

National Drought Management Authority

KAJIADO COUNTY

DROUGHT MONITORING AND EARLY WARNING BULLETIN – SEPTEMBER 2017



A Vision 2030 Flagship Project



SEPTEMBER EW PHASE



Early Warning Phase Classification

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

Drought Situation & EW Phase Classification

Biophysical Indicators

- ✓ September is normally a dry month. 2 day off season rains were however, received during the month.
- ✓ Vegetation condition in the county was worsening with Kajiado central and north having severe vegetation deficit.
- ✓ Pasture is depleted with Mosiro, Magadi, Mbirikani, Lenkism, and Ewuaso requiring close monitoring as they are worse off.
- ✓ The 3-month VCI indicates the County is experiencing moderate vegetation deficit recording a VCI of 24.86.

Production and Access Indicators

- ✓ livestock body condition is emaciated
- ✓ In mixed farming zone, household have no food stock due to exhaustion of existing stock through sale and consumption.
- ✓ 90% of livestock have migrated, deaths are being reported

Access indicators

- ✓ Water was inadequate and distance increased upto 40km in Torosei. Quality declined and pressure on existing sources.
- ✓ ToT at 31 unfavourable to pastoralists
- ✓ Milk production negligible and consumption low.

Utilization Indicators

- ✓ Majority (70%) of households were either consuming poor diet or were at borderline.
- ✓ The risk of malnutrition for under-fives increased to 16.30 %.

Biophysical Indicators	Observed Value/Range	Normal Range/LTA	
State of water	Inadequate	Adequate	
County 3-Monthly VCI	24.86	35 – 50	
Kajiado central	18.32	35 – 50	
Forage condition	Depleted	Good	
Production Indicators	Observed Value/Trend	Normal Range	
Cattle body condition	Emaciated	Good	
Milk production	Negligible	3-4 lt	
Out migration pattern	Early migration in June	Migration in September	
Livestock deaths	Deaths reported	No deaths	
Access Indicators	Observed Value	Long Term Average	
Terms of trade	31	48	
Milk Consumption	Negligible	2 - 3 lt	
Distance to water sources	Livestock	10.25 km	
Utilization indicators	Household	6.35 km	8.9 km
	Percentage	Normal	5.6 km
MUAC (% <135 mm)	16.30%	12.10%	
Coping Strategy Index	7.9	5.2	

<ul style="list-style-type: none"> Short rains harvest 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 harvest 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 Rainfall

- No major rainfall was received in this month. However, the county received some off seasonal downpour for 2 days during the first and second dekads of the month in Kajiado South and East recording an average of 0.408, 1.153 respectively (Figure 1).
- The insignificant off-season rain had no impacts on pasture rejuvenation or water source recharge.

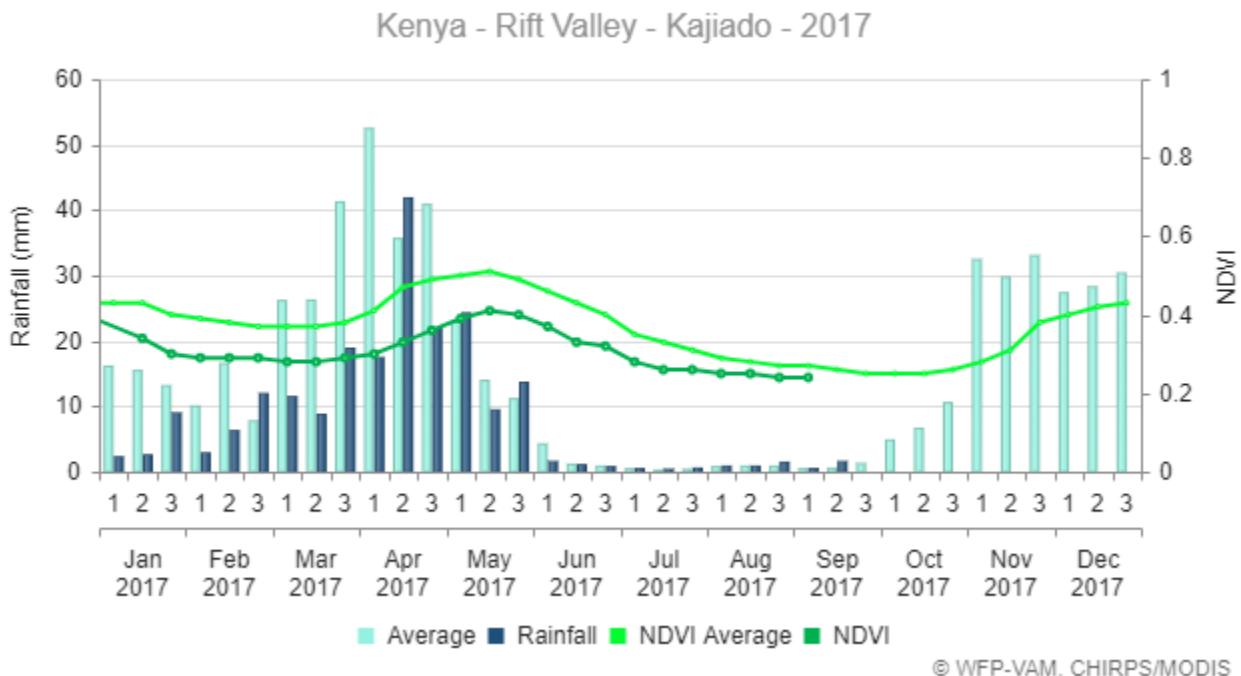


Figure 1: Rainfall performance for Kajiado County

Data source: World Food Programme; September, 2017

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

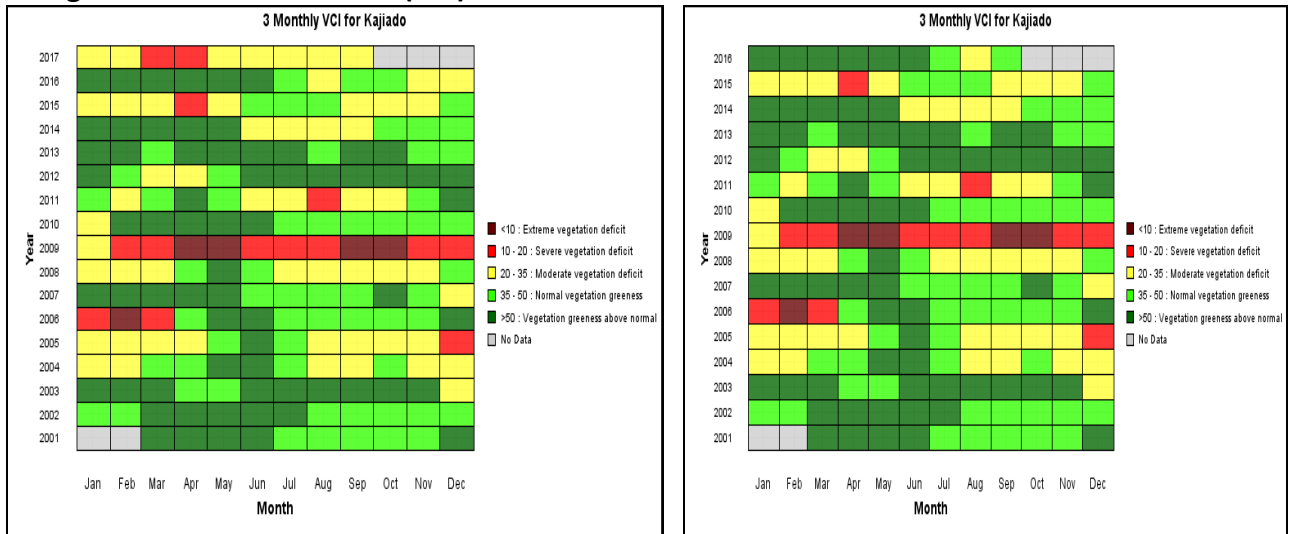


Figure 2a: Kajiado County Vegetation Condition Index (3 months): September 2017 & 2016

- (Figure 2a) compares the current vegetation condition with that of the previous year 2016 when the Vegetation Condition Index (VCI) showed normal vegetable greenness. This is a deteriorating situation comparing to the previous year (VCI index 36.83) with the current VCI index of 24.86.
- The County has remained in moderate vegetation deficit since January this year (Figure 2a), however the situation is likely to improve with the expected short rains in October.

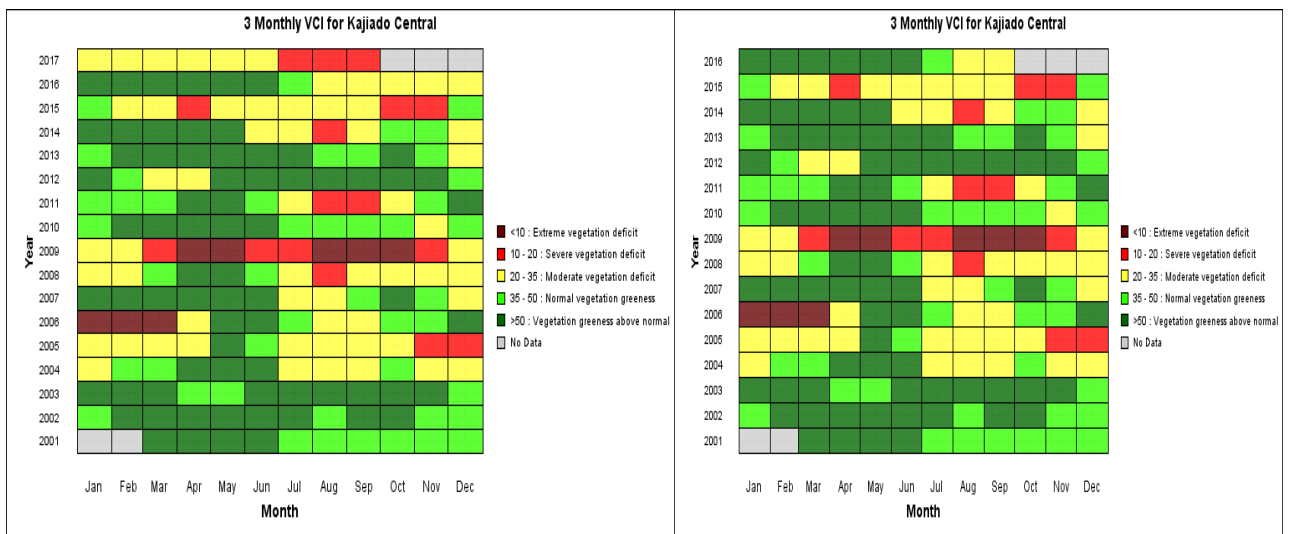


Figure 2b: Kajiado Central Vegetation Condition Index (3 months): September 2017 & 2016

- (Figure 2b) above compares the vegetation condition in September 2017 and 2016 for Kajiado Central which is currently the sub county with greatest vegetation deficit (Severe) with a VCI recording of 18.32. Kajiado North follows closely at severe vegetation deficit recording a VCI index of 19.09.

2.1.2 Pasture

- The VCI data was further confirmed by field observations and community responses, 100% reported depleted to poor pasture situations in both pastoral and agro-pastoral livelihood zones.
- Depletion of pasture was as early as July with continued worsening trend in the pastoral livelihood zones of Magadi, Mosiro, Ewuaso, Lenkism, Mbirikani and Olgulului, pasture failed to regenerate due to the below-normal performance of both short and long rains .
- Dry period grazing areas of Chulu hills, Ewuaso Nyiro swamp and Kinyawa Porka where some pasture were still available have deteriorated more quickly than usual due to large concentration of livestock.

2.1.3 Browse

- Browse was poor with continued deterioration since last month in all livelihood zones.
- It was projected to last for less than a month compared with a normal period from October through to December.
- The situation is worse in pastoral zones where browse is poor to deplete while mixed farming and agro-pastoral livelihood zones are experiencing fast depletion due to increased stock as a result of intra-migration of shoats.

2.2 WATER RESOURCE

2.2.1 Sources

- The current major sources of water for both domestic and livestock use were boreholes (58%) and Shallow wells (29%), (Figure 3). Other water sources included piped water, traditional river wells and water trucking.
- Pans had dried up as early as June, since they recharged to less than ten percent of their capacity during the long rains.
- The only reliable source left were few boreholes that had led to human wildlife conflict and increased distances to water sources as households walked further to access them. Kajiado

West Sub-county especially in Singiraine, the watering frequency was once in every two days with trekking distances of up to 30 km.

- Pressure on strategic boreholes in Matapoato, Lenkism, Elangata Ewuaso and Kinyawa Porka has increased from livestock, human beings and wildlife with frequent breakdowns.
- The situation is below normal compared to same period during the previous year.

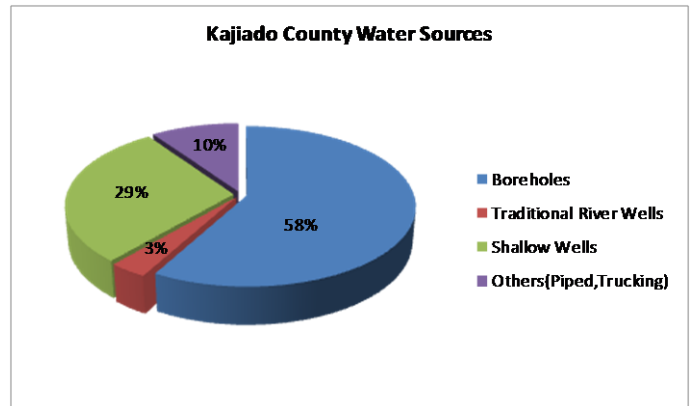


Figure 3: Main water sources in September 2017

2.2.2 Households Access and Utilization

- The average distances to water for domestic use lengthened during the current month at 6.35km from 5.6km in August, (Figure 4). They were also significant in-sub county differences: Kajiado West (Magadi, Singiraine and Mosiro) had trekking distance of over 13km; Kajiado South Mbirikani reported trekking distance of over 10 km to get water.

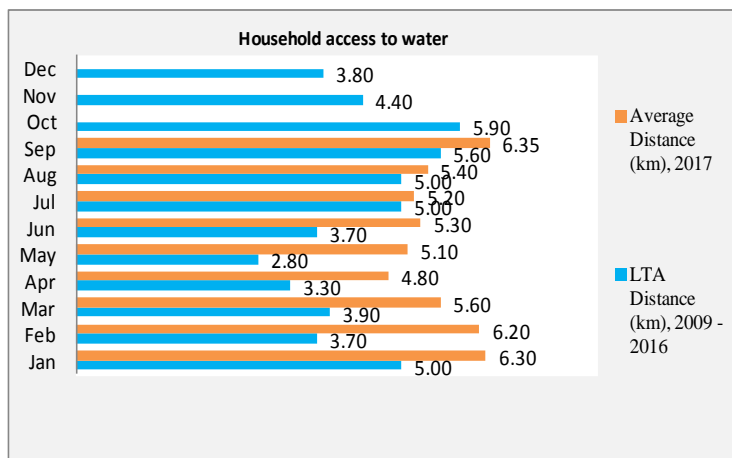


Figure 4: Return distance from household to water sources

- The average household water consumption was 2-8 litres per person in the pastoral livelihood zone while in agro-pastoral consumption was 5-15 compared with a normal of 20 litres in both livelihood zones.
- Current waiting time at water source increased by 7, 3 and 1 hours for pastoral, agro-pastoral and mixed farming livelihood zones respectively compared with normal, and the situation is projected to deteriorate further in the next month.

- The main water sources for domestic use since June remained boreholes/shallow wells which are permanent; however the distance increased due to breakdowns.
- Water trucking was being done in Magadi, Ewuaso and Mbirikani mainly by county government.

2.2.3 Livestock Access to Water

- The average return distances covered by livestock from the grazing areas to main water sources in the month of September was 10.15km, an increased from the previous month of 7.60km, (Figure 5).

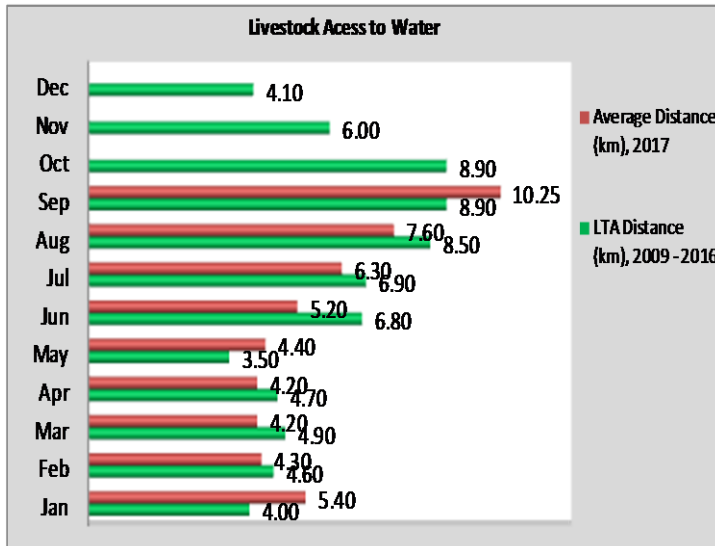


Figure 5: Return distance from grazing areas to water sources

- The quantity and quality of water has declined in all the livelihood zones as a result of decreasing water levels with a watering frequency of once after every 3 days compared with once per day during normal seasons.
- Distribution of fuel subsidy to strategic boreholes in Kajiado West, Central and South are on-going by National Drought Management Authority (NDMA) .Water trucking for livestock in Mbirikani, Mosiro and Magadi is on-going by the county government.

2.3 Implication to food security

- Long trekking distance, depleted to poor pasture and browse due to water stress and pressure from grazing by livestock will have continued drop in livestock body condition in all livelihood zones. This in effected will continue to have implication on nutrition status of children under five due to lack of milk especially in the pastoral and agro-pastoral livelihood zones.
- Food consumption patterns will decline further in the pastoral areas as households purchasing powers are affected by low prices fetched at market by livestock.

- Farmers have reported disposing their livestock for as low as ksh. 500 just to avoid them dying and /or to cater for other pressing household needs, thus affecting food security.

3. PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body conditions has continued to worsen across all livelihood zones. Cattle were the most affected with an average body condition under the Emaciated band (Emaciated, little muscle left) in pastoral and Stressed (Borderline fore-ribs not visible. 12th & 13th ribs visible) in agro-pastoral livelihood zones.
- Shoa's body condition was fair in mixed farming zone due to availability of some browse and poor in pastoral and agro-pastoral livelihood zones as browse has equally depleted, a decline from the previous month due to the increased trekking distances and worsening water scarcity.
- Intra-migration of shoats has been reported especially in Kajiado west, east and Central.
- In Magadi, Emukutano, Mosiro, Ewuaso, Meto and Dalalekutuk livestock were emaciated and many unable to walk due to lack of pasture and water while mortality associated with drought was reported in Magadi, Mbirikani, Emukutano, Poka, Mosiro, Ewuaso, Meto and Dalalekutuk.
- Distribution of 9,000 Bags of animal feeds (Pellets) across the county is on-going by National Drought Management Authority (NDMA) in collaboration with the County government.

3.1.2 Livestock Diseases

- Clinical evidence of Contagious Caprine Pleuro-Pneumonia was reported in Kajiado West and South Sub-counties, Sheep and Goat Pox in Matapato North and Dalalekutuk same as previous month.
- Suspected cases of Trypanosomiasis were reported in Oltiasika, Magadi and Chulu hills while Foot and Mouth Disease (FMD) was reported in Chulu hills, Ilpolosat and Oltiasika.
- Livestock mortality associated with drought has been reported across the county due to emaciation and wasting. Mosiro was the most affected.

- Vaccination of cattle against Contagious Bovine Pleuropneumonia (CBPP) in Kajiado West, Central and South was done by Kenya Agricultural and Livestock Research Organization in July.
- Construction of livestock market at Sultan-Hamud was done by County government in collaboration with Regional Pastoral Livelihood Resilience Project in September.
- Treatment and Vaccination of Contagious Caprine Pleuropneumonia (CCPP) is scheduled to kick off from 4th to 19th of October, 2017 by the County government with support from National Drought Management Authority (NDMA).

3.1.3 Milk Production

- Milk production has continued to decline to negligible due to livestock migration and enunciated body conditions thus affecting household milk production and consumption in the pastoral and agro-pastoral zones with no livelihood variation.
- The current situation is below normal range and worse than September 2016 when the daily household milk production was 3.8 litres.
- Large volume of milk on sale at the market is from outside the county at a price 60 percent higher than usual.

4. MARKET PERFORMANCE

4.1 Livestock Marketing

4.1.1 Cattle Prices

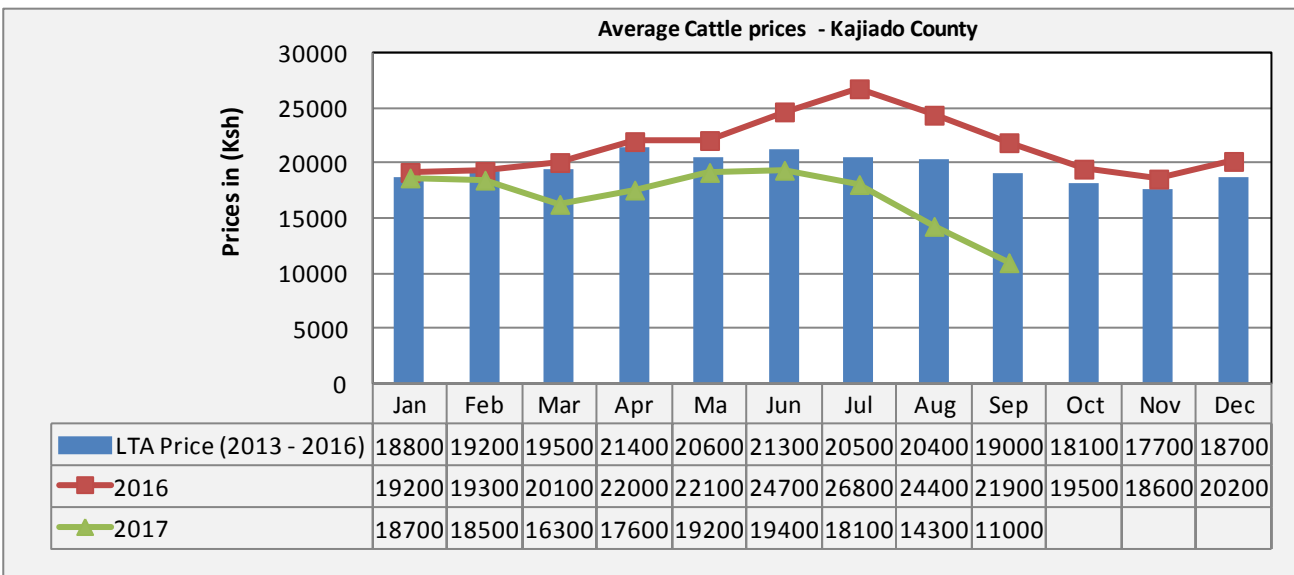


Figure 6: Trends in cattle prices, September 2017.

- From (Figure 6), the average cattle price has been on a continuous decline since June 2017, in September the prices reduced further to Ksh 11,000 from Ksh 14,300 during the previous month. This is due to the continuous deterioration of cattle body conditions, heightened supply and low demand at market level.
- Markets flooded with livestock in an effort to reduce loss due to mortality and again sale of livestock was the main source of income for purchase of household commodities as household maize stocks reduced.
- The highest prices were recorded in Mixed farming livelihood zone at Kshs 15,000 and the lowest in the Pastoral livelihood zones at an average of Kshs 4000.
- However, buyers remained fewer than normal due to poor livestock health and body condition.
- Though market operations were normal, livestock prices were 42% below-normal due to oversupply and low demand.

4.1.1.1 Other outstanding observations

- Farmers in pastoral Magadi and Mosiro were reported disposing their livestock for as low as ksh. 500 just to avoid loss due to death and /or to cater for other pressing household needs.

4.1.2 Goat Prices

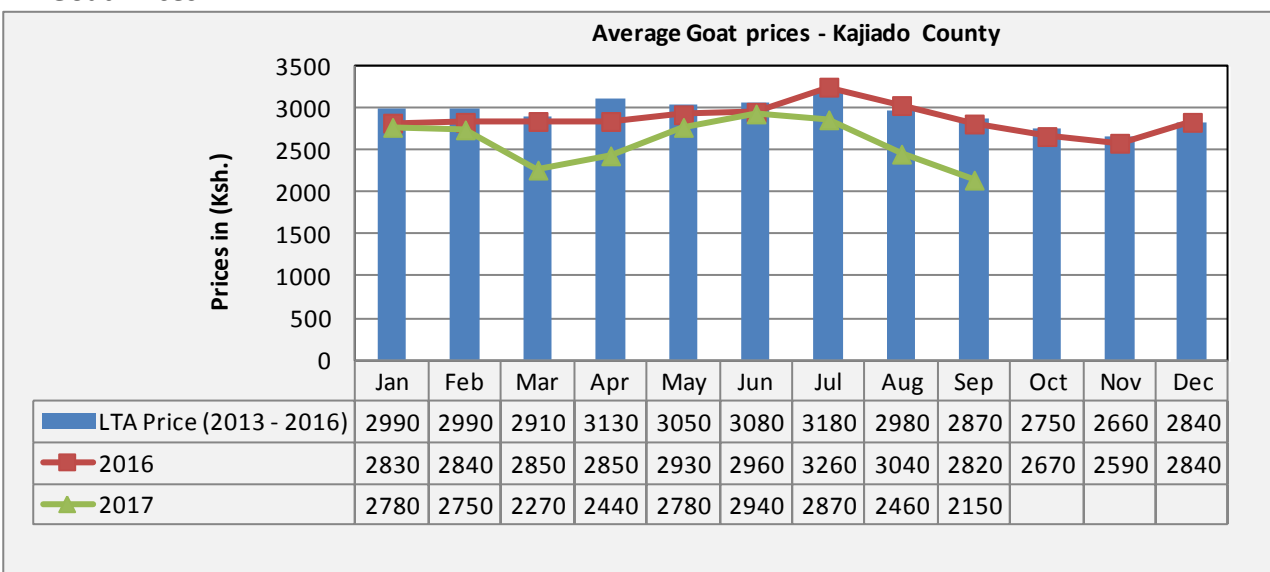


Figure 7: Trends in Goat prices, September 2017

- There has been a steady reduction in goat prices from June 2017 when they were same as previous year ,though slightly below long term average to September when they recorded the lowest since 2012 (Figure 7).
- The current average market price of goat was Ksh 2,150 reduction from previous month of Ksh. 2,460. Households are disposing the goats to the markets as browse has significantly reduced and also in an effort to get cash for purchasing food and other important household expenditures such as animal feeds and water.
- Prices of goats are expected to improve with the expected commencement of the October – December (OND) short rains.
- On average, goat prices were 25% below both the normal and the previous month.

4.2 CROP PRICES

4.2.1 Maize Prices

- In September, the average prices of maize increased to Ksh. 70 per kilogram from Ksh. 68 recorded in August (Figure 8). The price of maize has been on the increase since March due to continued scarcity across all livelihood zones resulting to high demand and low supply.

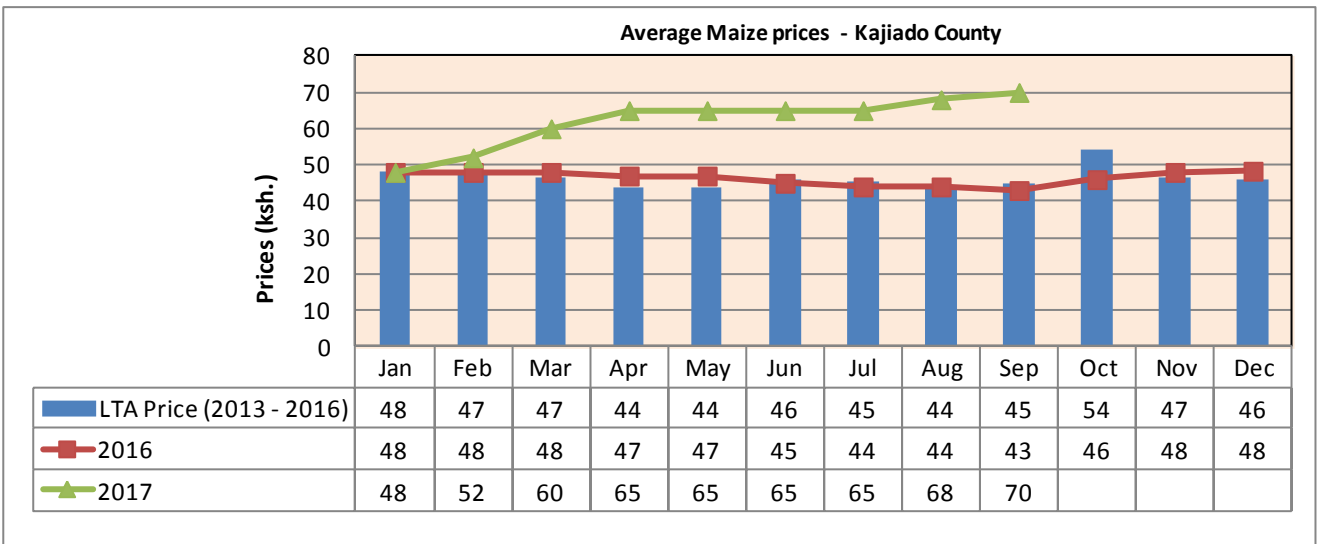


Figure 8: Trends in maize prices, September 2017

- There were variations in prices of maize across the livelihood zones. Highest prices of maize were observed in pastoral areas of Mosiro at Ksh. 150 per kilogram while lowest prices were reported in mixed farming areas of Kimana at Ksh 60 per kilogram.
- Further increase of the prices of maize was expected before the short rains season harvest.
- Overall, maize prices are currently at 67% above the long term average.

4.2.2 Beans Prices

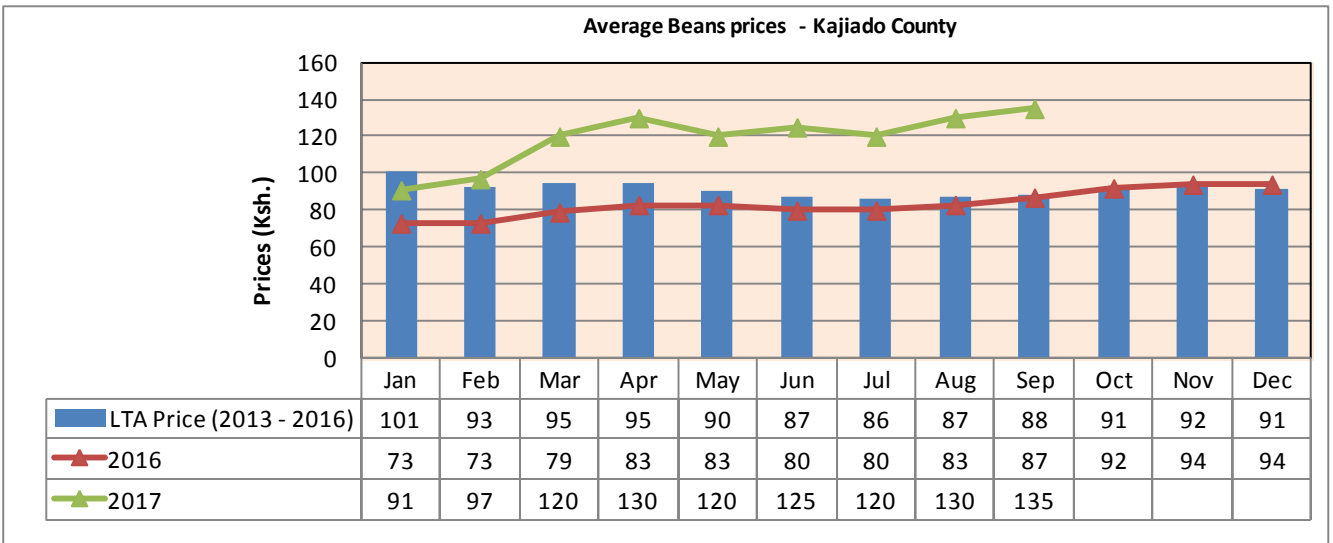


Figure 9: Trends in beans prices, September 2017

- The average price of beans per kg increased to Kshs. 135 compared to the previous month of Kshs. 130, (Figure 9). This increase was due to prolonged scarcity of the commodity since June.

- In Mosiro and Ewuaso, a kilogram of beans was selling at Ksh. 150 due to inaccessibility of the places while in Rombo a kilo of Beans was selling at Ksh 80. The price variation is attributed to additional costs during transportation due to poor market access networks and high demand.
- The prices of beans have shot further higher in September as households especially in mixed and agro-pastoral zones have since exhausted their stock.
- The current beans' prices are 53% above the long term average of Ksh 88.

4.3 Prices of Milk

- Milk prices ranged between Ksh.80 to Ksh.75 per litres at the market with minimal sale at household levels. Much of the milk sold within the county especially in the markets was from outside the county.
- The current prices are way above the normal prices (Ksh 50) and September 2016 when milk was retailing at Ksh 57.

4.4 Livestock Terms of Trade (ToT)

- The Terms of Trade based on the Cereal/Meat price ratio continued on the decline to 31 from 36 recorded in the previous month, unfavourable to livestock producers (Figure 10).
- The declining trend was attributed to the continuous rise in maize prices against reducing goat prices thus limiting household food access particularly in the pastoral livelihood and agro-pastoral areas.

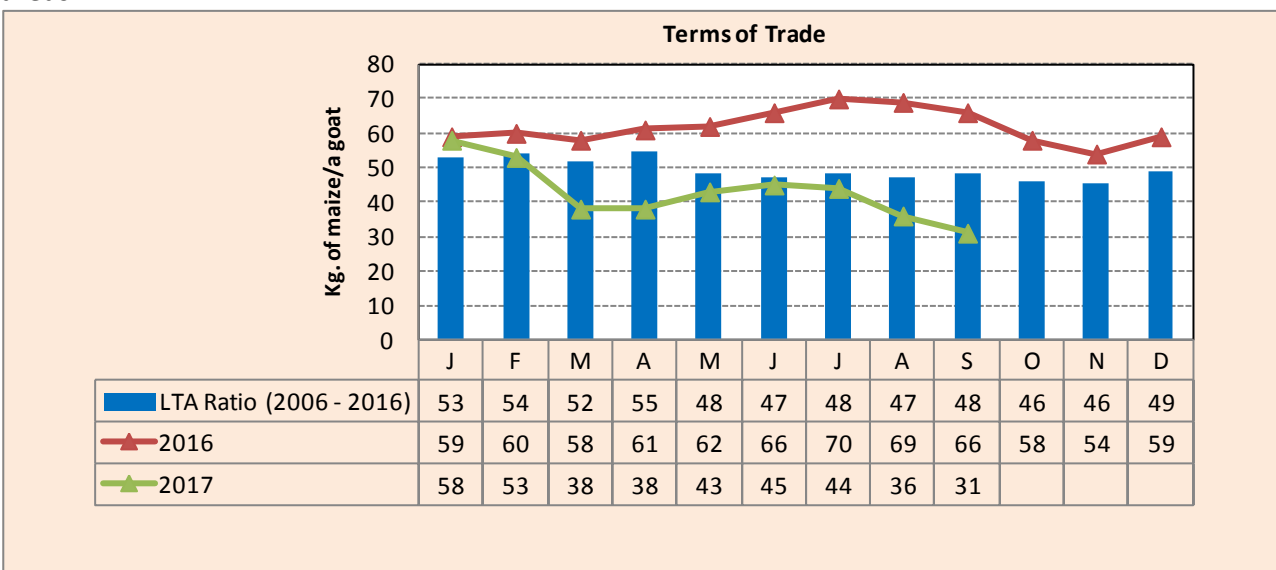


Figure 10: Trends in ToT ratio, September 2017

- The terms of trade were most unfavourable in the Pastoral livelihood and Agro-Pastoral livelihood zones as it was much lower compared to mixed farming livelihood zone. The Argo-pastoral and Pastoral areas recorded much higher cereal prices accompanied with reduced goat prices compared to mixed farming zones which recorded low goat prices with low cereal prices.
- Areas such as Mosiro, food availability were hampered by poor road network that makes transportation difficult.
- The terms of trade (ToTs) were 35 percent below the long term mean of 48 compared to the previous year when it was 38% above the long term mean.

4.5 Implication of the above indicators to food security

- Frequency of meal consumption has been affected in all livelihood zones as the purchasing power of the pastoralists have been reduced thus affecting food security.

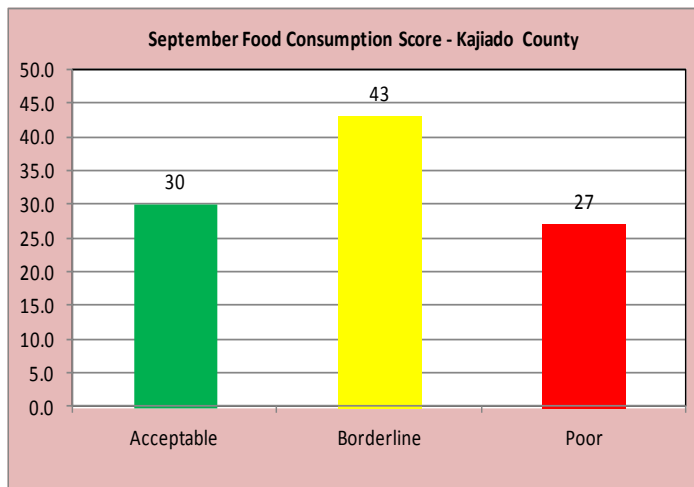
5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- Milk production declined by 80% due to migration and absence of water and pasture thus affecting household milk production and consumption in the pastoral and agro-pastoral zones.
- Milk was now being consumed as condiment. In a normal year the daily household milk consumption ranged between 2 - 3 litres.

5.2 Food Consumption Score

- An average of 30, 43 and 27 percent of the households had acceptable, borderline and poor food consumption scores respectively (Figure 11).



- Households diet in terms of meal frequency, dietary diversity; nutritional value and amount have declined.
- This is evidenced by the reduction in the proportion of households with acceptable food consumption from 37 percent during the last month and an increase in that with borderline and poor food consumption scores from 42, 21 percent respectively.

Figure 11: Food consumption score; Kajiado County

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The proportion of children at risk of malnutrition based on MUAC<135mm in September was at 16.30 percent (Figure 12), a 4 percent increase from the previous month.
- The worsening nutritional situation was attributed to decreased household milk consumption among children as livestock moved to dry-season grazing grounds and those left were emancipated with zero to negligible milk production.
- The pastoral livelihood zone of Mosiro recorded the highest number of children at risk of malnutrition at 27% while Mixed farming livelihood zone recorded 8.7%.

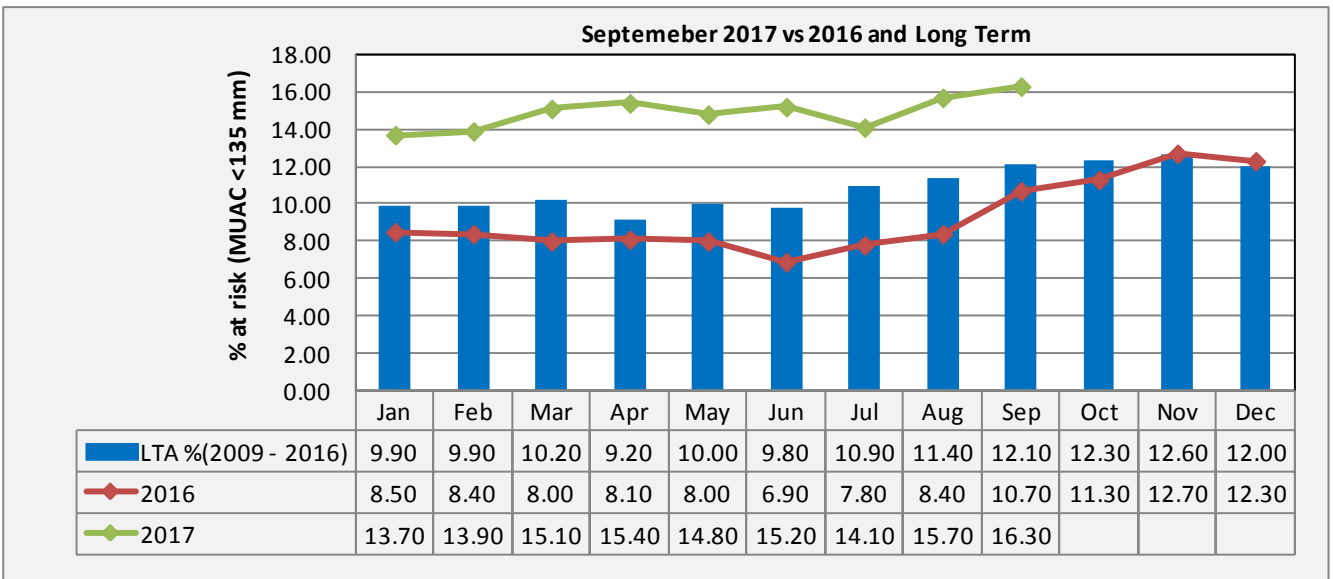


Figure 12: Proportion of children at risk of malnutrition (MUAC<135mm)

- The proportion of children at risk of malnutrition was 35 percent above the long term mean.

5.3.2 Human Diseases

- There were no reports on human disease outbreak in the county; however health services have been affected by the on-going strike.

5.4 COPING STRATEGIES

- The coping strategy index was 7.9 and 6 in pastoral and agro-pastoral livelihood zones respectively in September 2017, and increase from the previous month of 5.6 and 4.3 respectively. The increase is attributed to the low purchasing power by the pastoralists owing to the poor performance of livestock at market.
- The most common coping strategies are now to reduce the number of meals and meal portions and to limit the amount of food taken by adults.

6. CURRENT INTERVENTIONS MEASURES

6.1 NON-FOOD INTERVENTIONS

- Distribution of 9,000 bags of drought meal animal feeds (Pellet) across the county: By National Drought Management Authority.
- Livestock treatment and vaccination of CCPP across the county: By County Government and National Drought Management Authority.
- Provision 4,800 litres of fuel subsidy to 12 strategic boreholes each receiving 400 litres: By National Drought Management Authority.
- Emergency water trucking in Kajiado West and South: By County Government.
- Integrated health and nutrition outreaches in 13 sites of hard to reach areas in Kajiado South and West targeting 1,388 children, pregnant and lactating women: By Kenya Red-Cross Society and Ministry of Health.
- Livestock Off-take targeting 800 cattle in Kajiado Central, East, West and South at Ksh 18,000 per cattle: By Kenya Meat Commission.

7. EMERGING ISSUES

7.1 Migration

- Migration of livestock begun as early as June to the neighbouring counties which was not normal. Weak cattle were being ferried back while some die on the way and those who survive were being fed using livestock feeds.
- Livestock from Ewaso migrated to Mai Mahui , Kajiado central to Maparasha towards Chulu, Kajiado East towards Mashuru, Chulu, Makueni, Kajiado South towards to Chulu. Livestock in Rombo have migrated to Tsavo west and Tanzania.
- Chyulu hills is currently experiencing over-stocking and causing faster depletion of available grazing and water resources.
- Livestock are now moving towards Taita Taveta and other coastal counties, which is likely to result in break-out of Foot and Mouth Disease (FMD), East Coast Fever (ECF) and Trypanosomiasis.

7.2 FOOD SECURITY PROGNOSIS

- With the projected normal performance of the short rains(October, November, December) modest rejuvenation of pasture and browse is expected across all livelihood zones and thus the body condition of livestock is expected to start improving within 3 -5 weeks.
- Water stress is expected to reduce as the pans and other surface water begin to recharge and hence reduce trekking distances.
- With expected improvement in water and pasture rejuvenation, goat prices will improve slightly and supply in the market declines.
- Terms of trade are most likely to improve in favour of the livestock keepers.
- The livestock body condition is expected to improve slightly beginning November in all livelihood zones as the short rains commence and trekking distance reduce.
- The nutrition status of children under five is expected to improve due to slight improvement of milk as water improves and pasture begin to rejuvenate.

8. RECOMMENDATIONS FOR ACTION

- Continued provision of livestock feeds mainly pellets, hay and concentrates. *Action by National Drought Management Authority, County Government and State Department of Livestock.*
- Support strategic boreholes with fuel subsidy. *Action by National Drought Management Authority in collaboration with the County development partners.*
- Timely provision of seeds and fertilizers in anticipation of the short rains for drought recovery. *Action: County Government*
- Livestock vaccination to curb possible outbreak of livestock diseases. *Action: County Government.*
- Introduction of Hunger Safety Nets programme in Mosiro, Mbirikani and Lenkism wards. *Action: National Drought Management Authority and other players with mandate in food security.*
- Sensitize community to harvest water, proper usage and provision of water storage tanks to critical facilities : *Action: County Government*