

National Drought Management Authority SAMBURU COUNTY



A Vision 2030 Flagship Project



DROUGHT EARLY WARNING BULLETIN FOR DECEMBER 2017

DECEMBER 2017 EW PHASE

Drought Status: **NORMAL**



Shughuli za kawaida

Drought Situation & EW Phase Classification

Biophysical Indicators

- Dry weather conditions predominantly engulfed for the major part of the month with depressed showers in marginal pockets.
- Foliage significantly improved across the livelihood zones with vegetation greenness ranging between above normal and normal as measured by VCI.
- Recharge level for the open surface water sources is relatively exhibiting declining trends due to high daytime temperatures resulting to high evaporations.

Socio Economic Indicators Details

- Internal movement of cattle witnessed within their wards with few migrating to Kiromun plain in Laikipia north Sub County.
- Slight increase was witnessed in both livestock and household trekking distances to water points.
- Slight decreased was recorded in milk production and consumption as compared to last month.
- Livestock body conditions remained stable with browsers retaining good body conditions while grazers ranging between good and fair.
- Notable decline was observed in Posho/maize prices due to long rains season harvest.
- Further improvement was documented in TOT with income from sale of a goat exchanged for 61 kg of cereals compared to 43.5 kg recorded last month.
- Proportion of children at risk of malnutrition further improved to 17.2 percent from 20.2 percent recorded in last month.

Early Warning Phase Classification

LIVELIHOOD ZONE	EW PHASE	TRENDS
Agro-pastoral	Above Normal	Stable
Pastoral (North)	Above Normal	Stable
Pastoral (East)	Normal	Stable
County	Normal	Stable

Biophysical Indicators	Value	Normal range/Value	
VCI-3month (County)	51.19	35-50	
VCI-3month -Samburu East	38.16	35-50	
VCI-3month -Samburu North	60.75	35-50	
VCI-3month-Samburu West	71.51	35-50	
Production indicators	Value	Normal ranges	
Livestock Migration Pattern	Intra Migration	No Migration	
Livestock Body Conditions	Good Smooth with fat over back and tail	Fat & Smooth appearance	
Milk Production	1.7	>1.7	
Livestock deaths due to drought	No Deaths	No death	
Access Indicators	Value	Normal ranges	
Terms of Trade (TOT)	61	>53.7	
Milk Consumption	1.4	>2	
Return distance (km)	Household	5.2	<2.7
	Livestock	14.4	<7.9
Acceptable FCS (%)	Pastoral	48	100%
	Agro pastoral	96.4	100%
Utilization indicators	Value	Normal ranges	
MUAC (%)	17.2	<17.8	
Mean CSI	Pastoral	14.7	<56
	Agro pastoral	0	<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

Dry weather conditions prevailed in most parts of the county for the period under review. However marginal pockets of county occasionally recorded light rainfall amounting 9.1 mm compared 18.3 mm, 8.3 mm compared to 15.9 mm and 5.8 mm compared to 16.6 mm in the 1st, 2nd and 3rd dekads respectively. The cumulative amounts were below the Long Term Average (LTA) at this time of the year (Fig. 1).

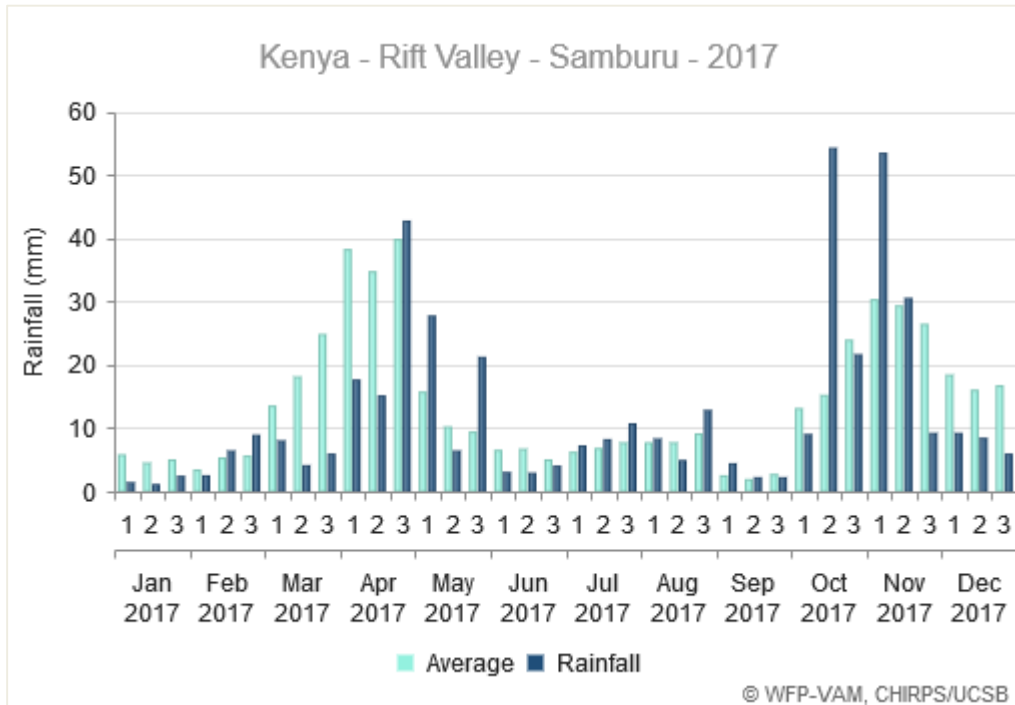


Figure 1: Graph Showing Rainfall Estimates (RFE) Trends for Samburu County (Source: WFP-VAM, CHIRPS/UCSB)

1.1.1 Temporal and Spatial Distribution

- The cumulative rainfall distribution for the period under review, both in space and time was poor and unevenly across the livelihood zones.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition Index (VCI)

- Notable improvement in vegetation cover continued to be witnessed in the month of December across the livelihood zones attributed to precipitation received in the month of November. The 3 month average vegetation advanced from normal vegetation deficit to vegetation greenness above normal band.
- The current average VCI for the county as at 27th December 2017 was in vegetation greenness above normal at a value of 51.19 compared to 46.36 recorded in the month of November as measured by VCI (Fig. 2).

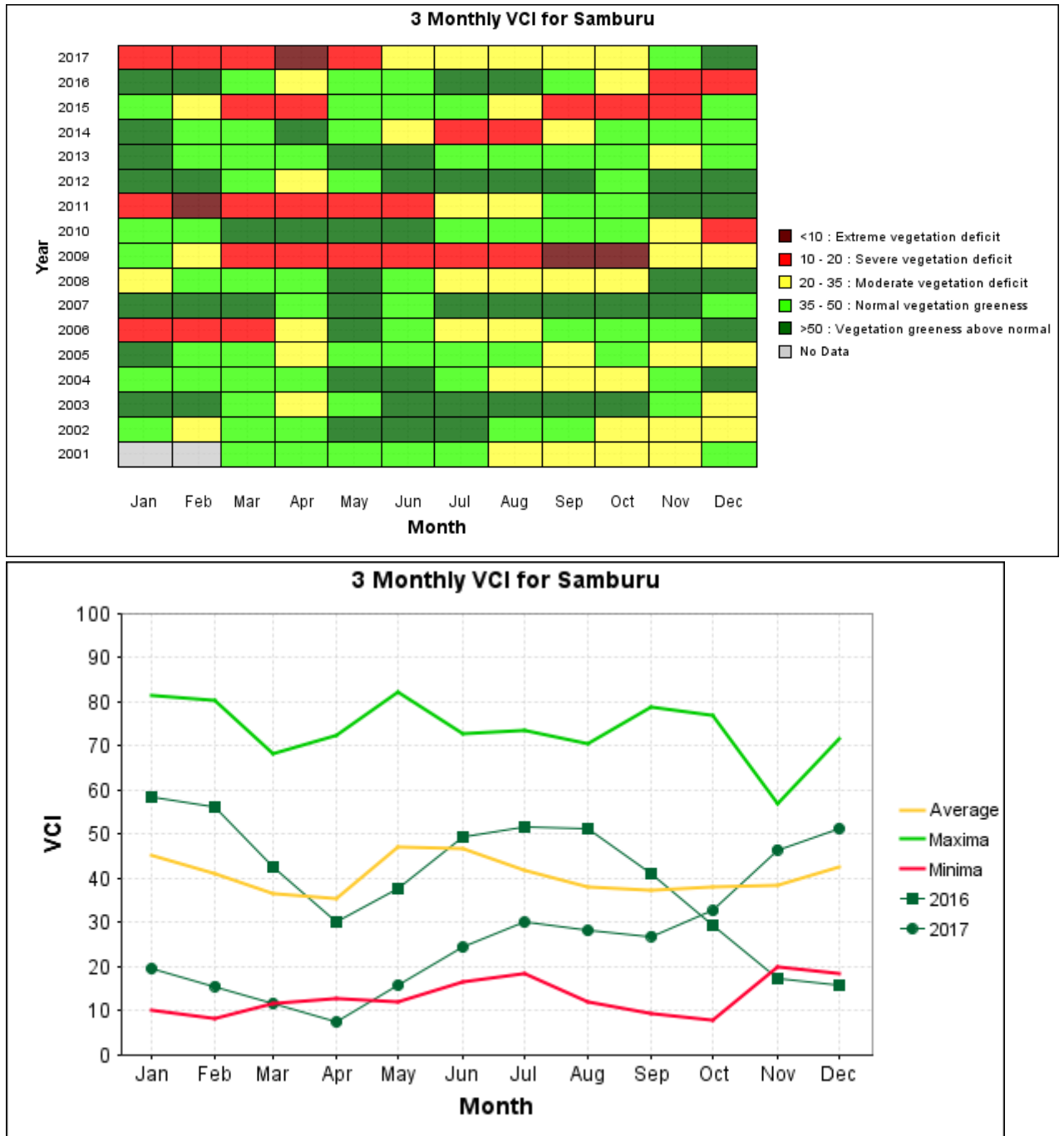


Figure 2: Matrix and Graph Showing VCI Trends for Samburu County (Source: Boku University)

- In Samburu west and Samburu north sub counties, vegetation cover greenness remained above normal. The VCI values improved in west and north from 69.72 to 71.51 and 58.03 to 60.75 respectively.

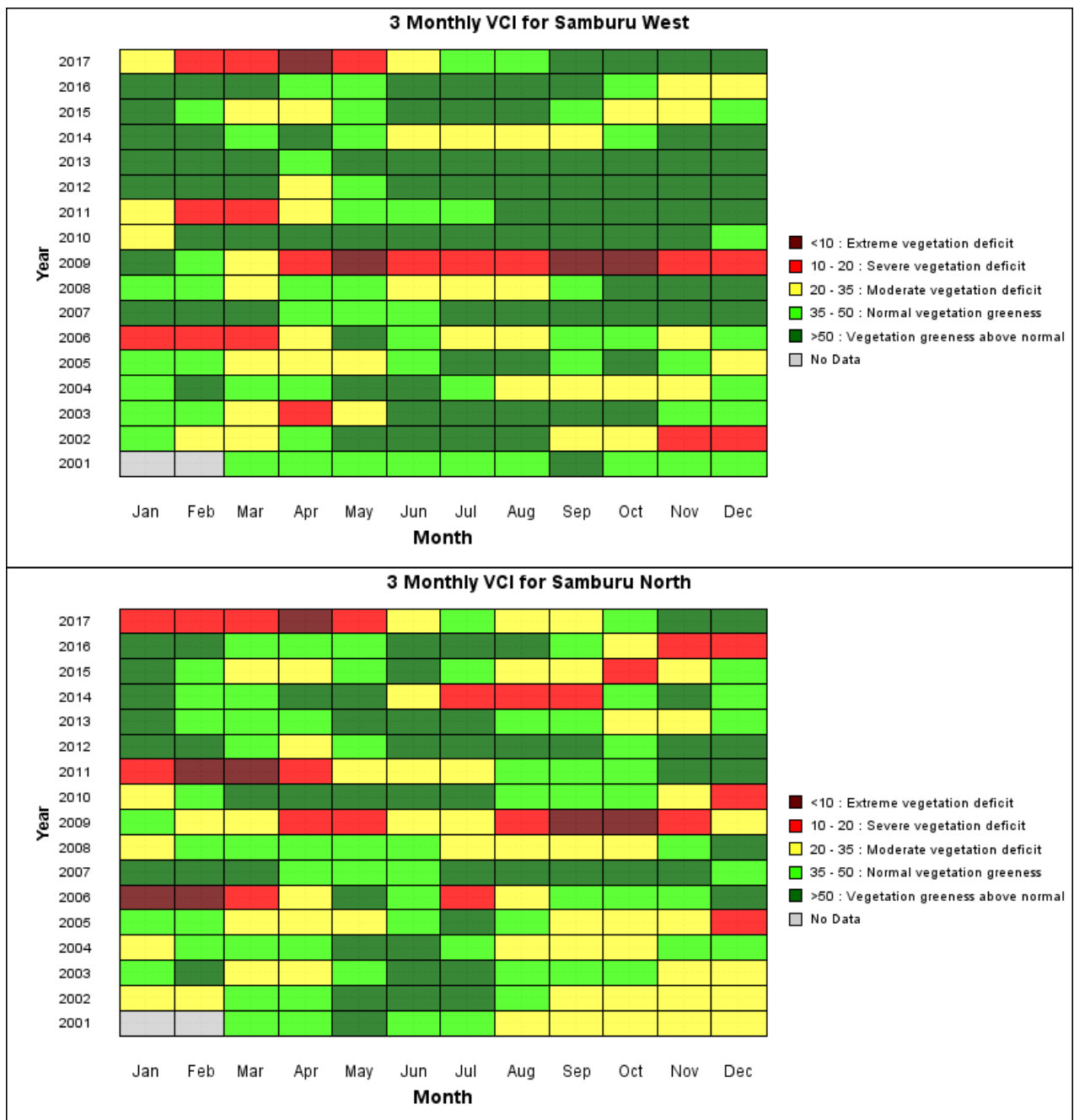


Figure 3: Matrix Showing VCI Trends for Samburu West and Samburu North sub county (Source: Boku University)

- Rangeland resources have gradually improved in Samburu east Sub County for the last two months. Current 3 month average VCI improved to normal vegetation greenness at 38.16 from 30.81 documented in last month. The improvement in vegetation cover can be attributed to enhanced short rains experienced in November (Fig 4).

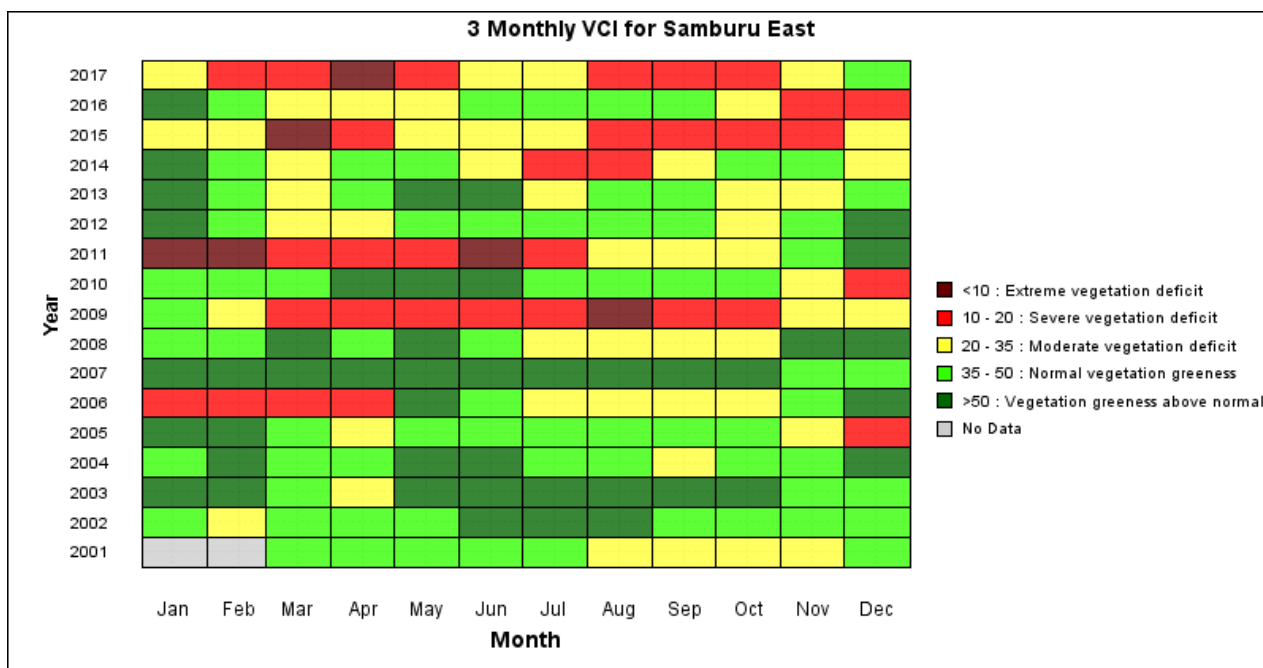


Figure 4: Matrix Showing Historical VCI trends for Samburu East sub county (Source: Boku University)

2.1.1 Field Observations (Pasture and Browse Conditions)

Quality

- High daytime temperatures have negatively affected quality of both pasture and browse resulting into fair to good conditions across both livelihood zones. Few pockets of Ndoto ward in Samburu North however have poor pasture and fair browse due to poor rainfall.

Quantity

- The quantity of pastures in enclosures and deferred grazing areas is good while in frequently grazed rangeland is fair to poor due to overgrazing in most parts however remained poor in Ndoto ward. Browse quantity remained considerably good and is enough to last browsers for about two to three months.
- Significant pastures still available in conflict hotspots areas of Angata Sikira, Marti and Kawop plains in Samburu North attributed to limited access due to resource based conflicts.

2.2. Water Resource

2.2.1 Sources

- In the month of December, major water sources include boreholes, shallow wells and pans and dams. Boreholes contribution was 23.7 percent of available water sources, shallow wells and pans and dams contributed each 21.1 percent.
- Other sources were traditional river wells contributing 18.4 percent while springs available particularly in Ndoto ward and river Waso specifically in Wamba West and Waso wards each contributed 7.9 percent (Fig 5).

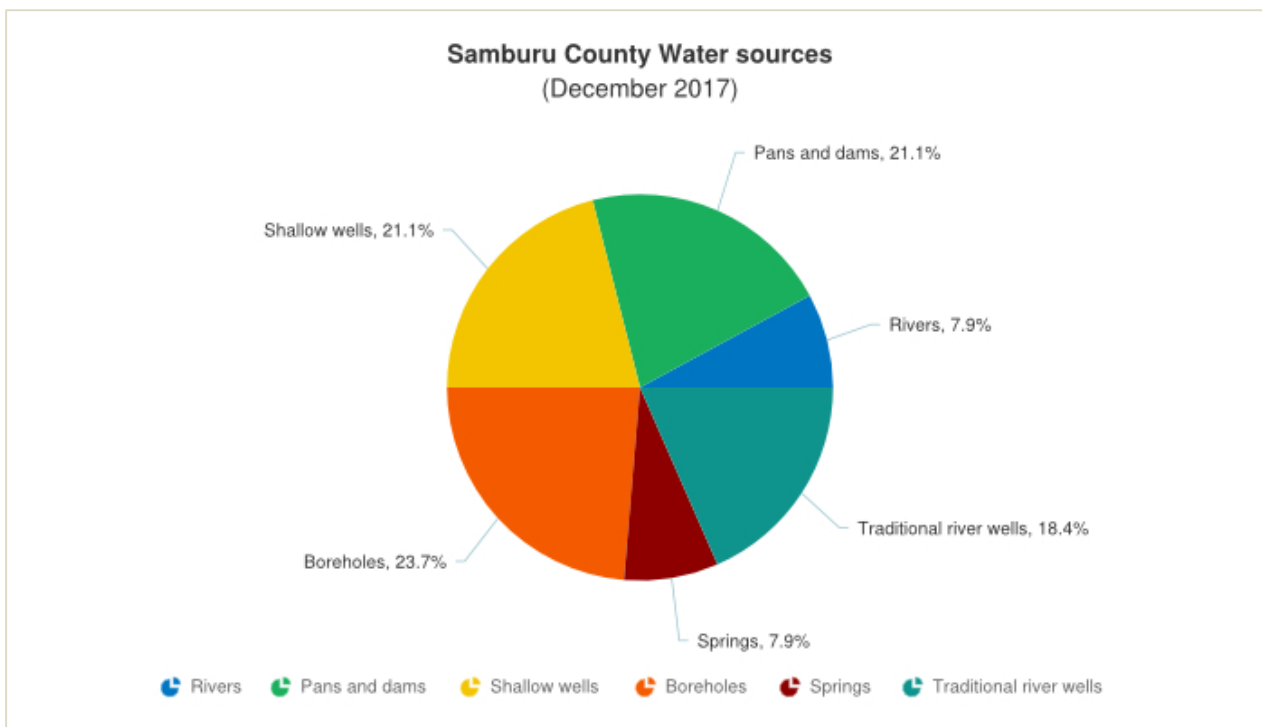


Figure 5: Common water sources

2.2.2 Household Access and Utilization

- Trekking distances to the water points by households slightly increased as compared to last month. The increase can be attributed decline in recharge level for open water sources due to maximum daytime temperatures experienced during the month and also probably silting of open water sources.
- Current average trekking distance was 5.2 km compared to 4.9 km recorded in November. High trekking distances were witnessed in in Nachola ward in Samburu North.
- Water consumption remained relatively low across the livelihood zones with majority of households consuming the water without treating it.
- The current average households return trekking distance remained above the LTA at this time of the year (Fig. 6).

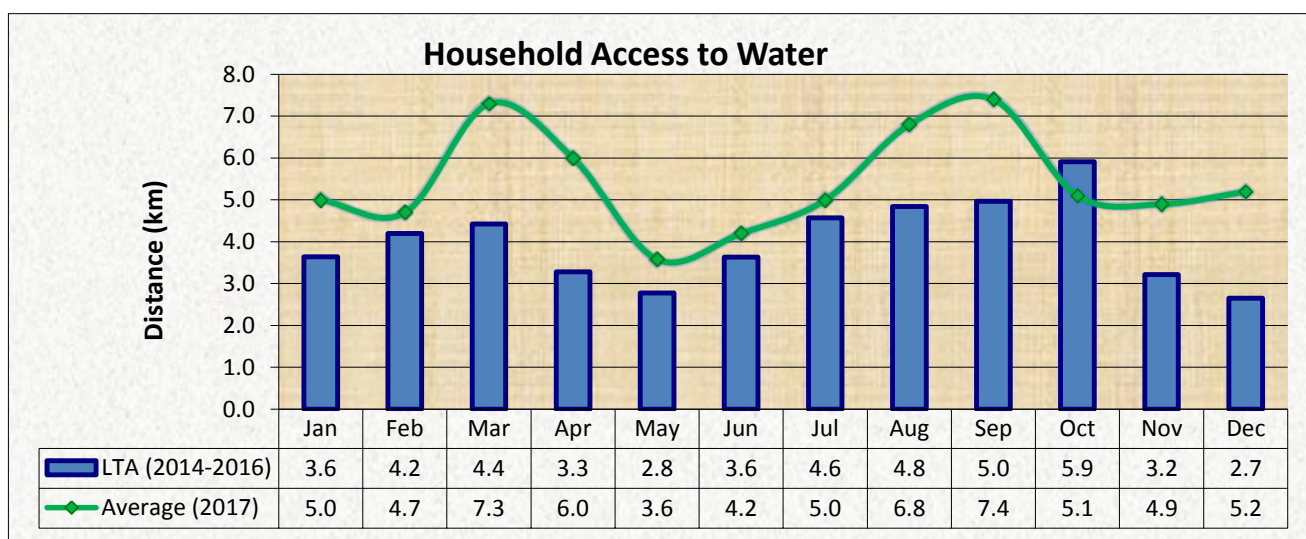


Figure 6: Average Distance Travelled by Households in Search of Water

2.2.3 Grazing Distances to Water Points

- Like household trekking distances, livestock distances from grazing areas to water points also increased from 11.2 km to 14.7 km attributed to livestock moving towards deferred grazing fields away from watering points.
- In pastoral areas of Samburu north and east sub counties livestock trekked on average 16 km and 15.3 km respectively while agro pastoral of Samburu central sub county recorded trekking distances of 10.7 km. The variation can be linked to close proximity of water sources in agro pastoral and in addition better water-holding capacity soils in agro pastoral as compared to loose sandy soils in pastoral areas.
- Average return trekking distance remained above the LTA by 59 percent at the same time of the year (Fig. 7).

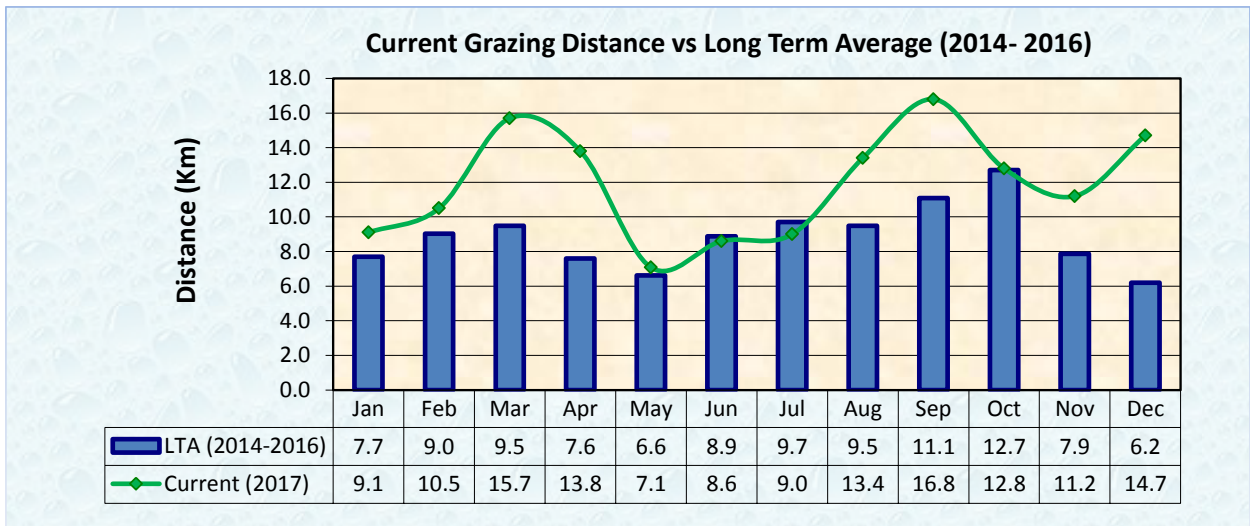


Figure 7: Distance Travelled from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Migration Patterns

- Following early cessation of the short rains season, some environmental indicators are deteriorating prompting early internal movement of cattle to utilized deferred grazing areas. Few herders are migrating into Laikipia North Sub County.

3.1.2 Livestock Body Condition

- Small stock and camels body conditions steadily improved remaining good smooth with majority exhibiting fat, blocky appearance with bone over the back not visible. This is mainly attributed to availability of browse which favored the browsers and the stunted pasture which was comfortably consumed by sheep.
- Cattle's body condition is fair and is still recovering following the long dry spell with most of them exhibiting moderate conditions (neither fat nor thin), (*Refer to table 1 in annex*).

3.1.3 Livestock Diseases

- Incidences of diarrhoea were reported by the communities and also clinical signs of endemic diseases such as Contagious Caprine Pleuro pneumonia (CCPP) in goats continued to be reported across the livelihood zones.

3.1.4 Milk Production and Consumption

- Gradual decrease in milk production continued to be noted attributed to weaning in goats and sheep. Further reduction recorded in milk production from 1.7 litres per household to 1.5 litres. Current milk production is 32 percent below the LTA at this time of the year (Fig. 8).

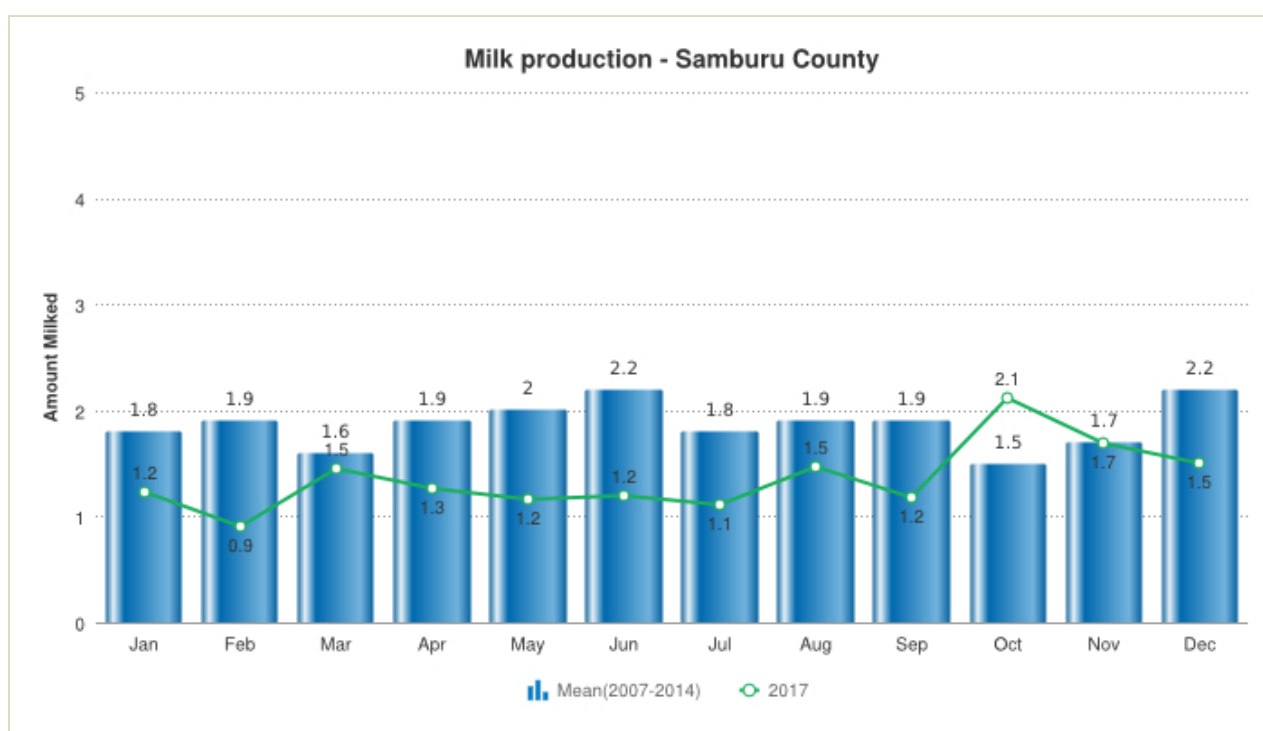


Figure 8: Trends in Milk Production per Household

- On average, 1.4 litres were consumed at the household level with the little remaining was sold retailed between Ksh 60 – 70 per litre.

- Milk consumed at household level on average is 30 percent below the LTA at this time of the year (Fig. 9).

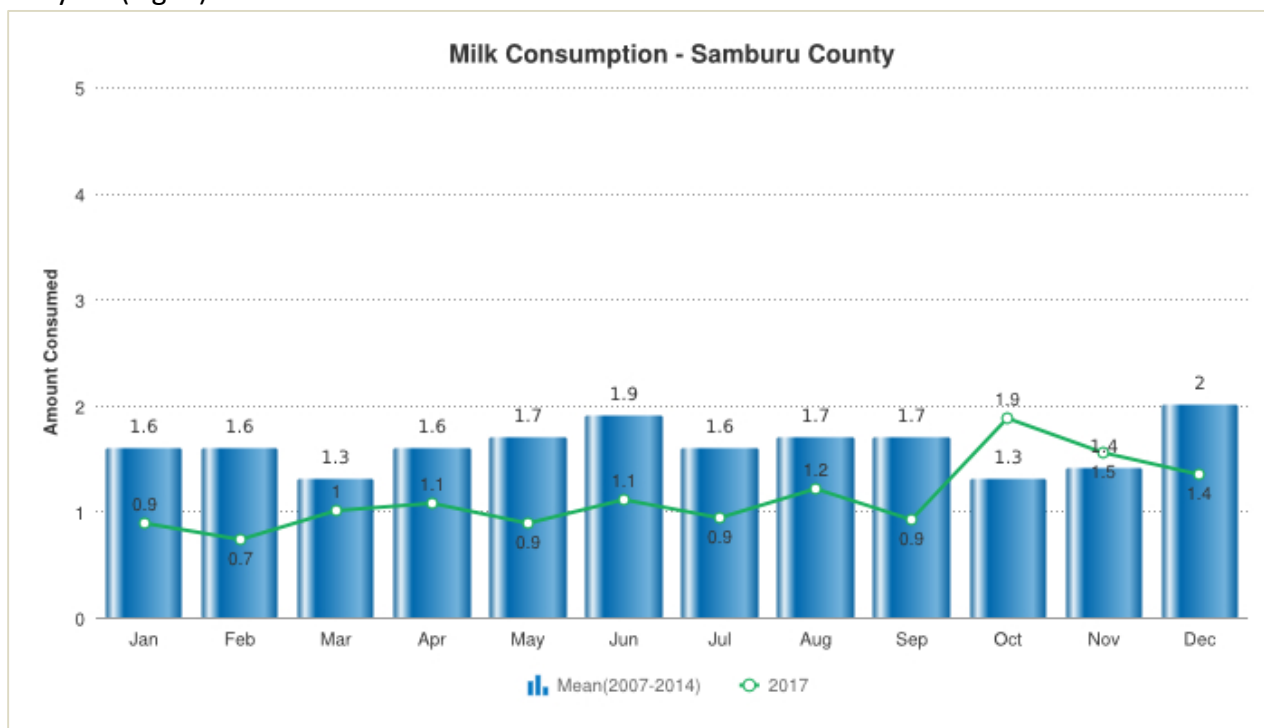


Figure 9: Trends in Milk Consumption per Household

3.1.5 Livestock Deaths

- No livestock deaths as a result of drought were reported. Incidences of livestock predation by wild animals were reported across the livelihood zones.

3.2 Rain Fed Crop Production

3.2.1 Stage and Condition of Food Crops

- Short rains planted crops along the Kirisia hills of Lodokejek ward and parts of Maralal ward which includes mostly maize and beans are at knee high for maize and ponding for beans, however early cessation of short rains season has negatively affected the conditions of the crops particularly maize thus likely of withering before reaching maturity stage.

3.2.2 Harvest of Crop

- Most farmers in high altitude areas of Poro ward are still harvesting maize. The delayed maturity is as a result of cold weathers conditions which normally result in prolonged maize maturity.
- Long rains season production yields were below normal owing to dry spell experienced after germination that discouraged most farmers from doing weeding and eventually allowed their livestock to feed on their crops immediately after germination.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Livestock Terms of Trade (TOT)

- Good livestock body conditions resulted into improved livestock prices whereas long rain season harvest in agro pastoral and even in bordering counties prompted reduction in maize prices thus positively affected pastoralist purchasing power.
- A pastoralist can exchange the income from the sale of one goat with 61 kilograms of cereals. TOT improved from 43.5 kilograms recorded in last month to 61 kilograms of cereals.
- The current average TOT is considerably favourable to pastoralists and was 14 percent above the LTA at the same time of the year (Fig. 10).

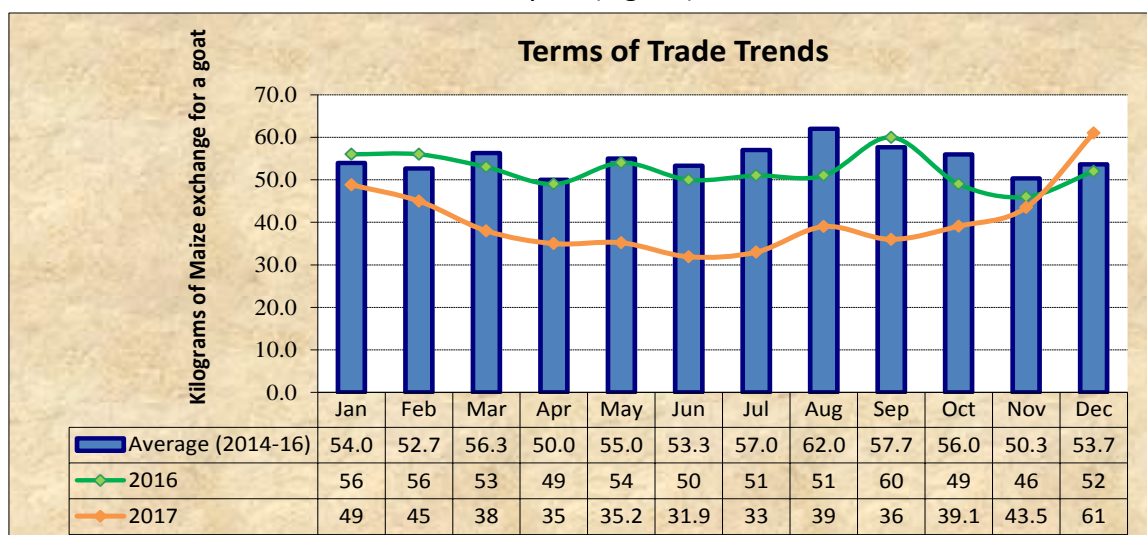


Figure 10: Trends in Terms of Trade (TOT)

4.1.2 Cattle Prices

- Upward trend continued to be recorded settling at Ksh 19,055 under review period compared to Ksh 18,860 recorded in last month. Better market prices attributed to improved livestock body condition.
- Lolkuniani market in pastoral livelihood recorded highest average price at Ksh 25,200 attributed to ease access by trader from Isiolo and Meru Counties while Lekuru in agro pastoral recorded lowest averaging at Ksh 12,000.

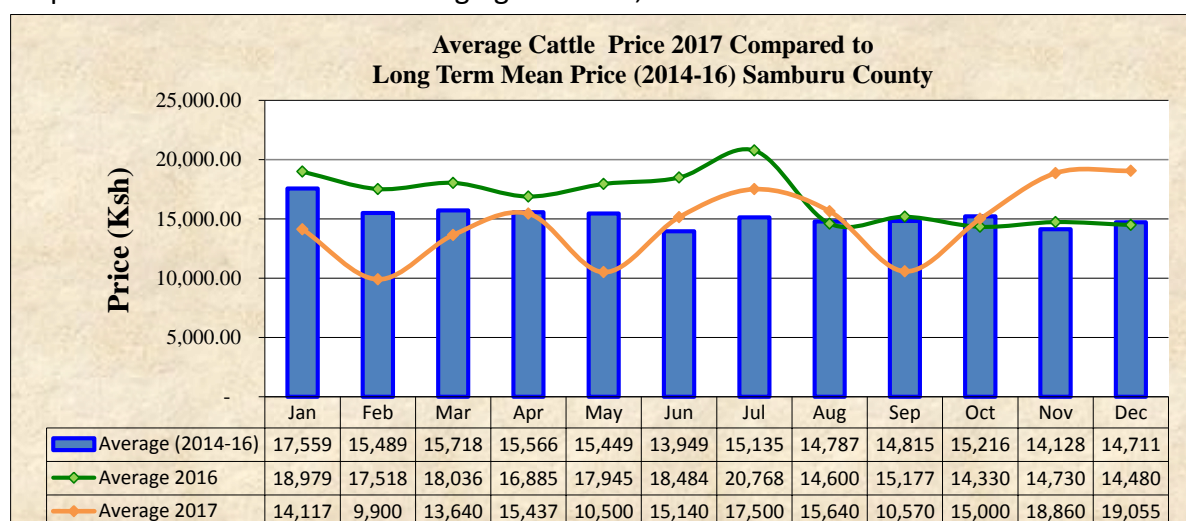


Figure 11: Graph Showing Cattle Selling Price Trends at Farm Gate and Market Level

4.1.3 Goat Prices

- Like cattle prices, goats market prices considerably increased attributed to good body conditions and high demand due to Christmas festive season. Current average market selling price for goats' was Ksh 2,920 compared to Ksh 2,218.
- High selling prices for goats continued to be witnessed in Lolkuniani market at Ksh 4,500 while Illaut recorded average price of Ksh 2,000.
- Baragoi market that is being revived has recorded an average selling price of Ksh 2,300 for a mature goat.
- Compared to LTA, the current average price of Ksh 2,920 was above the LTA by 18 percent at the similar time of the year (Fig. 12).

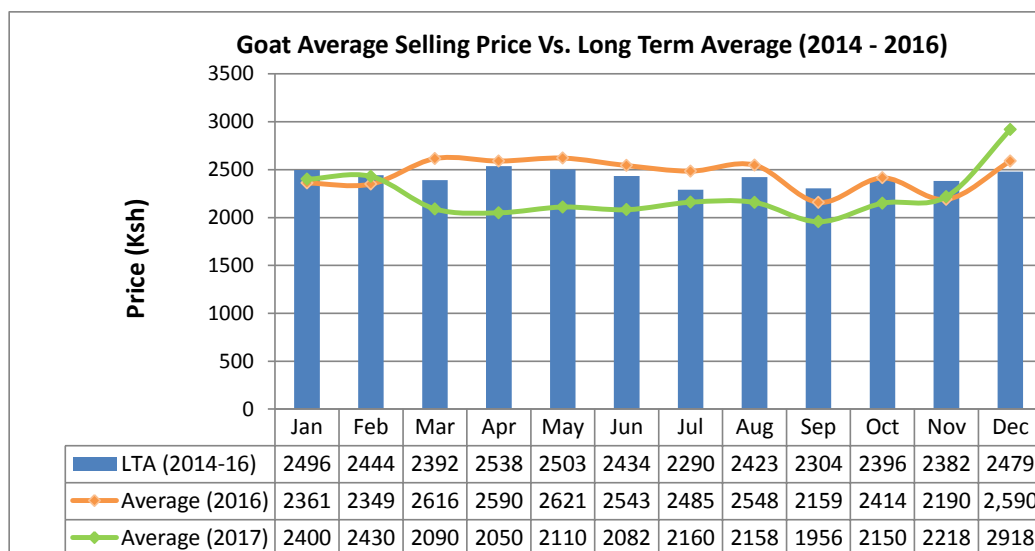


Figure 12: Graph Showing Goats' Selling Price Trends at Farm Gate and market Level

4.1.4 Sheep Prices

- Current average market price for sheep significantly increased to Ksh 2,510 from Ksh 2,242. The increase can be attributed to Christmas festive season and favourably good body conditions. High selling price was noted in Lolkuniani market at Ksh 3,500 while lowest at Illaut at Ksh 1,530.
- Compared to LTA, the current average selling price for sheep continued to be above the LTA by 11 percent at this time of the year (Fig. 13).

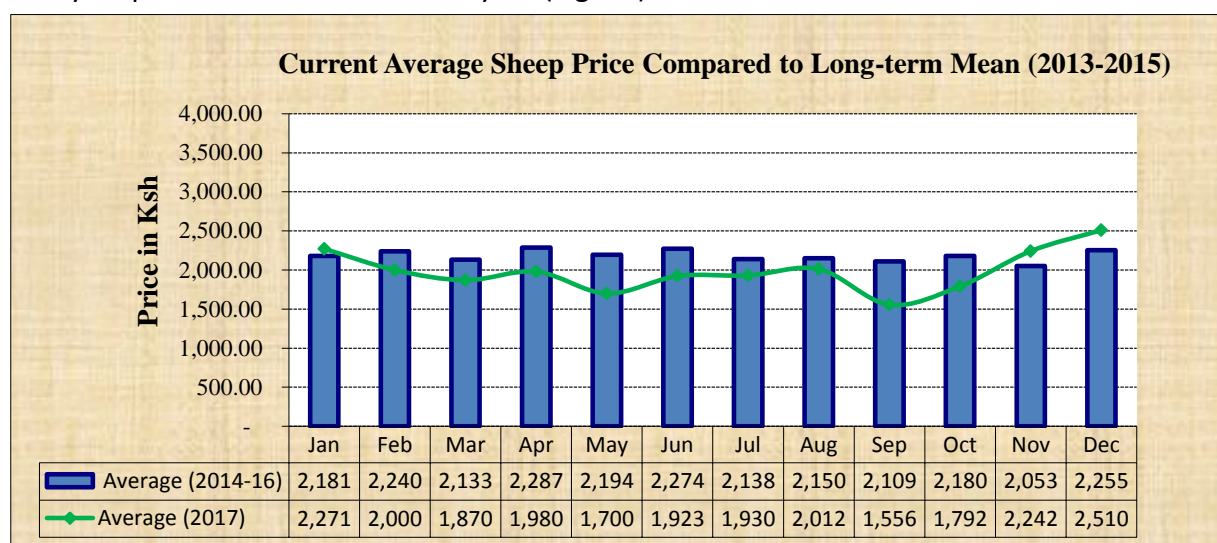


Figure 13: Graph Showing Sheep Selling Price Trends at Farm Gate and Market Level

4.2 Crop Prices

4.2.1 Posho (Milled Maize)

- Maize/posho (milled maize) average selling price declined from Ksh 51 documented in last month to Ksh 47 per kilogram. The decrease can attributed to replenished household stocks in agro pastoral zone due to long rains harvest and importation by local traders from outside the county resulting into reduction in selling prices.
- The current retail average price dropped below the LTA by 4 percent at this time of the year (Fig 14).

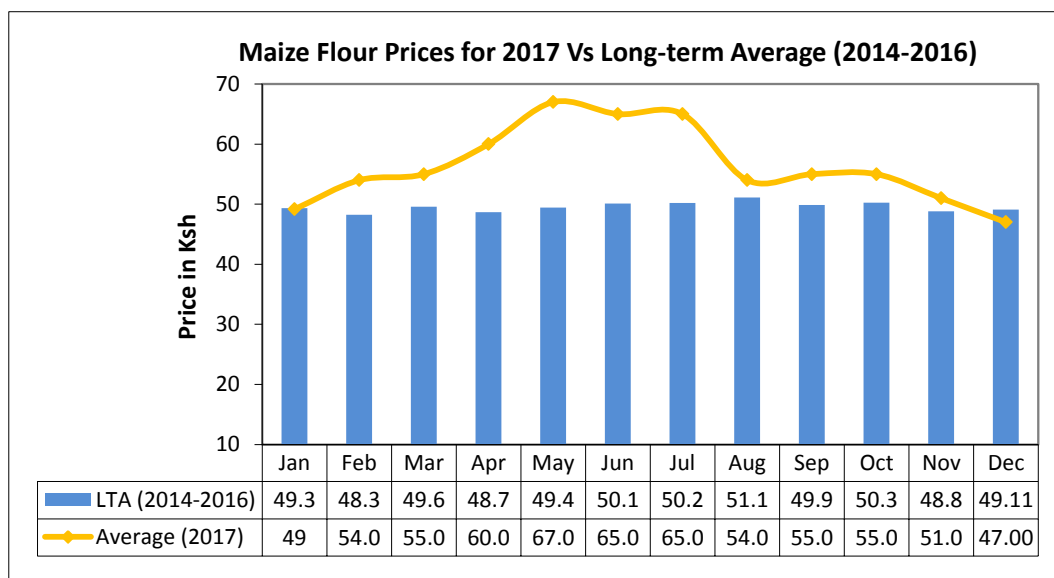


Figure 14: Graph Showing Maize meal Price Trends

6.1 Source of Income

- Sale of livestock remained the major source of income within the county during the period under review. The contribution to income from sale of livestock was 52.3 percent of available income sources.
- Other income sources include casual labour, petty trade and employment accounting for 25.6 percent, 19.9 percent and 2.3 percent respectively.

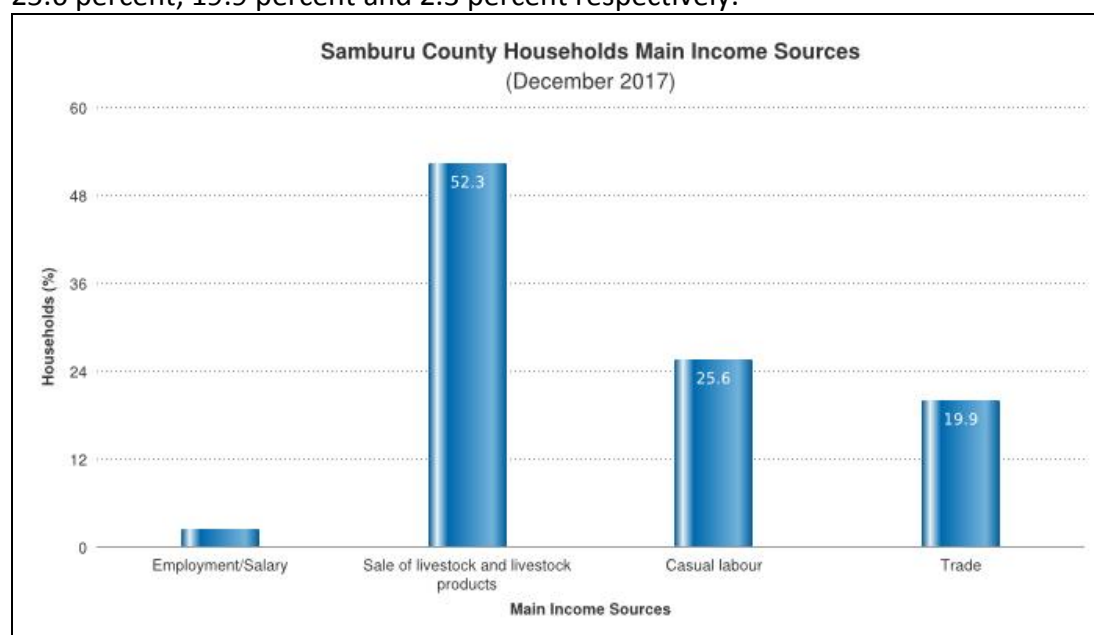


Figure 15: Households Common Sources of Income

5.0 UTILIZATION INDICATORS

5.1 Health and Nutrition Status

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

- Downward trend continued to be witnessed in children at risk of malnutrition for the last three months. The current proportion of children at risk improved to 17.2 percent from 20.2 percent recorded in the previous month.
- Improvement in nutritional status of under-five can be attributed to integrated medical outreaches across the county coupled with improved purchasing power probably resulting into better dietary diversity.
- High rate of children at risk of malnutrition were observed in pastoral areas at 23.2 percent and 14.9 percent in Samburu north and east sub counties respectively. In agro pastoral areas had an average rate of 12.4 percent of children at risk of malnutrition.
- During this time of the year, the proportion of under-five at risk of malnutrition dropped below the LTA by approximately 3 percent (Fig 16).

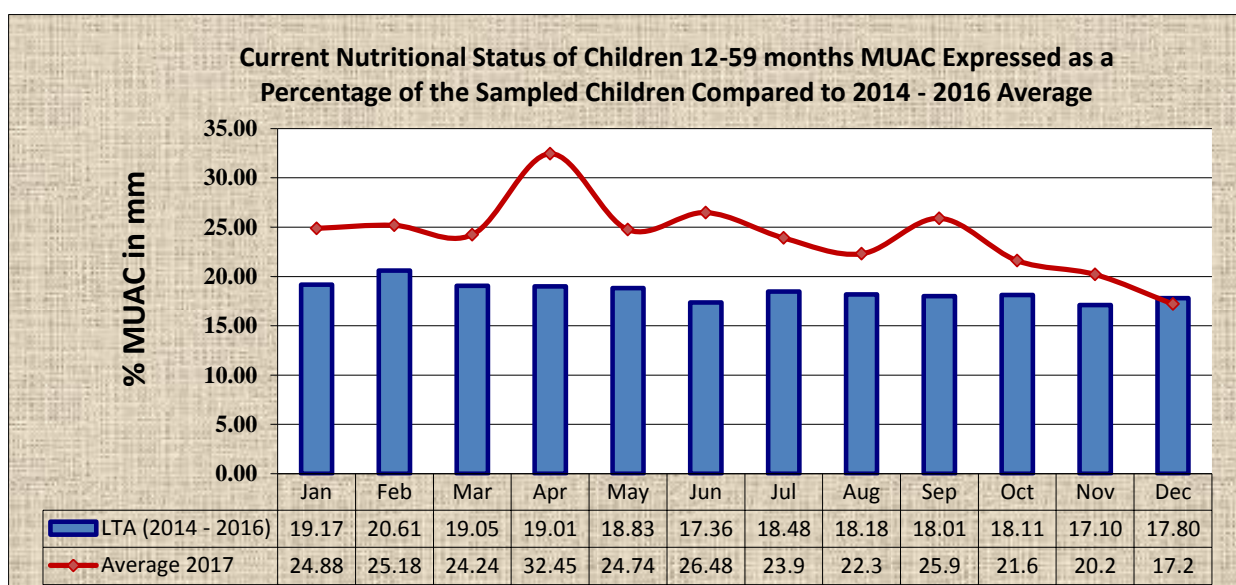


Figure 16: Graph showing average Nutritional status (MUAC)

5.1.2 Food Consumption Score(FCS)

- In pastoral livelihood, proportion of households in poor FCS reduced from 23.3 percent recorded in November to 19.6 percent while those with borderline FCS increased to 32.4 percent from 23.3 percent documented last month.
- Good FCS were noted in agro pastoral areas with 96.4 percent of households having acceptable FCS owing to availability of cereals and beans from long rains season harvest coupled with better markets and improved purchasing power.

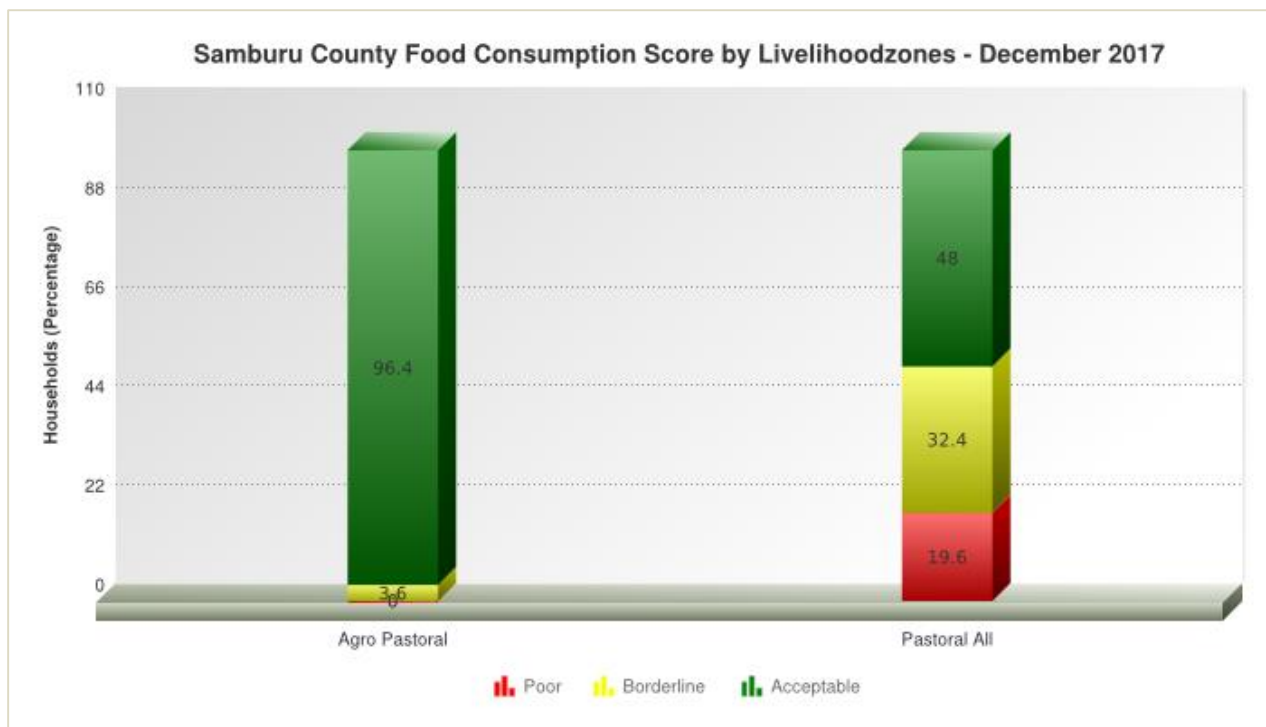


Figure 17: Bar chart showing FCS per Sub County

5.1.3 Health

- Incidences of Malaria, Pneumonia, common cold and URTI continued to be reported for both under-fives and general population with the households seeking help from public health centres/ dispensaries, private clinics while others used local herbs for treatment.

5.1.4 Coping Strategies Index(CSI)

- Frequent coping was observed in pastoral livelihood zone which include reduction in the number of meals eaten per day, reduction in the portion size of meals and relying on less preferred and/or less expensive food. High coping in pastoral can be linked to poor accessibility to markets and poor food stocks at household level.

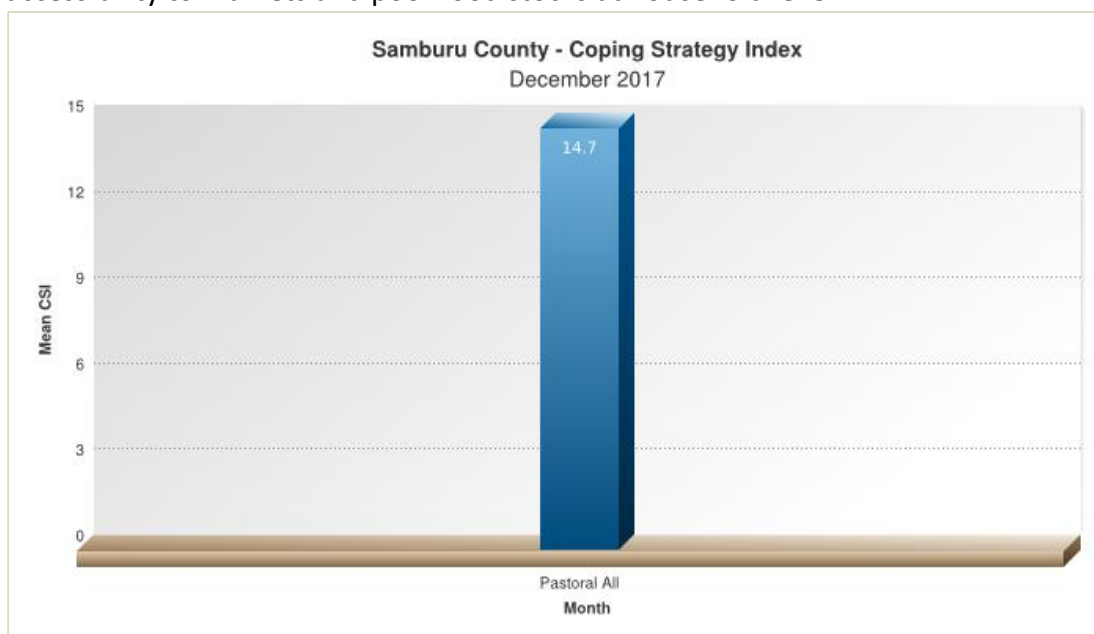


Figure 18: Bar chart showing CSI

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Non-Food On-going Interventions

SECTOR	INTERVENTION	IMPLEMENTERS
LIVESTOCK	Participatory livestock diseases surveillance and livestock markets monitoring	RPLRP, County Department of Veterinary & Livestock
	Support of livestock trading activities in Baragoi and Construction of Baragoi and Latakweny livestock Markets	RPLRP, NDMA
Health	On-going High Impact Nutritional Interventions (HINI) implemented by partners in collaboration with MOH in 47 health facilities across the County	MOH , NHP Plus and UNICEF
	Continuation of Integrated medical outreaches in Samburu East and North	MOH supported NDMA, EU, UNICEF and AMREF
Water	On-going drilling of a borehole at Lengarde village	RPLRP
Social Inclusion	On-going cash transfer and business mentorship to women	BOMA Project
	On-going cash transfer for old persons, people with disability and orphan and vulnerable children	National Government

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- The county remained relatively calm with isolated cases of attempted cattle theft reported in areas surrounding Baragoi leading to high tension.

7.2 Food Security Prognosis

- Good browse and fair pasture conditions is likely to sustain better livestock conditions thus likelihood to endure high income from livestock sales particularly goats and sheep in the next one month.
- Long rains harvests specifically maize from the cropping areas of agro pastoral fairly replenished household food stocks thus most likely to result into better dietary diversity and improved food consumption thus improved household nutritional status.
- High evaporation from open water sources due to high daytime temperatures will likely result into increase in trekking distances to water points for both domestic and livestock use.
- Improved livestock body conditions and long rains harvest is likely to maintain better purchasing power for pastoralists through the next month.

8.0 RECOMMENDATIONS

SECTOR	INTERVENTION
LIVESTOCK	<ul style="list-style-type: none">• Enhance livestock disease surveillance across the livelihood zones
Health	<ul style="list-style-type: none">• Need for advocacy and awareness creation on use of water treatment chemicals
Water	<ul style="list-style-type: none">• Equipping, repair and maintenance of boreholes in pastoral zones
Peace and Coordination	<ul style="list-style-type: none">• Consultative meetings to be held between warring communities in Samburu North to promote sustainable and conducive livestock and food commodities trading environment
Agriculture	<ul style="list-style-type: none">• Promote post harvesting management techniques such as dusting with pesticides to control weevils and advocacy to farmers not to disposal their cereals at low prices to middlemen

Annexes

Table 1: 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	