil, pasta and fruit. Households in this livelihood zone do not purchase milk, relying on own production from their livestock.

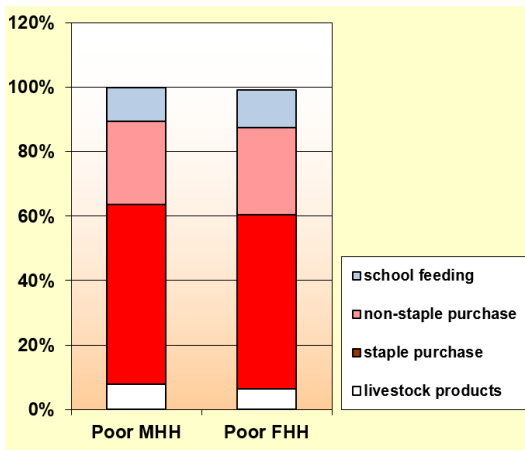
Female-Headed Households

Female-headed households are found in each of the wealth groups, as shown in the wealth breakdown table above. During field work, in-depth interviews were conducted with female-headed households from the poor wealth group. This is a group that faces similar constraints and characteristics as male-headed households in the same wealth group, but may be further disadvantaged by a lack of productive intra-household labor and, potentially, constraints on certain types of asset ownership, productive work, or income generating activities. Having said that, women in this livelihood zone have the right to inherit livestock from their husbands.

The graph on the left below illustrates that poor female-headed households and poor male-headed households share a very similar pattern of food access. Most food for this wealth group is purchased, with a small contribution from own livestock products (milk/meat).

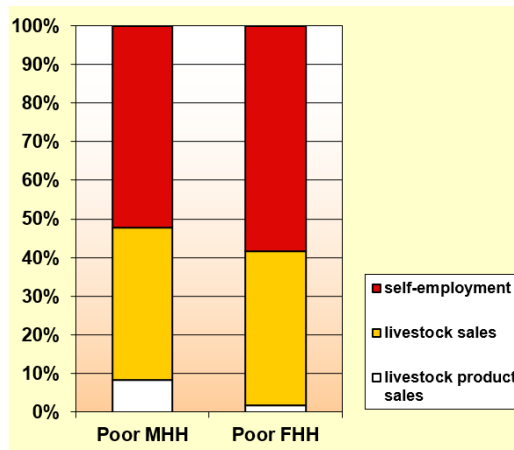
Cash income is also very similar, with a small difference in income earned from livestock product sales, which is a little higher for male-headed households. Poor female-headed households are less likely to own cattle than their male-headed counterparts in this wealth group, although their ownership levels of goats and sheep are similar. They make up for this with slightly more income from self-employment. Their absolute cash income levels are slightly lower than male-headed households in the same wealth group at a household level, but are almost exactly the same per person (with female-headed households having a slightly smaller household size of 7 members rather than 8 members).

Sources of food: poor female headed households vs poor male-headed households



In the graph, food access is expressed as a % of minimum food requirements, taken as an average food energy intake of 2100 kcals pppd.

Sources of cash: poor female headed households vs poor male-headed households



The graph provides a breakdown of total annual cash income according to income source.

Hazards

The Samburu Northern Pastoral Livelihood Zone is vulnerable to drought and to outbreaks of livestock diseases. Drought results in reduced pasture, browse and water availability for livestock, while livestock disease outbreaks can directly kill livestock or limit their productivity. Flash floods are a periodic hazard that can occur during rainy seasons. Cattle raiding is a chronic problem, mainly occurring in the rainy seasons when herding roles can be handled by children and young men have free time to raid.

Response Strategies

Households in this livelihood zone engage in a number of strategies in an attempt to cope with hazards. These include:

Switching of expenditure – Reducing expenditure on expensive foods (rice, sugar, vegetable oil), clothes, transport, and non-essentials (like alcohol and tobacco), in order to purchase more food, is a commonly used coping strategy pursued by all wealth groups.

Increased bush product collection and sale – The sale of firewood, charcoal and construction materials is intensified in bad years.

Increased wild food collection and sale – During bad years, household members spend more time collecting and processing wild foods, medicinal herbs, aloe vera and honey.

Labor migration – Increased numbers of people migrate in bad years to look for casual work. This reduces the number of mouths to feed locally and provides an income source for the household. However, the majority of households in this livelihood zone do not engage in this income-generating activity, even in bad years.

Increased livestock sales – Households from all wealth groups sell additional livestock to cover basic food and non-food expenses in bad years and to destock when the local environment cannot support all the livestock. However, the extent to which this strategy can be pursued without damaging future livelihoods is quite limited. Middle and better off households are in a better position to exploit this strategy.

Increased livestock product sales – Milk is a high value commodity in relation to the foods that households purchase (especially maize). In bad years, households sell a larger proportion of their milk production. This strategy is limited in years when drought is the main hazard and production levels are very low.

Seeking gifts -- Poorer households expect support from better off households in bad years, sometimes in exchange for labor. Social support is generally strong in pastoral communities, although repeated shocks put the ability to respond under pressure.

Livestock migration – Migrating with livestock to distant locations in search of better pasture and water is a common strategy in bad years, although it may mean moving to less secure areas. Most household members remain in a settlement where food aid is provided (or expected), while male adults and youths migrate with the livestock. Households with very few animals generally group their animals together with other households.

Key Parameters for Monitoring

The key parameters listed in the table below are things that make a substantial contribution to household food and income sources in the Samburu Northern Pastoral Livelihood Zone. These things should be monitored to indicate potential losses or gains to local household economies, either through ongoing monitoring systems or through periodic assessments.

It is also important to monitor the prices of key items on the expenditure side, including maize prices.

Item	Key Parameter – Quantity	Key Parameter – Price
Livestock	<ul style="list-style-type: none"> • Camel milk • Cow milk • Goat milk • Camel herd sizes • Cattle herd sizes • Goat herd sizes • Sheep herd sizes 	<ul style="list-style-type: none"> • Camel milk • Cow milk • Goat milk • Camel • Cattle • Goats • Sheep
Other food and cash income	<ul style="list-style-type: none"> • Firewood/charcoal • Livestock trade • Self-employment • Domestic labor 	<ul style="list-style-type: none"> • Firewood/charcoal • Livestock trade • Self-employment • Domestic labor

Development Priorities

The longer-term program implications suggested below were highlighted by the community leaders and wealth group interviewees themselves. All of these suggestions require further detailed feasibility studies and are covered by other USAID Nawiri studies.

Livestock production: Livestock diseases are a chronic problem in this livelihood zone and continued efforts to improve access to veterinary drugs and technical services are important. Increased access to water for livestock is also a priority.

Marketing: Opportunities for marketing livestock, livestock products and bush products and for purchasing inputs are relatively limited. Related to this, the road infrastructure is in a very poor state. Steps need to be taken to improve roads, market infrastructure and market function generally. This will not be easy to achieve and is likely to be relatively expensive in view of the sparse population and long distances between settlements in the county.

Health, water, sanitation and education: Improved health facilities, access to clean water for human consumption and sanitation facilities, and increased access to secondary and tertiary education were mentioned as priorities across all wealth groups.

Access to credit: There are informal group savings and loan (or merry-go-round) schemes in some villages, but there is interest in increased access to credit across all wealth groups for business activities. This would help with income diversification.

Peace building: Cattle raiding and general insecurity are problems in the livelihood zone. Increased efforts in conflict management and peace building were suggested.

3.2.3 Eastern Pastoral Livelihood zone

Samburu Livelihood Baseline Profile

Eastern Pastoral Livelihood Zone

April 2021⁵

Summary : The Eastern Pastoral Livelihood Zone is located in Samburu East and Samburu North Sub-Counties. Livestock rearing is the dominant economic activity, supplemented by other income generating activities for poorer households which do not have large enough herds to sustain a pastoral livelihood. Cattle and goats are the dominant livestock types in this livelihood zone, with smaller numbers of camels, sheep and donkeys. Herd sizes are larger than in the neighbouring Samburu Northern Pastoral Livelihood Zone. Other economic activities include charcoal production, firewood collection and sale, construction labor, domestic labor (including fetching water, washing and herding), brewing and petty trade. Market access is challenging due to the road infrastructure and distances from urban centers, but this is less problematic than in the Samburu Northern Pastoral Livelihood Zone. The main determinant of wealth in this zone is livestock ownership and livestock holdings increase with wealth. Longer-term program implications

⁵ Field work for the current profile was undertaken in March 2021. The information presented refers to April 2019 – March 2020, an average year for food security by local standards. 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 2026). All prices referred to in the document are for the reference year.

related to livestock production; infrastructure; health, water, sanitation and education; access to credit.

Zone Description

The zone (coded SEP in the map) is located in Samburu East and Samburu North Sub-Counties, covering 6 wards (Wamba West, Wamba East, Wamba North, Waso, Baawa, Angata Nanyekie). It is bordered by the Samburu Northern Pastoral Livelihood Zone to the northwest and west, Marsabit County to the north and east, Isiolo County to the south and the Samburu Agropastoral Livelihood Zone to the southwest.

Livestock rearing is the dominant economic activity in the Samburu Eastern Pastoral Livelihood Zone, supplemented by other income generating activities for poorer households like charcoal production, firewood collection, petty trade, domestic and construction labor and honey sales. It is a warm, semi-arid, lowland livelihood zone with low and erratic levels of rainfall, which means the area is not suitable for arable farming.

The natural vegetation includes rangelands,

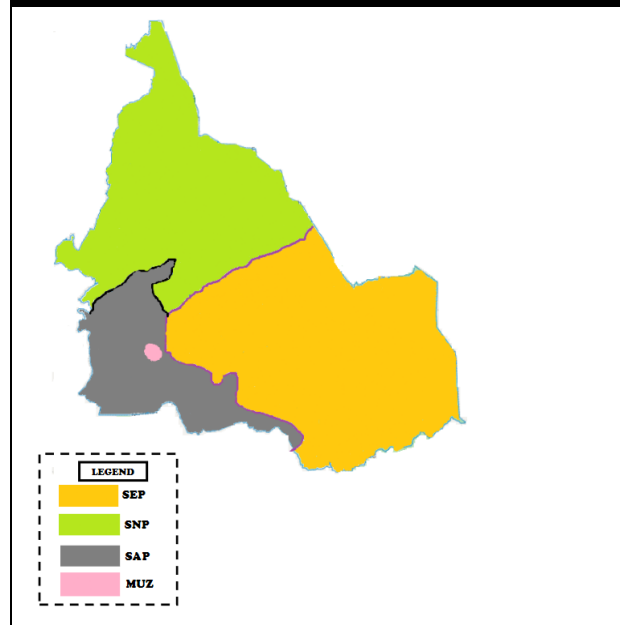
National Reserve and several conservancies managed by the Northern Rangelands Trust lie within the livelihood zone.

The Ng'eny and Lulu rivers are permanent and flow through this zone, while the Ewaso Ng'iro River is semi-permanent and there are a number of seasonal rivers (Nagor-oworu, Seiya, Rigrig, Sereolipi, Kukwar, Laresoro, Losesia). As well as rivers and open plains, the topography of the zone includes mountains (Mt. Lolokwe (Sapache); Ldonyuo Le Nkiyeu, Lenkura (Mathew Ranges), Tipito, Lolkeresire) and hills (Nasham-Nkainito; Lodung'okwe, Nonkupuli, Ndonyuo Wasin, Lolua, Lemarash, Loonkidong'i, Lowuamurt, Tabilbil, Narokwe).

The main roads running through the zone include those connecting Wamba to Isiolo (which is tarmac and part of the North Eastern Transport Corridor connecting Isiolo-Marsabit-Moyale) and Wambo to Maralal (a graded road with raised concrete bridges). Other roads within the livelihood zone are rough, but graded to improved local standards. These roads are dusty during the dry season are sometimes impassable in the wet season due to flooding. The main towns are Wamba and Archer's Post, while there are trading centers at Sereolipi, Lodung'okwe, Suari, Ndonyo wasin and Lolkuniyiani. Compared to the Samburu Northern Pastoral Livelihood Zone, this zone has better road infrastructure and better access to markets, to some support related to ecotourism (including school bursaries, borehole drilling and access to grazing land), and to nearby productive counties like Meru and Laikipia.

The rainy seasons run from April to May and from October to December and average annual rainfall per year is less than 700 mm. The 'long' rains in April to May are perceived to be

Livelihood Zones of Samburu County



slightly less important than the ‘short’ rains in October to December, although both seasons are important for ensuring adequate water, pasture and browse for livestock rearing. As elsewhere in Samburu County, rainfall is unreliable and erratic. It is a food deficit area in the sense that much consumed food is purchased and imported from other parts of Kenya.

The main types of livestock kept are cattle, goats, sheep, camels and donkeys. Herd sizes are larger than in the neighbouring Samburu Northern Pastoral Livelihood Zone. Livestock are fed by free grazing on grass and browse. There is no purchase of feed or water for livestock. During the rainy seasons, the main sources of water for livestock are permanent and seasonal rivers, ponds, seasonal pools and surface wells near to the home base. In the dry seasons, water for livestock is obtained from permanent and seasonal rivers and deep wells, sometimes at some distance from the home base. Men and boys migrate with the herd rather than whole households.

Livestock breeding is not controlled. Because of the usual peak of conceptions during the rainy seasons and the various lengths of gestation, camel births are most common in rainy seasons, cattle births in the dry seasons and goat births just before the start of the rainy seasons.

Livestock are milked year-round, but production decreases during the dry seasons. Mature female livestock are replaced from within the herds; livestock purchases are not very common. Slaughter of small stock is much more common than large.

The common diseases affecting livestock include *peste de petits ruminants* (PPR), contagious caprine pleuro pneumonia (CCPP) and foot and mouth. Livestock vaccination campaigns are periodically organised by the Ministry of Agriculture, while livestock drugs are purchased from the market. Other constraints to livestock production include deaths during previous droughts, dwindling forage reserves and over-dependence on livestock for food and income.

This is a pastoral livelihood zone; however, there is a notable split in livelihoods between the two upper and two lower wealth groups. The middle and better off are pastoralists who are entirely dependent on livestock production; the very poor and poor do not have large enough herds to sustain a pastoral livelihood and instead also depend on other income sources. Other economic activities include charcoal production, firewood collection and sale, construction labor, domestic labor (including fetching water, washing and herding), brewing and petty trade. Most of these income sources are more common in the dry season, but are possible all year. Women are more involved with firewood collection, charcoal production, brewing and petty trade, while men are more involved with livestock trading, herding, honey collection and construction-related activities.

There was some cash assistance to very poor and poor female-headed households from NGOs during the reference year of April 2019 to March 2020, and children from all wealth groups benefited from school feeding.

Water sources for humans include rivers, shallow wells and water pans in the rainy seasons, and deep wells and water pans in the dry seasons. Humans and livestock generally share the same water sources and there is no difference in this regard by household level of wealth. There is no payment for water in this livelihood zone. In most villages, there are no latrines or garbage disposal pits; open bush defecation and indiscriminate garbage disposal are common. Health services are accessed at dispensaries and health centers, which are sometimes long distances from villages. Services are generally available for a 20 KSh registration fee, but medical supplies and drugs are rarely available. Payment is required for referrals and for the purchase of medicines not available at dispensaries. Traditional medicine is also practiced. Electricity is

unavailable in the livelihood zone and most households obtain light from fires, kerosene and torches, while some better off households have access to solar power. Locally collected firewood is the main fuel used for cooking. There is no access to formal credit programs and savings are mainly through Mpesa/Mshwari. Organisations and NGOs working in the area include ACTED, Child Fund, BOMA, CARITAS Maralal, WFP, Northern Rangeland Trust, AMREF.

The youngest age at which boys/men generally get married is 18-25 years and the average age is 28-35 years. For girls/women, the youngest age of marriage is 13-14 years and the average age is 17-20 years. Fathers and clan elders decide when children should get married and the groom and his family pay for the dowry and wedding ceremony. A typical dowry is 8-10 cattle, 1 camel and 2-4 sheep plus 8-15,000 KSh and this does not vary by wealth group. The cost of the ceremony does increase with wealth, from about 25-30,000 KSh for the very poor to 50-75,000 KSh for the better off (or equivalent in livestock). Polygamy is common for middle and better off households. Men marry additional wives when they can afford it and need more household labor.

Markets

Market access in this livelihood zone is challenging due to the road infrastructure and distances from urban centers, but this is less problematic than in the Samburu Northern Pastoral Livelihood Zone. Two larger roads cross the Samburu Eastern Livelihood Zone: the tarmac North Eastern Corridor connecting Isiolo-Marsabit-Moyale and the Wamba to Maralal graded road, which has raised bridges. Most of the rest of the zone is accessed by graded dirt roads, which are generally accessible during the dry season, but less so in the rainy season. Insecurity can be a problem, but less so than in the Samburu Northern Pastoral Livelihood Zone.

The main markets used by the population of the livelihood zone are Archer's Post, Wamba, Lookuniyani, Lpus, Sere Olipi, Ndonyo Wasin, Lengusaka, Ngilai, Nairimirimo and Ngutuk Elmuget, which are all located within the livelihood zone. Livestock are exported out of the livelihood zone from these markets to destination markets in Nairobi, Meru, Isiolo and Nayuki. Most of the local livestock markets operate once per week throughout the year.

The main staple foods consumed in the livelihood zone are maize (grain/flour), rice, beans, sugar and vegetable oil. Maize, rice and beans are imported mainly from Meru and Nyahururu to Wamba in Samburu County and then on to smaller market towns and to village traders.

Labor migration by men exists as an income source across all wealth groups, but it is not an income source for a majority of households in any one wealth group. Most of the casual labor performed by people from the livelihood zone is undertaken within the local rural area. Self-employment (primarily the sale of bush products and local brew) is equally important in this livelihood zone. The market for these items is local, including nearby market centers.

Reference Year

The information presented in this profile refers to the period April 2019 to March 2020, a fairly average year for food security by local standards in most of the villages visited. In interviews at community level, key informants were asked to rank the seasons over the last five years, with

‘1’ indicating a poor season and ‘5’ indicating an excellent season for household food security. The average ranking for the long rains in 2019 was ‘2’ and for the short rains seasons in 2019 was nearly ‘3’. These two seasons followed a series of less good seasons/years. The following table provides a summary of the rankings of seasons for the last 5 years, starting with the most recent season.

Year	Season	Rank	Description
2020	Short	3	Average rainfall, good pasture and browse, average milk production and livestock diseases.
2020	Long	3	Above average rains, locust invasion, confirmation of 1 st Covid-19 case in Kenya, good forage and average milk production.
2019	Short	3	Average rains, increase in food prices, low milk production, internal migration of livestock, national population and housing census.
2019	Long	2	Average rains, poor/fair pastures, internal migration of livestock to good grazing zones in Merti (Isiolo County), death of livestock due to diseases.
2018	Short	1.5	No rains, no pasture, death of livestock, livestock diseases, migration of livestock outside the livelihood zone to Laikipia County, hunger. Relief food from the county government, cash transfers by WFP, distribution of livestock feed by county government.
2018	Long	1.5	Below average rains, reduced milk production, fair/good pasture.
2017	Short	2.5	Average rains, national elections, nationwide strike of health care workers, average pasture, average production of milk.
2017	Long	1.5	No rains, no pasture, nationwide campaigns, migration of livestock.
2016	Short	2.5	Below average rains, low production of milk, low pasture, death of livestock due to diseases.
2016	Long	1.5	Below average rains, death of livestock due to diseases, low pasture, low production of milk, migration of livestock.

Seasonal Calendar

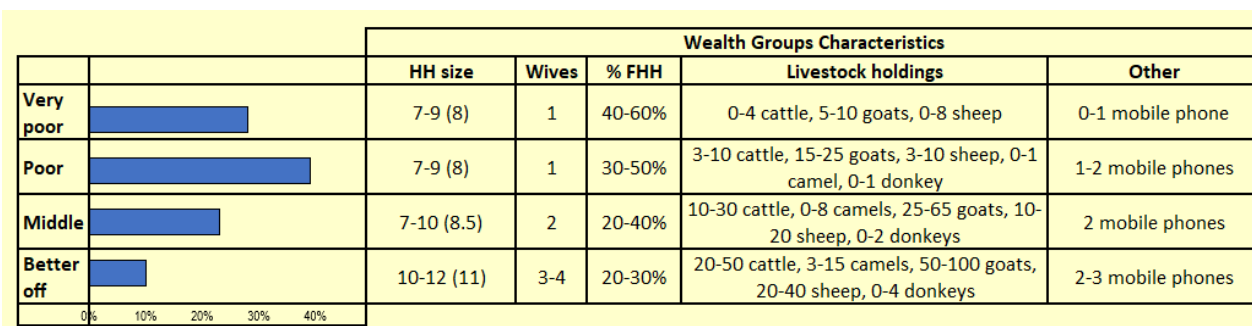
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Rainy seasons	<i>long</i>						<i>short</i>					
Dry seasons												
Livestock												
Camels												
conceptions												
births												
milk production												
Cattle												
conceptions												
births												
milk production												
Goats/Sheep												
conceptions												
births												
milk production												
Livestock migration - average year												
Livestock migration - bad year												
Livestock disease												
Livestock sales												
Other Income												
Firewood/charcoal sales peak												
Petty trade and brewing												
Remittances peak												
Stress & High Expenditure Periods												
High staple prices												
Festival season												
Human diseases peak												
Water scarcity (humans and livestock)												
Lean season												

The timing of rainfall determines the seasonality of livestock production and livestock movements. The ‘long’ rains fall from April-May and the ‘short’ rains from October-December. Once local pasture and browse are exhausted, the bulk of animals are moved away from home areas (where they spend the rainy seasons) into dry season grazing areas.

Livestock generally come into heat and conceive during the rains, when body condition is best. The timing of births is then determined by the length of pregnancy (camels give birth after 12 months, cattle after 9 months and sheep/goats after 5 months). Levels of milk production peak during the rains. This is the time of year when less staple food is purchased (and staple prices are lower) and few livestock are sold (and livestock prices are higher). It appears that staple food prices respond more to local patterns of demand than to the timing of harvests in the areas of production elsewhere in Kenya. The ‘hunger’ or lean seasons coincide with the dry seasons, when milk production is lower.

Charcoal burning and firewood sales are undertaken throughout the year, but peak during the dry/lean seasons. Other self-employment activities occur throughout the year.

Wealth Breakdown



The main determinant of wealth in this zone is livestock ownership and livestock holdings increase with wealth. Cattle and goats are the dominant livestock types in this livelihood zone, with smaller numbers of camels, sheep and donkeys.

Household size increases with wealth, as does the typical number of wives per man. A household in this zone is the larger unit of a man and his wives and children (rather than an individual wife and her children) because resources are shared amongst the members of the wider unit. Having said this, female-headed households are quite common, particularly amongst the poorer wealth groups.

	Wealth Breakdown	
	% of HHs	% of pop ⁿ
Very	25-30	25-30
Poor	35-45	35-40
Middle	20-25	20-25
Better	7-13	10-15

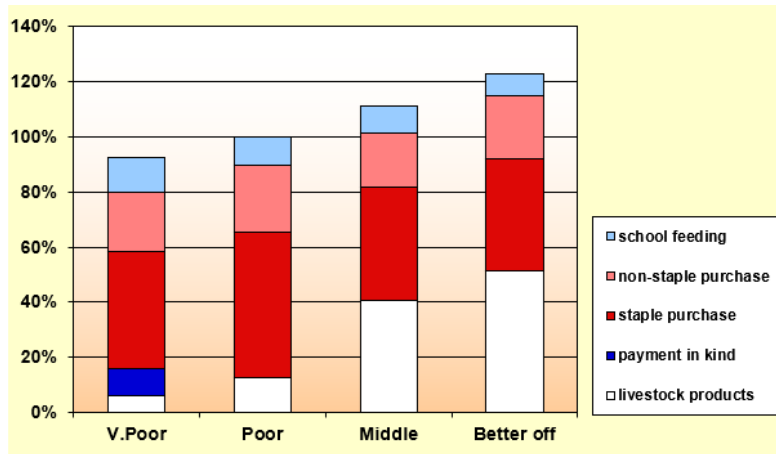
The small table to the right illustrates that the percentage of households in each wealth group is slightly different from the percentage of population in each wealth group (because of differing household sizes).

Schooling levels attained by children are different by wealth group, although there was little reported difference between boys and girls. Children from very poor and poor households rarely go beyond primary school, while children from middle and better off households attend secondary school.

Sources of Food for the Reference Year (2019-20)

The graph below presents the sources of food for households in different wealth groups in the livelihood zone for the period April 2019 – March 2020. April represented the start of the consumption year since it was when milk production starts to peak during the long rains season.

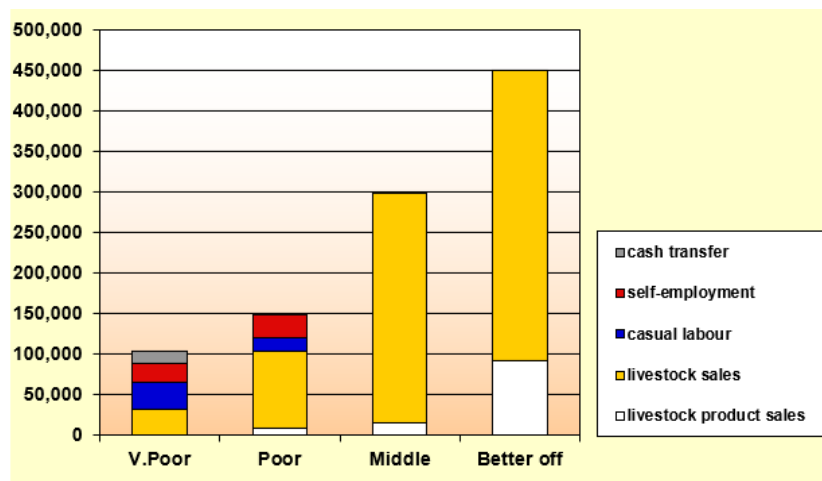
The proportion of food obtained from own livestock products (milk and meat, in white) increased with wealth. Market purchase was the other main source of food for households in all wealth groups in the reference year. The main items purchased were maize (grain/flour), rice, beans, vegetable oil and sugar. Other foods were not commonly purchased. School feeding represents meals eaten by children at school and was a food source across all wealth groups in the reference year. Payment in kind is food obtained from various types of domestic labor (instead of payment in cash).



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

Very poor households struggled to meet 100% of their food energy needs.

Sources of Cash for the Reference Year (2019-2020)



The graph provides a breakdown of total annual cash income in Kenyan shillings according to income source.

	Very poor	Poor	Middle	Better off
Annual income (KSh) 2019-20	85,000 - 125,000	120,000 - 180,000	250,000 - 350,000	350,000 - 650,000

The graph presents income sources by wealth group for the reference year April 2019 – March 2020. Income from livestock and livestock product sales increases steadily with wealth and are typically the only sources of cash for middle and better off households. This is different from their counterparts in the Samburu Northern Pastoral Livelihood Zone, where livestock income is supplemented by self-employment for all wealth groups.

Poor households obtained around 70% of their income from their livestock in the reference year and this was supplemented with income from self-employment and/or casual labor. For very poor

households, livestock provided only about one-third of their cash income. In addition to self-employment and/or casual labor, this group obtained some income from cash transfers from NGOs.

The self-employment category of income includes firewood and charcoal sales, building material sales, handicrafts, brewing, petty trade and honey sales. The labor category includes domestic work (washing, fetching water and firewood) and herding.

Decision making around the sale of milk is mostly made by women, based on the quantity produced, household size and needs, and access to markets. Very poor households have access to small quantities of milk and tend not to sell any. Poor and middle households sell 10-15% of their cow and goat milk, while better off households have access to larger quantities of milk and sell up to a quarter of their production.

Paid work by children (under 18 years) was reported to be very uncommon in this livelihood zone, but children help with livestock rearing and domestic tasks within their households.

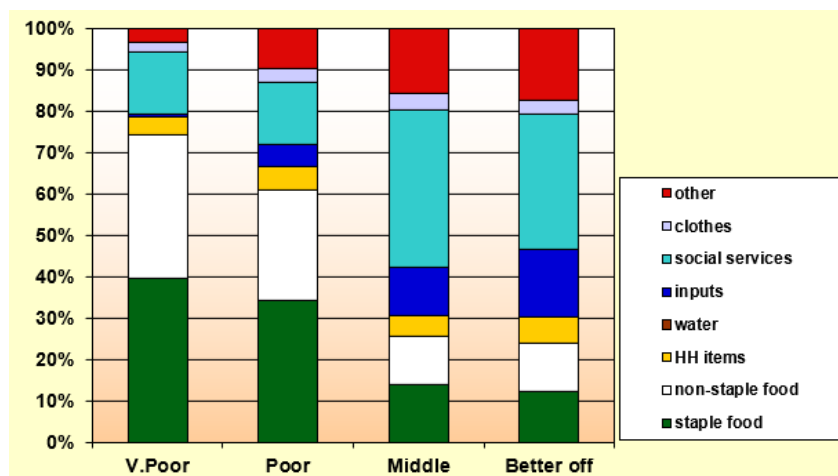
Labor migration by men exists as an income source across all wealth groups, but it is not a typical income source and hence does not appear in the graph above. About 25% of households have a household member who migrates in average years, increasing to about 30% in bad years. Destinations include Nairobi and Mombasa and the migrating man tends to stay away for 3-12 months. Remittances to the household are about 1-6,000 KSh per month.

Decision making around how to spend income is largely controlled by the person who earns the money or sells the item. Men control decision making around livestock income and income earned through their labor or self-employment activities, while women control income from milk and their own labor or self-employment activities. This includes any cash transfers or remittances received or credit taken.

Expenditure Patterns for the Reference Year (2019-2020)

The graph presents expenditure patterns for the reference year April 2019 – March 2020. While total expenditure increased with wealth, the expenditure breakdown by percent in this graph demonstrates how much was spent on different categories.

The proportion of expenditure on staple food (which is mostly cereals, in dark green in the graph) decreased with wealth from very poor households to better off households, from almost 40% of annual



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

expenditure to less than 15%. Combining staple and non-staple food, very poor households spent around 75% of their income on food, while the better off spent about 25%.

The main household items purchased (in yellow) were tea, salt, soap, cooking fuel (for the better off) and utensils. Water was generally not purchased in this livelihood zone. The ‘social services’ category (in pale blue) includes education and medical expenses. This was a major expenditure category for middle and better off households and mostly includes education costs. ‘Other’ items (in red) include expenditure on tobacco, alcohol, transport, phone credit, festivals, house repairs and social obligations.

The proportion of income spent on inputs increased with wealth. This included expenditure on livestock drugs, salt for livestock and restocking.

Key informants were asked if there are food items that households want to purchase that are not available in the market on a seasonal basis. Vegetables are less available during the dry season, particularly in remote locations. Food items that households would like to purchase more of, but find unaffordable, include wheat flour, rice, pulses, vegetables and fruit.

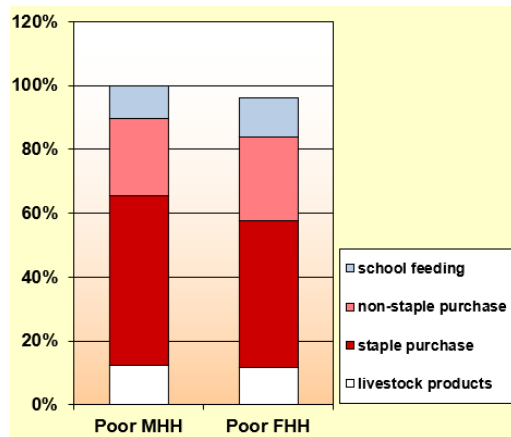
Female-Headed Households

Female-headed households are found in each of the wealth groups, as shown in the wealth breakdown table above. During field work, in-depth interviews were conducted with female-headed households from the poor wealth group. This is a group that faces similar constraints and characteristics as male-headed households in the same wealth group, but may be further disadvantaged by a lack of productive intra-household labor and, potentially, constraints on certain types of asset ownership, productive work, or income generating activities. Women in this livelihood zone have the right to inherit livestock from their husbands.

The graph on the left below illustrates that poor female-headed households and poor male-headed households share a very similar pattern of food access. Most food for this wealth group is purchased, with a small contribution from own livestock products (milk/meat) and school feeding. Total food needs met are slightly below 100% for poor female-headed households, but without an adult man in the household they may also have a lower requirement.

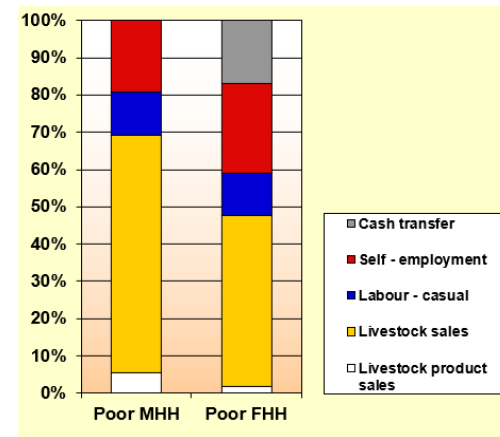
Cash income shows a different pattern between male- and female-headed households in the poor wealth group. Poor female-headed households own fewer livestock and obtain less income from livestock product sales and livestock sales. They make up for this with more income from self-employment and also received some cash transfers from NGOs in the reference year. Their absolute cash income levels are 20% lower than male-headed households in the same wealth group at a household level, and about 10% lower per person (with female-headed households having a slightly smaller household size of 7 members rather than 8 members).

Sources of food: poor female headed households vs poor male-headed households



In the graph, food access is expressed as a % of minimum food requirements, taken as an average food energy intake of 2100 kcals pppd.

Sources of cash: poor female headed households vs poor male-headed households



The graph provides a breakdown of total annual cash income according to income source.

Hazards

The Samburu Eastern Pastoral Livelihood Zone is periodically vulnerable to drought and outbreaks of livestock diseases. Drought results in reduced pasture, browse and water availability for livestock, while livestock disease outbreaks can directly kill livestock or limit their productivity. Wildlife attacks can be a problem during dry seasons, and especially during drought years, when water and forage resources are scarce and competition between domesticated and wild animals is high. Flash floods are another periodic hazard that can occur during rainy seasons. Insecurity caused by cattle raiding is an annual problem.

Response Strategies

Households in this livelihood zone engage in a number of strategies in an attempt to cope with hazards. These include:

Switching of expenditure – Reducing expenditure on expensive foods (rice, sugar, vegetable oil), clothes, transport, and non-essentials (like alcohol and tobacco), in order to purchase more food, is a commonly used coping strategy pursued by all wealth groups.

Increased bush product collection and sale – The sale of firewood, charcoal and construction materials is intensified in bad years.

Increased wild food collection and sale – During bad years, household members spend more time collecting and processing wild foods and honey.

Labor migration – Increased numbers of people migrate in bad years to look for casual work. This reduces the number of mouths to feed locally and provides an income source for the household. However, the majority of households in this livelihood zone do not engage in this income-generating activity, even in bad years.

Increased livestock sales – Households from all wealth groups sell additional livestock to cover basic food and non-food expenses in bad years and to destock when the local environment cannot support all the livestock. However, the extent to which this strategy can be pursued without damaging future livelihoods is quite limited. Middle and better off households are in a better position to exploit this strategy.

Increased livestock product sales – Milk is a high value commodity in relation to the foods that households purchase (especially maize). In bad years, households sell a larger proportion of their milk production. This strategy is limited in years when drought is the main hazard and production levels are very low.

Livestock migration – Migrating with livestock to distant locations in search of better pasture and water is a common strategy in bad years, although it may mean moving to less secure areas. Most household members remain in a settlement where food aid is provided (or expected), while male adults and youths migrate with the livestock. Households with very few animals generally group their animals together with other households.

Key Parameters for Monitoring

The key parameters listed in the table below are things that make a substantial contribution to household food and income sources in the Samburu Eastern Pastoral Livelihood Zone. These things should be monitored to indicate potential losses or gains to local household economies, either through ongoing monitoring systems or through periodic assessments.

It is also important to monitor the prices of key items on the expenditure side, including maize prices.

Item	Key Parameter – Quantity	Key Parameter – Price
Livestock	<ul style="list-style-type: none"> • Camel milk • Cow milk • Goat milk • Camel herd sizes • Cattle herd sizes • Goat herd sizes • Sheep herd sizes 	<ul style="list-style-type: none"> • Camel milk • Cow milk • Goat milk • Camel • Cattle • Goats • Sheep
Other food and cash income	<ul style="list-style-type: none"> • Firewood/charcoal • Self-employment • Construction labor • Domestic labor 	<ul style="list-style-type: none"> • Firewood/charcoal • Self-employment • Construction labor • Domestic labor

Development Priorities

The longer-term program implications suggested below were highlighted by the community leader and wealth group interviewees themselves. All of these suggestions require further detailed feasibility studies.

Livestock production: Livestock diseases are a chronic problem in this livelihood zone and continued efforts to improve access to livestock extension services are important. Increased access to water for livestock is also a priority.

Infrastructure: Road and bridge construction and improved communication networks would improve market access in this livelihood zone.

Health, water, sanitation and education: Improved health facilities, access to clean water for human consumption, and increased access to secondary education were mentioned as priorities.

Access to credit: There is interest in access to loans and grants for business activities. This may help with income diversification. 3.2.4 Maralal Urban Livelihood zone

Samburu Livelihood Baseline Profile

Maralal Urban Livelihood Zone

April 2021⁶

Summary : The Maralal Urban Livelihood Zone falls within Maralal Ward of Samburu West Sub-County in Samburu County. Maralal is a hillside market town and is the county capital and administrative headquarters of Samburu County. Livelihoods here are based around casual labor, employment, self-employment, trade and – to a small extent – agropastoralism. Households in all wealth groups are dependent on market purchases to acquire the bulk of their food needs and income from crops and livestock was small. Compared to the rural livelihood zones in Samburu County, market access in this livelihood zone is good because the road network is passable and the main county market is located in Maralal town. Seasonal changes in Maralal Urban Livelihood Zone are not as important as in the surrounding rural zones. This is mostly because livelihoods for the majority of Maralal’s residents are less based on own production and more based on the availability of work. Construction work, loading/unloading labor, domestic labor and formal employment are available throughout the year, as is self-employment income from trade, brewing, handicrafts and bodaboda (motorcycle taxis). Firewood and charcoal are collected and sold throughout the year, but there is a peak period from January - March. Longer-term program implications relate to health, water, sanitation and education; infrastructure; access to credit and job opportunities.

⁶ Field work for the current profile was undertaken in March 2021. The information presented refers to April 2019 – March 2020, an average year for food security by local standards. 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 2026). All prices referred to in the document are for the reference year.

Zone Description

The Maralal Urban Livelihood Zone (MUZ in the map to the right) falls within Maralal Ward of Samburu West Sub County in Samburu County. Maralal is a hillside market town and is the county capital and administrative headquarters of Samburu County. This HEA baseline covers Maralal town proper and peri-urban villages up to 10 km from the town center. Fieldwork was conducted in 10 settlements in these six sub-locations: Lkuroto, Milimani, Shabaa, Ngari, Maralal and Lpartuk.

Livelihoods here are based around casual labor, employment, self-employment, trade and – to a small extent – agropastoralism. The livelihood zone is surrounded by the Samburu Agropastoral Livelihood Zone, meaning that the geography and climate potentially support rainfed crop and livestock production.

Indeed, some crop and livestock production was found in the middle and better off wealth groups. However, households in all wealth groups are dependent on market purchases to acquire the bulk of their food needs and income from crops and livestock was small.

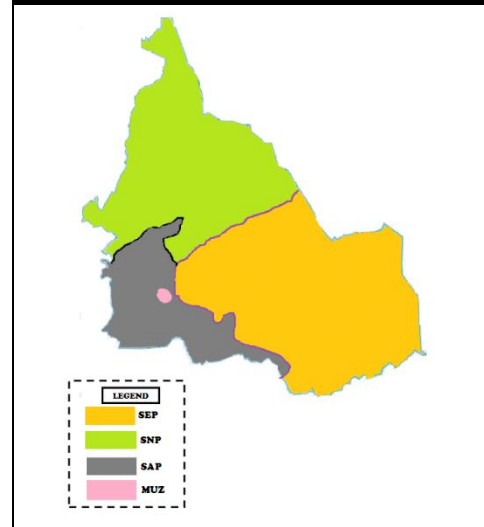
Maralal grew into a town in the 1990s, attracting communities from the north of Samburu County affected by conflict, drought and economic insecurity and who also now value the better access to education and health care that living in or near a town brings.

The town is located at almost 2000 metres above sea level. Like most of Samburu County, there are two main rainy seasons: the long rains which occur in March – May, and the short rains in October – December. However, most months experience some rainfall and there is about 1400-1500 mm of precipitation annually, which is much more than in the pastoral lowlands of Samburu County. Temperatures range from lows of 12-15C to highs of 21-24C in the town.

In terms of services, water sources are different according to wealth. Poorer households purchase water from boreholes or collect water from rivers and dams. Some wealthier households also purchase water from water bowsers, while others have their own borehole or harvest rainwater. Sanitation is also different. Wealthier households have their own latrines or toilets, while poorer households do not. Health services are accessed by all at the district hospital or health center, but wealthier households can also afford to pay for treatments at private clinics. Poorer households obtain light from fires, kerosene and torches, while better off households have access to electricity, solar power or generators. Firewood and charcoal are the main fuels used for cooking by poorer households, while better off households also use gas. There is no access to formal loans or credit for poorer households, while wealthier households can access loans through banks and microfinance institutions. Organisations and NGOs working in the area include BOMA, World Vision, ACTED, AMREF, Kenya Red Cross, Compassion.

The youngest age at which boys/men generally get married is 18 years and the average age is 20-30 years. For girls/women, the youngest age of marriage is 13 years and the average age is 15-25 years. Marriage age tends to be older for girls/women and boys/men from better off

Livelihood Zones of Samburu County



households compared to poor households. Fathers decide when children should get married and usually the groom's family pays for the dowry and wedding ceremony, although in better off families both sides of the family may contribute to the wedding ceremony. A typical dowry is 7 cattle (or cash equivalent) and this does not vary by wealth group. The cost of the ceremony increases with wealth, from about 10,000 KSh for the very poor to 50-100,000 KSh for the better off. Polygamy is less common in the urban setting compared to in rural areas.

This profile contains additional information about children's role in the household economy based on separate interviews with child workers in 8 villages. This is included in the sections on sources of income, expenditure patterns and coping strategies.

Markets

Compared to the rural livelihood zones in Samburu County, market access in this livelihood zone is good because the road network is passable and the main county market is located in Maralal town.

The main foods imported into the zone are cereals (maize meal, maize grain, rice, wheat flour and pasta), sugar, oil and beans. These items originate in the main productive areas of Kenya and usually travel through Nakuru and/or Nyahururu on their way to Maralal. Most items are purchased in Maralal town center or from small shops in the settlements.

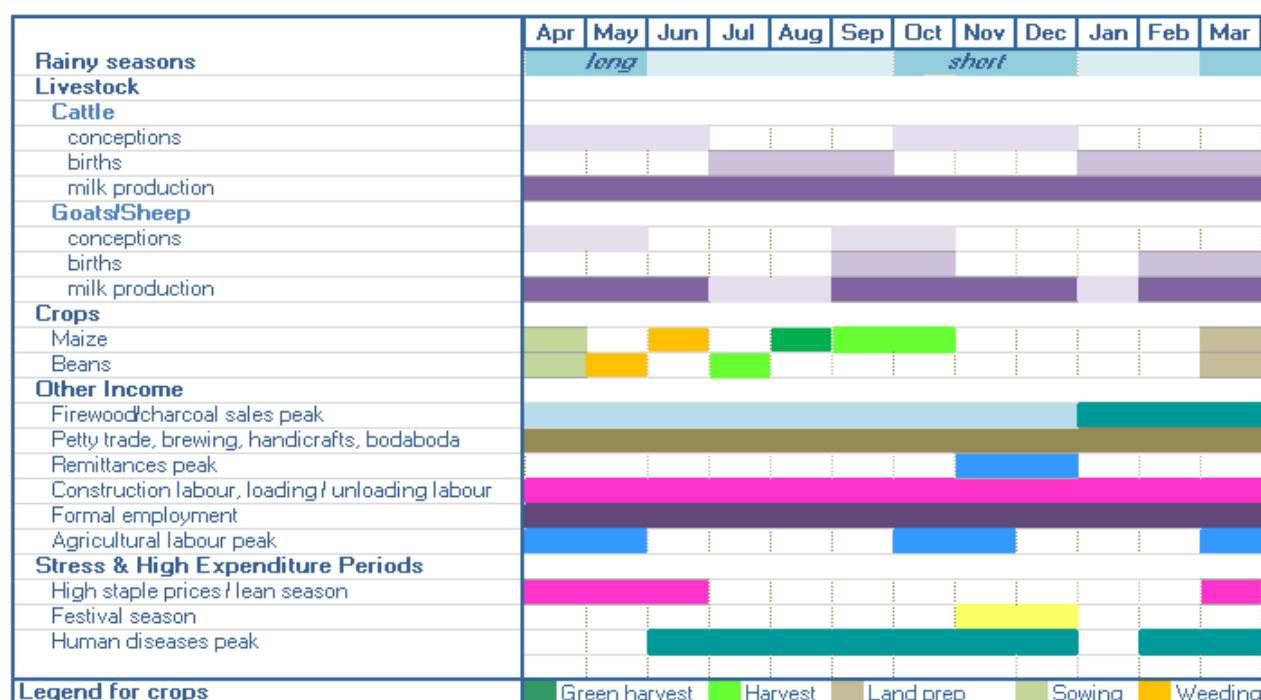
Casual labor is undertaken within the town itself or in the surrounding rural area during peak periods for agricultural labor. Bush products are collected in the nearby Kirisia Forest and their main market is Maralal town. Livestock are sold in the Maralal livestock market and exported from the area to destination meat markets through Rumuruti livestock market. Crop production by households in this urban zone is very limited and mostly for home consumption. Any small quantities of crop sales are for the local market.

Reference Year

The information presented in this profile refers to the period April 2019 to March 2020, an average year for food security by local standards in most of the villages visited. In interviews at community level, key informants were asked to rank the seasons over the last five years, with '1' indicating a poor season and '5' indicating an excellent season for household food security. The average ranking for the long rains season in 2019 was '2.5' and for the short rains season in 2019 was also '2.5'. These two seasons followed a couple of less good seasons. The following table provides a summary of the rankings of seasons for the last 5 years, starting with the most recent season.

Year	Season	Rank	Description
2020	Short	2	Insufficient rains, poor harvest, animal diseases, human diseases, water shortage.
2020	Long	2	Good rains, human diseases (coronavirus), closure of schools, floods, invasion of locusts, poor market prices.
2019	Short	2-3	Poor harvests, poor rains, good livestock production.
2019	Long	2-3	High livestock prices, delayed rains, moderate harvests.
2018	Short	2	Poor rains, migration of livestock (Laikipia), severe drought, death of livestock, high food prices. Increased casual employment.
2018	Long	1-2	Drought, poor harvests, high food prices. Aid from the county in terms of fodder, destocking, migration of livestock to ranches.
2017	Short	2-3	Moderate rains, moderate harvests, good livestock prices, good livestock production.
2017	Long	2-3	Good rains, good harvests, animal diseases.
2016	Short	2-3	Good harvests, high milk production, job opportunities.
2016	Long	2-3	Good rains, poor harvests, poor infestation and weeds, good livestock prices. Provision of tractors by county government for land preparation.

Seasonal Calendar



Seasonal changes in Maralal Urban Livelihood Zone are not as important as in the surrounding rural zones. This is mostly because livelihoods for the majority of Maralal’s residents are less based on own production and more based on the availability of work, some of which is relatively constant throughout the year.


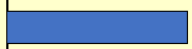


Construction work, loading/unloading labor, domestic labor and formal employment are available throughout the year, as is self-employment income from trade, brewing, handicrafts and bodaboda (motorcycle taxis). Firewood and charcoal are collected and sold throughout the year, but there is a peak period from January - March.

Agricultural work outside of Maralal town center is common for very poor and poor households and peaks during the land preparation/planting (March-April) and harvesting periods (from September). Farmers who cultivate within the livelihood zone harvest beans in June and maize from September.

Increased staple food (maize) prices correspond with the hunger season (March to June).

The timing of rainfall determines the seasonality of livestock production and livestock movements, although less so than in pastoral areas because the purchase of fodder is more common in this livelihood zone. Levels of milk production peak during the rains.

Wealth Breakdown

		Wealth Groups Characteristics					
		HH size	Wives	% FHH	Income range (KSh per year)	Livestock holdings	Other
Very poor		6-10 (8)	1	60-80%	120-150,000	No livestock	0 mobile phone
Poor		6-9 (7)	1	60-80%	150-200,000	0-2 cattle, 0-2 sheep, 0-5 poultry	1 mobile phone
Middle		7-9 (8)	1	25-50%	200-500,000	0-5 cattle, 0-10 goats, 0-10 sheep, 0-20 poultry	2-3 mobile phones; 0-1 motorcycle; 0-0.5 ha cultivated
Better off		7-9 (8)	1	10-25%	500,000+	5-15 cattle, 0-40 goats, 0-30 sheep, 15-45 poultry	2-4 mobile phones; 1 motorcycle; 0-1 ha cultivated
0% 10% 20% 30% 40%		% of households					

In a rural setting, wealth groups are primarily defined by their main productive assets, which are usually livestock or land holdings. In an urban setting, this definition is less relevant because only part of the population owns productive assets. Urban populations instead usually rely upon trade, self-employment and employment (skilled and unskilled labor) to maintain their livelihoods; therefore, urban wealth groups are categorized primarily by their income levels.

Four wealth groups were identified in this urban livelihood zone. The income levels and main characteristics of each wealth group are described in the table above. Income is mainly determined by the types of income activity household members are engaged in, which are described in the income section below. Households in Maralal maintain links with the surrounding rural area and some crop and livestock production was found.

Female-headed households are common in this urban livelihood zone, particularly in the very poor and poor wealth groups where they represent the majority of households. The definition of female-headed households used by the team is: a household in which the female is the primary provider of the household needs.

Schooling levels attained by children are different by wealth group, although there was little reported difference between boys and girls. Children from very poor and poor households rarely go beyond primary school, whereas children middle and better off households can reach secondary or even college level education.

Sources of Food for the Reference Year (2019-20)

The graph below presents the sources of food for households in different wealth groups in the livelihood zone for the period April 2019 – March 2020. April 2019 was selected as the start of the consumption year to match with the two pastoral livelihood zones that were assessed at the same time.

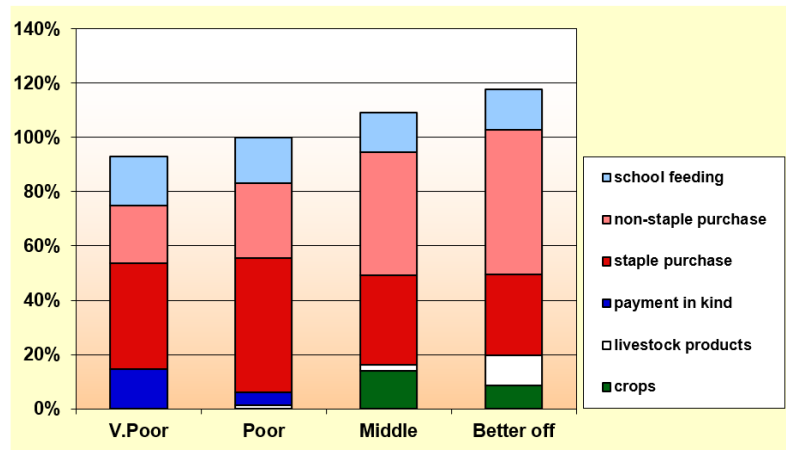
Market purchase was the main source of food for households in all wealth groups in the reference year. The main items purchased by all wealth groups were maize (grain/flour), rice, beans, vegetable oil, sugar, meat, milk, vegetables and wheat flour. Small quantities of pasta and fruit were also purchased by middle and better off households only.

School feeding represents meals eaten by children at school and was a food source across all wealth groups in the reference year. Other food assistance was not common in the reference year.

Payment in kind is food obtained from various types of domestic labor (instead of payment in cash), such as washing clothes, fetching water or babysitting.

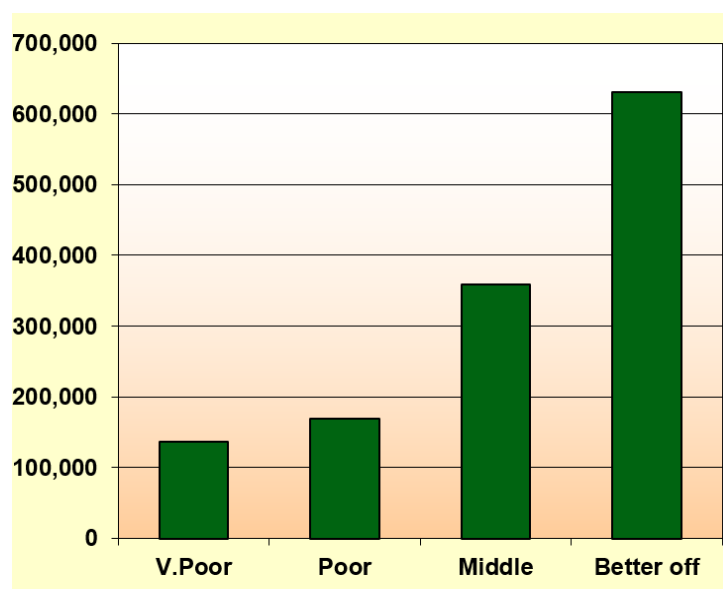
The proportion of food obtained from own crops (in green) and own livestock products (milk and meat, in white) was very small in this urban livelihood zone, but increased with wealth.

Very poor households struggled to meet 100% of their food energy needs.



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

Sources of Cash for the Reference Year (2019-2020)



The graph illustrates total typical annual cash income levels in Kenyan shillings.

	Very poor	Poor	Middle	Better off
Annual income (KSh) 2019-20	120,000 - 150,000	150,000 - 200,000	200,000 - 500,000	500,000+

Middle and better off households have higher income levels and commonly engage in some type of trade, perform specialized or skilled work, have formal employment and/or own a small or large shop or formal business. They also may have a small amount of cash income from their livestock holdings or from crop production, but these are relatively minor income sources in this urban livelihood zone.

Cash transfers and loan taking were not common across all wealth groups in the reference year.

Many income sources were paid or generated earnings by the day. As examples, unskilled construction labor was paid about 500 KSh per day in the reference year, while skilled construction labor was double that. Loading/unloading labor and bodaboda earned about 300 KSh per day. Small-scale hawking or vegetable trading earned 150-200 KSh per day. Households generally had two people earning income. Children's work and income is covered in the next section.

Labor migration by men and women exists as an income source for very poor and poor households. About 50% of households have a household member who migrates in average years, increasing to about 75% in bad years. Destinations include Rumuruti and the migrating person tends to stay away for 6-12 months. Remittances to the household are about 2,000 KSh per month in average years, but this decreases to 1,000 KSh per month in bad years.

The graph presents the total typical annual income level by wealth group for the reference year April 2019 – March 2020. For each wealth group, it represents the mid-point of a range.

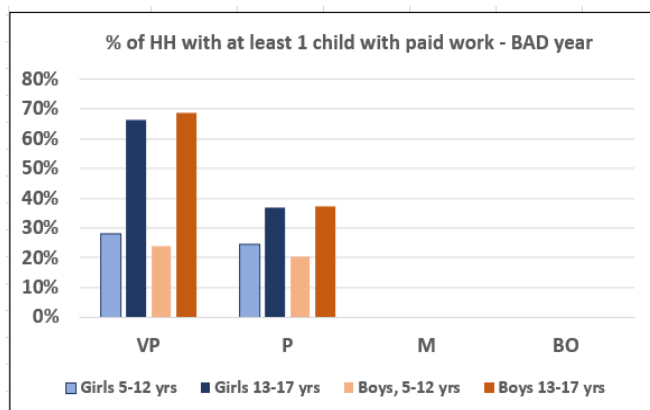
Income levels for very poor households largely fall in the range of KSh 120-150,000 per year and the types of income-generating activities in which they engage vary by household and include: charcoal and firewood sales, domestic labor, agricultural labor, unskilled construction labor, petty trade, brewing, boda boda (motorcycle taxis) and/or handicrafts.

Poor households have similar income options to their very poor neighbours but are more involved in trading and self-employment activities. Their income levels in the reference year fell in the range of 150- 200,000 KSh per year.

Decision making around how to spend income is reportedly more equally shared than in rural areas. Decision making around income from casual labor and self-employment generated by men is generally shared both by men and women, along with income from livestock and crop sales. However, income generated from casual labor and self-employment generated by women is generally made by women. In other cases, decision making around how to spend income is largely controlled by the person who earns or receives the money. This includes any migration income, cash transfers or remittances received, or credit taken.

The majority of very poor and poor households in this livelihood zone are female-headed and these are the households represented in the graphs above.

Children's income and child workers



Many children in the livelihood zone took on paid work in the reference year, but the incidence varied significantly by wealth group (see graph, right). In the upper wealth groups, children did not typically take on paid work even in a bad year. By contrast, in a bad year, in 70% and 40% of very poor and poor households respectively, at least 1 boy 13-17 years old carried out paid work. In this reference year, this dropped to 61% and 32% for the very poor and poor. Thus, for very poor households in particular, it is common most years for older boys to take on paid work.

This pattern of paid work was the same for girls. Principally, it is older girls (13-17 years) from very poor households who take paid work. In a bad year, the incidence was 66% of very poor households who had at least one girl with paid work which dropped marginally to 61% in the reference year. The incidence was lower for poor households and was in the range of about 35% in good years and bad.

Children 5-12 years	
VP/P	
Girls	Boys
domestic	domestic
agriculture	agriculture
	herding
Youth 13-17 years	
VP/P	
Girls	Boys
domestic	domestic
construction	construction
charcoal sales	agriculture
agriculture	herding
	charcoal sales
	boda boda

For the younger age group, in roughly 25% of very poor and poor households, a girl or boy 5-12 years old undertook paid work. The incidence did not change significantly between good years and bad.

Children do a range of work depending on their age and sex. Younger children typically work as domestic help, or they find paid work for local farmers or herders. Older girls and boys do similar work but in addition, due to their size and strength, they get paid jobs in construction (loading and offloading supplies), driving *boda boda* taxis, and burning and selling charcoal. Only boys typically get paid work herding but both girls and boys get paid to carry out on-farm work.

For those children who work, most typically get their first paid job around the age of 13 years. This reflects that amongst the younger age group (5-12 years), the

incidence of children with paid work is low. Peak work periods coincide with school term breaks (i.e., April, August, and December). During these peak months, children with jobs on average work for about 6 hours per day for 4-5 days per week. Earnings range from 50-150 KSh per day for younger girls 5-12 years to 100-500 KSh per day for older girls 13-17 years. Average earnings amounted to about KSh 235 perday. Younger girls were more typically paid a mix of cash and food especially those girls who worked as maids or had on-farm jobs. Boys worked similar hours to girls during the peak months (i.e. about 6 hours per day for 4-5 days/week). Boys earned slightly more than girls on average (255 KSh per day for older boys 13-17 years) but the range in earnings for boys 13-17 years was the same as for the older girls (i.e. 100-500 KSh per day).

The period January to March -- which coincides with the second term at school -- is the lowest period for work. During these months, children mix school with their job. Due to school, they work fewer hours per day (3-4 hours/day on average) and fewer days per week (2.5-3 days/week) compared to peak periods. Daily earnings at this time are slightly lower than during peak period (i.e. 210-225 Ksh per day in the low period compared to 235-255 KSh per day at the peak time) but the difference is not significant.

Reasons for working
VP/P
Girls
HH needs income (poverty)
Help in family enterprise
Self-reliance / save own money
Pay school expenses
Learn skills / trade
VP/P
Boys
HH needs income (poverty)
Self-reliance / save own money
Help in family enterprise
Pay school expenses
Support siblings
Learn skills / trade

Children have many reasons for seeking work but chief amongst them is the need to contribute to household income. Poverty is the key driver for seeking employment and about 50% of the children interviewed stated that poverty was the main reason why they work. Other than needing to help with household expenses, other reasons why children work is to help support a family enterprise (charcoal burning or taxi driving for instance), save some of their own money for self-reliance, pay for school expenses, learn a new trade, and, for older youth, help support their siblings.

As it is mainly older youth who find paid work in this urban zone, they typically control how the income is spent. 88% of girl and boy workers reported that they make their own spending decisions when it comes to their income. For those who do not control their own income, girls generally reported that their

mothers decided how their income was spent whereas boys typically reported that it was their fathers who made spending decisions in terms of the boys' income.

Despite the benefits of work, children also face work-place hardships. Accidents and illness from the job are the main disadvantages for both girls and boys. However, for girls, their primary work hazard is sexual assault and harassment. Almost 40% of the child workers interviewed ranked sexual assault/harassment as the main hazard of paid work for girls.

Hazards of paid work	
VP/P	
Girls	
Sexual assault/harassment	
Accidents/illhealth	
No or delayed pay	
Miss or drop out of school	
Mean boss/abuse	
Not enough time to study	

VP/P	
Boys	
Accidents/illhealth	
Miss or drop out of school	
Theft of goods/income	
Arrest/exposed to drugs	
Mean boss/abuse	
Sexual assault	
Stress	

Missing school or dropping out altogether is another significant work hazard. It was ranked as the main work hazard for boys by 25% of respondents (13% in the case of girls). Children are also vulnerable to not receiving their full pay or having payment delayed; they may suffer abuse from a mean

boss; and they are also at risk of having their money or goods stolen whilst working. Finally, boys in particular seem at risk of being exposed to drugs which often puts them at risk of arrest.

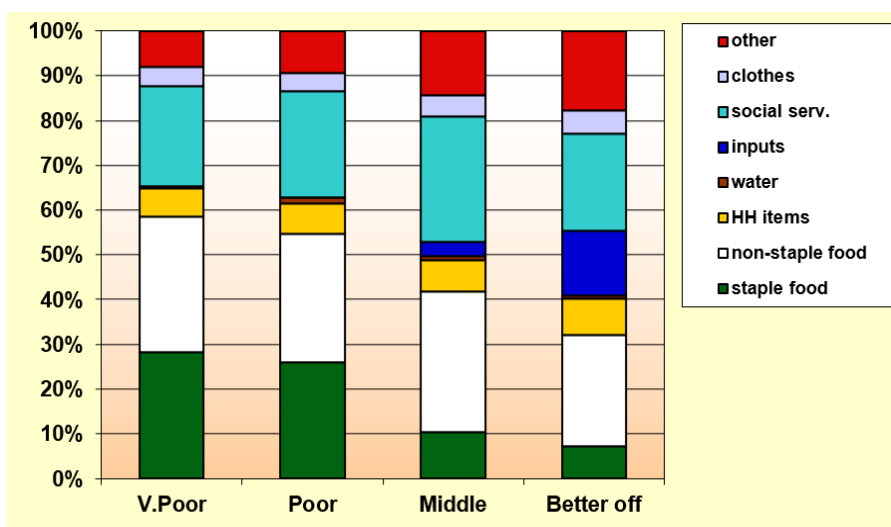
Ref Year	
Girls	Boys
maid/domestic	crush / sell stones
fetch water	dig wells
wash clothes	agricultural labour
fetch firewood	collect / sell sand
charcoal burning	construction (loading/offloading)
agricultural labour	herding
	fishing
Bad Year	
Girls	Boys
charcoal burning	crush / sell stones
maid/domestic	construction, fencing
wash clothes	collect / sell sand
fetch water	charcoal burning
collect / sell sand	herding, ag labour
brewing	watchman / askari
herding, ag labour	boda boda taxis
	fishing
	steal

The type of work carried out by children in a bad year does not differ greatly from an average year. The box to the left summarises the responses by adult key informants when asked about children's work in good years and bad. For girls, primary source of income in a bad year is charcoal burning whereas in the reference year, working as a maid, washing clothes and fetching water and/or firewood were their primary income sources. For boys, burning and selling charcoal is likewise an income source that is intensified in a bad year. Otherwise, the range of jobs remains much of the same in good years and bad, generally involving construction work (fencing, crushing stone, gathering and selling sand, digging wells, and loading/offloading) as well as herding, fishing and casual agricultural labor.

Expenditure Patterns for the Reference Year (2019-2020)

The graph presents expenditure patterns for the reference year April 2019 – March 2020. While total expenditure increased with wealth, the expenditure breakdown by percent in this graph demonstrates how much was spent on different categories.

The proportion of expenditure on staple food (which is mostly cereals, in dark green in the graph) decreased with wealth from very poor households to better off households, from almost 30% of annual



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

expenditure to less than 10%. Combining staple and non-staple food, very poor households spent around 55-60% of their income on food, while the better off spent about 30-35%.

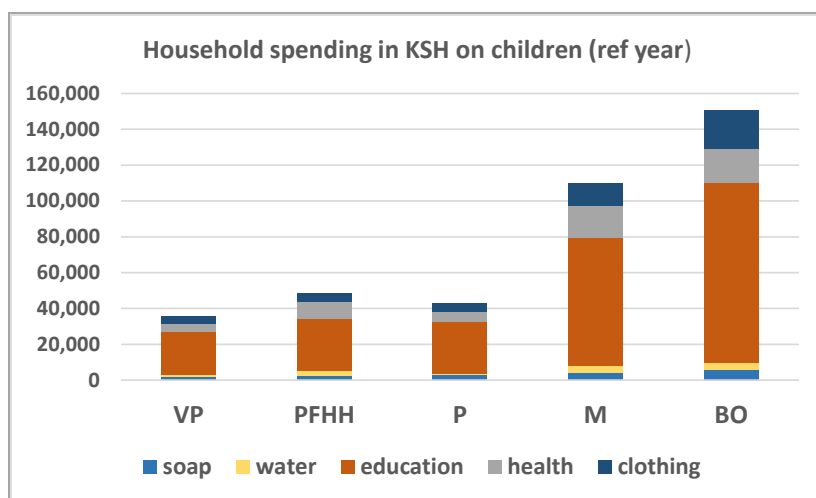
The main household items purchased (in yellow) were tea, salt, soap, cooking fuel (for the better off) and utensils. The ‘social services’ category (in pale blue) includes education and medical expenses. This was a major expenditure category for all wealth groups and is dominated by education costs. ‘Other’ items (in red) include expenditure on tobacco, alcohol, transport, phone credit, festivals, house repairs and social obligations.

The proportion of income spent on inputs increased with wealth. This included expenditure on livestock and crop inputs and labor.

Key informants were asked if there are food items that households want to purchase that are not available in the market on a seasonal basis. Vegetables are more expensive during the dry season and less available, as traders generally do not transport them then. Food items that households would like to purchase more of, but find unaffordable, include rice, wheat flour, meat, bread, pulses, cooking oil, fruit and carrots.

Household expenditures and spending on children’s basic needs

Looking at per capita spending by wealth group and then multiplying per capita spending by the typical number of children per household in each wealth group, we can compare differences in spending on children in the reference year.



The results of the analysis (see graph left) show that middle households spend about 3 times as much on children’s education and clothing and almost 4 times as much on health and water for children compared to very poor households.

What is particularly striking is the level of education expenditure. Spending on children’s schooling by middle and better off households was 250-350% of the spending level by poor households. As all wealth groups reported that they had 3-4 children attending primary school and at least 1 child attending secondary school, the difference in spending must reflect quality of schools, types of supplies, payment for boarding and other

	number of children/HH				
HH expenditures on children	6	6	5	5	5
	VP	PFHH	P	M	BO
soap	1,983	2,543	2,774	4,329	5,625
water	1,053	2,808	1,114	3,960	4,313
education	23,754	28,669	28,675	71,170	100,000
health	4,767	9,777	5,224	17,672	19,375
clothing	4,481	4,645	5,049	12,719	21,250

costs that are part of a higher quality service. Other differences in spending on key services for children, such as on health care or water access, are not as stark although certainly upper wealth groups uniformly spent more on their children than the lower wealth groups. This of course reflects the high income earned by middle and better off wealth groups and thus their ability to pay for more (and better quality) essential goods and services.

Hazards

The Maralal Urban Livelihood Zone is vulnerable to drought and to outbreaks of livestock diseases. Drought results in reduced pasture, browse and water availability for livestock, while livestock disease outbreaks can directly kill livestock or limit their productivity.

Staple food price increase: The most common hazard in this zone is sharp increases in staple food prices. All households depend heavily on food purchased from the market and increases in prices result in increased difficulty with access unless incomes also increase.

Drought in rural areas: This periodic event does not have a large direct effect on households in this zone but is one of the causes for price increases and competition for labor opportunities from in-migration from other livelihood zones and reduced self-employment income.

Response Strategies

Households in this livelihood zone engage in a number of strategies in an attempt to cope with hazards. These include:

Switching of expenditure – Reducing expenditure on expensive foods (rice, sugar, vegetable oil), clothes, transport, and non-essentials (like alcohol and tobacco), in order to purchase more food, is a commonly used coping strategy pursued by all wealth groups.

Increased self-employment and casual labor – The sale of firewood, charcoal and construction materials is intensified in bad years. Households search for all opportunities to increase income from self-employment and casual labor.

Labor migration – Increased numbers of people migrate in bad years to look for casual work. This reduces the number of mouths to feed locally and provides an income source for the household. However, the majority of households in this livelihood zone do not engage in this income-generating activity, even in bad years.

Increased livestock sales – Households from the middle and better off wealth groups can sell additional livestock to cover basic food and non-food expenses in bad years and to destock when the local environment cannot support all the livestock.

Effect of bad years on children

Bad year impacts BASIC NEEDS
VP/P
Girls
fewer meals
can't afford personal care items
can't afford clothes
drop out of school
less food per meal
sick (can't afford health care)
VP/P
Boys
drop out of school
fewer meals + less food/meal
can't afford personal care items
sick (can't afford health care)
can't afford clothes
use of drugs

Bad year impacts on children's work			
	Mild/ lean season	Moderate bad year	Severe bad year
migrate away	12%		6%
drop out of school	13%	30%	6%
more illness from work	25%	20%	18%
more early marriage/pregnancy	50%	5%	35%
don't get paid		10%	
more harassment / assault		10%	5%
more accidents / injuries		5%	15%
more riskier work (steal; drug abuse)		20%	15%
% of the responses to the question - adult key informants			

From children's perspectives, bad years means less food at home leading to either fewer meals or eating less at each meal. Amongst the child respondents, 40-50% ranked less food/fewer meals as the main impact of a bad year in terms of their basic needs. Significantly, almost 40% of child respondents said that a major impact of bad years on girls' basic needs was lack of money to buy personal care items. By contrast, for boys, the other major impact of bad years is having to drop out of school to work. See box top left.

When adult key informants were asked about the impact of a bad year on children and children's work, they highlighted that the most significant impacts include dropping out of school and suffering more illness from work (this may reflect the nature of work, but it also may affect children's overall worsening health conditions in a bad year). Moreover, in moderate and severe bad years, child workers may be forced to take on riskier work, including stealing, or taking on work that exposes them to drug abuse. However, one of the most significant impacts highlighted by the adults was that bad years often lead to early marriages and, for girls, pregnancy at a young age. Early marriage has a health effect on girls and also typically leads to the end of their education.

Bad year coping strategies WORK
VP/P
Girls
work more hours per day
do two or more jobs
migrate away to work
borrow from friends
join another family for work

Bad year coping strategies WORK
VP/P
Boys
drop out of school to work
beg for money or food
work more hours per day
migrate away to work
do two or more jobs
take riskier jobs / steal
join another family for work

According to children, 'lean' periods mean working more hours per day and often taking on two or more jobs to earn additional income. Migrating away to larger towns for work is a strategy more often used by boys than girls but nonetheless, it was still ranked second as a strategy for girls. Other strategies used by boys and girls is to borrow or beg money and food, join another

family to work, and, finally, to steal.

Key Parameters for Monitoring

The key parameters listed in the table below are things that make a substantial contribution to household food and income sources in the Maralal Urban Livelihood Zone. These things should be monitored to indicate potential losses or gains to local household economies, either through ongoing monitoring systems or through periodic assessments.

It is also important to monitor the prices of key items on the expenditure side, including maize prices.

Item	Key Parameter – Quantity	Key Parameter – Price
Crops and livestock	<ul style="list-style-type: none"> • Cow milk • Cattle herd sizes • Goat herd sizes • Maize harvest 	<ul style="list-style-type: none"> • Cow milk • Cattle • Goats
Other food and cash income	<ul style="list-style-type: none"> • Firewood/charcoal • Agricultural labor (cultivation) • Agricultural labor (harvest) • Construction labor • Domestic labor • Livestock trade • Self-employment • Petty trade 	<ul style="list-style-type: none"> • Firewood/charcoal • Agricultural labor (cultivation) • Agricultural labor (harvest) • Construction labor • Domestic labor • Livestock trade • Self-employment • Petty trade

Development Priorities

The longer-term program implications suggested below were highlighted by the community leaders and wealth group interviewees themselves. All of these suggestions require further detailed feasibility studies.

Health, water, sanitation and education: Improved health facilities, access to clean water for human consumption, improved sanitation facilities, and increased access to secondary and tertiary education were mentioned as priorities across all wealth groups.

Infrastructure: Road and bridge construction and improved communication networks would improve market access between this livelihood zone and other parts of the county.

Access to credit and job opportunities: There is interest in access to loans and grants for business activities and training in business skills. Job and income-generating opportunities for youths are particularly sought after.

Inputs for crop and livestock production: Provision of fodder for livestock, improved livestock breeds and inputs for farming were mentioned by wealth groups with access to land.

3.2.5 Agropastoral Livelihood zone

Samburu Livelihood Baseline Profile

Agropastoral Livelihood Zone

August 2021⁷

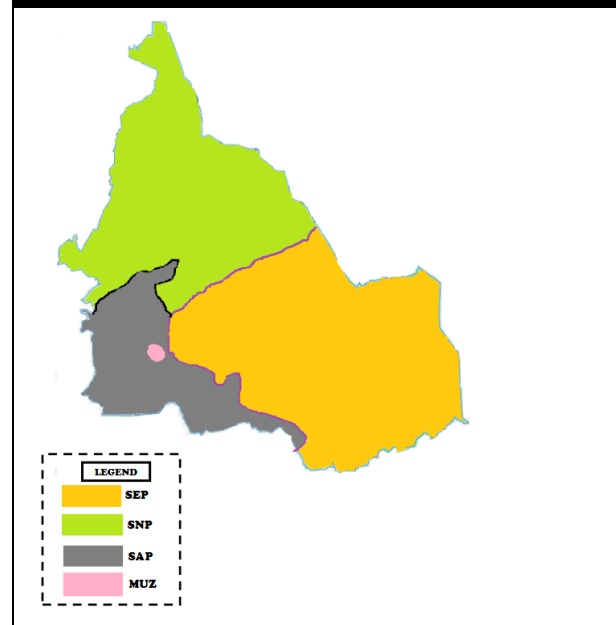
Summary : The Samburu Agropastoral Livelihood Zone is located in Samburu Central Sub-County. Crop production and livestock rearing are important economic activities in this zone, supplemented by other income generating activities for poorer households like various types of casual work (agricultural, domestic, herding) and self-employment (especially charcoal production and firewood collection). Off-farm income sources for wealthier households include trading activities. The main crops grown are rainfed maize and beans during the long rains season. The main types of livestock kept are cattle, sheep, goats and chickens. The main determinants of wealth in this zone are land areas cultivated and livestock ownership, both of which increase with wealth. Longer-term program implications related to crop production; livestock production; infrastructure; and access to credit.

Zone Description

The zone (coded SAP in the map) is located in Samburu Central Sub-County, covering just over 60% of the sub-county population (as of 2019). It is bordered by the Samburu Northern Pastoral Livelihood Zone (SNP) to the north, the Samburu Eastern Pastoral Livelihood Zone (SEP) to the east, Turkana County to the west and Laikipia and Isiolo Counties to the south. It surrounds the Maralal Urban Livelihood Zone (MUZ).

Crop production and livestock rearing are important economic activities in this agropastoral livelihood zone, supplemented by other income generating activities for poorer households like various types of casual work (agricultural, domestic, herding) and self-employment (especially charcoal production and firewood collection). Off-farm income sources for wealthier households include

Livelihood Zones of Samburu County



⁷ Field work for the current profile was undertaken in July-August 2021. The information presented refers to April 2019 – March 2020, an average year for food security by local standards. 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 2026). All prices referred to in the document are for the reference year.

The main towns located within the livelihood zone are Maralal, Kisima and Suguta Marmar. The Seiya and Nkare Narok rivers are seasonal and flow through this zone. The main roads running through the zone include the road from Nyahururu to Baragoi, which passes through Maralal, and the road from Maralal to Archer's Post via Wamba. Other roads within the livelihood zone are rough, but graded to improved local standards. These roads are dusty during the dry season and sometimes impassable in the wet season due to flooding.

The rainy seasons run from March to May and from October to December and average annual rainfall per year is between 700-1000 mm. The 'long' rains in March to May are more important than the 'short' rains in October to December for crop production, but both seasons are important for ensuring adequate water, pasture and browse for livestock rearing. As elsewhere in Samburu County, rainfall can be unreliable and erratic. It is a food deficit area in the sense that some consumed food is purchased and imported from other parts of Kenya.

The main crops grown are rainfed maize and beans during the long rains season. The soils are moderately productive loam and chemical fertilizers are not commonly used, just manure from livestock. Poorer households prepare their land by hand, while wealthier households hire tractors for this purpose. Weeding and harvesting are the main activities for paid casual agricultural work. Maize can be affected by pests such as army worm and locusts.

The main types of livestock kept are cattle, sheep, goats and chickens. Livestock are fed by free grazing on grass and browse and on crop residues. There is no purchase of feed or water for livestock. During the rainy seasons, the main sources of water for livestock are minor rivers, shallow wells and seasonal pools. In the dry seasons, water for livestock is obtained from boreholes and deep wells. Livestock are milked year-round, but production decreases during the dry seasons. Mature female livestock are replaced from within the herds; livestock purchases are not very common. Slaughter of small stock is much more common than large. The common diseases affecting livestock include foot and mouth (FMD), contagious caprine pleuro pneumonia (CCPP), bovine diarrhoea, lupus and enteroxemia. Livestock vaccination campaigns are periodically organised by the Ministry of Agriculture, while livestock drugs are purchased from the market.

Livestock migration depends on the performance of rains each season. In a year with average rains, livestock remain close to the home base during the rainy seasons and may split during the dry seasons, with some livestock nearby, others away from home but within the Samburu Agropastoral Livelihood Zone, and still others as far as Laikipia County or the Marti area in the Samburu Northern Pastoral Livelihood Zone. These more distant locations are the main areas where livestock are taken in bad years when the rains fail.

Water sources for humans include rivers, ponds and boreholes. There is no payment for water in this livelihood zone. In most villages, wealthier households have latrines, while poorer households use the bush. Health services are accessed at local dispensaries and health centers, which are sometimes long distances from villages. Services are generally available for a 20 KSh registration fee, but medical supplies and drugs are rarely available. Payment is required for referrals and for the purchase of medicines not available at dispensaries.

For primary education, most schools are located locally at village level, where students can easily access them. For secondary, some schools are near and some quite far depending on the location of the village. Not every location has a secondary school and in some cases students

must cover long distances to get to school. For tertiary education, access is only in a few institutions in Maralal and Wamba towns or outside the county.

Electricity is unavailable in the livelihood zone and most households obtain light from fires, kerosene and torches, while some better off households have access to solar power. Locally collected firewood or charcoal is the main fuel used for cooking, although some better off households use gas.

Only better off households have access to formal loan programs through banks and credit is otherwise unavailable. Organisations and NGOs working in the area include ACTED, BOMA, NARIG, WFP, FAO, AMREF, World Vision, Kenya Red Cross.

The typical age at which boys/men generally get married is 19-25 years across all wealth groups. For girls/women, the typical age of marriage is 15-20 years for poorer households and 18-20 years for wealthier households. Fathers generally decide when children should get married and the groom and his family pay for the dowry and wedding ceremony. A typical dowry is 7-9 cattle, 1-2 sheep plus 10-20,000 KSh and this does not vary by wealth group. The cost of the ceremony increases with wealth, from about 20,000 KSh for the very poor to 30,000 KSh for the better off (or equivalent in livestock). Polygamy is common for better off households. Men marry additional wives when they can afford it and need more household labor.

Markets

Although better than in the nearby pastoral livelihood zones, market access in this livelihood zone is challenging due to the road infrastructure. Most of the zone is accessed by graded dirt roads, which are generally accessible during the dry season, but less so in the rainy season when some become impassable.

The main market used by the population of the livelihood zone is Maralal. Maize and beans are sold from village level at weekly markets to traders from Maralal and then on to other local markets within Samburu.

Livestock are exported out of the livelihood zone from local weekly livestock markets in Poro, Nkorika, Kisima, Loosuk, Lekuru, Suguta and Longewan where livestock and other commodities are sold/purchased. The final destination markets are towns within Samburu and larger urban centers in other counties.

The main staple foods consumed in the livelihood zone are maize, rice, beans, sugar and vegetable oil. These food items are imported through Nyahururu to Maralal in Samburu County and then on to smaller market towns and to village traders within the livelihood zone.

Approximately 80% of the casual labor performed by people from the livelihood zone is undertaken within the local rural area. Another 15% is carried out in local towns, while only about 5% is outside the livelihood zone (in large urban towns like Nairobi, Nakuru, Laikipia). Self-employment (primarily the sale of firewood and charcoal) is important in this livelihood zone. The market for these items is local, including nearby market centers.

Reference Year

The information presented in this profile refers to the period April 2019 to March 2020, a fairly average year for food security by local standards in most of the villages visited. In interviews at community level, key informants were asked to rank the seasons over the last five years, with '1' indicating a poor season and '5' indicating an excellent season for household food security. The average ranking for the long rains and the short rains seasons in 2019 was '3'. These two seasons followed a series of less good seasons/years. The following table provides a summary of the rankings of seasons for the last 5 years, starting with the most recent season.

Year	Season	Rank	Description
2020	Short	3	Heavy rains, average livestock production, good pasture, average livestock markets, livestock diseases
2020	Long	3	Heavy rains, high livestock production, good pasture, good harvest, outbreak of Covid-19, closure of livestock markets, crop pests
2019	Short	3	Moderate to heavy rains, average livestock production, good livestock markets, livestock diseases
2019	Long	3	Moderate to heavy rains, average livestock production, good harvest, crop attack by wild animals, good pasture, livestock diseases
2018	Short	2	Light rains, lack of enough pasture, low livestock markets, low livestock production, livestock migration
2018	Long	2.5	Poor to moderate rains, low to average livestock production, low to average crop harvest, livestock diseases, low to average livestock market
2017	Short	2	Poor rains, low livestock production, livestock migration, deaths of livestock, poor livestock markets, lack of enough pasture
2017	Long	1.5	No rains, low livestock production, no harvest, poor livestock markets, migration of livestock, lack of livestock pasture
2016	Short	2	Low rains, low livestock production, low livestock market, lack of enough pasture
2016	Long	2	Low rains, low livestock production, lack of enough pastures, low to harvest failure, livestock diseases

Seasonal Calendar

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Rainy seasons	<i>long</i>						<i>short</i>					
Dry seasons												
Crops												
maize												
beans												
Livestock												
Cattle												
conceptions												
births												
milk production												
Goats/Sheep												
conceptions												
births												
milk production												
Other Income												
Firewood/charcoal sales peak												
Petty trade												
Stress & High Expenditure Periods												
High staple prices												
Festival season												
Lean season												

The timing of rainfall determines the seasonality of crop and livestock production. The ‘long’ rains fall from March-May and the ‘short’ rains from October-December.

Maize and beans are the main crops and they are cultivated during the long rains season, with land preparation commencing before the rains begin. Planting occurs with the start of the rains, followed by a period for weeding. Beans mature first, with green consumption in June and the main harvest in July-August. Green consumption of maize starts in August, with the main harvest in September-October.





The start of green maize consumption ends the lean season, which can last from February-July for the poorest households. Staple food prices peak during the lean season.

Although the consumption year begins in August, the reference year April 2019 to March 2020 (starting with peak milk production rather than crop production) was selected for this livelihood zone because Covid-19 restrictions affected livelihoods from April 2020.

Livestock generally come into heat and conceive during the rains, when body condition is best. The timing of births is then determined by the length of pregnancy (cattle give birth after 9 months and sheep/goats after 5 months). Levels of milk production peak during the rains.

Charcoal burning and firewood sales are undertaken throughout the year, but peak during the lean season. Petty trade and other self-employment activities occur throughout the year.

Wealth Breakdown

		Wealth Groups Characteristics					
		HH size	Wives	% FHH	Land areas cultivated (acres)	Livestock holdings	Other
Very poor		7-9 (8)	1	40-60%	0.25 - 0.5 acres	0 cattle, 0-3 goats, 2-5 sheep, 0-10 chickens	1 mobile phone
Poor		7-9 (8)	1	30-50%	0.25 - 0.75 acres	2-4 cattle, 3-8 goats, 5-10 sheep, 0-15 chickens	1 mobile phone
Middle		8-15 (11)	1-2	20-40%	1 - 1.5 acres	5-10 cattle, 5-15 goats, 10-25 sheep, 0-15 chickens	2 mobile phones
Better off		14-16 (15)	2	15-25%	1.5 - 3 acres	10-20 cattle, 15-35 goats, 25-60 sheep, 0-15 chickens	2-4 mobile phones, 0-1 motorcycle

0% 10% 20% 30%
% of households

The main determinants of wealth in this zone are land areas cultivated and livestock ownership, both of which increase with wealth.

In most villages, land ownership is communal, so households do not own their land. For this reason, land areas cultivated are more relevant for distinguishing between wealth groups and this is indicated in the table above. Sheep, goats, cattle and chickens are the main livestock types in this livelihood zone, with few camels or donkeys.

Household size increases with wealth, as does the typical number of wives per man. A household in this zone is the larger unit of a man and his wives and children (rather than an individual wife and her children) because resources are shared amongst the members of the wider unit. Having said this, female-headed households are quite common, particularly amongst the poorer wealth groups.

	Wealth Breakdown	
	% of HHs	% of pop ⁿ
Very	20-35	15-30
Poor	30-40	20-35
Middle	20-30	20-35
Better	10-20	20-25

The small table to the right illustrates that the percentage of households in each wealth group is slightly different from the percentage of population in each wealth group (because of differing household sizes).

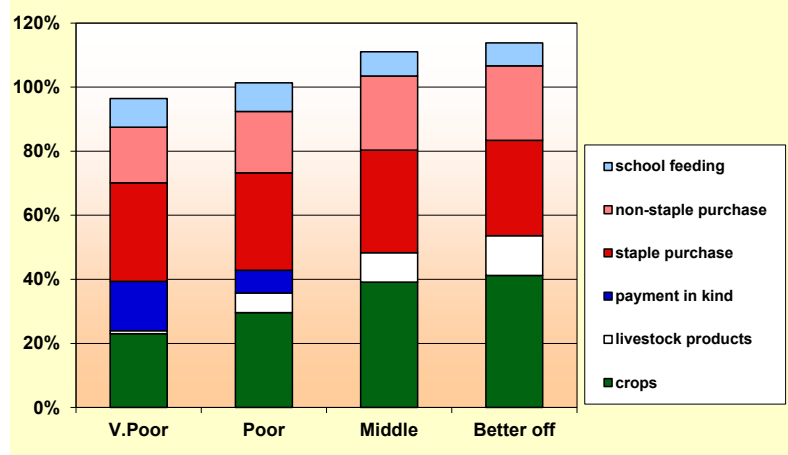
Schooling levels attained by children are different by wealth group, although there was little reported difference between boys and girls. Children from very poor and poor households rarely go beyond primary school, while children from middle and better off households attend secondary school and some continue to university.

Sources of Food for the Reference Year (2019-20)

The graph below presents the sources of food for households in different wealth groups in the livelihood zone for the period April 2019 – March 2020.

The proportion of food obtained from own crop production increased with wealth, from 20-30% for very poor households to just over 40% for better off households. The contribution of own livestock products (milk and meat, in white) also increased with wealth, from almost nothing for very poor households to 10-15% for better off households.

Market purchase was the other main source of food for households in all wealth groups in the reference year. The main items purchased were maize (grain/flour), rice, beans, vegetable oil, wheat flour and sugar. Other foods were not commonly purchased.

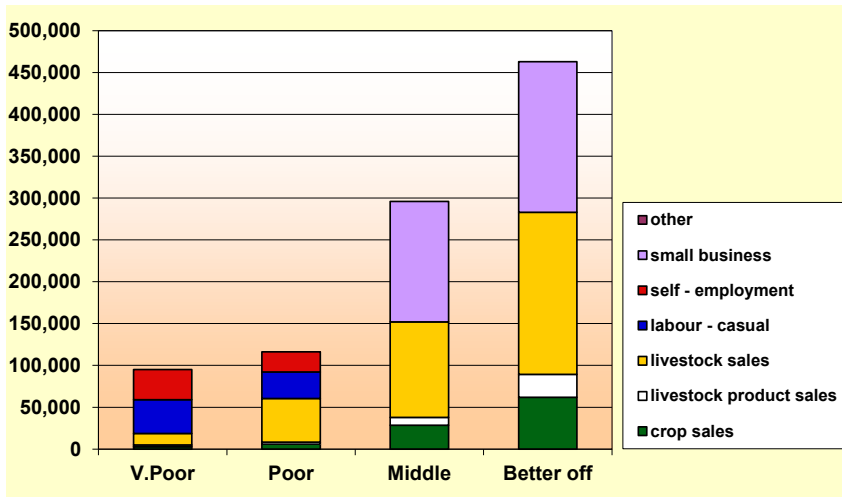


In the graph, food access is expressed as a percentage of minimum food requirements, taken as an average food energy intake of 2100 kcals per person per day.

School feeding represents meals eaten by children at school and was a food source across all wealth groups in the reference year. Payment in kind is food obtained from various types of agricultural labor (instead of payment in cash).

Very poor households struggled to meet 100% of their food energy needs.

Sources of Cash for the Reference Year (2019-2020)



The graph provides a breakdown of total annual cash income in Kenyan shillings according to income source.

The graph presents income sources by wealth group for the reference year April 2019 – March 2020.

Income from crop sales and from livestock and livestock product sales increases steadily with wealth and these are typically the main sources of cash for middle and better off households, supplemented by trading income.

Very poor and poor households have four main income sources: livestock sales, casual labor (including some labor

	Very poor	Poor	Middle	Better off
Annual income (KSh) 2019-20	90,000-100,000	100,000-150,000	250,000-350,000	350,000-600,000

migration), self-employment (mainly firewood and charcoal sales) and crop sales. Crop sales are a minor income source for these wealth groups, who tend to consume most of their harvest.

Labor migration by men exists as an income source for the poorer wealth groups. About half of very poor and poor households have a household member who migrates in average years, increasing in bad years. Destinations include Nakuru, Laikipia and Nairobi and the migrating man tends to stay away for about 6 months. Remittances to the household are about 2-3,000 KSh per month.

Decision making around the sale of milk is mostly made by women, based on the quantity produced, household size and needs, and access to markets. Very poor and poor households have access to small quantities of milk and tend not to sell any. Better off households have access to larger quantities of milk and sell up to 20% of their production.

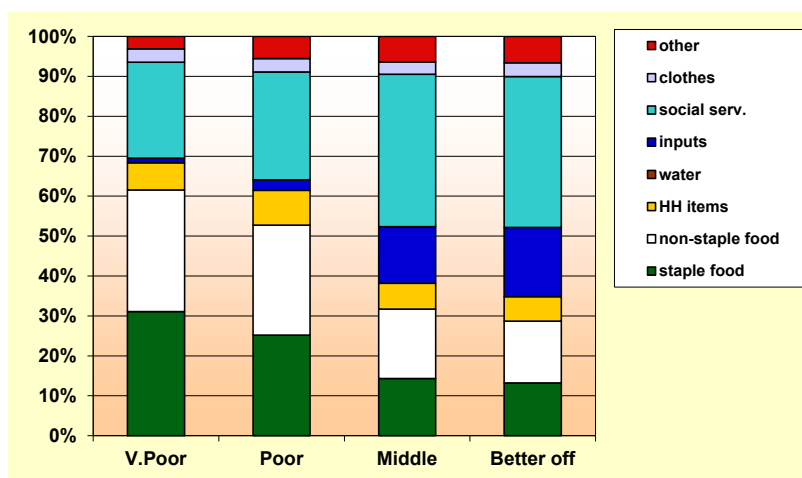
Paid work by children (under 18 years) was reported to be uncommon in this livelihood zone, but children help with own crop production, livestock rearing and domestic tasks within their households.

Decision making around how to spend income is largely controlled by the person who earns the money or sells the item. Men control decision making around cattle, goat and sheep sales and income earned through their labor or self-employment activities, while women control income from chicken and milk sales and their own labor or self-employment activities.


Expenditure Patterns for the Reference Year (2019-2020)

The graph presents expenditure patterns for the reference year April 2019 – March 2020. While total expenditure increased with wealth, the expenditure breakdown by percent in this graph demonstrates how much was spent on different categories.

The proportion of expenditure on staple food (which is mostly cereals, in dark green in the graph) decreased with wealth from very poor households to better off households, from just over 30% of annual expenditure to less than 15%.



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



Combining staple and non-staple food, very poor households spent around 60% of their income on food, while the better off spent about 30%.

The main household items purchased (in yellow) were tea, salt, soap, grinding and utensils. Water was generally not purchased in this livelihood zone. The ‘social services’ category (in pale blue) includes education and medical expenses. This was a major expenditure category for middle and better off households and mostly includes education costs. ‘Other’ items (in red) include expenditure on tobacco, alcohol, transport, phone credit, festivals, house repairs and social obligations.

The proportion of income spent on inputs increased with wealth. This included expenditure on land preparation, agricultural labor, seeds, tools, livestock drugs and salt for livestock.

Key informants were asked if there are food items that households want to purchase that are not available in the market on a seasonal basis. Vegetables and milk are less available during the dry season, particularly in remote locations. Food items that households would like to purchase more of, but find unaffordable, include rice, wheat flour, rice, pulses, meat, cooking oil, vegetables and fruit.

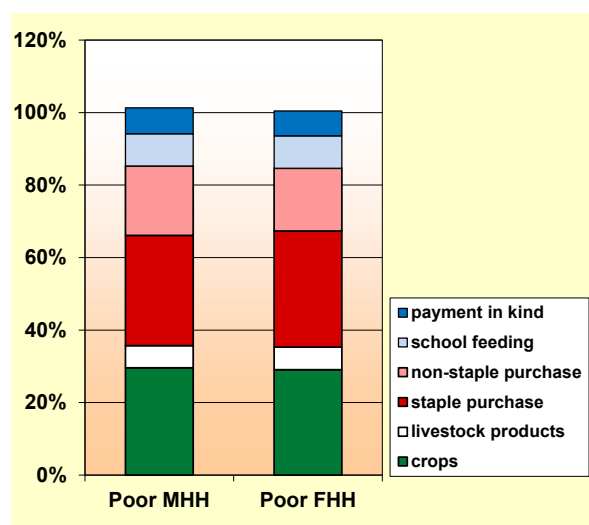
Female-Headed Households

Female-headed households are found in each of the wealth groups, as shown in the wealth breakdown table above. During field work, in-depth interviews were conducted with female-headed households from the poor wealth group. This is a group that faces similar constraints and characteristics as male-headed households in the same wealth group, but may be further disadvantaged by a lack of productive intra-household labor and, potentially, constraints on certain types of asset ownership, productive work, or income generating activities. Women in this livelihood zone have the right to inherit livestock from their husbands.

The graph on the left below illustrates that poor female-headed households and poor male-headed households share a very similar pattern of food access. Crops provide almost one-third and market purchase about half of food needs. Smaller contributions come from own livestock products (milk/meat), school feeding and payment in kind.

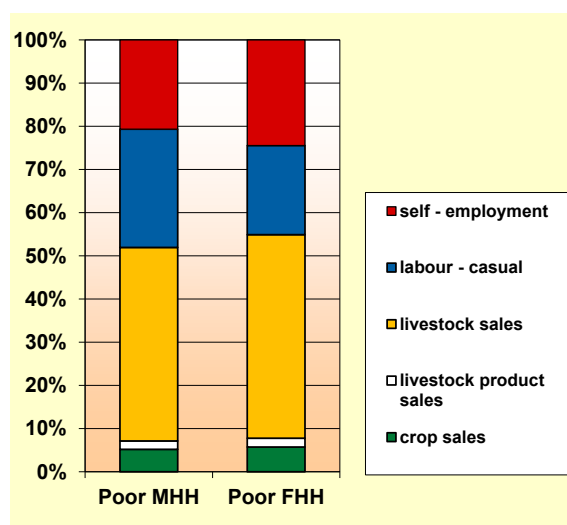
Cash income patterns are also similar, with households obtaining income from the same sources and in roughly similar proportions. The absolute cash income levels of female-headed households are 10% lower than male-headed households in the same wealth group both at a household level and per person. Expenditure patterns are almost exactly the same.

Sources of food: poor female headed households vs poor male-headed households



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

Sources of cash: poor female headed households vs poor male-headed households



The graph provides a breakdown of total annual cash income according to income source.

Hazards

The Samburu Agropastoral Livelihood Zone is periodically vulnerable to drought, outbreaks of livestock diseases, crop pests and human-wildlife conflict. Drought results in reduced crop production and reduced pasture, browse and water availability for livestock. Crop pests like army worm and locusts can also devastate crops. Livestock disease outbreaks can directly kill livestock or limit their productivity. Wildlife attacks can be a problem during dry seasons, and especially during drought years, when water and forage resources are scarce and competition between domesticated and wild animals is high.

Response Strategies

Households in this livelihood zone engage in a number of strategies in an attempt to cope with hazards. These include:

Switching of expenditure – Reducing expenditure on expensive foods (rice, sugar, vegetable oil), clothes, transport, and non-essentials (like alcohol and tobacco), in order to purchase more food, is a commonly used coping strategy pursued by all wealth groups.

Increased bush product collection and sale – The sale of firewood, charcoal and construction materials is intensified in bad years.

Increased casual labor – Women especially seek out more casual work for better off households, including fetching water and cleaning. Men seek out construction labor.

Labor migration – Increased numbers of people migrate in bad years to look for casual work and stay away for longer. This reduces the number of mouths to feed locally and provides an income source for the household.

Increased livestock sales – Households from all wealth groups sell additional livestock to cover basic food and non-food expenses in bad years and to destock when the local environment cannot support all the livestock. However, the extent to which this strategy can be pursued without damaging future livelihoods is quite limited. Middle and better off households are in a better position to exploit this strategy.

Increased livestock product sales – Milk is a high value commodity in relation to the foods that households purchase (especially maize). In bad years, households sell a larger proportion of their milk production. This strategy is limited in years when drought is the main hazard and production levels are very low.

Livestock migration – Migrating with livestock to distant locations in search of better pasture and water is a common strategy in bad years, although it may mean moving to less secure areas. Most household members remain at the home base, while male adults and youths migrate with the livestock. Households with very few animals generally group their animals together with other households.

Key Parameters for Monitoring

The key parameters listed in the table below are things that make a substantial contribution to household food and income sources in the Samburu Eastern Pastoral Livelihood Zone. These things should be monitored to indicate potential losses or gains to local household economies, either through ongoing monitoring systems or through periodic assessments.

It is also important to monitor the prices of key items on the expenditure side, including maize prices.

Item	Key Parameter – Quantity	Key Parameter – Price
Livestock	<ul style="list-style-type: none"> • Maize harvest (long rains) • Bean harvest (long rains) • Cow milk production • Cattle herd sizes • Goat herd sizes • Sheep herd sizes 	<ul style="list-style-type: none"> • Maize prices • Bean prices • Cow milk • Cattle • Goats • Sheep

Other food and cash income	<ul style="list-style-type: none"> • Firewood/charcoal • Trading levels • Agricultural labor (pre harvest) • Agricultural labor (harvest) • Domestic labor • Herding labor 	<ul style="list-style-type: none"> • Firewood/charcoal • Trading profits • Agricultural labor (pre harvest) • Agricultural labor (harvest) • Domestic labor • Herding labor
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Development Priorities

The longer-term program implications suggested below were highlighted by the community leader and wealth group interviewees themselves. All of these suggestions require further detailed feasibility studies.

Crop production: All wealth groups requested support to crop production, including capacity building in modern methods of crop production and the provision of certified seeds and fertilizers to increase yields. Fencing of farms was also mentioned to prevent losses from wild animals and livestock. Farmers also seek water for irrigation, which would help them to cope with erratic rainfall and diversify the crops that they produce.

Livestock production: Livestock diseases are a chronic problem in this livelihood zone and continued efforts to improve access to livestock extension services are important. Increased access to water for livestock is also a priority, along with the introduction of improved livestock breeds.

Infrastructure: Road and bridge construction and improved communication networks would improve market access in this livelihood zone. Improved access to markets for crops is a priority.

Access to credit: There is interest in access to loans and grants for business activities. This may help with income diversification.

4.0 IMPLICATIONS FOR PROGRAMMING

The final section of each livelihood zone profile outlines ideas for longer-term programming that were generated by the community leader and wealth group interviewees themselves. These suggestions can be divided into interventions related to production (for crops and livestock), to markets and to diversifying livelihoods.

Since livestock remain the backbone of the economy of the county, and one of the few economically viable ways to exploit semi-arid lands, it is essential to continue and improve the support to this sector. Pastoralism remains an important and viable option for many households. At the same time, since large numbers of households have inadequate herd sizes to sustain their livelihoods and since the livestock population growth rate cannot keep up with the current human population growth rate, it is important that practical and sustainable alternatives are found.

The suggestions below are not exhaustive and are not based on feasibility studies, but are offered by the field teams as ideas for further discussion and exploration.

Livestock interventions: Livestock constitute the mainstay of local livelihoods and provide the main source of total income for many households in the Eastern and Northern Pastoral Livelihood Zones. It is important to continue to improve support to this sector, especially in relation to *veterinary drugs and services* to address the chronic problem of livestock disease. *Water* is another vital sector to support because a number of areas in the livelihood zones suffer chronic problems of water shortage.

Crop production: In the Agropastoral Livelihood Zone, all wealth groups requested support to crop production, including capacity building in modern methods of crop production and the provision of certified seeds and fertilizers to increase yields. Fencing of farms was also mentioned to prevent losses from wild animals and livestock. Farmers also seek water for irrigation, which would help them to cope with erratic rainfall and diversify the crops that they produce.

Roads, market infrastructure and general market function: The pastoral livelihood zones have poor access to markets. There is very little market infrastructure and few regular markets, particularly for the Northern Pastoral Livelihood Zone, where roads are in poor condition and access is difficult, especially in the rainy seasons. These factors are likely to reduce the prices that pastoralists or farmers receive for the items they sell (including livestock) and increase the prices of items they buy (both food and non-food items). Investment is required to improve roads, bridges and market infrastructure.

Employment opportunities: In urban areas, increased formal employment opportunities in the County Government or in the private sector are a priority for households seeking regular, reliable incomes.

Health, water, sanitation and education: Improved health facilities, access to clean water for human consumption and sanitation facilities, and increased access to secondary and tertiary education were mentioned as priorities.


Access to credit: There are informal group savings and loan (or merry-go-round) schemes in some villages, but there is interest in increased access to credit and business skills across all wealth groups and livelihood zones for business activities. This may help with income diversification.

Peace building: Cattle raiding and general insecurity are problems in the pastoral livelihood zones. Increased efforts in conflict management and peace building were suggested.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The baselines presented in this report represent the starting point for Household Economy Analysis to be used in the USAID Nawiri program. The implications for programming in the previous section relate to improved production (for crops and livestock, depending on livelihood zone), to markets (infrastructure and access), and to diversifying livelihoods (to increase income levels and improve resilience to hazards).

HEA was designed as a tool for early warning. Seasonal information on rainfall, crops and prices, which tends to be routinely collected by government systems, along with information on livestock and labor and self-employment opportunities, are used in conjunction with baseline data to indicate which wealth groups within a population are likely to face a deficit of how much



and when. Combined with population data, the analysis allows for an estimate of the number of people that will need assistance to protect livelihoods and/or prevent extreme hunger, and the total food or cash equivalent required and of the months when it will be needed.

The HEA baselines presented in this report also offer a good starting point for measuring economic resilience as they provide a quantified summary of livelihood options disaggregated by-livelihood zone and wealth group. HEA outcome analysis measures resilience by assessing how total income after a typical hazard compares to the cost of maintaining the household's livelihood – this provides us with a “household livelihood resilience score”. It analyses whether project interventions are likely to increase or decrease household resilience by modelling the impact of a typical hazard and incorporating project data on project-generated income, project costs and opportunity costs.

The HEA baselines should be seen as a starting point for future analyses. A plan will be developed by project staff to use the HEA baselines described in this report for HEA outcome analysis to 1) assess food insecurity in future seasons, 2) conduct resilience analysis of potential nutrition-sensitive livelihood opportunities for program design.

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