

National Drought Management Authority SAMBURU COUNTY



A Vision 2030 Flagship Project



DROUGHT EARLY WARNING BULLETIN FOR MAY 2019

MAY 2019 EW PHASE



Drought Situation & EW Phase Classification

Biophysical Indicators

- Erratic rainfall experienced for about 2 to 3 days during the third dekad.
- Vegetation cover remained poor across the county similar to previous month.
- Considerable recharge for both surface and underground water sources following the rains.

Socio Economic Indicators Details

- Minimal decrease in trekking distances to water points for livestock and stabilized for households.
- Livestock moved back to wet season in Samburu north but remained within the normal dry season grazing areas in East.
- Milk production and consumption Stabilized compared to April.
- Body condition for all livestock species was to fair to poor across the entire livelihood zones.
- Market prices for cattle and sheep reduced and stabilized for goats.
- Maize/*posho* prices at market increased compared to April.
- A medium sized goat exchanged with 54.9 kilograms of cereals.
- Marginal decline in proportion of children less than 5 years at risk of malnutrition compared to last month.

Early Warning Phase Classification

LIVELIHOOD ZONE	EW PHASE	TRENDS
Agro-pastoral	Alarm	Improving
Pastoral (North)	Alarm	Improving
Pastoral (East)	Alarm	Improving
County	Alarm	Improving

Biophysical Indicators	Value	Normal range/Value	
VCI-3month (County)	19.52	35-50	
VCI-3month -Samburu East	19.54	35-50	
VCI-3month -Samburu North	19.82	35-50	
VCI-3month-Samburu West	18.4	35-50	
Production indicators	Value	Normal ranges	
Livestock Migration Pattern	Migration to wet season areas	No Migrations	
Livestock Body Conditions	Thin, fore ribs visible for grazers and moderate appearance for browsers	Good Smooth appearance	
Milk Production	1.1	>2	
Livestock deaths due to drought	No death	No death	
Access Indicators	Value	Normal ranges	
Terms of Trade (TOT)	54.9	>54.1	
Milk Consumption	0.9	>1.7	
Return distance (km)	Household	6.2	<3.4
	Livestock	11.4	<7.3
Acceptable FCS (percent)	Pastoral	45.9	100
	Agro pastoral	35.5	100
Utilization indicators	Value	Normal ranges	
MUAC (percent)	24.8	<20.53	
rCSI	Pastoral	12	<56
	Agro pastoral	7	<56

<ul style="list-style-type: none"> ▪ Short rains harvests ▪ Short dry spell ▪ Reduced milk yields ▪ Increased HH Food Stocks ▪ Land preparation 	<ul style="list-style-type: none"> ▪ Planting/Weeding ▪ Long rains ▪ High Calving Rate ▪ Milk Yields Increase 	<ul style="list-style-type: none"> ▪ Long rains harvests ▪ A long dry spell ▪ Land preparation ▪ Increased HH Food Stocks ▪ Kidding (Sept) 	<ul style="list-style-type: none"> ▪ Short rains ▪ Planting/weeding 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1.0 CLIMATIC CONDITIONS

1.1 Rainfall Performance

- The county experienced erratic rainfall with delayed false onset in the third dekad of April with marginal pockets receiving 2 - 3 days precipitation in Samburu central and east sub counties and 3 - 4 rainy days in pastoral pockets of Samburu north particularly around Baragoi town.

1.2 Amount of Rainfall and Spatial Distribution

- According to rainfall estimates, the amounts received were below long-term average (LTA) in the first dekad and second dekad of the month. In the third dekad, the rainfall amounts gradually increased by 40 percent above the dekadal long term average (Figure 1). However, some areas such as Longewan, Louwa nyekie, Morijo, Marti, Suiyan, Angata Sikira and Ndoto ward remained dry throughout the month due to lack of rainfall.
- Distribution was poor in terms of space and unevenly distributed in terms of space across the livelihood zones.

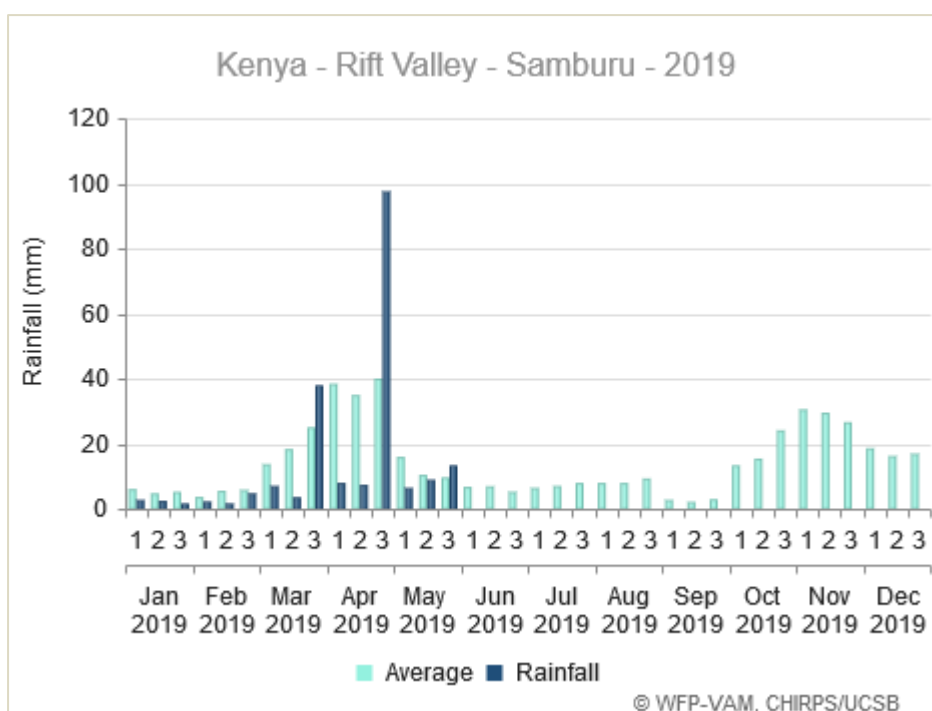


Figure 1: Graph Showing Rainfall Estimates (RFE) Trends for Samburu County
(Source : WFP-VAM, CHIRPS/UCSB)

IMPACTS ON VEGETATION AND WATER

2.0 Vegetation Condition

2.1.1 Vegetation Condition Index (VCI)

- Erratic and intermittent showers have slightly improved rangeland resources in marginal pockets in the county. However, in some areas which include Longewan, Louwa Nyekie, Morijo, Marti, and Angata Sikira the rangeland resources remained similar compared to last month. According to the 3-month VCI, the county vegetation greenness slightly improved by 10 percent from last month VCI value. However, in pastoral areas of Samburu east sub county had vegetation greenness improved by 35 percent from last month value of 14.39 to 19.54. the county remained in severe vegetation deficit (Figure 2). All the three sub counties were in severe vegetation deficit.

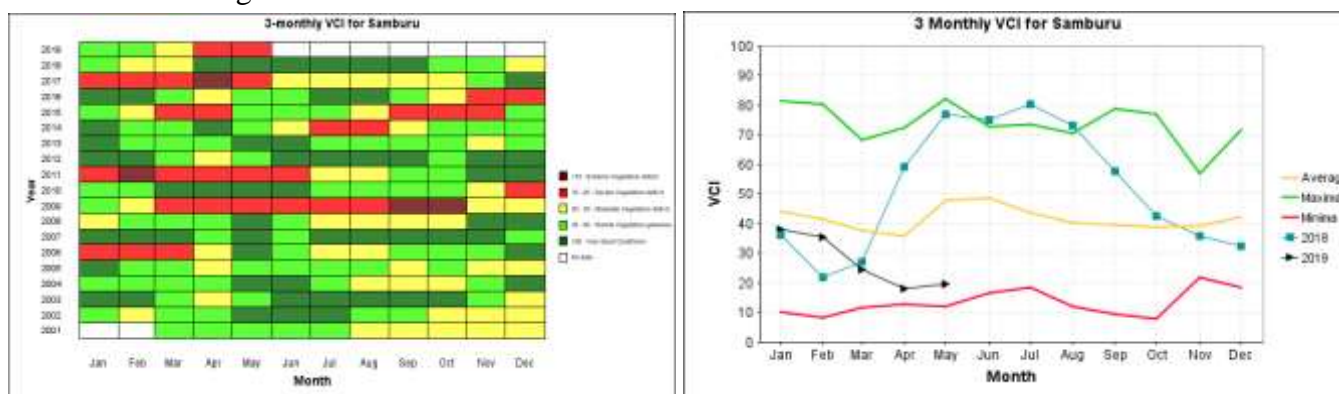


Figure 2: Matrix and Graph Showing VCI Trends for Samburu County
(Source: Boku University)

2.1.2 Field Observations (Pasture and Browse Conditions)

Quality and Quantity

- Browse in major parts of pastoral areas of Samburu east and pockets of Samburu north has considerably regenerated attributed to depressed and poorly distributed rainfall while pastures had insignificant improvement. Majority of cattle from loosuk, Lolmolok and Kirisia hills are depending on looping (cutting of tree leaves) as feeds. However, some pockets of Marti, Morijo, Longewan, Lolmolok, Angata Sikira and Suiyan remained dry due to lack of rainfall. Dry standing hay still exists in dry grazing areas of Mbukoi, Angata Sikira, Kawop and Suiyan in Samburu north and Koom in Samburu east although accessibility is limited by resource-based conflicts.
- Approximately 76.5 percent of the sampled key informants reported that browse was fair and 52.9 percent reported pasture to be fair. Only six percent stated that pasture and browse was good with 17 – 40 percent of the key informants observed that both browse and pasture was in poor condition (Figure 3).

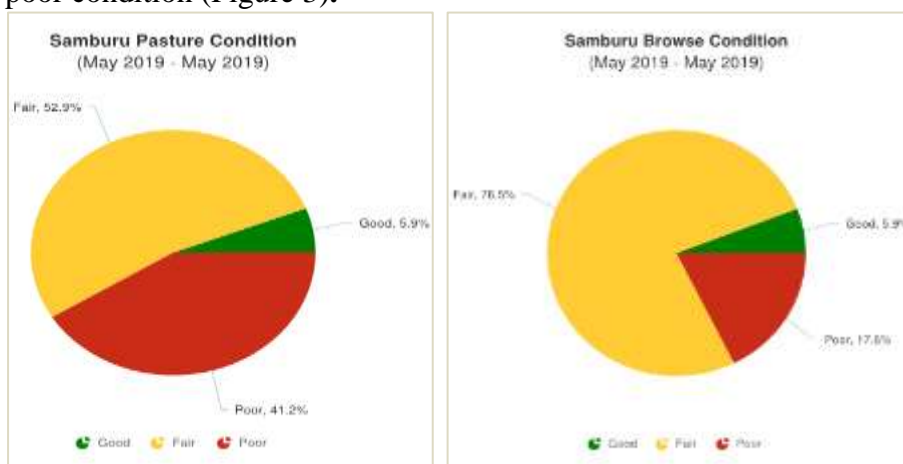


Figure 3: Pasture and Browse Condition

2.2. Water Resource

2.2.1 Sources

- Open water sources have slightly recharged driven intermittent showers received in some areas of the county. Boreholes and traditional river wells remained the most used water source both by livestock and households contributing 41.4 and 24.1 percent of the households. Traditional river wells usage increased to 24.1 percent from 20.7 percent recorded in April. Other sources of water were Shallow wells at 10.3 percent, rivers, pans and dams at 6.9 percent each (Figure 4).

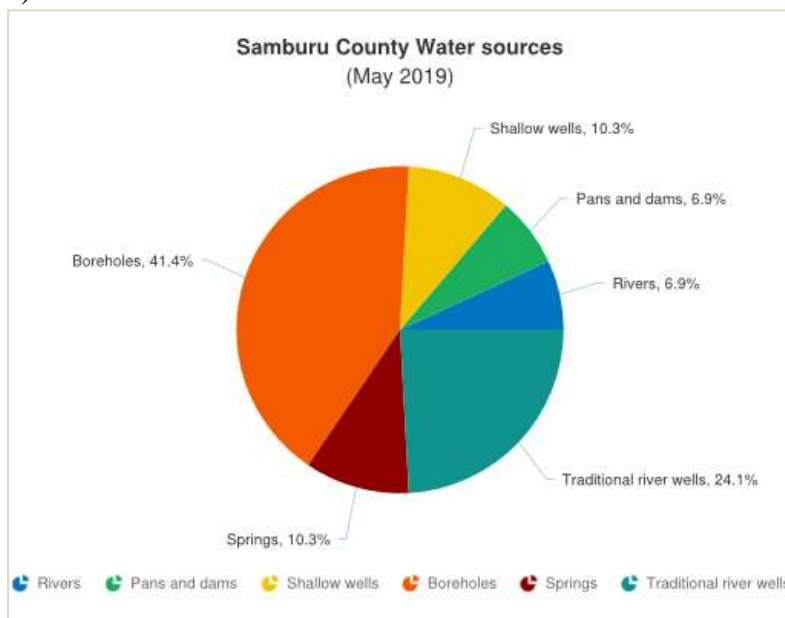


Figure 4: Common Water Sources

2.2.2 Household Access and Utilization

- The current return distance trekked by households to main water points stabilized at 6.2 km compared to 5.9 km recorded in last month. The stable distances were attributed to erratic showers that slightly recharged open surface water sources.
- Waso ward reported the longest distances to water points at 13 km return trekking driven by lack of genset fuel in Kiltamany borehole while Arsim had return distance of 2 km due to availability of springs in the area.
- The current households trekking distances to water points remained above the long-term average at this time of the year (Figure 5) occasioned by poor performance of the March to May rainfall season.

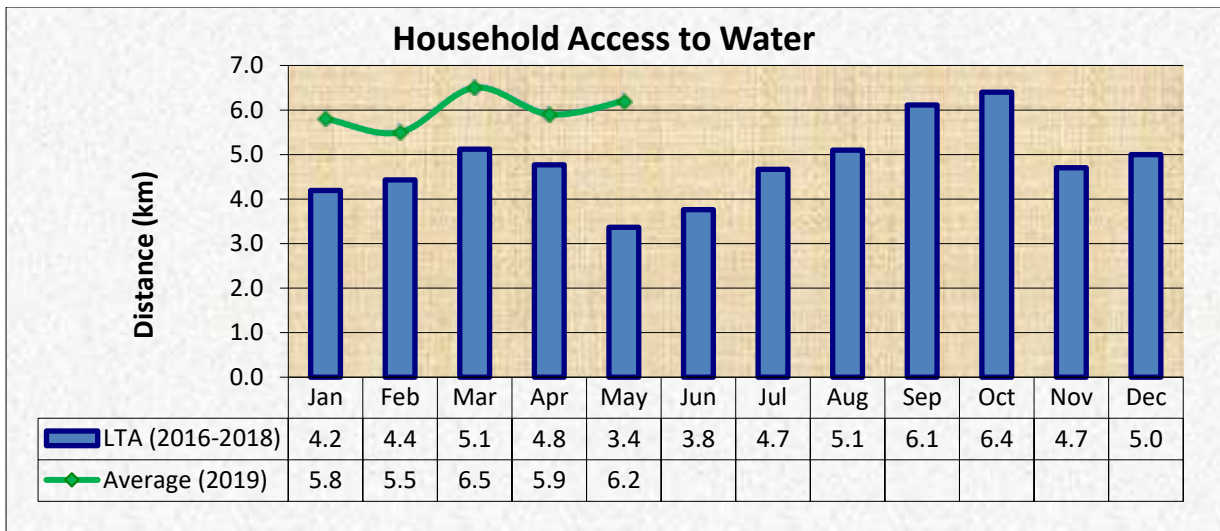


Figure 5: Average Distance Travelled by Households in Search of Water

2.2.3 Livestock Access (Grazing Distances to Water Points)

- Intermittent and depressed showers partially recharged some of the open surface water sources driving a 16 percent decrease from the April value in livestock trekking distance from grazing fields to watering points. However, the warmer than normal temperatures coupled with high concentration and wading of livestock is occasioning faster depletion of the water sources.
- Wamba north and Nachola wards had the longest trekking distances of about 17 km whereas shortest distances were recorded in Ndoto at 6.7 km.
- Majority of cattle in pastoral zones were water after every other day while sheep and goats after every other two days. Cattle in agro-pastoral zones access water on a daily basis while sheep and goats after every other day.
- Water availability both for livestock and domestic use remained below average with current average livestock trekking distance being 56 percent above the long-term average at this time of the year (Figure 6).

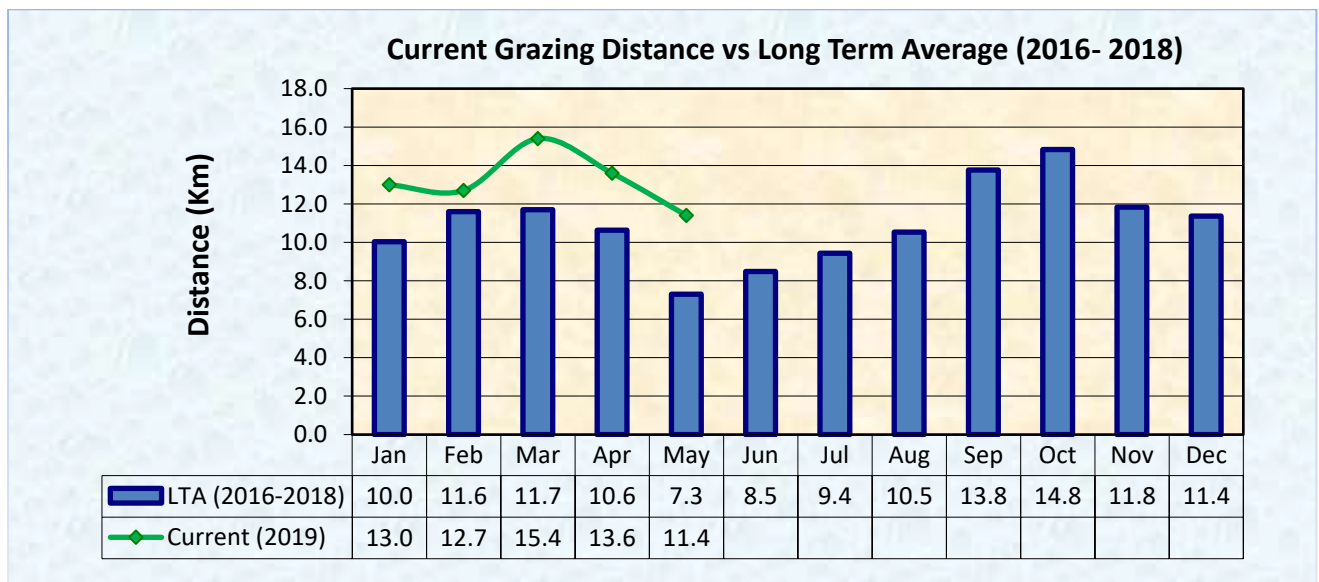


Figure 6: Distance Travelled from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- Cattle and sheep body condition have deteriorated ranging between fair to poor body conditions (thin fore ribs visible) driven by depletion of pastures coupled with long trekking distances due to prolonged dry spell. Poor body conditions for cattle and sheep were predominantly observed in the agro-pastoral livelihood zone following overstocking of sheep that mainly graze on grass.
- Goats and camels have maintained moderate (neither fat nor thin) and borderline fore-ribs not visible, 12th and 13th ribs visible body conditions supported by improved browse condition (Refer to table 1 in annex).

3.1.2 Livestock Diseases and Deaths

- No outbreak of livestock disease was reported however, endemic diseases which include Contagious Caprine Pleuropneumonia (CCPP) and tick-borne diseases such as East Coast Fever (ECF) continued to be reported across the livelihood zone.

3.1.3 Milk Production

- Milk production stabilized at 1.1 litres same as April. Production was mainly from camels and lactating goats. Low production can be mostly attributed to declining body condition as livestock were forced to trek long distances in search of pasture and browse. Moreover carrier effects from recurrent drought over the last two years has made livestock not recover properly thus affecting their breeding patterns and consequently herd size numbers.
- The current production per household was 45 percent below the long-term value at the same period of the year (Figure 7).

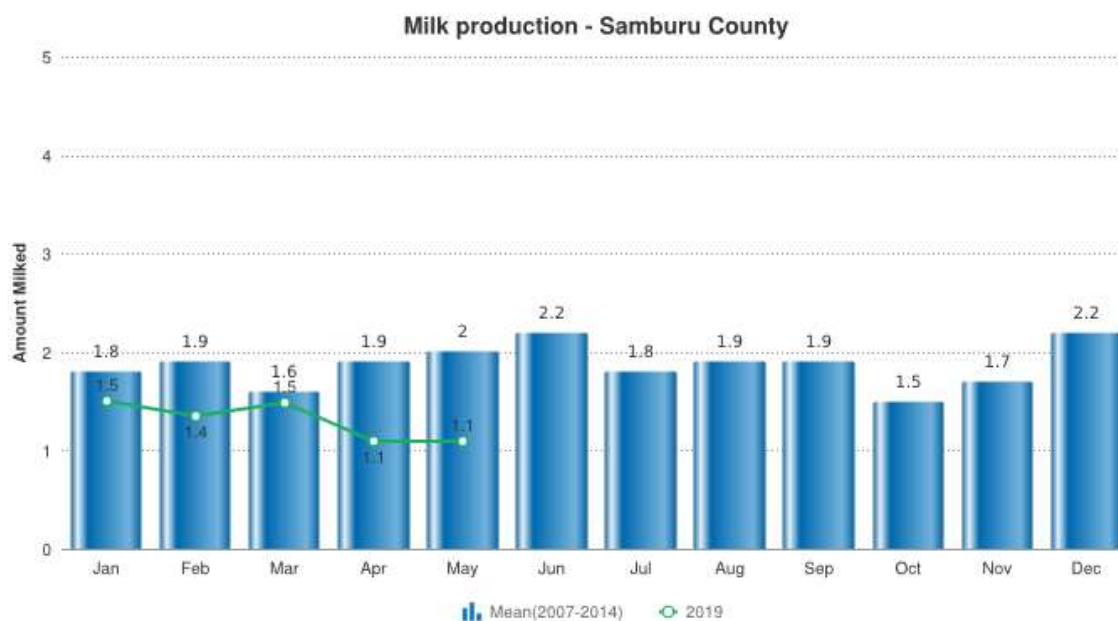


Figure 7: Trends in Milk Production per Household

3.2 Rain Fed Crop Production

3.2.1 Stage and Condition of Food Crops

- Farmers in agro-pastoral zone have cultivated their farms and planted maize and beans however germination was poor as a result of insufficient soil moisture due to erratic precipitation.

3.2.2 Harvest of Crop

- There is no harvest currently on going.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- The current average market selling price decreased by six percent from last month price of Ksh 19,000 to Ksh 17,900 recorded in the month of May. The decreased was attributed to deterioration of cattle body conditions driven by accelerated depletion of forage coupled with long trekking distances to watering points.
- In the pastoral markets of Lpus and Lolkuniani had the cattle prices ranging between Ksh 18,000 to Ksh 26,700 for mature cattle whereas Illaut market had the lowest price of Ksh 13,300. Lolkuniani recorded the highest prices due to its accessibility by external traders from Isiolo, Laikipia and Meru Counties.
- Despite the deterioration in cattle body condition, the current average price remained above LTA by 10 percent at similar period of the year (Figure 8).

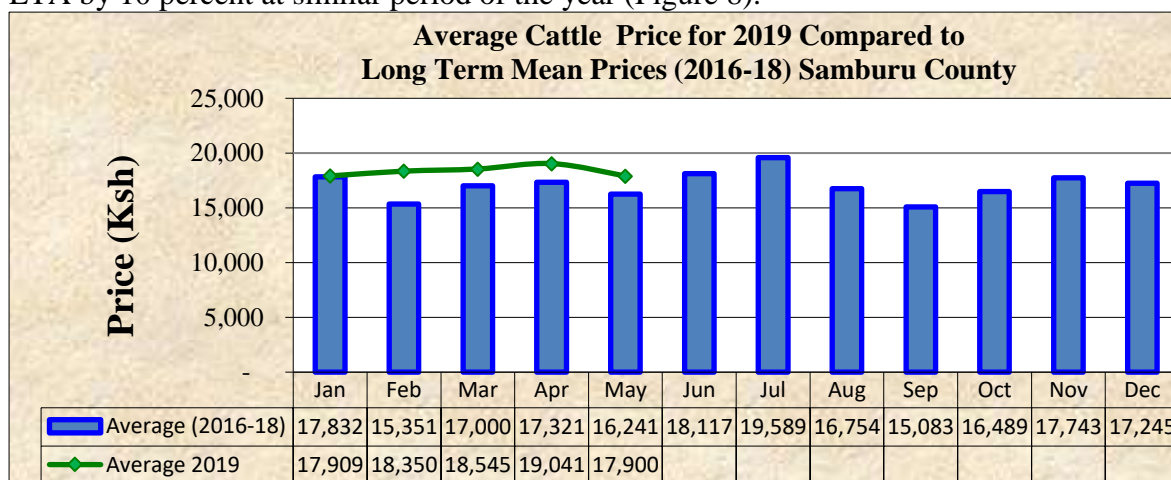


Figure 8: Graph Showing Cattle Selling Price Trends at Market Level

4.1.2 Goat Prices

- Unlike cattle price, goat prices relatively remained stable attributed to fair to good body conditions supported by fair browse conditions. The current average market price was Ksh 2,780 compared to Ksh 2,700 recorded in last month.
- Like cattle prices, high prices were recorded in Lolkuniani at Ksh 4,070 for a mature goat and least price at Illaut at Ksh 2,000. Other sampled markets which include Lekuru, Lpus and Archer post ranged between Ksh 2,500 to Ksh 2,750.
- Goats average prices steadily maintained an upward trend, with the current average price being 33 percent above the 2016 – 2018 long term average at this time of the year (Figure 9).

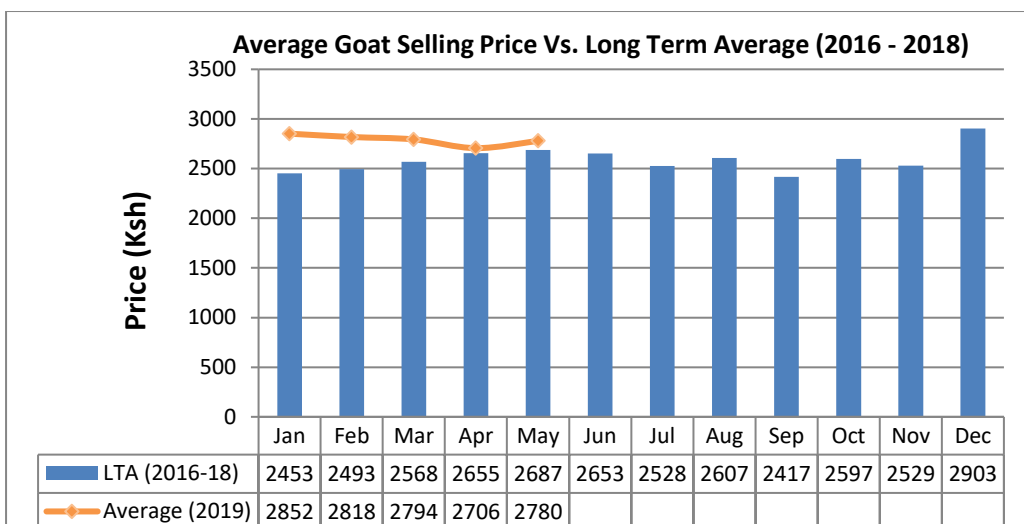


Figure 9: Graph Showing Goats' Selling Price Trends at market Level

4.1.3 Sheep Prices

- Like cattle prices, sheep markets prices decreased to Ksh 2,180 from Ksh 2,210 recorded in the month of April due to depletion of pastures.
- The current average market price remained below the three-year average by five percent at this time of the year (Figure 10).

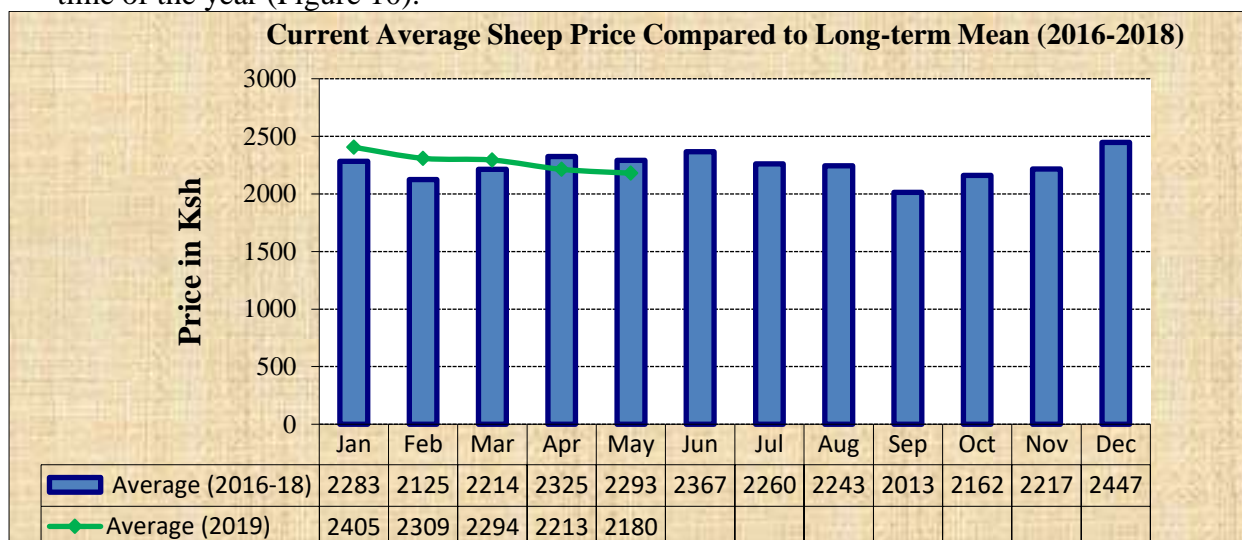


Figure 10: Graph Showing Sheep Selling Price Trends at Market Level

4.2 Crop Prices

4.2.1 Posho (Milled Maize)

- Gradual increase in maize prices were observed since March occasioned by significant decline in stocks at household level resulting to market reliance for the commodity. The current average price increased by 11 percent from the previous month price.
- All the sampled markets recorded a price of Ksh 50 per kilogram except Archers Post and Lolkuniani which had Ksh 40 and Ksh 60 per kilogram respectively.
- Despite the increase, the current prices remained below the LTA by 6 percent at this time of the year (Figure 11).

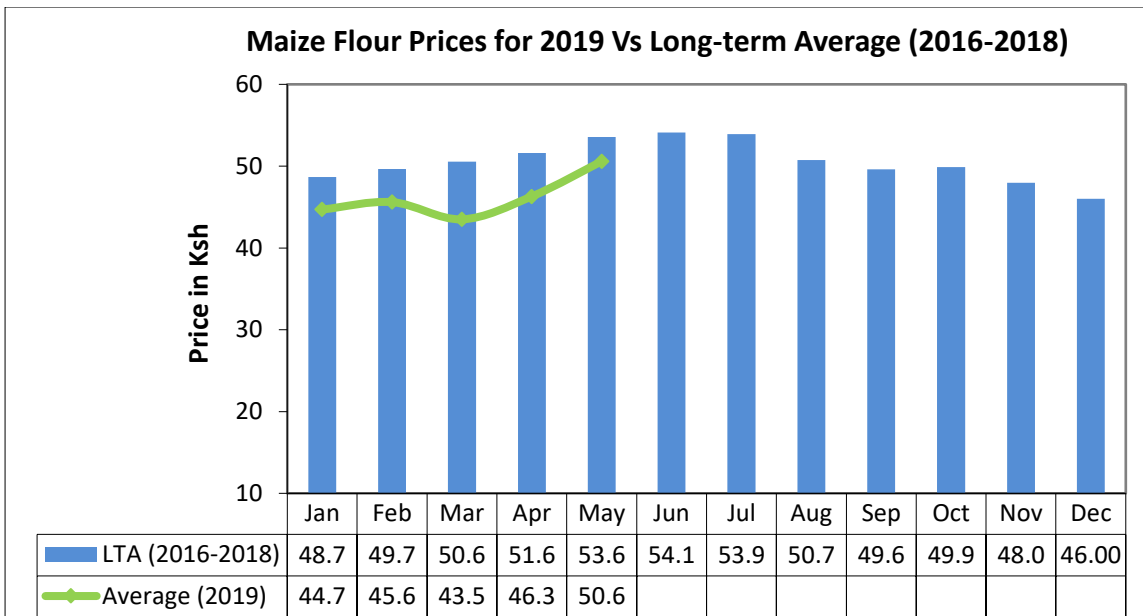


Figure 11: Graph Showing Maize Meal Price Trends

4.3 Livestock Price Ratio/Terms of Trade (TOT)

- The terms of trade have exhibited a downward trend driven by increase in maize prices due to diminishing household stocks coupled with stable goat prices.
- Households were able to exchange the proceeds of one mature goat with approximately 55 kilograms of cereals.
- Lowest terms of trade of 47 kilograms fetched from income from sale of a goat were noticed in Samburu north attributed to resource-based conflicts deterring external traders into the region. The highest terms of trade recorded in Samburu east whereby 63 kilograms were exchanged with income from one mature goat.
- In comparison to LTA, the average ToT was stable at this time of the year (Figure 12).

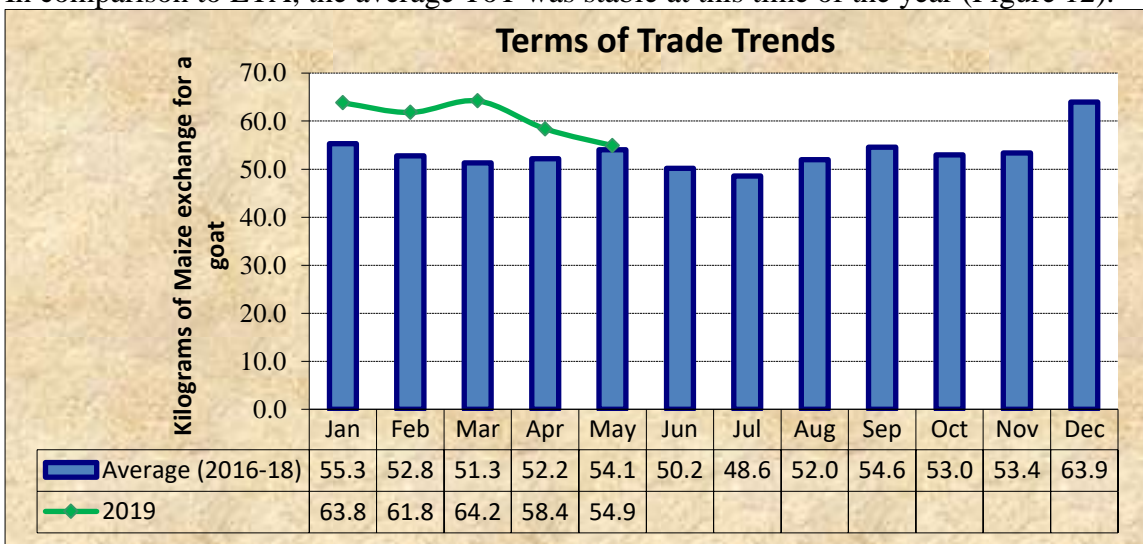


Figure 12: Trends in Terms of Trade (TOT)

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- Most of the milk produced was consumed at household level though some was sold at the market. Milk consumption stabilized at 0.9 litres as compared to 1 litre in April.
- Milk was shared amongst households and was mostly used to make tea rather than consumed as whole milk.
- Consumption was 47 percent below the long term average (Figure 13).

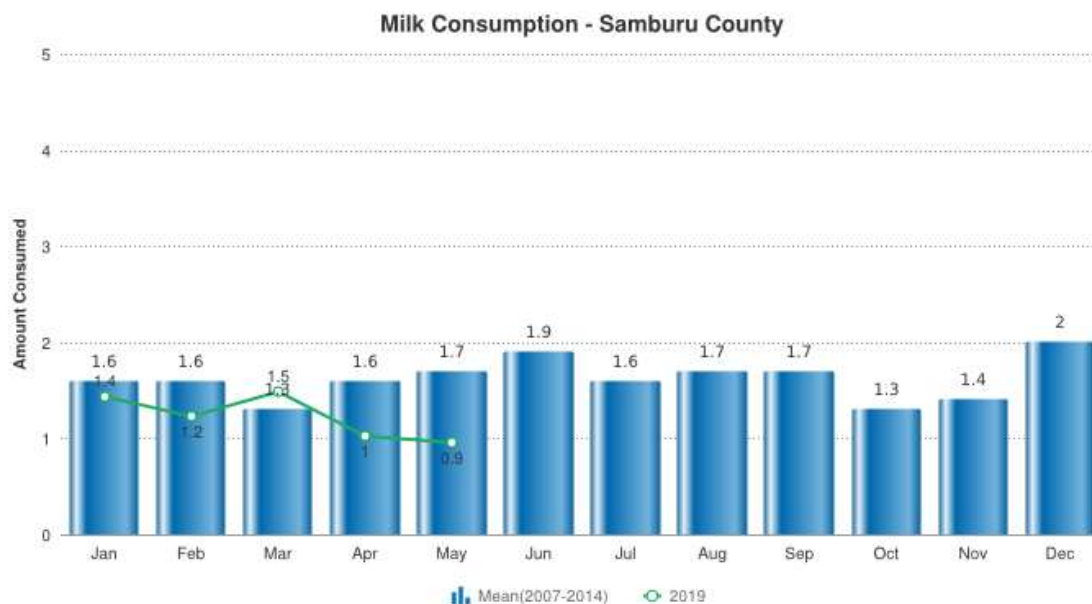


Figure 13: Trends in Milk Consumption per Household

5.2 Food Consumption Score (FCS)

- A larger proportion of about 64.5 percent of households in agro-pastoral zone had borderline FCS while 35.5 percent had acceptable FCS indication that they are partially able to access minimum food requirements.
- In pastoral livelihood, 9.6 percent of households had poor FCS implying that they are only consuming starch and vegetables seven days a week while 90.4 percent had borderline and acceptable FCS (Figure 15).

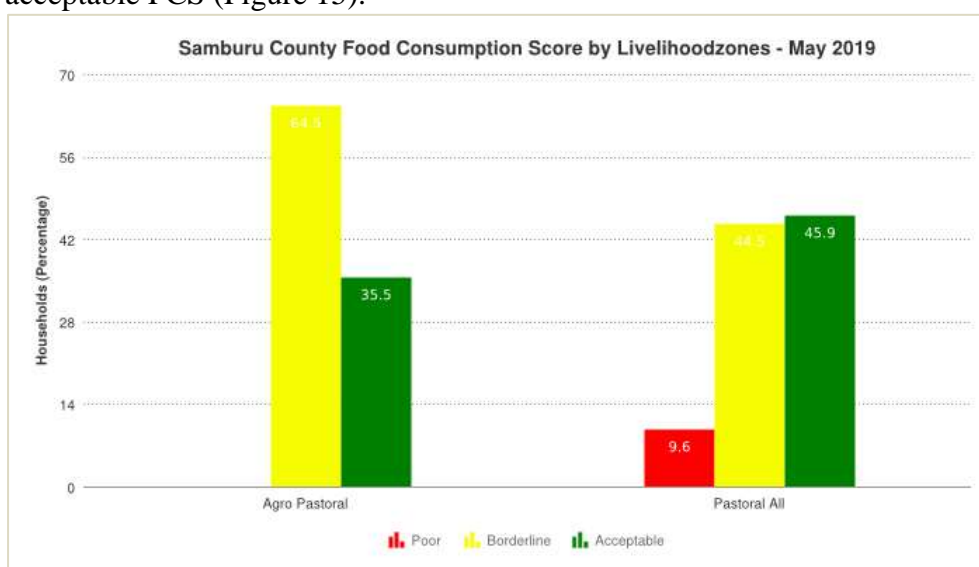


Figure 14: Bar chart showing FCS per livelihood zone

5.3 Health and Nutrition Status

5.3.1 Mid Upper-Arm Circumference (MUAC 125-134 mm)

- Regular monitoring of sampled children below 5 years showed the proportion at risk of being malnourished decreased by 7 percent from 26.7 percent in April to 24.8 percent in May. The decrease was attributed to efforts by stakeholders in the health department in conducting outreaches and referring malnourished cases for supplementary feeding.
- Sentinel sites which reported high prevalence were Suguta ward, Ndoto and Wamba North at 46.9 percent, 29.1 percent and 28.4 percent respectively.
- The current proportion of under-five at risk of malnutrition was 17 percent above LTA (Figure 15).

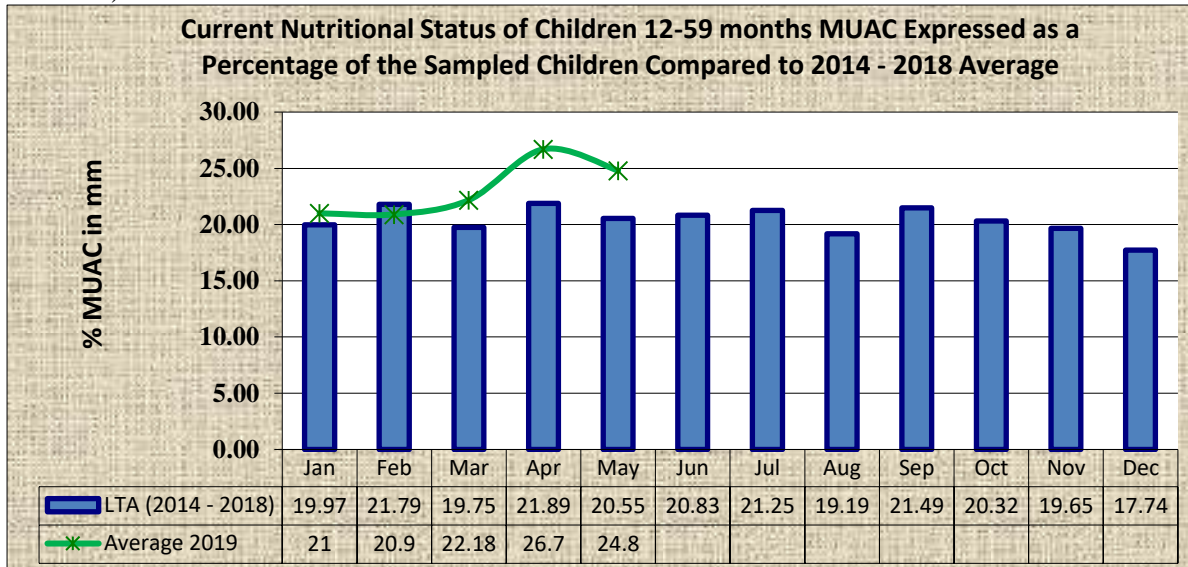


Figure 15: Graph showing average Nutritional status (MUAC)

5.3.2 Health

- Health centres and dispensaries across the county recorded cases of Malaria, Pneumonia, Upper Respiratory Tract Infections and diarrhoea for both children under five years and general population. These cases were treated and discharged
- Few households however opted to use local herbs for treating the ailments.

5.4 Reduced Coping Strategies Index(rCSI)

- The current mean rCSI was 11.11 compared to 12.14 with reduction of meal portions and consumption of less preferred/cheaper food being the commonly used coping mechanisms.

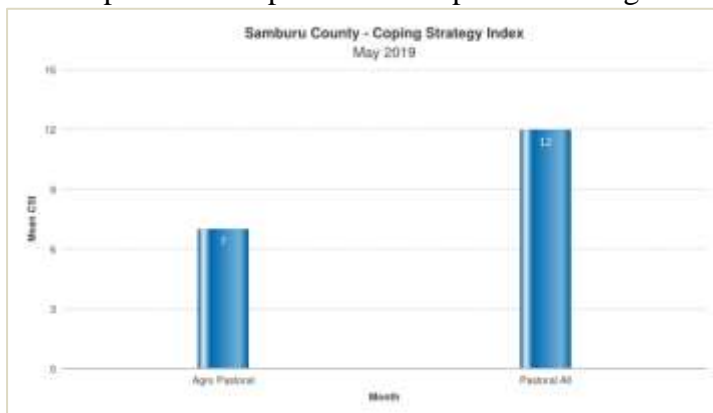


Figure 16: Bar chart showing CSI per livelihood zone

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Non-Food On-going Interventions

Table 1: Non-food On-going Interventions

SECTOR	INTERVENTION	IMPLEMENTERS
Water	<ul style="list-style-type: none"> • Repair and equipping with solar of Lchoro Lelerai borehole • Repair of Mbukoi, Porro and Nkejemuny boreholes systems 	NG-CDF and Water department Water department
Livestock	<ul style="list-style-type: none"> • Ongoing construction of Lpus livestock market (sale yard) 	RPLRP
Health	<ul style="list-style-type: none"> • Integrated outreach across the county 	MOH through Transforming health system for universal coverage program supported by world bank

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Tension remained high in parts of Samburu north and Samburu east along the Samburu– Isiolo counties border in fear of retaliatory attacks. An attempted cattle theft was reported in areas around Mbukoi leading to gunshot injury to young herder.

7.2 Migration

- Internal movement of all livestock species have been noticed to the pockets that received depressed rainfall. Majority of cattle from Samburu north and some from east are concentrated in Lesepe, Lesirkan, Ngilai. and Ndotto hills. Livestock from Samburu east have remained Loijuk, Naishamunye and Mathew ranges. Livestock from Nachola ward have migrated towards Suguta valley along the border of Turkana County due to fear of government security operation. In Samburu central majority of livestock from Suguta and loosuk wards have moved to Lodekejek ward and in Kirimun plains due to minimal replenishment of rangeland resources.
- Livestock from Marsabit have been spotted heading towards Keno in Samburu North.

7.3 Food Security Prognosis

- Following the ongoing rainfall, water sources are likely to recharge significantly and forage is expected to rejuvenate in the next one month resulting to improved livestock body conditions subsequently return of livestock closer to homesteads thus improving milk production and livestock market prices.
- The ongoing agricultural activities in the agro-pastoral zone particularly crop planting is likely to increase labour-based wage at household level. However, below average crop production is expected as the rainfall season performed poorly thus less agricultural activities undertaken.
- The depletion of staple food commodities stocks at household level is likely to continue triggering increase in food commodities prices in the market thus impacting negatively on household food access and consumption.

8.0 RECOMMENDATIONS

Table 2: Proposed Interventions per Sector

SECTOR	INTERVENTION
Livestock	<ul style="list-style-type: none">• Sensitization on pasture production
Health	<ul style="list-style-type: none">• Up scaling of integrated outreaches and provision of Aqua tabs to address high water turbidity.
	<ul style="list-style-type: none">• Up scaling of CLTS and WASH programs
Water	<ul style="list-style-type: none">• Advocacy for roof water harvesting in institutions
Agriculture	<ul style="list-style-type: none">• Promotion of drought tolerant crops

Annexes

Table 3: Livestock Body Condition Scoring Chart

Score	Body Condition	Warning Stage
1	Emaciated, little muscle left	Emergency
2	Very thin no fat, bones visible	
3	Thin fore ribs visible	Alert Worsening/Alarm
4	Borderline fore-ribs not visible. 12th & 13th ribs visible	Alert
5	Moderate. neither fat nor thin	Normal/Alert
6	Good smooth appearance	
7	Very Good Smooth with fat over back and tail head	Normal
8	Fat, Blocky. Bone over back not visible	
9	Very Fat Tail buried and in fat	