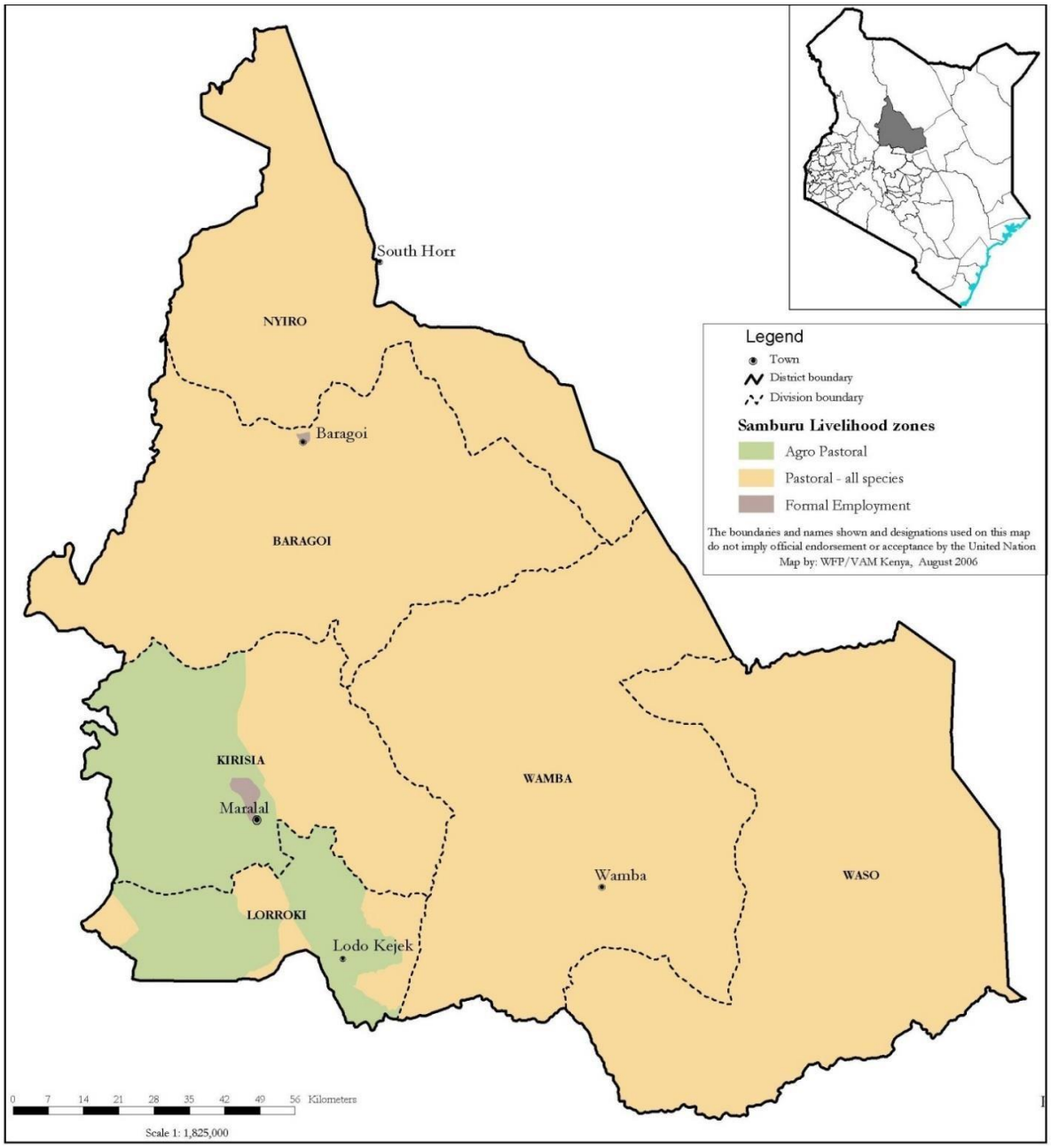
SAMBURU COUNTY
2017 LONG RAINS FOOD SECURITY ASSESSMENT REPORT



A Joint Report by the Kenya Food Security Steering Group[1] (KFSSG) and County Steering Group, Samburu County

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EXECUTIVE SUMMARY

Samburu County is currently classified in the Crisis phase (IPC 3) in the pastoral all species zone and Stressed phase (IPC Phase 2) in the agro-pastoral all species and formal employment livelihood zones. A significant proportion of households; 40.7 percent in May 2017 from 1 percent in December 2016 especially in the pastoral all species areas currently have poor food consumption score with 54.7 percent of the households employing emergency coping strategies. According to SMART survey 2017, the Coping Strategy Index (CSI) has increased from 17.6 in June 2016 to 26.0 implying worsening food consumption at household level.

Moreover, maize stocks are on a decline and this is attributed to less stock from farmers in the agro-pastoral and limited stocks held by NCPB. Majority of farmers exhausted their produce from last year's harvest. In the pastoral all species livelihood zone, most farmers depend on stocks held by traders for there was nil harvest from the little planted in the last season. Maize stocks being held in the county were 85 percent below long term average (LTA) out of which only 9 percent was held by households, 24, 30 and 26 percent are held by traders, millers and NCPB respectively. Unfortunately, the projected productivity of rain fed maize, beans and cowpeas is expected to be 30, 25 and 50 percent below the LTA and for all the irrigated crops; kales, spinach and tomatoes, the productivity is expected to be 50 percent below LTA.

Markets were operational, although access to food was limited by high prices. Maize flour prices have been on a rising trend since January and 28 percent above LTA in June. The earlier than normal migration and poor body condition of livestock had reduced access to milk for consumption as well as income from livestock and livestock related products. The Terms of Trade (TOT) has been steadily declining since January and currently at 33 percent below LTA. The decline is attributed to low livestock prices versus high posho prices.

The number of under five years of age at risk of malnutrition has been steadily increasing as from January through June where it stood at 26.48 percent, a 43 percent above the LTA across the county due to reducing food consumption and dietary diversity. Food utilization was poor, driven by the poor dietary intake. It is likely to deteriorate further, increasing food insecurity of individuals and households. The major contributing factors to food insecurity in the county included; poor performance of the short rains and poor distribution in space and time, low demand for livestock in the markets due to poor body condition, high food commodity prices and decrease in prices of livestock.

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1.0 INTRODUCTION

1.1 County Background

Samburu County borders Turkana County to the Northwest, Baringo County to the Southwest, Marsabit County to the Northeast, Isiolo County to the East and Laikipia County to the South. Samburu County covers an area of approximately 20,183 square kilometers with an estimated projected population of 283,780 (KNBS, 2016). The county has three sub-counties: Samburu North, Samburu East and Samburu Central and three main livelihood zones: pastoral all species, agro-pastoral and formal employment/casual waged labour (Figure 1).

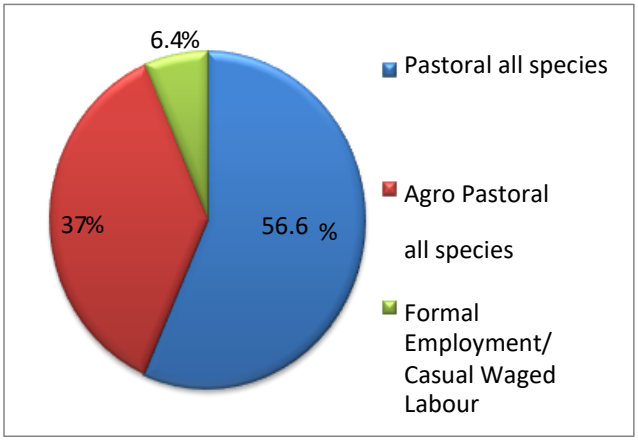

Figure 1.Proportion of Population per Livelihood

1.2 Objectives and approach

The Samburu's food security assessment conducted earlier than the usual timing of mid July as a result of the planned August 2017 general election was conducted as from 3-7th of June 2017. The overall objective was to develop an objective, evidence-based and transparent food security situation analysis following the short rains season of 2016 taking into account the cumulative effect of previous seasons and to provide recommendations for possible response options based on the situation analysis. The assessment employed the multi-sectorial and multi-agency approach. Administration of checklists was undertaken by the government line departments at the county and sub-county levels under the supervision of County's National Drought Management Authority (NDMA) office.

After the 3rd July 2017 County Steering Group (CSG) debrief where sectorial reports were presented and discussed, a two-day field work was planned by the CSG's selected members of County's KFSSG team. The 4th and 5th July transect drive across the county covered all the three livelihood zones. During the field mission and ground truthing, focus group discussions (FGDs), observations and household interviews covering the six key sectors were conducted; Agriculture, Livestock, Health, Markets, Education and Water. Finally, all the information both from field, secondary data and checklists was collated, reviewed, analyzed and shared in a final CSG meeting on 7th July. The preliminary report was thereby adopted as a true finding and reflection of the situation on the ground. Further analysis was later done using the Integrated Food Security Phase Classification (IPC).

2.0 DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY

2.1 Rainfall Performance

The entire Samburu pastoral all species livelihood zone relies on short rains whereas the agro-pastoral livelihood zone relies on both short rains (The lowlands parts of the zone) and long rains (The highlands part of the zone) hence the bimodal rainfall seasonality of the County. The long rains onset was late in the 3rd dekad (10-day period) of April compared to the normal first dekad of March. Most parts of the county received intermittent and depressed rainfall of about 75-90 percent of the normal with pastoral all species parts of Samburu east (south-eastern part) and Samburu north (north-western part) receiving between 25-50 percent of normal. A few pockets of both agro-pastoral (Kirimon & Lengei) and pastoral all species (Marti, Masikita, Koitin, Lerata) received 90-110 percent of the normal. Temporal and spatial distribution was poor and uneven respectively as most rains were only received in the third dekad of April and first dekad of May. Cessation was early in the second dekad of May compared to the normal first dekad of June (Figure 2).

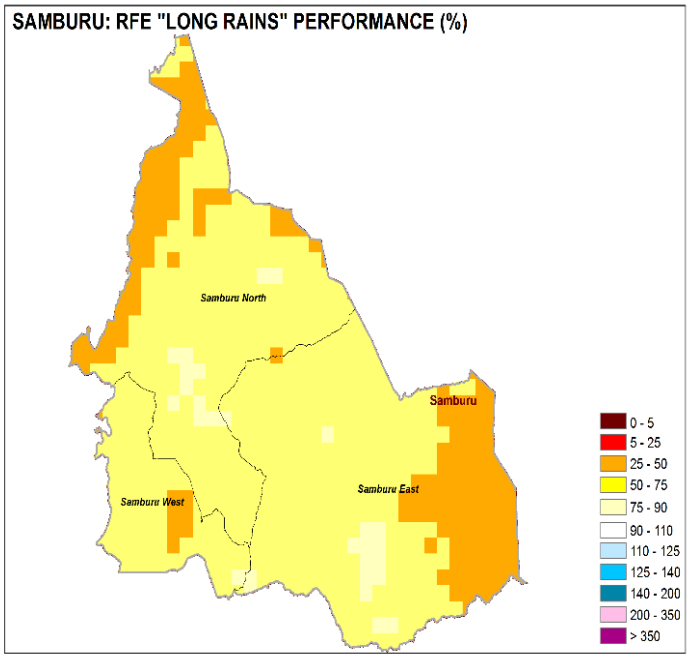

Figure 2. Rainfall Performance

2.2 Cumulative Effects of Prolonged Drought

he county whose main source of income is livestock and crop production in both agro-pastoral (60 percent contribution) and pastoral all species livelihood zone (85 percent contribution) had poorly performing long and short rains seasons in 2016 leading to the prolonged drought. The drought has led to a prolonged lack of pasture and browse and reduced access to water for livestock and humans in all the livelihood zones.

2.3 Livestock Pests and Diseases

Livestock disease incidences including Foot and Mouth Disease (FMD), lumpy skin disease (LSD) and goat pox and Contagious Caprine Pleuro-Pneumonia (CCPP) were reported in the both the livelihood zones; agro-pastoral and in some parts of the pastoral all species zones in Baragoi. Vaccination for FMD and CCPP was on-going in Samburu North and East and complete in Central. Vaccination against LSD was yet to be conducted.

2.4 Insecurity and Conflict

Cases of cattle rustling were reported in Samburu North in the month of March particularly in Leilei village where three deaths were reported. In Samburu East in Sereolipi and Koom in the month of May, there was cattle rustling reported resulting in deaths of eleven herders and four raiders in separate incidences leading to migration and human displacement.

3.0 IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

3.1 Availability

The maize stocks held by households in agro pastoral all species livelihood zone from the 2016 long rains harvests were nine percent of the LTA which are likely to last up to end of August. In the pastoral all species livelihood zone households depend on stocks held by traders for there was nil harvest from the little planted in the last season. Average milk availability at household level is 0.5-1 litre in pastoral all species livelihood zone (being contributed by goats and camels) and 1-2 litres in agro-pastoral zone (as cattle recover from the last drought) which is below normal in both cases.

3.1.1 Crop Production

Maize and beans are the main rain fed food crops grown in the agro pastoral livelihood zone where maize contributes 80 percent to food and 40 percent to income and beans contributes 10 and 5 percent to food and income respectively. The area planted for maize production slightly reduced by 3 percent while that of beans reduced by 7 percent. Area under cow peas remained relatively constant when compared to LTA. The decreased acreage of both maize and beans during the period under review was because of delayed on-set of the long rains which were received in the 3rd dekad of April. The prolonged drought also led to earlier than normal migration resulting to the withdrawn labour force from the agro-pastoral livelihood zone areas hence late land preparation and planting (Table 1).

Table 1. Rain fed Crop Production

Crop	Area planted during 2017 Long rains season (Ha)	Long Term Average (5 year) area planted during the Long rains season (Ha)	2017 Long rains season production (90 kg bags) Projected/Actual	Long Term Average (5 year) production during the Long rains season (90 kg bags)
1.Maize	7,120	7,300	35,600	42,400
2.Beans	3,050	3,280	4,575	5,300
3.Cowpeas	203	205	2,010	2,115

There was reduction in area under irrigated crops with spinach and tomatoes reducing by 25 percent and 35 percent compared to LTA respectively and kales remaining constant. The decrease is attributed to the drying up of water sources as a result of below average long rains across the county as well earlier than normal migration causing reduced labour force. The production from the irrigated crops is projected to be 50 percent below the LTA due to increased pests and diseases incidence associated with dry spell periods (Table 2).

Table 2. Irrigated Crops

Crop	Area planted during the 2017Long rains season (ha)	Long Term Average (3 years) area planted during Long rains season (ha)	2017 Long rains season production (90 kg bags/MT) Projected/actual	Long Term Average (3 years) production during 2017 Long rains season (90 kg bags/MT)
1. Kales	29.8	30	76	145
2.Spinach	10.2	13.5	65	124
3.Tomatoes	9.1	14	79	164

Maize Stocks

Maize stocks being held in the county are about 85 percent below LTA of which nine percent is held by households, 24 percent by traders, 30 percent by millers and 26 percent by National Cereals Produce Board (NCPB). The stocks at the households are expected to last not more than one month. The households in pastoral all species all species livelihood are currently entirely depending on markets for food commodities supplied by traders from outside the County (Table 3).

Table 3. Food Stocks

Commodity		Farmers	Traders	Millers	NCPB	TOTAL
Maize	Current	350	1,300	1,050	1945	3,024
	LTA	3,900	5,500	3,500	7,500	20,400
Rice	Current	0	1,300	0	16	1,316
	LTA	0	1,300	0	16	1,316
Sorghum	Current	0	0	0	0	6,810
	LTA	0	20	0	0	20
Millet	Current	0	30	0	0	30
	LTA	0	30	0	0	30

3.1.2 Livestock Production

Livestock production is the main economic activity in the County. The main livestock breeds found in the county are cattle, sheep, goats, camels and donkeys. The small stock (sheep and goats) are mostly reared for provision of basic household commodities like food and cash while the large stock (cattle and camels) are reared for the provision of food and income for major investments. Donkeys on the other hand are used as a means of transport and provision of cash income. Livestock production contributes to 85 percent of cash income in pastoral all species all species livelihood zone and 60 percent in agro pastoral all species livelihood zone (Table 4).

Table 4. Livestock Average Percentage Contribution of Cash Income

Livelihood zone	Livestock average percent of cash income contribution
Pastoral all species	85
Agro-pastoral all species	60

Pasture and Browse Condition

Pasture situation is poor in both pastoral all species and agro-pastoral livelihood zones while browse situation is fair which is not normal and is expected to last one month till August and two months until September respectively as shown in the Table 2. Access to pastures and browse is currently being limited by availability in both livelihood zones and insecurity in pastoral all species zones especially in hot spots like Koom, Westgate (situated on the Samburu-Isiolo border) and Marti in Samburu North Sub-county (Table 5).

Table 5. Pasture and Browse Condition

	Pasture				Browse			
Livelihood zone	**Condition**		**How long to last (Months)**		**Condition**		**How long to last (Months)**	
	Current	**Normal**	**Current**	**Normal**	**Current**	**Normal**	**Current**	**Normal**
Agro-Pastoral all species	Poor	Good	1	3	Good	Good	3	5
Pastoral all species	Poor	Fair	< 1	2	Fair	Good	1-2	3

Livestock Body Condition

Livestock body conditions for grazers (cattle and sheep) was poor in all livelihood zones while fair to good for browsers (goats and camel) attributed to poor regeneration of pasture as a result of depressed long rains as shown in Table 6. Body condition for cattle in the agro-pastoral and pastoral all species zone will continue to deteriorate until short rains are expected.

Table 6. Livestock Body Condition

Livelihood zone	**Cattle**		**Sheep**		**Goat**		**Camel**	
	Current	**Normal**	**Current**	**Normal**	**Current**	**Normal**	**Current**	**Normal**
Agro-Pastoral all species	Poor	Good	Fair	Good	Fair	Good	Good	Good
Pastoral all species	Poor	Fair	Poor	Fair	Fair	Good	Fair	Good

Milk Availability

Average milk availability at household level is 0.5-1 litre in pastoral all species livelihood zone (being contributed by goats and camels) and 1-2 litres in agro-pastoral zone (as cattle recover from the last drought) which is below normal in both zones. Some parts of the agro-pastoral zone that rear dairy cattle and dairy goats e.g. Loosuk, Maralal and Baawa areas are producing milk for the market. The milk availability is expected to reduce further until the onset of short rains in the month of October.

Milk Consumption

The current milk consumption at household level ranges from 0.5-1 litres compared to 1-2 litres normally in pastoral all species zone which is below normal and 1-2 litres (compared to 3-5 litres during normal) in agro-pastoral zone. In both livelihood zone's, much of the milk produced is consumed at house hold level except in very few areas in agro-pastoral zone in Samburu central sub-county where some farmers are selling milk in the Maralal (through Samburu Dairy Cooperative Society) and Suguta Marmar centres. The current average retail price of milk is Ksh 60 per litre in agro- pastoral and Ksh 80 per litre in pastoral all species which is above normal. This price has persisted due to low levels of milk supply and the increasing human population in urban areas (Table 7).

Table 7. Milk production, consumption and retail price

Livelihood zone	Milk Production (Litres)/Household		Milk consumption per Household (Litres)		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Agro-Pastoral all species	1-2	3-5	1-2	3-5	60	50
Pastoral all species	0.5-1	1-2	0.5-1	1-2	80	60

Tropical livestock unit and birth rates

The current livestock herd size in pastoral all species zone is 8-10 TLUs while in agro- pastoral it is six TLU's. The TLU's are not normal at this time of the year which is normally 10-15 in agro-pastoral and 15-20 pastoral all species respectively due to drought, and recently depressed rains resulting to delayed breeding, lower conception hence reduced birth rates. Insecurity in Samburu North has also contributed to the reduction in TLUs. The variation by wealth groups is widening especially in Samburu north where a number of households have lost their animals due to the frequent cattle raids. Such households have been rendered vulnerable and food insecure. Sheep and goats were negatively affected by drought and their birth rates will be low compared to 85-95 percent in June-December 2017 for agro-pastoral and pastoral all species respectively.

Livestock Diseases and Mortalities

Disease incidences like Foot and Mouth Disease (FMD), Sheep and Goat Pox (SGP) and Contagious Caprine Pleuro-Pneumonia (CCPP) have been reported in all livelihood zones in addition to Pestes des Petits ruminants (PPR) and rabies reported in agro-pastoral zone. Ring vaccination against FMD was done in Baragoi and Samburu West in the month of June 2017 targeting about 29,784 cattle while 2314 sheep and goats vaccinated against SGP and a further 232 dogs vaccinated against rabies. Vaccinations against PPR in all sub- counties has commenced in both Samburu Central and Samburu North sub-counties in addition to disease surveillance and sampling to ascertain the specific strains for CCPP. The reported mortality rates are about 10 percent which is above the normal ranges of 0.5-3 especially for cattle and sheep in areas like Kawop, Kom, Marti and Mbukui areas.

Migration

The depressed long rains received this year have caused the depletion of the scarcely regenerated pasture and browse in the County thereby affecting the natural reserve livestock feeds. The forced eviction of Samburu livestock from Laikipia County has compounded the problem of feed shortage. Currently, there is earlier than normal internal migrations of livestock especially towards Mathew Ranges, Ngilai, Sarara in Samburu East Sub- County and towards Marti (Lbukoi), Ndoto and Nyiro Mountains in Samburu North Sub- County. In Samburu Central livestock migrations are toward Kirisia hills. There is also out-migration of livestock outside the county towards Koom, Oldonyiro in Isiolo County and consequently to Mount Kenya in Nanyuki.

Livestock markets

The main markets in pastoral all species livelihood zone are Lolkuniyani, Lpus, Archers Post and Sereolipi in Samburu East sub-county and Tangar, Illaut and Latakweny in Samburu North sub-county while in agro-pastoral zone; Maralal, Kisima and Lekuru are the main livestock markets. The main commodities traded are livestock and livestock products, crop produce and other merchandise sourced from within and outside the county mostly from Isiolo, Meru, Nyahururu and Nakuru counties. All markets were operating normally though recording low volumes of livestock attributed to low supply especially of large stock. Livestock prices are also low for small stock ranging from Ksh1,800–4,000.

Water for livestock

The current water sources for livestock include water pans, shallow wells, boreholes and seasonal streams and rivers. Due to depressed long rains experienced, there are low recharge levels in all water sources estimated at 15 percent in pastoral all species and 20-30 percent in agro pastoral zone. The average trekking distance to water sources in pastoral all species zone was 10-15km compared to 3-5km during normal while in agro-pastoral zone was 2-5 km compared to 1-2 km during normal. The water is expected to last for one month up to August in pastoral all species and 3 months in agro-pastoral. In pastoral all species zone, the variation in trekking distance and duration the water is expected to last is attributed to low recharge levels while in agro-pastoral zone, it is attributed to presence of many water sources in close range.

Table 8. Water Availability and Access for Livestock

Livelihood zone	Return average distances (km)		Expected duration to last (months)		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal
Agro Pastoral all species	2-5	1-2	3	5	Daily	Daily
Pastoral all species	10-15	3-5	1	3	1-2	After 1 day

The watering frequency for all species is 4-5 days per seven days as opposed to a normal of 5-6 days per seven days for pastoral all species and daily for agro-pastoral except camels which can go for 3-7 days without water. In pastoral all species areas like Nkutuk, Engiron, Lbukoi (Marti), Koom, the watering frequency shifts to after every 2 days a situation being attributed to increasing distances between available pastures and water (Table 8).

3.2 ACCESS

3.2.1 Markets operations

The main markets in pastoral all species livelihood zone are Lolkuniyani, Lpus, Archers Post and Sereolipi in Samburu East sub-county and Tangar, Illaut and Latakweny in Samburu North sub-county while in agro-pastoral zone; Maralal, Kisima and Lekuru are the main markets. The main commodities traded are livestock; goats, sheep, cattle and camels and livestock products. The major food items traded in the market include; maize and maize flour ('posho'), rice, beans, vegetable oil and wheat flour. Others include green grams, sugar and milk. Food items are sourced from within and outside the County mostly from Isiolo, Meru, Nyahururu and Nakuru counties. All markets are operating normally although recording low volumes of livestock attributed to migration, low demand due to poor body conditions and increased distances to markets from grazing areas. Market operations are expected to be erratic for the next four months for the livestock markets especially in the pastoral all species all species zone and resume in November-December as a result of the felt impacts of short rains.

Maize Prices

The market prices have been rising steadily from January to May attributed to shortage of maize at the market and household level due to prolonged drought. The current flour price is 64 Ksh per kilo and is 28 percent above LTA (Figure 3). However, the slight decrease noted in June was due to the national government's intervention of subsidizing maize that prompted the traders to respond by dropping the maize prices. The national government announced that each and every household was to be allowed to purchase only one bag; repackaged 100kg at 2,500 Ksh from NCPB but was quickly depleted and is currently unavailable.

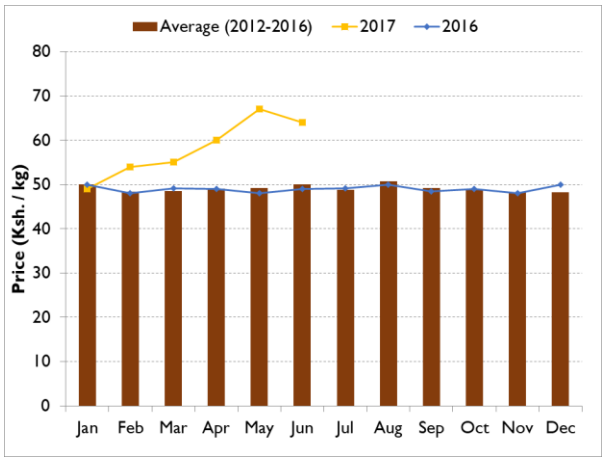

Figure 3. Maize flour (Posho) prices

Goat Prices

Current average goat prices are 14 percent below LTA ranging from Kshs.1800–2300 (Figure 4). The current prices are expected to decline as a result of prolonged drought affecting the body condition of livestock especially in pastoral all species zone where pasture is to last less than a month and browse is fair. However, in agro-pastoral all species LZ, prices are likely to improve as pasture and browse is expected to regenerate due to off-season July and August rains resulting to improved body condition.

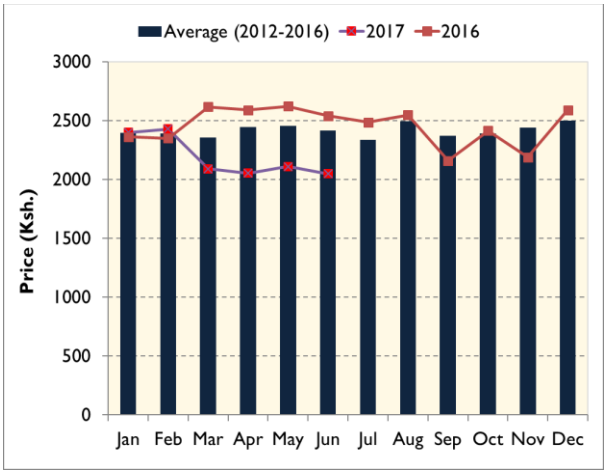

Figure 4. Goat Prices

3.2.2 Terms of Trade

The current terms of trade (ToT) value implies that households in the pastoral all species zone will receive 32 kg of maize in exchange for sale of one goat. Current ToT is 33 percent below LTA and has been steadily declining since January. The decline is attributed to low livestock prices versus high maize flour prices which is unfavorable considering the LTA. The ToT are expected to continue to deteriorate as forage deteriorates (Figure 5).

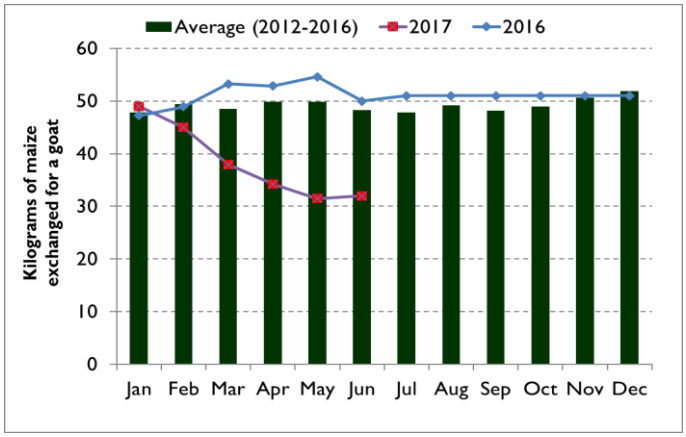

Figure 5. Terms of Trade

3.2.3 Income Sources

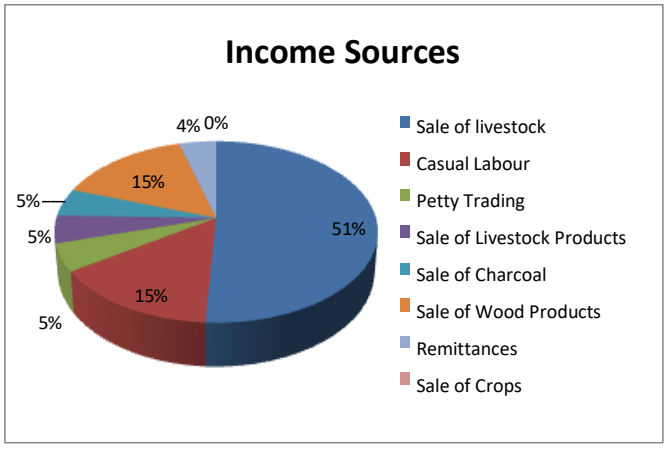

Figure 6. Income sources

The main source of income is sale of livestock and livestock products. Livestock production in pastoral all species zone constitutes 85 percent of household income while in agro pastoral it contributes 60 percent to income. Crop production contributes 20 percent of income in the agro-pastoral livelihood zone. In the formal employment livelihood zone, small businesses/own business including crafts, non-farm production are the major contributors of cash at about 60 percent (Figure 6).

3.2.4 Water access and availability

Water Sources

The main current water sources in the county for both livestock and domestic include water pans, dams, boreholes, springs and shallow wells. In the agro-pastoral livelihood zone, the long rains recharge for surface water sources were about was about 30 percent and it is expected to increase due to the offseason rains of July. In the pastoral all species livelihood zone which depends on the short rains, the below average long rains managed to recharge the surface water sources to about15 percent. In Samburu East, about 80 percent of the water pans have dried up and only underground water sources are currently being used but strained due to pipeline breakdown and low levels of water as a result of low recharge levels. The high ambient temperatures especially in the pastoral all species zone caused by the prolonged drought in the County has also contributed to drying up of surface water sources (Figure 7).

Distance to water sources and waiting time at the source

Approximately only 20 percent of all the water sources in the pastoral all species livelihood zone and about 40 percent in the agro-pastoral zone were operational leading to increased overall distances to water sources as households trek further distances to access water. The current return trekking distance for water for domestic use in the pastoral all species zone in areas like Wamba, Waso, served by boreholes and water pans doubled from 2-5kmto 5-10kmand was near normal to those households close to the water sources in the agro-pastoral livelihood zone. In most parts of both Samburu East and North sub-counties, the drying up of surface water sources and few operational boreholes has necessitated water trucking interventions to households and institutions like schools.

Cost at the source, waiting time, and water consumption

Water remained free for all for surface water sources like water pans, shallow wells but was constant at Ksh 5 per 20 litre jerrican from water kiosks and vendors across the County. However, there were some extreme cases like in Baragoi where a jerrican was selling at Ksh 40 as water pans and shallow wells dried up.

Table 9. Water for Domestic and Livestock use

Livelihood Zone	Trekking Distance to Water Sources for Domestic Use (Km)		Cost of Water (Ksh per 20litres Jerican)		Waiting Time at Source (Minutes)		Average HH Use (Liters/person/day)	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral all species	5- 10	2 - 5	5	5	60	15	5-10	20-25
Agro pastoral all species	2 - 3	2-3	5	5	5	5	5	5

The current waiting time at water sources in the highland agro-pastoral areas like Poro, Seketet was normal at 5 minutes but increased in the lowland agro-pastoral areas like Lodokejek, Kirimon from 5 to 30 minutes. In pastoral all species zone areas, the waiting time increased from 15 to 60 minutes due to increased population pressure as most water sources have dried and few functioning boreholes have low water levels. Water consumption has remained the same in the formal employment livelihood zones like Maralal at about 15l/pp/d and a few highland areas of the agro-pastoral livelihood zone areas like Poro, Suguta Marmar and Seketet at about 5l/pp/d. In the pastoral all species zone area, the consumption ranged between 5–10 l/pp/d below the normal of 20–25l/pp/d attributed to increased water scarcity and waiting time at water sources. Households in the pastoral all species areas were adversely affected by reduced access to water impacting on their food security by constraining food preparations and utilization (Table 9).

3.2.5 Food consumption

According to the World Food Programme (WFP) Food Security Outcome Monitoring (FSOM) study carried out in May. The proportion of households in Samburu with poor, borderline and acceptable food consumption score was 40.7, 35.7 and 23.6 percent respectively compared to 16.0, 26.7 and 57.3 percent for poor, borderline and acceptable for the same period in 2016. This was attributed to reduced food availability at household level as a result of the poor performance of 2017 long rains and reduced access due to high food prices. Depleted forage lead to poor

livestock productivity and resulting reduced milk productivity and consumption in the homesteads. The prolonged drought experienced has also caused the status. The Standardized Monitoring and Assessment of Relief and Transition (SMART) survey 2017 also shows a downward trend in food consumption score compared to the results obtained in 2016 SMART survey in the county (Table 10.)

Table 10. Food Consumption Score (SMART Survey 2017)

Nomenclature	Main Threshold	Proportion of Households	
		Jun-16	Jun-17
Poor food consumption (mainly cereal and sugar)	0-21	0.90%	12.80%
Borderline food consumption (Cereal, legumes, milk, oil, sugar, Good food consumption)	21.5-35	3.60%	15.70%
Acceptable food consumption (Cereal, legumes, milk, condiment, flesh meat, vegetable, oil, sugar)	>35.5	95.40%	71.50%

3.2.6 Coping strategy

According to the WFP FSOM study in Samburu, 54.9, 21.5 and 11.8 percent of the households employed emergency, crisis and stress coping strategies by May 2017 compared to 35.1, 20.6, and 40.5 percent of the households who employed emergency, crisis and stress coping strategies same period last 2016. According to smart survey June 2017, the coping strategy index (CSI) increased from 17.6 in June 2016 to 26.0 in June 2017. This implied that more households were employing food based coping strategies more frequently. The most employed coping strategies included reduced meal frequency, portion sizes and consumption of less preferred foods.

3.3 Utilization

According to a SMART survey conducted in June 2017, household's food consumption and dietary diversity was greatly reduced due to impacts of prolonged drought and reduced food stocks. Households in the pastoral all species areas dietary intake is likely deteriorate further increasing food insecurity of individuals. Although the under-fives and general population disease morbidity has been stable throughout the year due to active disease surveillance and availability of medicines in the health facilities, the on-going nurse national strike will likely affect utilization.

3.3.1 Nutritional Status

Morbidity patterns

Generally, there was a decrease in number of reported morbidity cases for both children below the age of five years and the general population in the period January-May 2017 compared to a similar period in 2016 and 2015. However Upper Respiratory Tract infection (URTI) for under-fives increased by 22 percent due to dusty conditions as a result of drought during the months of January to May 2017.

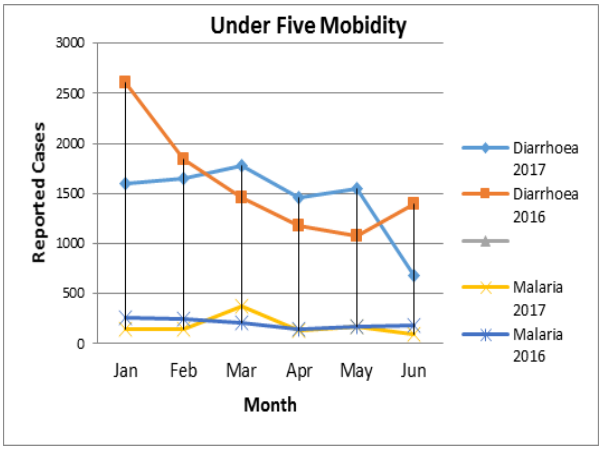

Figure 7. Under Fives Morbidity

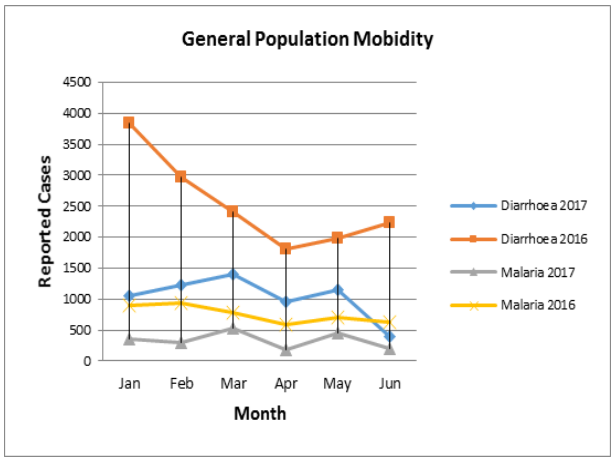

Figure 8. General Population Morbidity

According to the district health information system (DHIS), there was a significant decrease in occurrence of all the epidemic and water borne disease comparing January to June in 2016 and the same period this year, with measles cases showing the highest 100 percent decrease. This was attributed to active disease surveillance and availability of medicines in the health facilities Diarrhea, dysentery and typhoid significantly reduced because of the continued community sensitization by County's department of health on hygiene and sanitation coupled with availability of sufficient medicines in health facilities (Figure 7 and 8).

Immunization and Vitamin Supplementation

According to the DHIS, the proportion of fully immunized children between January-June 2017 slightly reduced from 61.8 percent to 51.5 percent compared to the same period in 2016 and was below the national target of 80 percent. This was because more campaigns, outreaches and vaccination drives were conducted in 2016 than in 2017. The proportion of children who received vitamin A supplementation in the last 6 months (January- December 2017) of 6-11 months age cohort remained constant compared to the same period last year and was below the recommended national average of 80 percent.

Table 11. Vitamin A Supplementation Coverage

Year	Children less than one year old		Children 1 to 5 years old		Children 6-11 months	Children 12 to 59 months
	Received vitamin A supplementation Source> DHIS MOH 710 Vaccines and Immunizations	Total Population	Received vitamin A supplementation Source> DHIS MOH 710 Vaccines and Immunizations	Total Population	Proportion of children Received Vit A supplementation in the last 6 months Source Nutrition Survey	Proportion of children Received Vit A supplementation in the last 6 months Source Nutrition Survey
January - June 2016	2019	9867	13,904	51884	69%	36.3%
January - June 2017	3991	10187	18,087	53617	69%	80.4%

However, the proportion of children who received vitamin A supplementation in the last 6 months (January- December 2017) of 12-59 months age cohort impressively improved to 80.4

percent which is at the recommended national average of 80 percent from 36.3 percent same period last year. This is attributed to adequate sensitization on the importance of the supplementation to children coupled with prioritization to carry it out at the health facilities as well during outreaches in the County (Table 11).

3.3.1 Nutritional Status

The disease morbidity for the under-fives and general population has been stable through the year attributed to active disease surveillance and availability of medicines in the health facilities. Operationalization of new health facilities has prompted the increased cases in health facilities. The newly built additional health facilities by the County government reduced distances and with continued health education via Serian radio station by county health department, an improved trend in health seeking behavior was noted. The global acute malnutrition (GAM) rates slightly increased from 14.5 to 18.3 percent compared to previous year same period according to SMART survey June 2017.The severe acute malnutrition (SAM) increased to 3.8 percent in June 2017 from 2.4 percent during the same period last year. The increase in both GAM and SAM was attributed to declined food intake and poor dietary diversity in most of the households in the County (Figure 8).

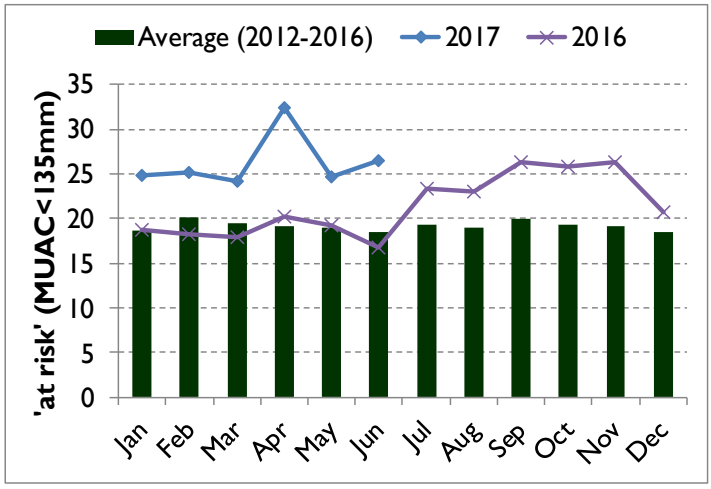

Figure 7. MUAC by NDMA

According to National Drought Management Authority (NDMA) June 2017 bulletin, the proportion of children at risk of malnutrition measured by MUAC <135mm is high at 26.48 percent compared to the same period last year which was at 16.7 percent and is currently at 43 percent above the LTA (Figure 9). This is attributed to reduction in the availability of milk at both the agro-pastoral and but more in pastoral all species households in the County.

3.3.2 Sanitation and Hygiene

According to the SMART survey of June 2017, 9.2 percent of the sampled households in the survey area reported to be treating water of which 80 percent boil water, 24.7 percent use chemicals (chlorine, Pur and water guard) and 1.3 percent use pot filters. The survey also showed that 73 percent of caregivers are aware of hand washing practices at critical times but with only 58 and 47 percent of those interviewed wash hands before eating and cooking respectively. The survey also showed that only 22 percent of households use pit latrine with the other 72 percent using the bush/open field. According to the County's public health office, the latrine coverage from January-June 2017 has increased by one percent from 28 percent to the current 29 percent compared to the same period last year.

3.4 Trends of Key food security indicators

Most indicators showed deterioration when compared to the situation during the short rains assessment in February 2017 (Table 12).

Table 12. Food Security Trends in Samburu County

Indicator	**Short Rains Assessment, Feb 2017**		**Long Rains Assessment, Feb 2017**	
Livestock body condition	Grazers	Fair to poor	Grazers	Poor in Pastoral all species and Fair in agro-pastoral all species
	Browsers	Good to fair	Browsers	Poor in Pastoral all species and Fair in agro-pastoral all species
% of maize stocks held by households (agro pastoral all species)	500 % of long term average (LTA)		9 % of the long term average (LTA)	
Water consumption (litres per person per day)	Pastoral all species Livelihood	5	2	
	Agro-pastoral all species	10	4	
Indicator	**Short Rains Assessment, July 2016**		**Long Rains Assessment, Feb 2017**	
Price of maize (per kg)	Ksh 50		Ksh 65	
Distance to grazing	7-10 km		15-25 km	
Terms of trade (pastoral all species zone)	52		31.9	
Coping strategy index	17.6 (SMART Survey 2016)		26 (SMART Survey 2017)	
Food consumption score	Poor – 16.0% Borderline – 26.7% Acceptable – 57.3% (FSOM May 2016)		Poor – 40.7% Borderline – 35.7% Acceptable – 23.6% (FSOM May 2017)	
Latrine Coverage	28%		29%	
Children at risk of malnutrition	24.88		26.48%	

4.0 Food Security Prognosis

4.1 Assumptions

The following are the assumptions made for Samburu county;

- Rangeland conditions are likely to deteriorate especially in the pastoral all species zone areas through to September 2017 due to insufficient regeneration from the long rains.
- Maize prices are likely to remain stably high unless the national government interventions are up scaled.
- Conflict over water and forage is likely to reoccur especially between August to October
- Land surface temperatures are likely to be higher than normal through to September
- Livestock prices are likely to decrease further until November 2017 as rangeland conditions deteriorate resulting to poor livestock body conditions especially in pastoral all species areas.
- Following the poor performance of the March to May long rains 2017, the forage and water in both Samburu East and North sub counties are likely to be depleted faster than normal before September forcing the communities to out migrate to the neighbouring counties.

4.2 Outlook for 3 and 6 months

4.2.1 Food security outcome for 3 months (July-September)

Livestock body condition is expected to deteriorate in most parts of the pastoral all species livelihood zone through to November resulting in reduction in milk production, availability, consumption and consequently increasing the risk of child malnutrition. Water availability will decline as the surface water sources dry up except in the highland agro-pastoral all zone areas which are likely to be recharged by the ongoing off-season July rains. Currently, most households in the pastoral all species areas are currently relying on markets for food, but are constrained by low purchasing power exhibited by low ToT and high staple food prices. The reducing food consumption score will thereby force majority of households to continue employing emergency coping hence staying at Crisis (IPC Phase) until the projected timely on-set of the short rains in the month of September.

4.2.2 Food security outcome for 3 months (October-December 2017)

The October to December short rains are expected to be below normal with a likely late onset and poor distribution in both time and space. As a result, livestock body conditions in the pastoral zones will minimally improve from November owing to partly regenerated forage and water resources keeping livestock prices and purchasing power low. Below average pasture, browse and water regeneration will likely keep livestock in the dry season grazing areas reducing household milk access and access to income from livestock sales hence deteriorating food security. As food access and availability remains low, food consumption gaps are likely to increase. Malnutrition in children under five years is also likely to increase as food and milk availability reduces and as the frequency and number of the current emergency coping strategies employed to access food rises. There will be deterioration in food security and the below average rains will not bring about significant improvements and the pastoral all species zone will remain in Crisis (IPC Phase 3) and the agro-pastoral livelihood zone will remain in the Stressed (IPC Phase 2) phase.

5.0 CONCLUSION AND INTERVENTIONS

5.1 Conclusion

5.1.1 Phase Classification

The county's pastoral all species all species zone (Samburu East North sub-counties) is classified in "Crisis" (IPC Phase 3) phase whereas the agro-pastoral and formal employment zone (Samburu Central) remains in "Stressed" phase (IPC Phase 2). The areas in the Crisis phase have been experiencing a myriad of challenges such as acute lack of water, pasture and browse, less than 0.5 litre milk availability, low livestock prices and high food commodity prices. A significant proportion of households; 40.7 percent by May 2017 from one percent in December 2016 in the pastoral all species areas currently have poor food consumption score with more households employing emergency coping strategies. As the prolonged drought continues, livestock migration trends, market prices of food commodities and livestock as well as livestock mortality rates especially in the pastoral all species areas need to be closely monitored and the recommended intervention to be implemented.

5.1.2 Summary of the Findings

Most parts of the county received intermittent and depressed rainfall of about 50-75 percent of the normal with pastoral all species parts of Samburu east (south-eastern part) and Samburu north (north-western part) receiving between 25-50 percent of normal. The resultant poor regeneration of forage and recharge of water sources led to earlier than normal in-migration also affecting land preparation in the agro-pastoral livelihood zones. Reduced milk availability in the households and livestock poor condition in the pastoral all species livelihood zone areas caused by poor rangelands conditions and declining water access and availability affected milk consumption and reduced income from livestock and products sales. Food prices have been on rising steadily as from January but stabilized in June due to national government intervention which prompted traders to reduce their prices. The recommendations resulting from the assessment are; close monitoring of key areas for the next six months especially in all the pastoral all species livelihood zones; pasture and browse situation, livestock body condition, human and livestock diseases and livestock and food prices.

5.1.3 Sub-county ranking

Table 14. Sub County Ranking

Sub County	Ranking (Worse to Best)	Reasons
SAMBURU EAST	1	• Pasture to last 1 month while browse 1-2 months • Poor body condition for cattle and sheep and expected to deteriorate. • Increased trekking distances about 15km • Less than 0.5l milk availability (some areas nil milk available) • More than 80 percent of animals have migrated to North • Water consumption 4l/pp/d • Rising TOT
SAMBURU NORTH	2	• Pasture to last 1 month (with some areas to last 1-2 months) while browse 1-2 months • Poor to fair body condition for cattle and sheep and expected to deteriorate. • Increased trekking distances about 15km • Less than 0.5l milk availability (some areas nil milk available) • 80 percent of animals from East animals have migrated to North • Water consumption 4/pp/d • Rising TOT
SAMBURU CENTRAL		• Reduced projected maize Crop production at 30% & irrigated 50% • Stocks held at household to last a month • Fair body condition for all species and expected to improve due to July-August rains • Increased trekking distances about 2km • Average of 1l milk availability • Water consumption 10/pp/d • High food prices, Low livestock productivity

5.2 Ongoing Interventions

5.2.1 Food interventions

The ongoing food interventions in the County are;

- Food for Asset (FFA) targeting 20,000 beneficiaries administered by World Food Programme partnering with RAMATI; a non-governmental organization.
- Home Grown School Meals Programme supported funded by the National Government

5.2.2 Non-food Intervention

Sub County	Intervention	Location	No. of beneficiaries	Implementers	Impacts	Cost (M Ksh)	Time Frame
AGRICULTURE SECTOR							
Samburu	County wide	Small scale vegetable production	3,000 Households	Samburu County government CARITAS Maralal, Amref, World Vision	-improved nutrition -Increased income	10	Continuous
	County wide	Relief seed supply	400 famers	Samburu County government CARITAS Maralal, Amref, World Vision	Higher crop yields and hence improved food security, Nutrition and income	17	Continuous
Samburu	County wide	Extension services	4,210 households	County Government and partners	Increased crop yields	5	Continuous
	Fuel subsidy for ploughing (500 lts of diesel per tractor)	Entire county	3,250	County government (Agriculture department)	Increased crop yields	4	
LIVESTOCK SECTOR							
Samburu	Samburu East	Destocking by slaughter	2370	County Government	Power to purchase and protein availability	10	3-4 quarters
		Livestock feeds	10,000 livestock	National government	Sustenance of stock		quarters 2,3and 4
	Samburu North	Destocking by slaughter	2370	County Government	Power to purchase and protein availability	10	3-4 quarters
		Livestock feeds		National government	Sustenance of stock		quarters 2,3and 4
	Samburu Central	Destocking by slaughter	1195	County Government	Power to purchase and protein availability	5.7	3-4 quarters
		Livestock feeds	5322	National government	Sustenance of stock		quarters 2,3and 4
WATER SECTOR							
Samburu	Rehabilitation and extension of existing water sources	All the three Sub Counties	30,000	County Government	Reduced water stress for domestic and livestock use.	8.06	continuous
Samburu	All boreholes in the County. Attending to breakdown by Drought Response Team	All the three Sub Counties	10,000 persons	County Government NDMA	Reduced water stress for domestic and livestock use.	2	Ongoing
Samburu	Construction of Barsilinga water supply	Samburu East	10,000	County Government	Reduced water stress for domestic and livestock use	30	90% complete
HEALTH SECTOR							

Whole County	Vitamin A Supplementation	Health facilities	46,696	MOH Partners	Improved immunity hence less disease burden	5	3 months
Whole County	Zinc Supplementation	Health facilities	53,617	MOH Partners	Reduced diarrheal cases	15	3 months
Whole County	Management of Acute Malnutrition (IMAM)	Health facilities	53,617	MOH Partners	Reduced malnutrition cases	20	3months
Whole County	IYCN Interventions (EBF and Timely Intro of complementary Foods)	Health facilities	4934	MOH Partners	Improved IYCN practices	15	3months
Whole County	Iron Folate Supplementation among Pregnant Women	Health facilities	12,278	MOH Partners	Better pregnancy outcome	5	3 months
Whole County	Deworming	Health facilities	41,508	MOH Partners	Reduced morbidity among under fives	0.5	ongoing
Whole County	Food Fortification	Health facilities	274,079	MOH Partners	Improved nutrition status	0.5	ongoing

5.3 Recommended Interventions

5.3.1 Food Intervention

Sub County	Population in need (% range min – max)	Proposed mode of intervention
Samburu East	55- 60%	GFD
Samburu North	50 - 55%	GFD
Samburu Central	25-30%	FFA

5.3.2 Recommended Non Food Interventions

Sub County	Intervention	Location	No. of beneficiaries	Implementers	Impacts	Cost (M Kshs)	Time Frame
AGRICULTURE SECTOR							
Samburu	County wide	Enhanced small scale irrigation farming	1000 HH	Department of Agriculture (County government) and Partners		15	Continuous
	County wide	Promotion of drought tolerant crops	1000HH	Department of Agriculture (County government) and Partners		20	Continuous
Samburu	County wide	Water harvesting for irrigation	1000 HH	Departments of water and Agriculture		100	5 years
LIVESTOCK SECTOR							
Samburu	All the Sub-Counties	Rapid Disease Assessment FMD-vaccination BQ vaccination	Target 90% of the livestock population	County Government and Partners	Vaccines Vaccination equipment Drugs	10	Immediately

		De-worming Disease surveillance and reporting Renovation of slaughter houses Education extension			Logistics Facilitation of staff to undertake vaccination		
Samburu	Samburu Central and Samburu East	Destocking by slaughter	677 HH at risk	County Govt and FAO/RED Cross	Funds Logistics	10	July, August, September
Samburu	All the Sub-Counties	Provision of emergency supplementary feeds, target; Lactating stock Breeding stock	Target 2.5% of livestock population	County Govt and Partners i.e. FAO/Red cross	Supplementary Feeds Funds Logistics	5	July, August, September
Samburu	All the Sub-Counties	enhance traditional grazing systems for pasture/fodder conservation	8549	County Govt and Partners		3	September, October, November
WATER SECTOR							
Samburu	Siting, strategic boreholes.	Samburu central 3 Samburu North 3 Samburu East 3	15,000 15,000 15,000	County government of Samburu other Actors / Partners		40	12 Month
Samburu	Capacity building of Water users associations	Countywide- 53 WUAS	150,000	County Govt Partners		2	6 months
Samburu	Construction of Dams and pans 10	Countywide	25,000	County partners		30	6 months
Samburu	Roof water harvesting in schools in five schools	Countywide	20,000	County partners		10	1 year
HEALTH SECTOR							
East North Central	Mass NUTRITION Screening	All	58,974	MOH Partners	Finances Vehicles Anthropometric Equipment HCPs, CHVs		3 MONTHS
East North Central	Integrated medical Outreaches	All	123,723	MOH UNICEF, AMREF, WVK ACF	Finances Vehicles Anthropometric Equipment HCPs, CHVs	4	2 MONTHS
Central, East and North	Integrated WASH activities	All	123,723	AMREF, WVK, MOH, ACTED	Finances Vehicles Anthropometric Equipment HCPs, CHVs		3 MONTHS

5.3.3 Status of recommended 2016 SRA interventions

Intervention description/type	Ward	No of beneficiaries		Cost in Ksh	Implementers /actors	Remarks ✓ Implementation status (ongoing,) ✓ % completion status		
		Male	Female					
AGRICULTURE SECTOR						Ongoing	% of completion status	Not funded
Promotion of drought tolerant crops	Entire county	3,250	3,310	4,000,000	County government (Agriculture department)	Ongoing at 20%		
Fuel subsidy for ploughing (500 lts of diesel per tractor)	Entire county	3,250	3,310	4,000,000	County government (Agriculture department)		100% complete	
Development of lulu Irrigation Scheme	Samburu Central	250	233	7 M	County Government	On-going	Development of Lulu Irrigation Scheme Phase 1- 100 %	Samburu Central