

National Drought Management Authority
KWALE COUNTY
DROUGHT EARLY WARNING BULLETIN FOR DECEMBER 2017



A Vision 2030 Flagship Project



DECEMBER 2017 EW FLAG

Drought Status: NORMAL



Shughull za kawaida

Drought Situation & EW Phase Classification

Biophysical Indicators

- Normal-to-above normal rainfall amounts were received in both livelihood zones.
- The Vegetation Condition Index was above-normal at 63.18.
- The state of water sources was normal for this time of the year.

Socio Economic Indicators (Impact Indicators)

Production indicators

- Livestock body condition was normal at this time of the year.
- Milk production was below-normal.
- No livestock migration was witnessed during the month.

Access indicators

- The terms of trade were below-normal for the month.
- Milk consumption was normal.
- Return distances to water sources for households were normal.

Utilization Indicators

- The proportion of children at risk of malnutrition was above-normal for this time of the year.

Early Warning (EW) Phase Classification

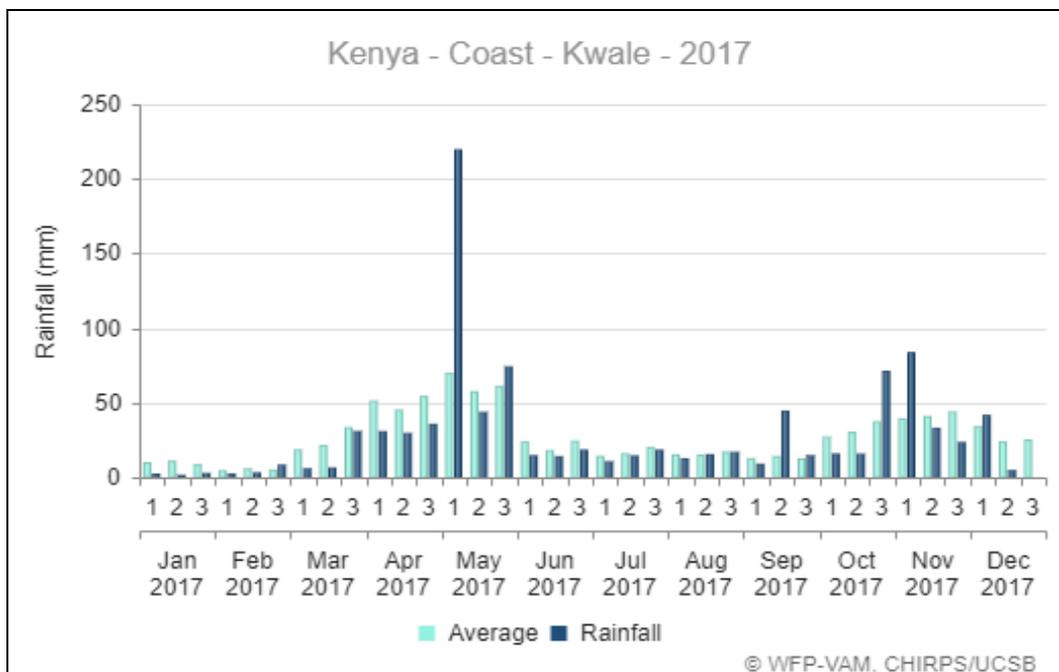
Livelihood Zone	Phase	Trend
Mixed Farming	Normal	Stable
Livestock Farming	Normal	Improving
County	Normal	Improving
Biophysical Indicators	Value	Normal Range/Value
VCI	63.18	50
State of Water Sources	5	5
Production indicators	Value	Normal
Crop Condition (maize and legumes)	Good	Good
Livestock Body Condition	2 (livestock farming) 1(mixed farming)	2 (livestock farming) 1(mixed farming)
Milk Production (Litres)	3.5	4.6
Livestock Migration Pattern	No migration	No migration
Livestock deaths (from drought)	-	-
Access Indicators	Value	Normal
Terms of trade	54.1	80.2
Milk Consumption (litres)	1.8	2
Return distance to water sources (km)	2.3	2.0
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	7.0	5.6

Seasonal calendar

<ul style="list-style-type: none"> ▪ Short rains harvests ▪ Short dry spell ▪ Reduced milk yields ▪ Increased household 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 household 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

1.1 RAINFALL PERFORMANCE

- The short rains season's onset was the third dekad of October.
- During the month of December, the first dekad received slightly higher-than-normal rainfall while the second one received significantly less-than-normal rainfall.
- The rainfall amounts have been provided in the graph below.



- The rainfall distribution was good temporally and spatially even across both livelihood zones in the county.
- In most parts of the county the rains ceased in the second dekad of the month.

2. IMPACTS ON VEGETATION AND WATER

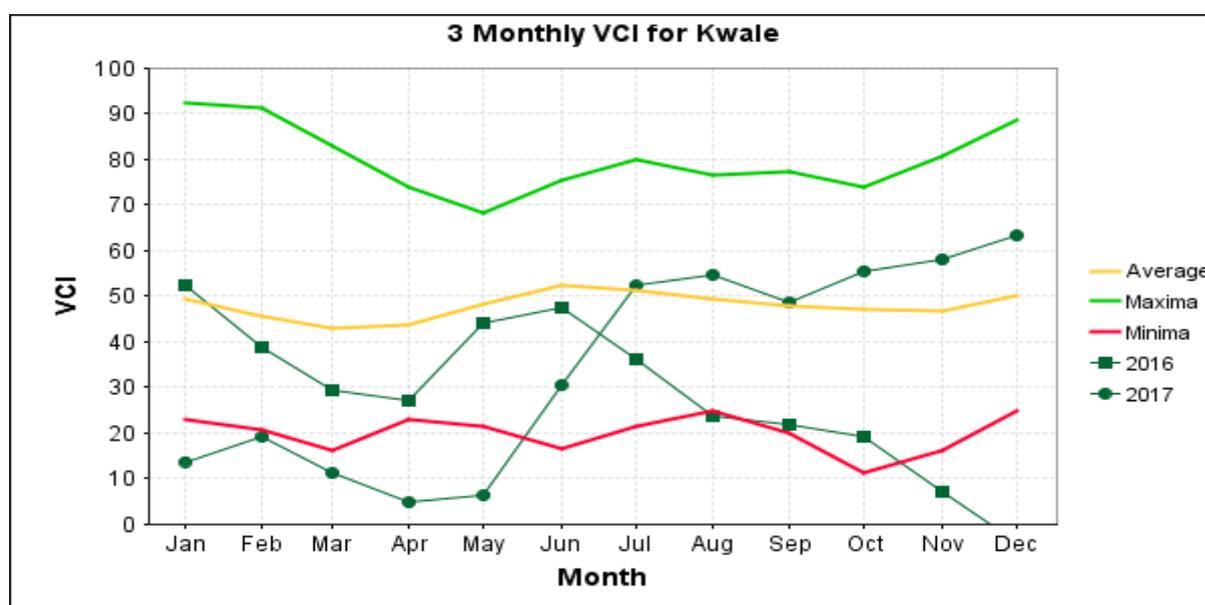
2.1 VEGETATION CONDITION

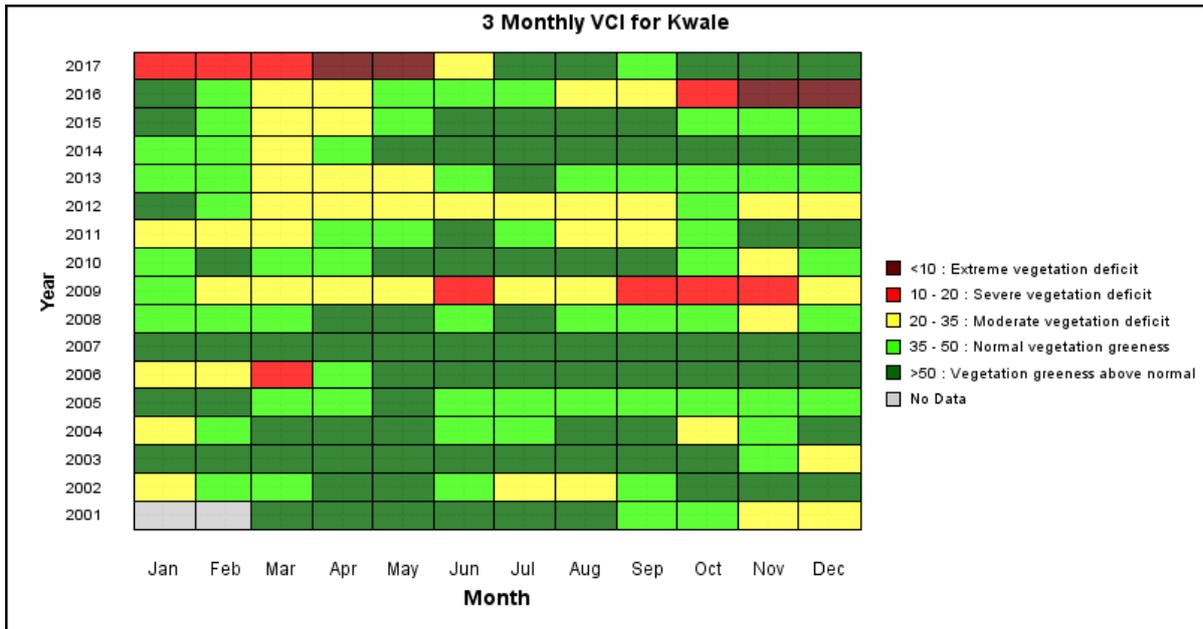
2.1.1 Vegetation Condition Index (VCI)

- There was a general improvement in the vegetation greenness this month compared to last month as recorded by the increase in the vegetation condition index shown in the table below. The improvement was largely attributed to the rains received during the month and also since the onset of the short rain season in October.

County/Sub-county	3-month VCI June 2017	3-month VCI July 2017	3-month VCI August 2017	3-month VCI September 2017	3-month VCI October 2017	3-month VCI November 2017	3-month VCI December 2017
Kinango	39.34	60.13	60.36	51.3	55.36	57.3	64.81
Lunga Lunga	20.97	49.13	51.73	46.03	52.32	57.67	63.05
Matuga	11.46	31.93	44.56	47.98	62.1	62.16	59.19
Msambweni	17.71	24.17	27.04	28.83	51.14	55.34	54.41
Kwale County	30.34	52.12	54.63	48.9	55.36	57.91	63.18

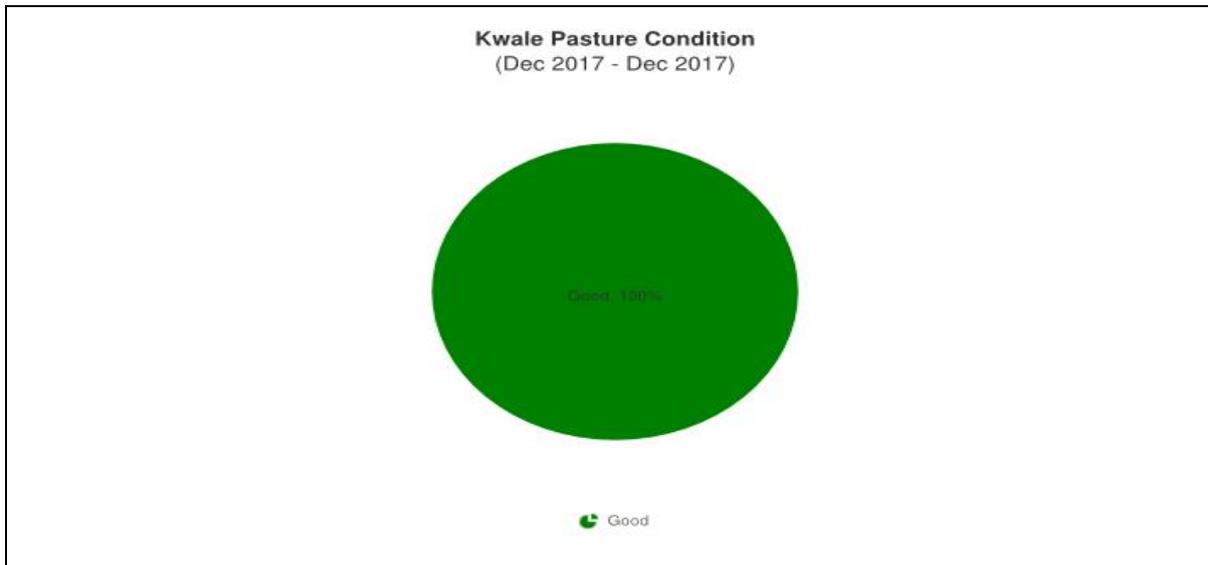
- All sub-counties recorded above-normal vegetation greenness similar to last month where a general improvement was recorded at sub-county level particularly for Kinango and Lunga Lunga sub-counties.
- In Kinango sub-county, there was an improvement of 13.1 percent from an index of 57.3 in November to 64.81 in December while in Lunga Lunga sub-county, an improvement of 9.3 percent was recorded from an index of 57.67 last month to 63.05 this month.
- The vegetation condition remained comparably the same in Msambweni sub-county which recorded an index of 55.34 in November and 54.41 in December.
- However, a slight reduction of 4.8 percent in vegetation greenness was posted in Matuga sub-county from an index of 62.16 last month to 59.19 currently.
- The current vegetation condition index in the county is provided in the graph and matrix below.



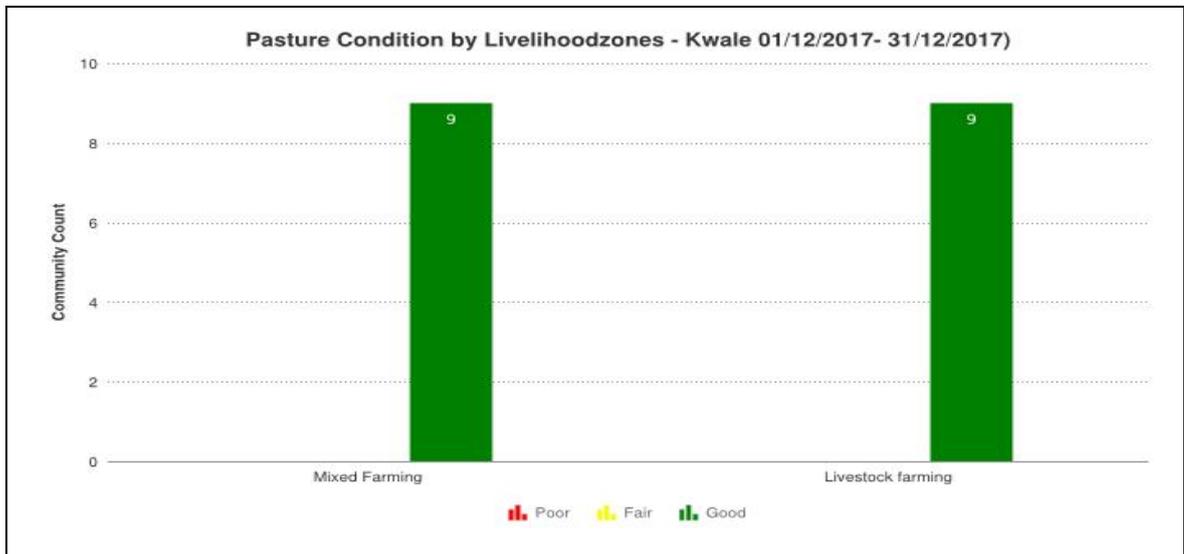


2.1.2 Pasture

- The condition of the pasture in the county continued to improve this month as all households interviewed reported good pasture condition compared to 95 percent last month.
- The current condition was maintained by the sustained rejuvenation of pasture due to rains received from October through to December and is shown in the pie-chart below.

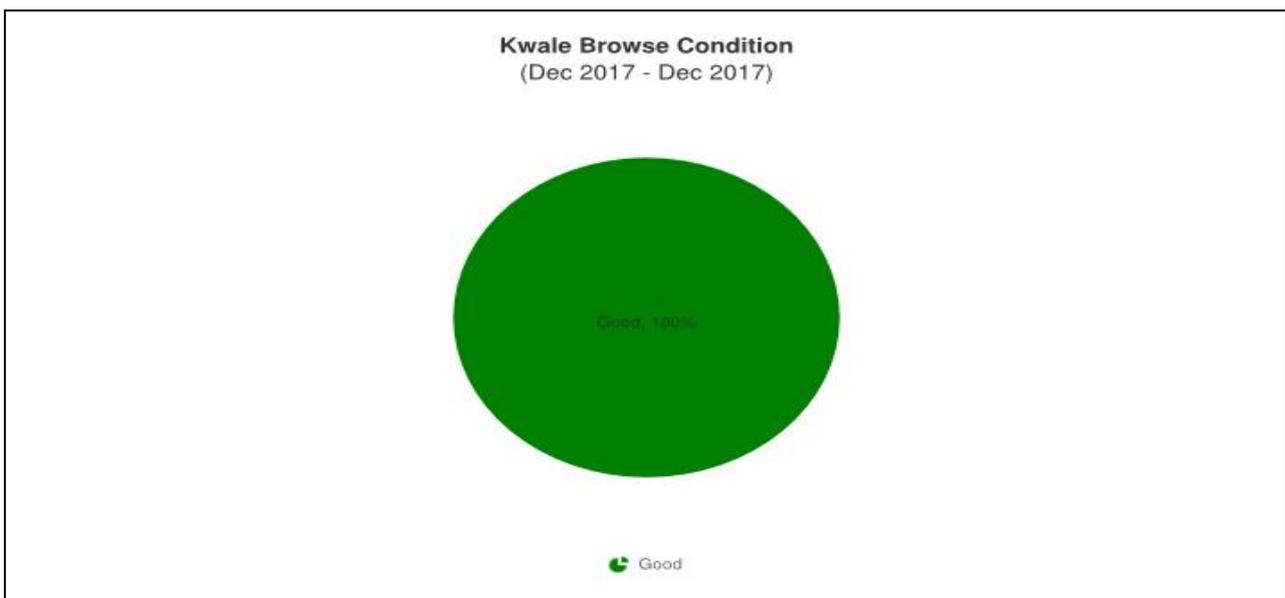


- The improved pasture condition was also manifested at the livelihood zone level as all households in both zones reported good condition whereas some in the livestock farming one had reported fair condition last month.
- The available pasture is projected to last for at least four and three months in the mixed farming and livestock farming livelihood zones respectively.
- The current pasture condition at livelihood zone level is illustrated in the graph below.

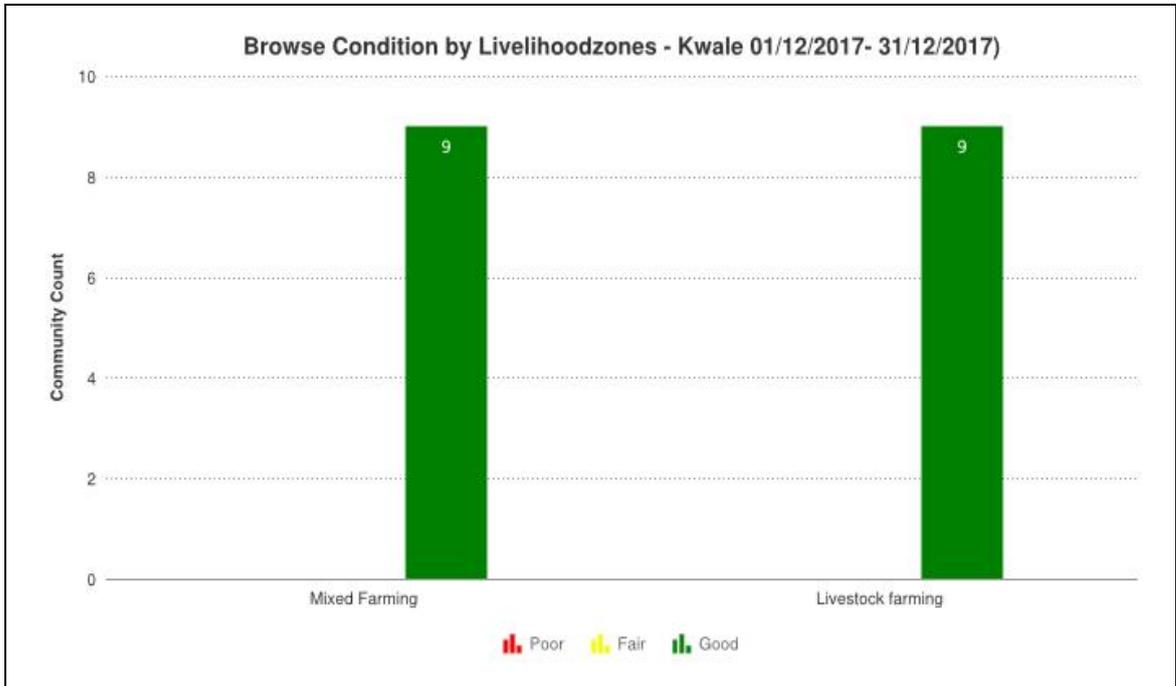


2.1.3 Browse

- Browse condition continued to be good this month as reported by all households.
- The rains experienced in the county have resulted in sustained browse rejuvenation similar to the case for pasture.
- The current browse condition in the county is provided in the graph below.



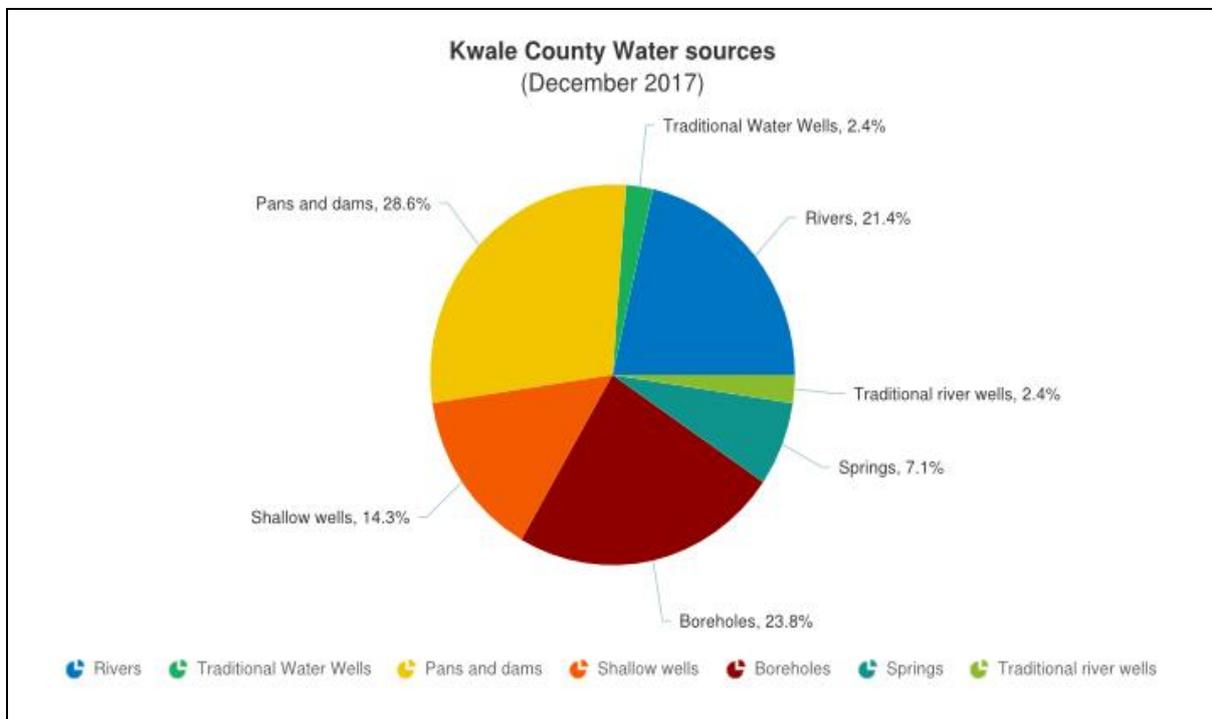
- There were minimal variations in browse condition at livelihood zone level as all households reported good condition in both zones similar to last month.
- The available browse is projected to last for four and six months in the livestock and mixed farming livelihood zones respectively.
- The current browse condition is illustrated in the graph below.



2.2 WATER RESOURCES

2.2.1 Sources

- The main water sources for the month include water pans and dams, shallow wells and boreholes. Others include rivers, piped water and springs as shown in the pie-chart below.
- The sources currently in use are the normal ones for this time of the year and were the same ones in use last month.



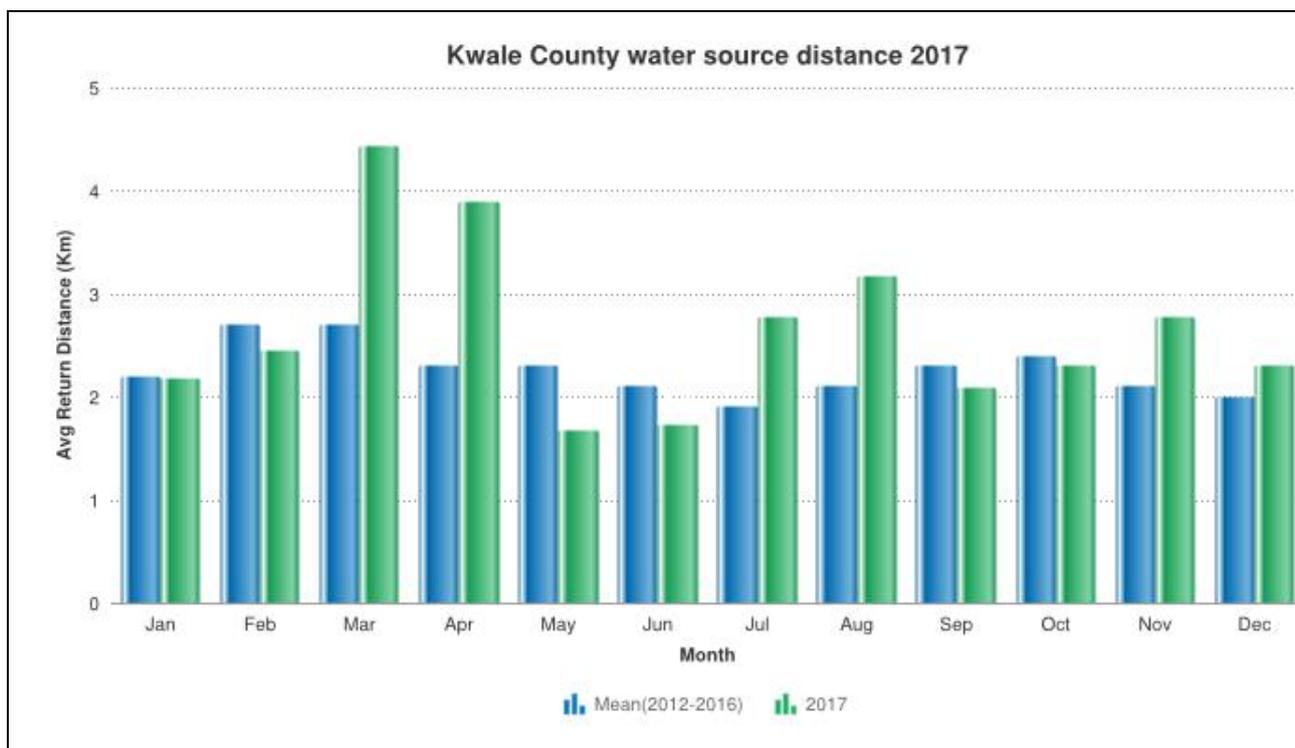
- The most relied upon water sources in the livestock farming livelihood zone remained pans and dams which held water of up to 70 percent of their capacity projected to last at least 3-4 months.

- The general early warning classification categorizes the state of water resources at 5 implying normal for this time of the year similar to last month. (Below is a description of the state of water resources).

INDEX	STATE OF WATER SOURCE	DESCRIPTION
1	EMERGENCY SITUATION	All main water sources have dried up; only few boreholes still yielding significant amounts
2	STRONGLY INADEQUATE	Surface water sources have dried up while the underground water sources are yielding very little amounts of water. Breakages of boreholes contribute to worsen the situation. Acute water shortage in many areas within the livelihood
3	INADEQUATE	Surface water sources have dried up while the underground water sources are yielding modest amounts of water. Concentration of livestock around few water points contribute to spread communicable diseases and to degradation of rangeland
4	DECLINING	The water availability is below normal for the period
5	NORMAL	The water availability is normal for the period
6	GOOD	The water availability is above normal for the period

2.2.2 Household access and utilization

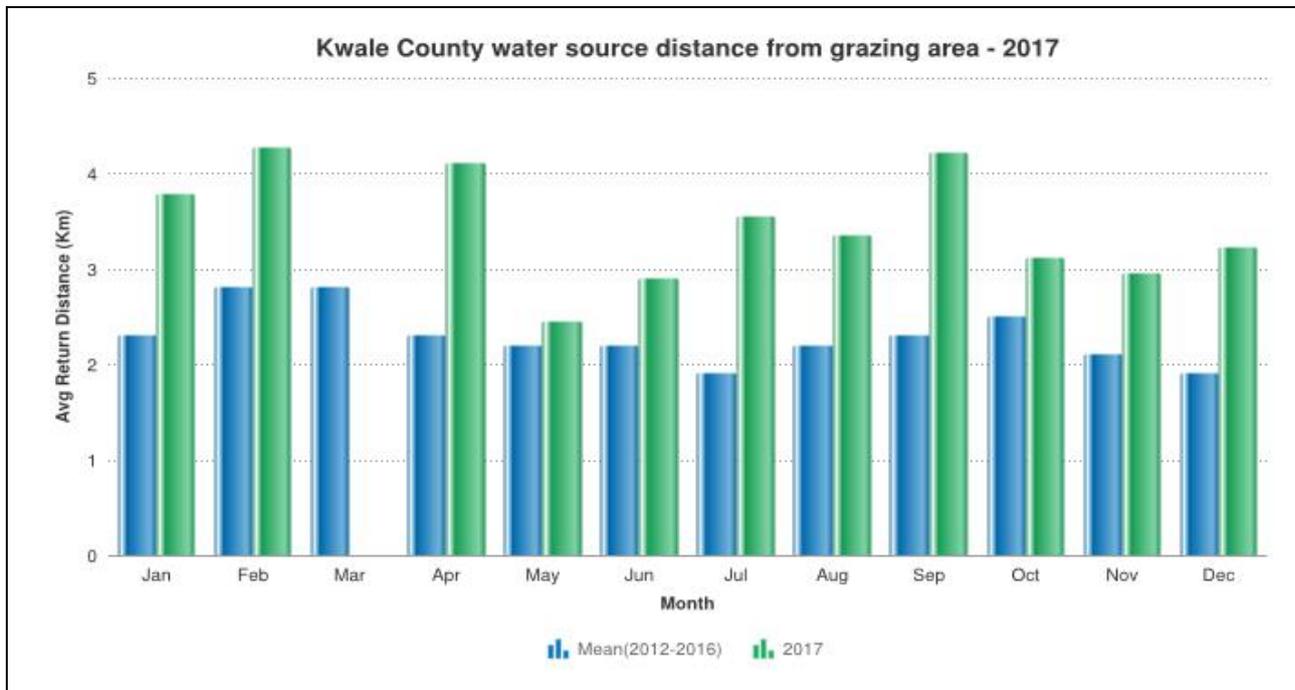
- Access to water for domestic use remained similar to last month as households had to walk 2.3 km in December compared to 2.8 km in November.
- The distance was normal compared to the 2012-2016 long-term average (LTA) of 2.0 km.
- The trend in household access to water in the county has been provided in the graph below.



2.2.3 Livestock access

- The average trekking distance to grazing areas remained similar to last month as it was recorded as 3.2km in December compared to 2.9km last month.

- The distance was 68.4 percent higher than the recorded distance of 1.9 km in the 2012-2016 long-term average. The significant difference compared to normal could be attributed to the sub-optimal rejuvenation of forage from last year's drought impacts.
- The graph below illustrates the trend in trekking distances in the county.

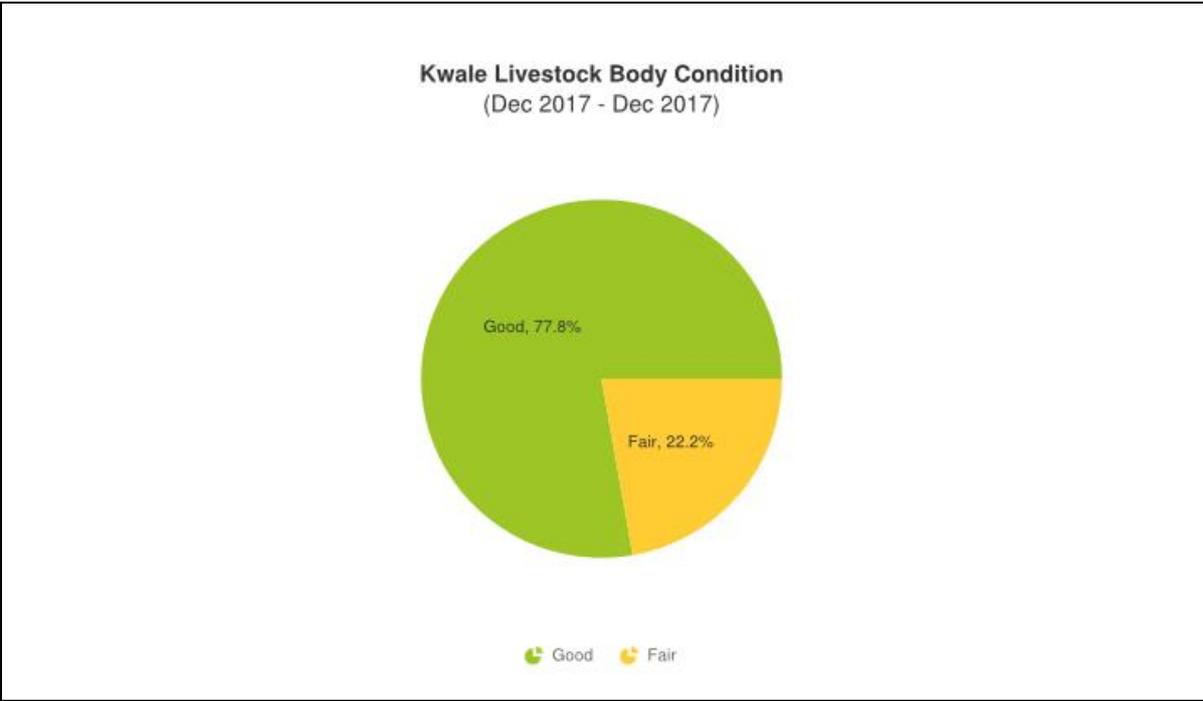


3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition deteriorated slightly this month as 77.8 percent of the households reported good body condition in December compared to 90 percent last month.
- The deterioration could be attributed to the diseases that were reported this month in livestock such as Foot and Mouth Disease (FMD), Contagious Bovine Pleuro-Pneumonia (CBPP) and Contagious Caprine Pleuro-Pneumonia (CCPP).
- The pie-chart below illustrates the current livestock body condition in the county.



- The early warning classification for livestock body condition remained 2 (moderate) and 1 (normal) in the livestock farming and mixed farming livelihood zones respectively similar to last month (see below the early warning classification table for livestock body condition).

Level	Classification	Characteristics (this describes majority of the herd and not individual isolated Stock)
1	Normal	Very Fat Tail buried and in fat
		Fat, Blocky. Bone over back not visible
		Very Good Smooth with fat over back and tail head
		Good smooth appearance
2	Moderate	Moderate. neither fat nor thin
3	Stressed	Borderline fore-ribs not visible. 12th & 13th ribs visible
4	Critical	Thin fore ribs visible
5	Emaciated	Very thin no fat, bones visible
		Emaciated, little muscle left

- Given the availability of forage currently, the present livestock body condition is projected to be maintained for at least three months up to March 2018.

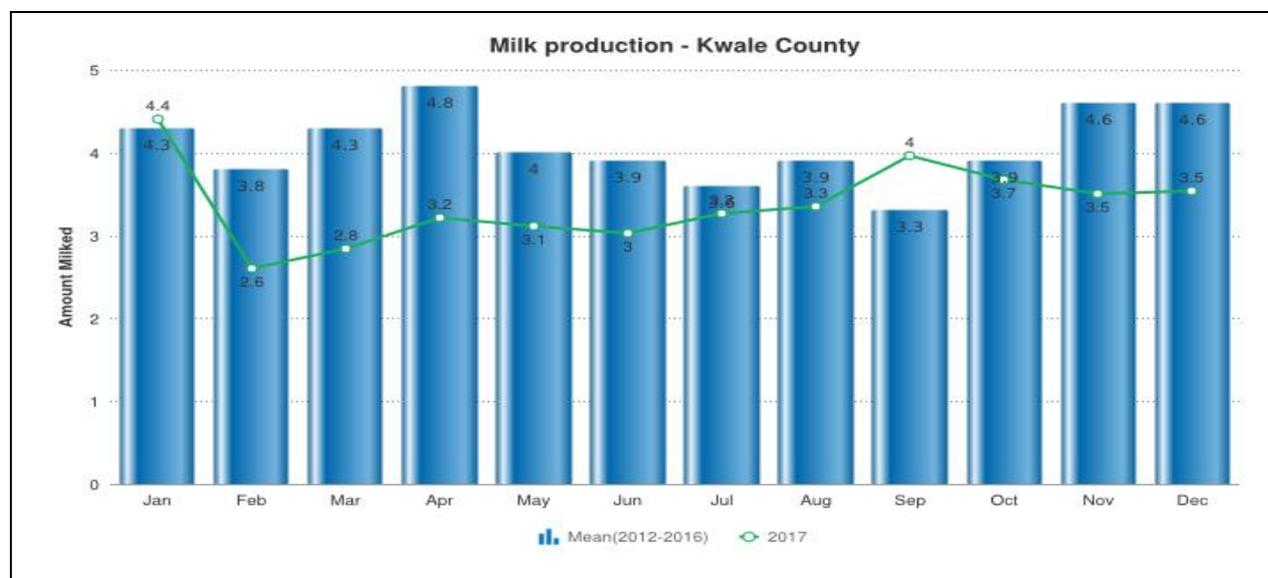
3.1.2 Livestock Diseases

- There were several livestock diseases reported in the month of December mostly in Kinango sub-county which included: FMD and CBPP in both Ndavaya and Kasemeni wards.
- New Castle Disease and CCPP were also reported in Ndavaya and Kasemeni wards respectively.

3.1.3 Milk Production

- Cattle remained the main producers of milk in the county similar to last month.
- Household milk production remained the same as last month at 3.5 litres which was 23.9 percent lower than the 2012-2016 LTA of 4.6 litres.

- The distance to grazing areas have remained above-average which implies that pasture has not adequately rejuvenated from the impacts of last year's drought.
- Therefore, the lower-than-normal milk production could be attributed to the lack of sufficient pasture rejuvenation.
- The graph below illustrates trends in milk production in the county compared to normal.



3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and condition of food crops

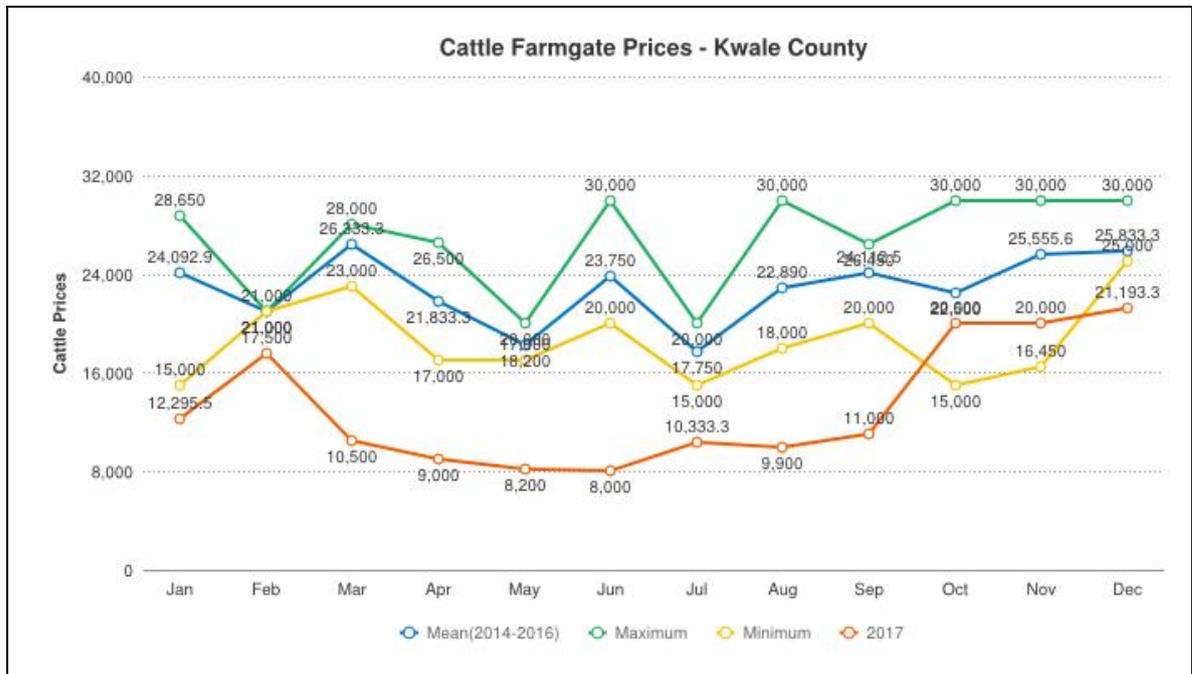
- Maize is the county's staple and was ready on the farms in its green stage in most parts of the county and was already being harvested. However, it was at different stages on farms where it was planted late. Weeding was on-going in these areas.
- Fall army-worms were still present although sensitization on their early detection and control had been done which may prevent substantial loss in production.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

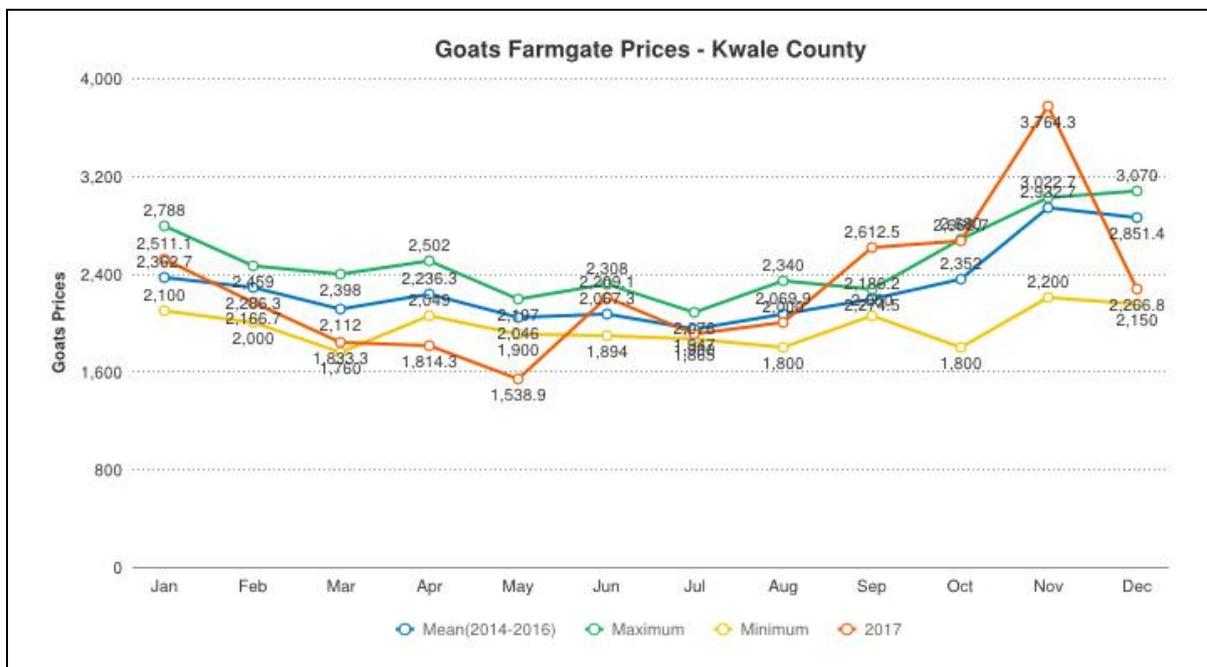
4.1.1 Cattle Prices

- The average selling price of a mature 3-year old bull was Kshs 21,193.3 in December having increased marginally by six percent from Kshs 20,000 in November.
- The price was 18 percent lower-than-normal compared with the 2014-2016 LTA of Kshs 25,833.3.
- Cattle prices have maintained a below-normal trend throughout the year which is illustrated in the graph below.



4.1.2 Goat Prices

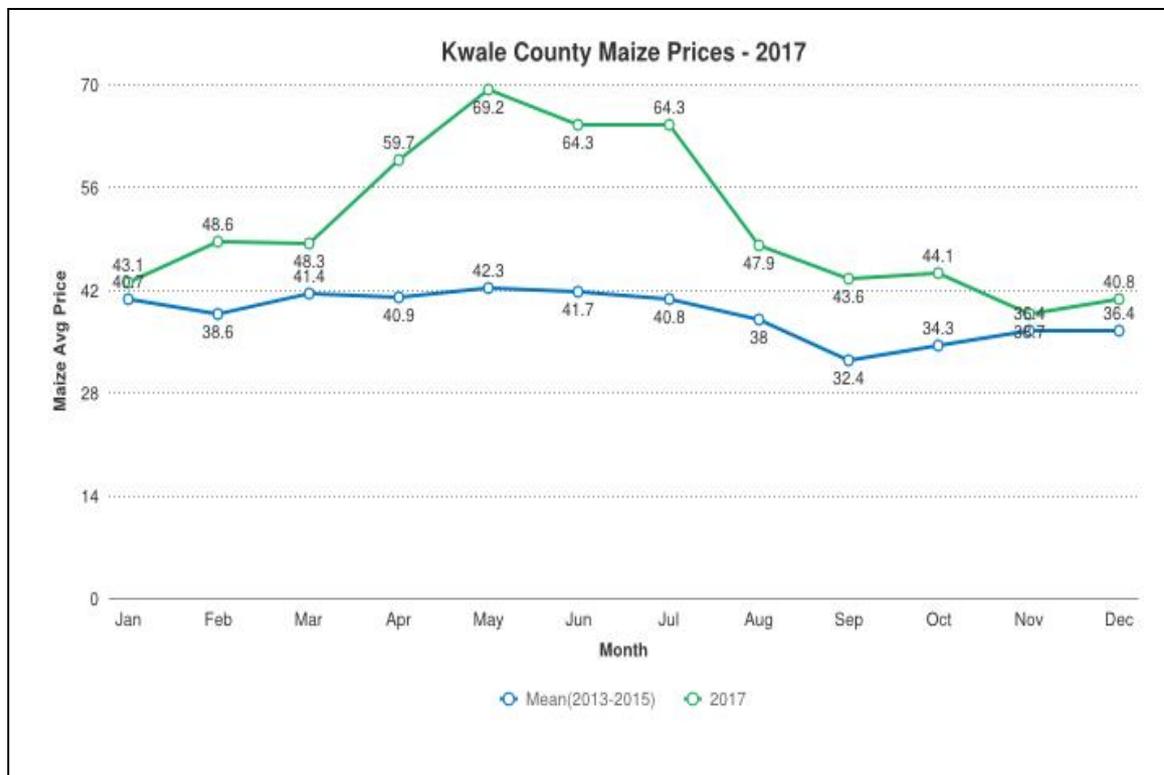
- The average selling price of a medium-sized three-year old buck was Kshs 2,266.8 in December which was a significant 39.8 percent decrease from Kshs 3,764.3 in November.
- The price decrease may be attributed to the Foot and Mouth Disease out-break that weakened goats' body condition and led to less competitive prices at market level.
- The current price was 20.5 percent lower than the normal price of Kshs 2,851.4 in the 2014-2016 LTA.
- Provided below is a graphical representation of the trend in goat prices in the county.



4.2 CROP PRICES

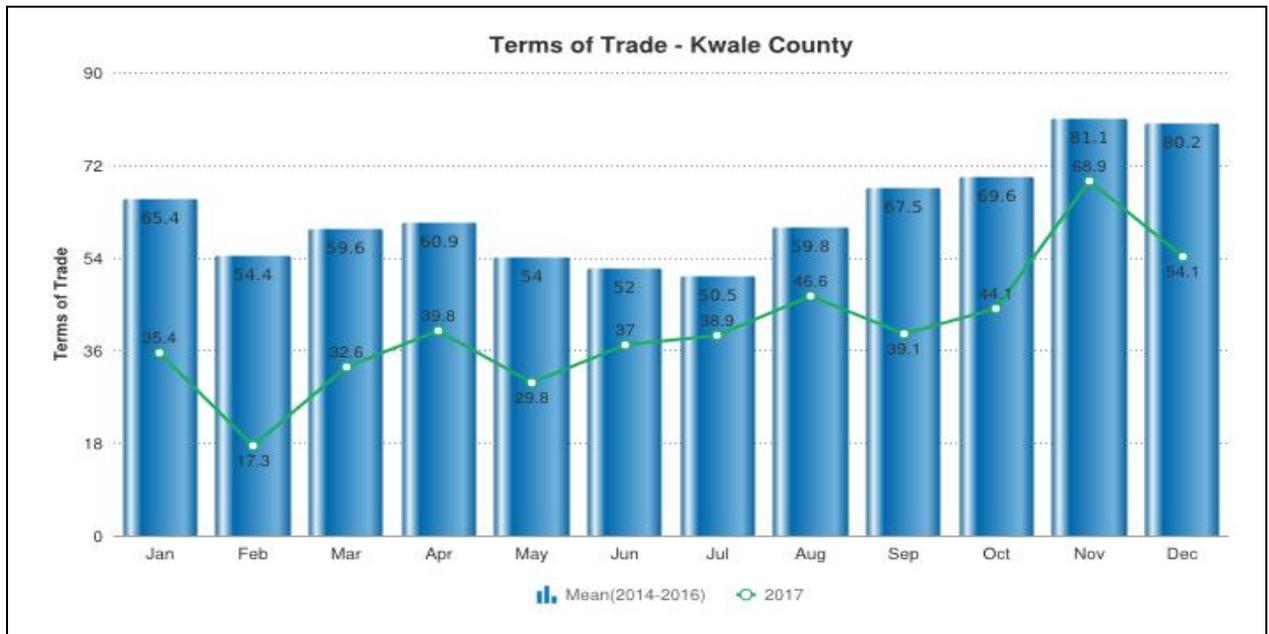
4.2.1 Maize

- A kilogram of maize was selling at Kshs 40.8 in December compared to Kshs 36.4 last month.
- The price was normal for this time of the year.
- The trend in maize prices in the county is provided in the graph below.



4.3 TERMS OF TRADE (CASUAL LABOUR VERSUS MAIZE PRICES)

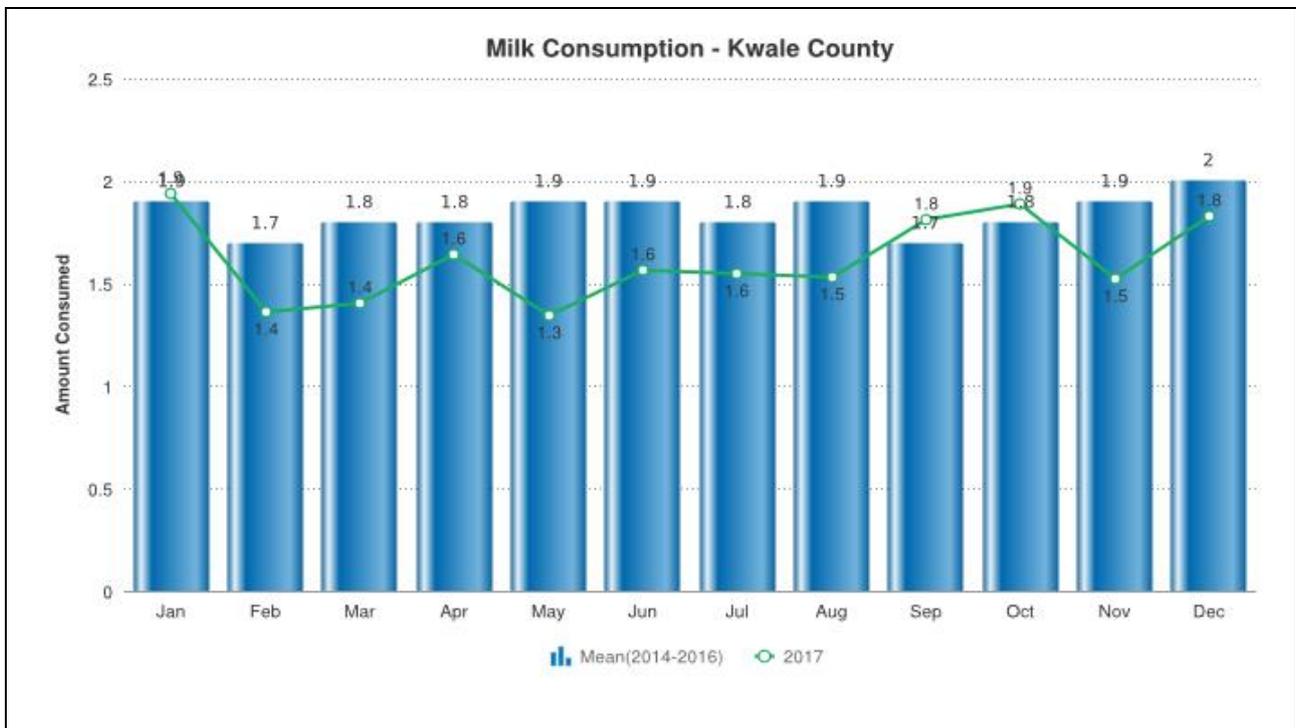
- Terms of trade reduced by 21.5 percent in December as households could currently purchase 54.1 kilograms of maize from the proceeds of casual labour compared with 68.9 kilograms in November. It was also 32.5 percent lower-than-normal compared with 80.2 kilograms recorded in the 2014-2016 LTA.
- Households' purchasing power had seemingly been eroded compared to last month. However, the reduced terms of trade could be attributed to the fact that households were busy on their own farms and had green maize to consume as food and therefore did not need to engage in casual labour to buy food.
- The graph below illustrates the trend in terms of trade in the county.



5.0 FOOD CONSUMPTION AND NUTRITION STATUS

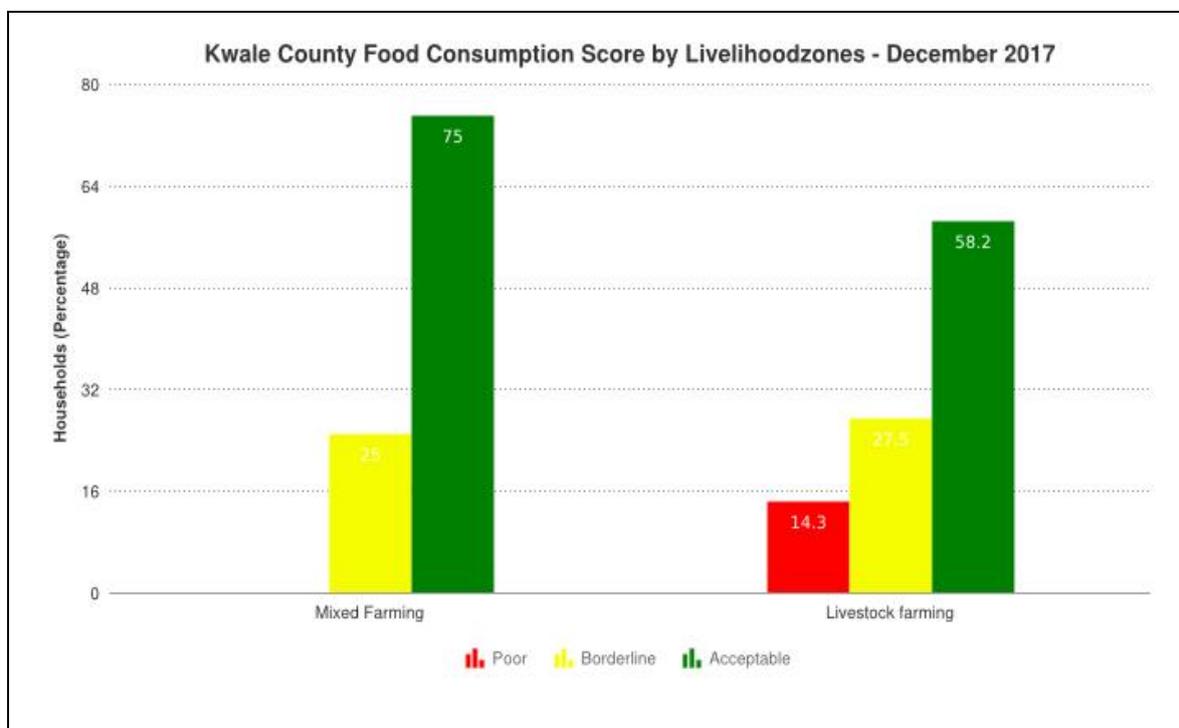
5.1 MILK CONSUMPTION

- The average household milk consumption was 1.8 litres this month quite comparable to 1.5 litres recorded in November.
- Milk consumption was normal for this time of the year and the trends are provided in the graph below.



5.2 FOOD CONSUMPTION SCORE

- Food consumption improved slightly compared to last month as the percentage of households with acceptable food consumption increased from 58.9 percent in November to 66.6 percent in December.
- There was therefore an increase in the proportion of the population that was consuming a staple and vegetables daily coupled with a frequent consumption of oil and pulses and occasionally dairy products, meat and fish.
- Inter-livelihood zone variations were recorded and illustrated in the figure below.

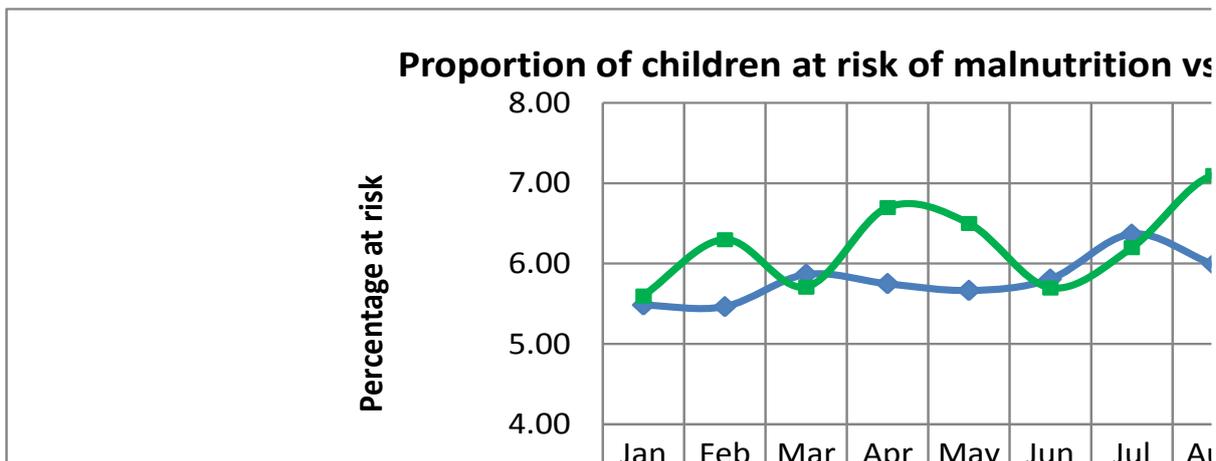


- Dietary diversity, food frequency and the nutritional value of food increased from last month to this month in both livelihood zones as shown in the graph above since the proportion of households with acceptable food consumption had increased.
- In the mixed farming livelihood zone, this proportion increased from 68.9 to 75 percent from November to December, while in the livestock farming zone, it increased from 48.9 to 58.2 percent during the same period.

5.3 HEALTH AND NUTRITION STATUS

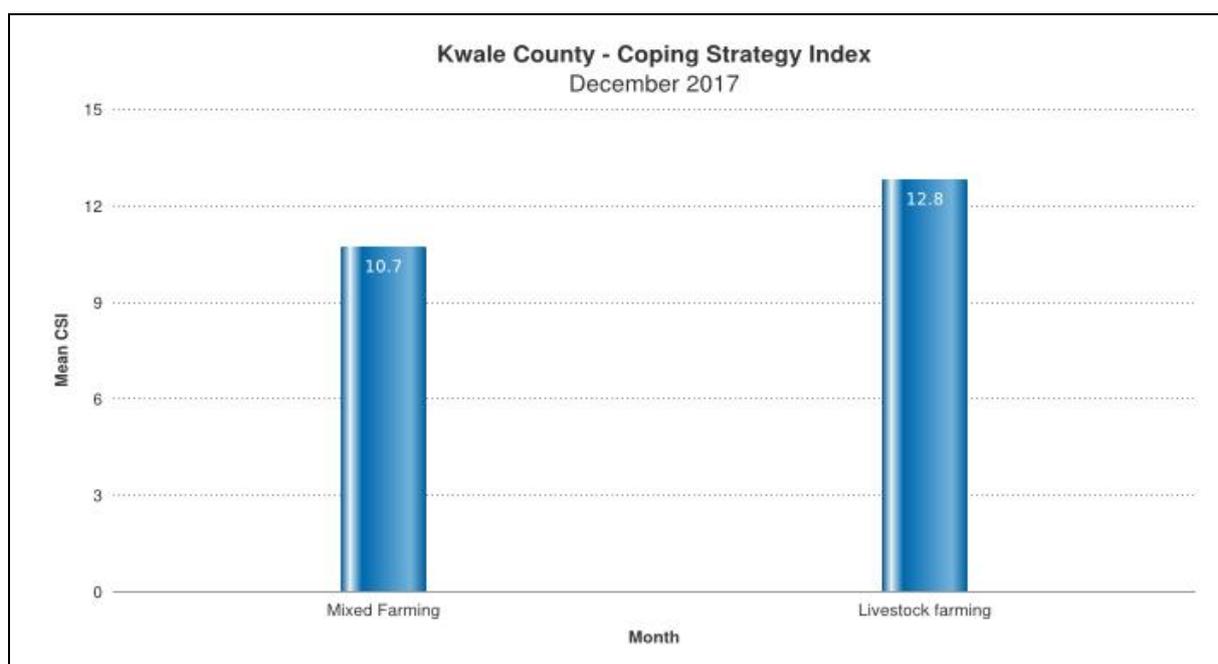
5.3.1 Nutrition Status

- There were 496 females and 566 males sampled this month for the mid-upper arm circumference (MUAC).
- The percentage of children aged below five years at risk of malnutrition as measured by MUAC reduced marginally by 7.9 percent from 7.6 percent in November to seven percent in December implying a slight improvement in their nutritional status.
- However, despite the improvement, the current nutritional status was 25 percent worse than normal when compared with 5.6 percent of children at risk in the 2012-2016 LTA.
- Children's nutritional status was still recovering from the negative impacts of poor access to medical services during the protracted nurses' strike in the county.
- The graph below shows the trend in malnutrition rates in the county in 2017.



5.4 COPING STRATEGIES

- The county's coping strategy index (CSI) is 11.8 this month which was quite comparable to last month's 11.5.
- The implication was that the consumption-based coping strategies that were in use in November had not increased in either severity or frequency compared with December.
- There were minimal variations at livelihood zone level too as the mixed farming livelihood zone posted a CSI of 10.7 in December compared with 10.4 in November, while the livestock farming one recorded one of 12.8 currently compared with 12.5 last month.
- The graph below shows the current situation at livelihood zone level.



6. CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

- World Food Program
- In coordination with NDMA, a total of Kshs 19,016,258 was transferred to 7,390 beneficiaries in the Cash For Assets program for work-norms achieved in November 2017.

- Agriculture department
 - Early identification of fall army-worm and sensitization of farmers on the right chemicals to use in addition to the correct time of spraying to curb their spread continued this month by the department.
- Health and Nutrition department
 - The department conducted a Knowledge, Aptitude and Practices survey in all the four sub-counties.
 - It also continued with the routine activities for the department which included: vitamin A supplementation, screening for malnutrition, growth monitoring and immunization.
 - Mass net distribution was also carried out during the month.

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- No cases of insecurity, conflict or human displacement were reported this month.

7.2 Migration

- No migration was reported this month.

7.3 FOOD SECURITY PROGNOSIS

For households in the livestock farming livelihood zone, forage rejuvenation has ensured some income from livestock production. In the mixed farming livelihood zone, some households are already harvesting green maize and there is generally increased food availability (mostly maize, the county's staple). Its price is also expected to decrease and resume near-normal ranges next month when harvesting occurs in earnest. Therefore, no significant food consumption gaps are projected and households are expected to continue employing normal consumption-based coping strategies without increasing them either in frequency or in severity. Increased availability and access to food at household level is also likely to lead to a further reduction in the proportion of children aged below five years who are at risk of malnutrition. The food security situation in the county is therefore likely to remain stable.

8. RECOMMENDATIONS

- Conduct a verification exercise to ascertain the higher-than-normal rate of malnutrition across the county from August. **Action-** department of Nutrition.
- Continuous scouting and surveillance for the fall army-worm in addition to sensitization of farmers on how to curb their spread. **Action-** department of Agriculture.
- With harvests expected next month and some farmers already harvesting, farmers need to be sensitized on post-harvest management. **Action-**department of Agriculture.
- Continued disease surveillance for CBPP, CCPP and FMD that were reported in Kinango sub-county. **Action-**Department of Veterinary Services.