

National Drought Management Authority

KAJIADO COUNTY

DROUGHT MONITORING AND EARLY WARNING BULLETIN – JANUARY 2017



A Vision 2030 Flagship Project



JANUARY EW PHASE



Early Warning Phase Classification

LIVELIHOOD ZONE	EW PHASE	TRENDS
PASTORAL	ALERT	DETERIORATING
AGRO-PASTORAL	ALERT	DETERIORATING
MIXED FARMING	ALERT	DETERIORATING
COUNTY	ALERT	DETERIORATING

Drought Situation

Biophysical Indicators

- ✓ Normal dry weather conditions prevailed in January. The 2016 short rains were between 60% – 90 % of the long term average.
- ✓ The county vegetation condition was in moderate vegetation deficit band and expected to deteriorate further until when long rains begin.
- ✓ Distances to water sources were longer than the long term average and steadily increasing.

Production and Access Indicators

- ✓ Both the daily household milk production and consumption were below normal at this time of the year.
- ✓ The terms of trade were relatively stable between December 2016 and January 2017.
- ✓ Beans yield was about 10% of long term average while maize yield was projected to be less than 5% of long term average.

Utilization Indicators

- ✓ Risk of malnutrition for children aged 6-59 months was higher than the long term average.
- ✓ Nearly one half (46%) of the households were consuming poor diet in January.
- ✓ Households were now reducing the frequency of feeding and size of meals eaten in a day due to lack of money to buy food.

Biophysical Indicators		Observed Value/Range	Normal Range/LTA
Rainfall		No rains	No rains
State of water		Inadequate	Adequate
3-Monthly VCI		32.93	35 – 50
Production Indicators		Observed Value/Trend	Normal Range
Livestock body		Poor-fair	Good
Milk production		2.3 lt	>=6 lt
Migration pattern		Early Migration	No migration
Livestock deaths		Deaths reported	No deaths
Crop yields per acre	Beans	< a sack	4 sacks
	Maize	< a sack	8-12 sacks
Access Indicators		Observed Value	Long Term Average
Terms of trade		58	53
Milk Consumption		1.5 lt	>= 4 lt
Distance to water sources	Livestock	5.4 km	4.0 km
	Household	6.3 km	5.0 km
Utilization indicators		Percentage	Normal Range/LTA
MUAC (% <135 mm)		13.7%	9.9%

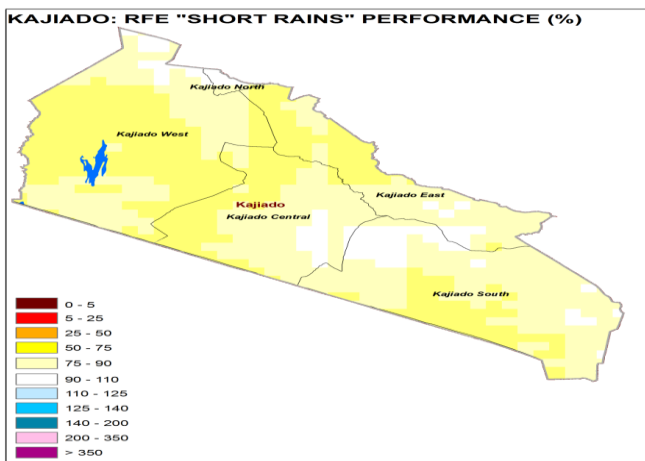
<ul style="list-style-type: none"> Short rains harvests Short dry spell Reduced milk yields Increased HH food stock 	<ul style="list-style-type: none"> Planting/Weeding Long rains High calving rate Milk yields increase 	<ul style="list-style-type: none"> Long rains harvests A long dry spell Land preparation Increased HH food stocks 	<ul style="list-style-type: none"> Short rains Planting/weeding 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

Seasonal Calendar

1.0 CLIMATIC CONDITIONS

1.1 Performance of 2016 Short Rains

- In January-March period, most of the production sectors heavily depend on the performance of short rains (October-December).
- The County received depressed rainfall (60% - 90% of the long term) across all livelihoods during 2016 short rains. Spatial distribution was uneven (Figure 1a). Areas including Lenkism, Mbirikani, Mosiro and Magadi wards received only light showers during the season.



- The rains were characterized with late onset and early cessation (Figure 1b).
- January was marked with dry and hot weather condition (Figure 1c). In January last year, the County experienced off-season rains (Figure 1b).

Figure 1a: Performance of 2016 short rains in Kajiado County

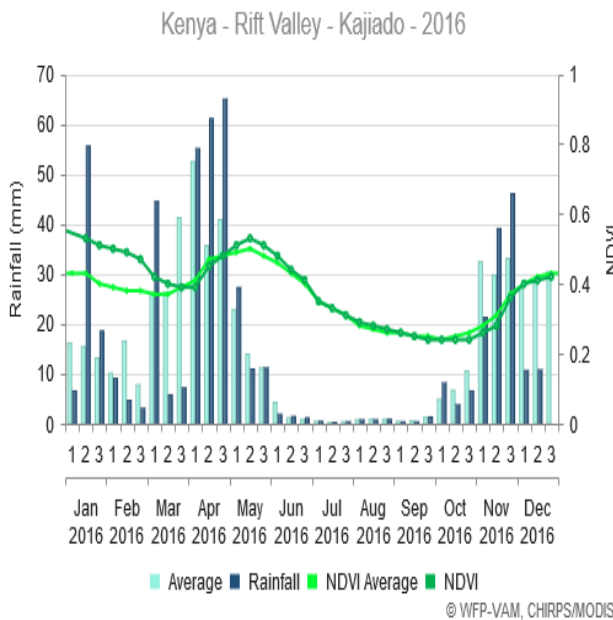


Figure 1b: Rainfall performance for Kajiado County
Data source: World Food Programme; December, 2016

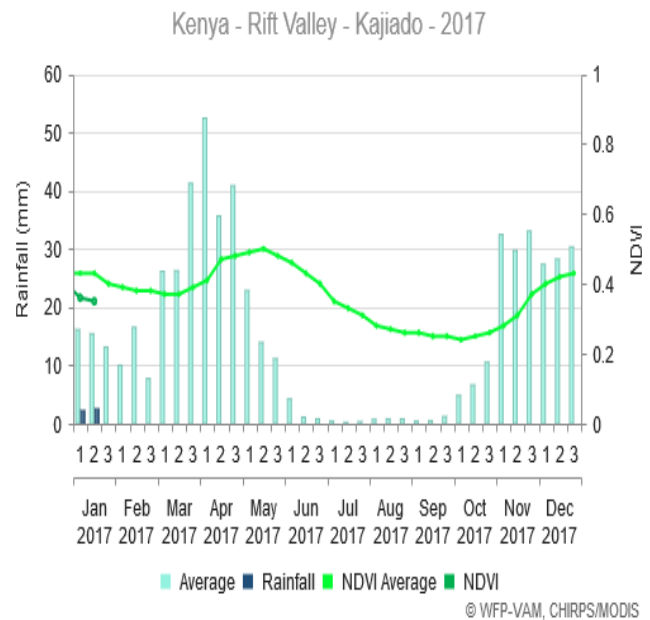


Figure 1c: Rainfall performance for Kajiado County
Data source: World Food Programme; January, 2017

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition

- The average vegetation condition in the County remained in moderate deficit between October 2016 and January 2017. In October 2016 the County vegetation condition index (VCI) was 37.21 compared to 32.93 in January 2017.
- The deterioration of vegetation condition between October 2016 and January 2017 was due to poor performance of 2016 short rains. Regeneration of the vegetation was below long term average.
- Kajiado South and Kajiado Central sub-Counties were in a moderate vegetation deficit since June 2016 (Figure 2a and Figure 2b). In January 2017 the VCI for Kajiado South was 27.47 while that of Kajiado Central was 34.66.
- The vegetation condition for the County was expected to deteriorate continually between January and April when the long rains were expected.

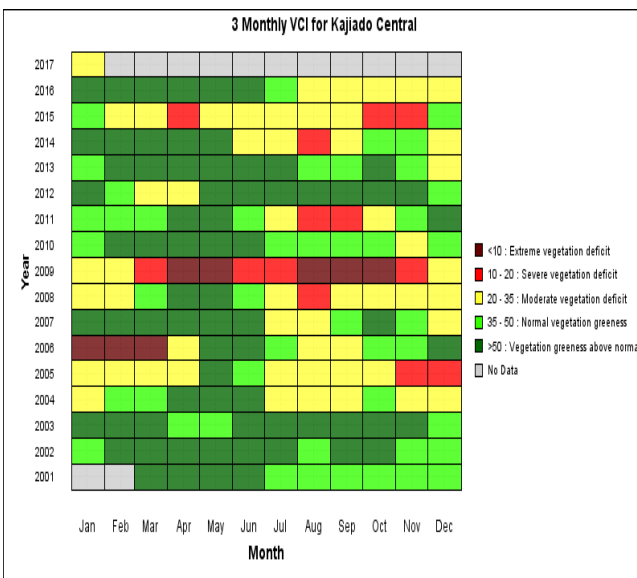


Figure 2a: VCI matrix for Kajiado South, 2001 – 2017

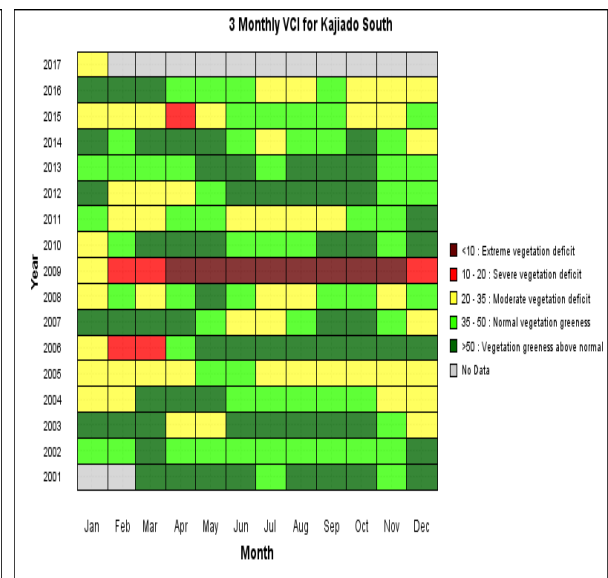


Figure 2b: VCI matrix for Kajiado Central, 2001 - 2017

2.2 Pasture and Browse Situation

- The depressed rainfall during 2016 short rains resulted to poor development of pasture and browse during the season.
- Thus, in January 2017 pasture and browse in all the livelihoods was significantly below what would be expected in January in a normal year.

- In Agro-Pastoral zones, pasture condition ranged from poor to fair and would last for one month.
- Maize in Agro-pastoral and in Mixed farming zones dried up before maturity and cattle were feeding on these dried residuals.
- Browse in this zone was fair and would last for two months.
- Pasture was depleted in Pastoral areas by the end of January. In Lenkism, Mbirikani, Mosiro and Magadi wards, pasture and browse did not regenerate because these areas did not receive meaningful rainfall during the 2016 short rains season.

2.3 Water Sources

- During 2016 short rains, the surface water sources recharge was about 40% while underground water source recharge was about 30%. Thus, most of the temporal water sources including pans, seasonal rivers and some dams had dried up by mid-December 2016.
- The main water source for both domestic and livestock in January was boreholes and shallow wells that accounted for 54% (Figure 3).

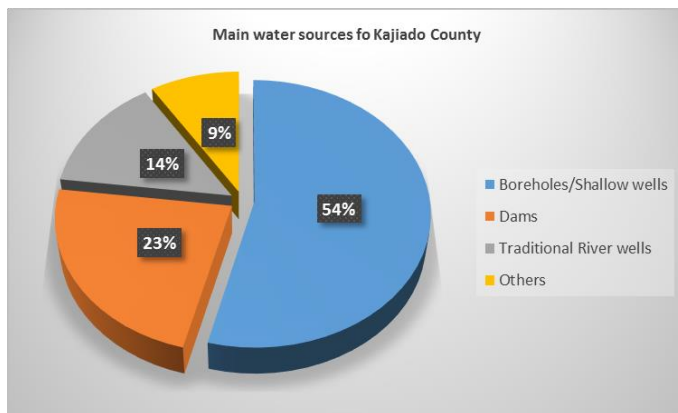


Figure 3: Main water sources in Kajiado County, January 2017

- Other sources of water during the month were piped water and springs. Water trucking was reported in various parts of the County

- In the next two months starting from February, permanent water sources (boreholes and some dams) would be experiencing great pressure from livestock, human and wildlife concentrations.

2.4 Households Access to Water

- The average distance covered by households to and from water sources increased to 6.3 km in January 2017. The long term average distance for the month of January is 5.0 km (Figure 4).
- In December last year, households travelled 3.3 km to get water for domestic use. The increased distance was due to drying up of temporary water source such as seasonal rivers and pans.

- Water access for domestic use varied across livelihoods in January. In Pastoral zone the return distance travelled by households in search for water was up to 8 km, 6 km in Agro-pastoral zones while in Mixed farming zones it was 3 km.
- In Pastoral zones people waited for about 4-5 hours to fetch water while in Agro-pastoral zone they waited for 3-4 hours.
- Distance covered by households to and from water point was likely to stabilize between February and March as households turn to permanent water sources.
- However, waiting time was likely to increase due to expected greater concentration of livestock and human beings at these water sources.

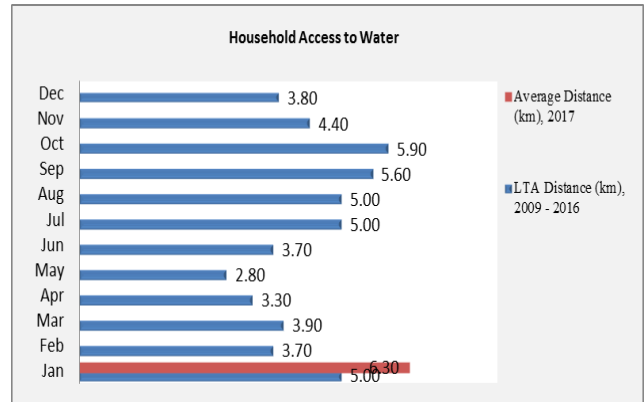


Figure 4: Return distance from households to water sources for Kajiado County, 2009 – 2017

2.5 Livestock Access to Water

- On average, the return distance covered by livestock from grazing fields to water points remained nearly stable between December 2016 and January 2017 at 5 km and 5.4 km respectively (Figure 5). In December and January livestock were concentrated near permanent water points.
- In Chylu hills where most of cattle had migrated in search of pasture, the return distance to water sources from grazing area was about 20 km and were being watered after three days.

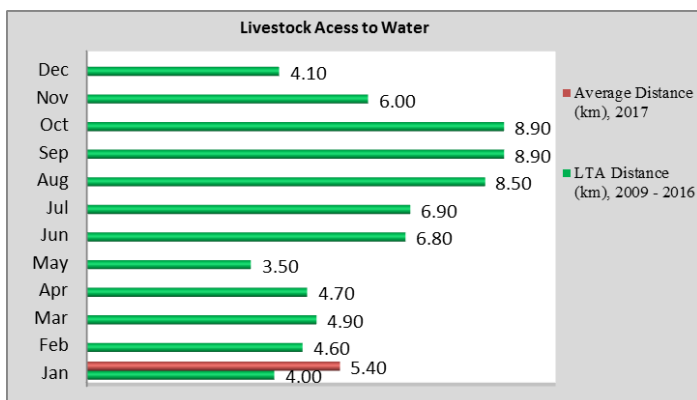


Figure 5: Return distance from grazing areas to water sources in Kajiado County, 2009 – 2017

- Increased concentrations of livestock in these boreholes would lead to generators operating longer hours which would result into frequent breakdown.
- The cost of watering cattle was from Ksh. 25 to Ksh. 30 per cow per month.

3. PRODUCTION INDICATORS

3.1 Livestock Body Condition

- In January, the cattle body condition ranged from fair to poor across the three livelihood zones; Pastoral, Agro-pastoral and Mixed farming.
- Goats' and sheep body condition was fair with minimal variations across livelihoods.
- Normally, livestock body condition for all species in January is good (fat with smooth skin).
- Cattle body condition was expected to deteriorate fast in the next month due to insufficient pasture. Goats and sheep were more likely to maintain their fair body condition for a month.

3.2 Livestock Diseases

- Foot and Mouth Disease (FMD), Lumpy skin disease (LSD) and Contagious Bovine Plueropneumonia (CBPP) were continually being reported in various parts of the county.
- The county government in collaboration with National Drought Management Authority carried out targeted countywide vaccination campaign against FMD in December 2016. Vaccination against LSD and CBPP was expected in February 2017.
- Mortalities associated with CBPP were observed in Kajiado Central and Kajiado West.
- Continuous mingling of livestock especially cattle due to rampant migration increased the likelihood of livestock disease outbreak.

3.3 Milk Production

- The household milk production per day reduced from 2.9 litres in December 2016 to 2.3 litres in January 2017. Most of livestock migrated in January in search of pasture and the body condition of those that were left also deteriorated.
- In a normal year, the household milk production in January would range from 5 to 6 litres per day.
- In Pastoral livelihoods, the household milk production per day ranged between 2 to 3 litres while in Agro-pastoral zone it ranged between 1 to 2 litres.
- Milk production was expected to maintain a declining trend until April when rains were expected.

3.4 Migration of Livestock

- Unusually early migration of livestock in January was triggered by inadequate pasture in their normal grazing areas.
- About 70% of cattle from Matapato South and from Tanzania were now concentrated along Pelewa-Maparasha-Emotoro-Kenyawa belt.
- High concentration of cattle from Lenkism, Mbirikani, Rombo, Kuku wards and also from Tanzania was observed in the fall back areas of Chylu hills. Normally, cattle migrate to this part of the County in September.
- Close to 50% of cattle from Ewuaso moved to Nakuru County, while those from eastern side (Imaroro, Arroi wards) of the County moved towards Machakos County.

3.5 Rain-fed Cropping

- The 2016 short rains harvest for beans was about 5% of the long term average. Beans suffered moisture stress when they were flowering.
- Maize harvest for the 2016 short rains season was projected to be negligible. Most of maize dried up after early cessation of the rains.

4. MARKET PERFORMANCE

4.1 Livestock Marketing

- All the main livestock markets for the County were operating normally throughout the month. These markets include; Shompole, Ilbisil, Kimana, Rombo and Kiserian. Low volumes of livestock were observed in most of the markets in January due to poor prices of livestock during the month.

4.1.1 Prices of Cattle

- As cattle body condition deteriorated, their prices reduced from Ksh 20,200 in December 2016 to Ksh. 18,700 in January 2017. (Figure 6) with minimal livelihood variations.

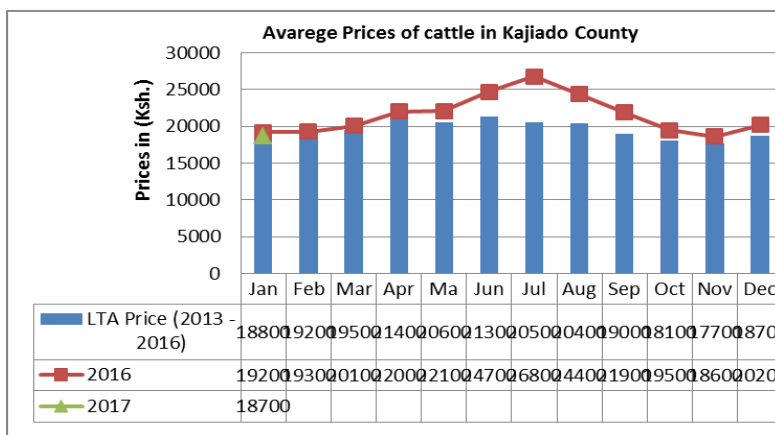


Figure 6: Average price of cattle for Kajiado County, 2013 - 2017

- The current price was close to the last four year's average of Ksh. 18,800.
- Prices of cattle were further expected to reduce as their body condition deteriorates in the next subsequent two months.

4.1.2 Prices of Goats

- Low volumes of goats were observed in main livestock markets in January due to low prices that they fetched. In January 2017 a two-year old goat was selling at Ksh. 2,780 compared to Ksh. 2,840 in December 2016 (Figure 7)

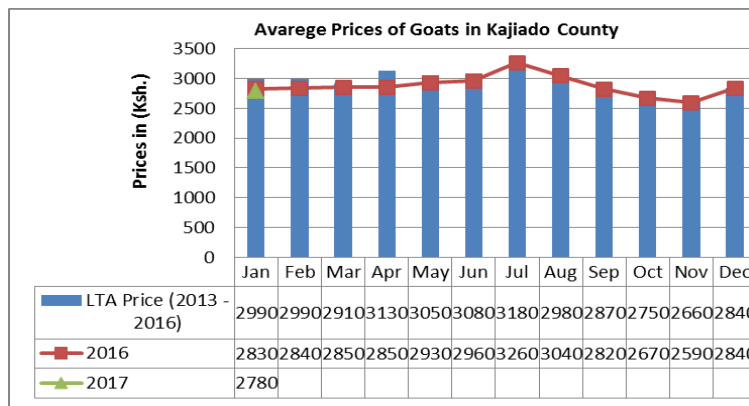
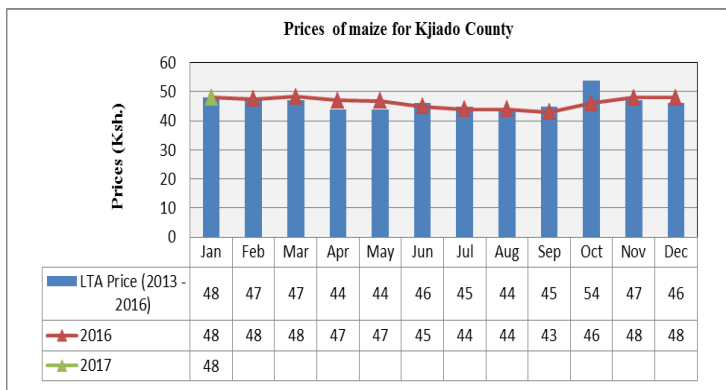


Figure 7: Trends of goats' price for Kajiado County, 2013 - 2017

4.2 Prices of Cereals and Legumes

4.2.1 Prices of Maize

- The price of maize remained at Ksh. 48 since November 2016 (Figure 8). In Pastoral West, a kilogram of maize was selling at Ksh. 60 and Ksh. 45 in Pastoral South.

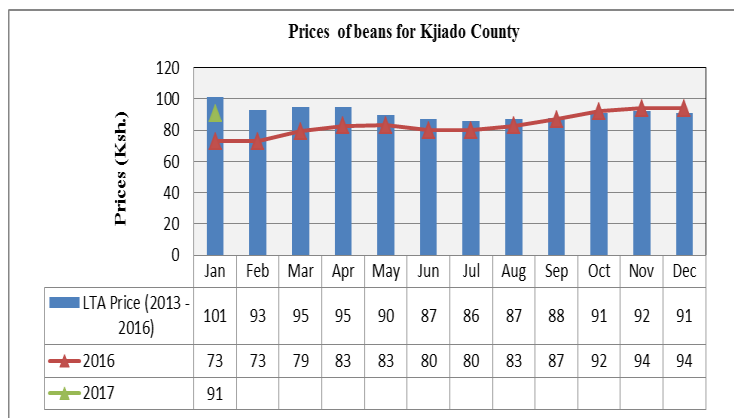


- The current price was equal to the long term average for the month.
- The price of maize was expected to increase due to the expected low yield following depressed 2016 short rains.

Figure 8: Trends of price of maize for Kajiado County, 2013 – 2017

4.2.2 Prices of Beans

- Following harvest of beans, the price reduced from Ksh. 94 per kilogram in December to Ksh. 91 per kilogram (Figure 9).
- In western part of the County (Loodokilani, Ewaso, Oldonyonyokie), a kilogram of beans was selling at Ksh. 120 while in Rombo it was Ksh. 80.



- The prices of beans were expected to continually increase from February 2017 due to the low yield of the crop during 2016 short rains.

Figure 9: Trends of beans' prices for Kajiado County, 2013 - 2017

4.3 Prices of Milk

- The cost of one litre of milk in January 2017 was Ksh 60 after increasing from Ksh 56 in December 2016. Increase in the price of milk between December 2016 and January 2017 was due to reduced production during the period.
- There were no livelihood variations in prices of milk in the month of January.
- As household milk production tends to negligible by March, its price was expected to rise.

4.4 Livestock Terms of Trade

- The terms of trade (TOT) remained fairly stable between December 2016 and January 2017. In January one would exchange a goat with 59 kg of maize while in January a sale of a goat was equivalent to 58 kg of maize. The long term average TOT is 53 kg of maize per goat (Figure 10).
- The prices of the two items changed minimally between December 2016 and January 2017.

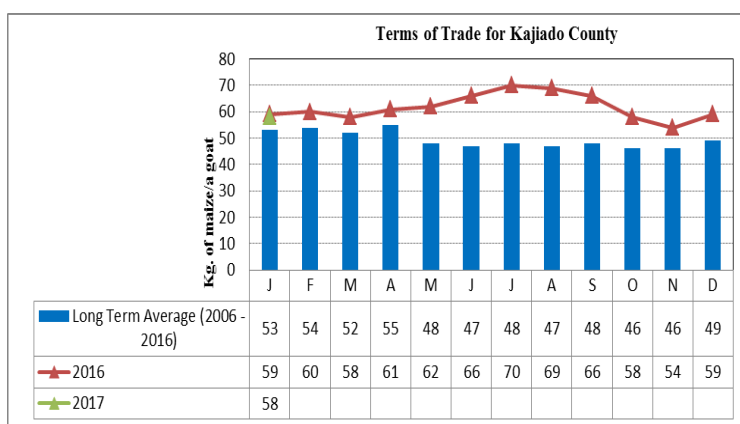


Figure 10: Trends of terms of trade for Kajiado County, 2006 - 2017

- The terms of trade were likely to decline continually for the next three months if prices of food stuffs increase due to scarcity while that of livestock would decrease due to their deteriorating body condition.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- The daily household milk consumption in January averaged 1.5 litres with no variation across livelihoods. In a normal year, milk consumption per household per day in January is 5 litres. Milk consumption would reduce to negligible by February due to expected low production by then.

5.2 Food Consumption Score

- Figure 11 shows food consumption score for Kajiado County since September 2016.

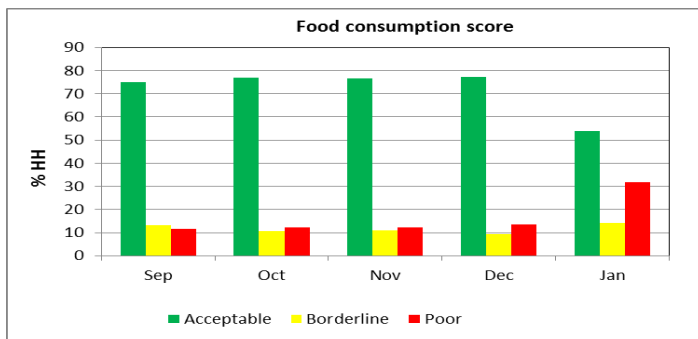


Figure 11: Food consumption score for Kajiado County, Sept 2016 – Jan 2017

- The proportion of households that were consuming poor diet rose significantly in January 2017 compared to the previous months.
- This trend was likely to continue for the next two to three months.

5.3 Nutritional Status of Children aged 6-59 Months

- The risk of malnutrition of children aged 6-59 months in January was 13.7% which exceeded long term average of 9.9% as while as that of December 2016 which was 12.7% (Figure 12).

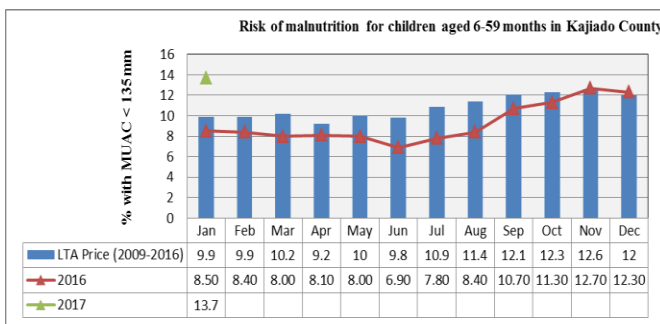


Figure 12: Percentage of children aged 6-59 months at risk of malnutrition for Kajiado county, 2009 - 2017

- The risk of malnutrition in Mbirikani, Magadi and Lenkism wards exceeded 15%.
- High risk of malnutrition was due to poor diet and was likely to rise further in the next subsequent two months.

5.3.2 Human Diseases

- There was no report of human disease outbreak in the County in the month of January.

6 FOOD SECURITY PROGNOSIS, CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Food Security Prognosis

- The 2016 short rains had little impact on vegetation as well as on production sectors. The rainfall was below normal for the season.
- Kajiado South was faced with extreme water scarcity, human-wildlife conflict, early migration of livestock and Tsetse fly infestation. Kajiado West was facing water scarcity, livestock out migration and poor infrastructures mainly roads.
- Massive crop failure for rain-fed crops was expected in Mixed farming and in Agro-pastoral zones.
- Malnutrition for children and general population was likely to be elevated as most of the households resulted into consumption of poor diet.
- Environmental degradation from sand harvesting and charcoal burning as communities struggle to cope with drought was likely to be accelerated.

6.2 Current Interventions

- Countywide livestock vaccination for lumpy skin disease by *county government with support from National Drought Management Authority.*
- Capacity building on ipomea weed, reseeding and pasture conservation by *County government with support from Agricultural Sector Development Support Programme.*
- Routine rehabilitation of boreholes by *County Government through the ministry of water and Irrigation.*
- Distribution of drought tolerant crop seeds by *County government through the ministry of Agriculture, Livestock and Fisheries.*

6.3 Recommendations for Action

- Mass screening and integrated outreaches. *Action by County Government (Ministry of Health) in collaboration with National Drought Management Authority.*

- Repair and rehabilitation of strategic boreholes. *Action by County Government (Ministry of water and Irrigation) in collaboration with National Drought Management Authority*
- Water trucking to schools and critical institutions. *Action by County Government (Ministry of water and Natural Resources) in collaboration with National Drought Management Authority*
- Supplementary feeding for milking and weak herd. *Action by County Government (Ministry of Agriculture and Livestock) in collaboration with National Drought Management Authority.*
- Destocking of livestock. *Action by County Government (Livestock production) in collaboration National Drought Management Authority.*
- Provision of hay to weak cattle. *Action by County Government (Livestock production) in collaboration National Drought Management Authority.*