

**National Drought Management Authority**  
**KWALE COUNTY**  
**DROUGHT EARLY WARNING BULLETIN DECEMBER 2019**



A Vision 2030 Flagship Project



**DECEMBER 2019 EW FLAG**

**Drought Status: NORMAL**



*Shughull za kawaida*

**Early Warning (EW) Phase Classification**

Livelihood Zone	Phase	Trend
Mixed Farming	Normal	Improving
Livestock Farming	Normal	Improving
County	Normal	Improving
Biophysical Indicators	Value	Normal Range/Value
VCI	85.02	>50
State of Water Sources	5	5
Production indicators	Value	Normal
Crop Condition (maize and legumes)	Fair	Good
Milk Production (Litres)	4.3	4.1
Livestock Migration Pattern	No migration	No migration
Livestock deaths (from drought)	Zero deaths	Zero deaths
Access Indicators	Value	Normal
Terms of trade	39.4	55.2
Milk Consumption (litres)	1.4	2.0
Return distance to water sources for households (km)	3.1	2.1
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	7.7	6.4

**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

- Above-normal rains were received throughout December.
- The VCI for the month was significantly above-normal for this time of the year.
- The state of water sources was normal.

**Socio Economic Indicators (Impact Indicators)**

**Production indicators**

- The condition of maize, green grams and cowpeas was fair this month compared to good normally.
- Milk production was within seasonal norms for the month.
- No drought-related deaths or migration incidences were reported during the month.

**Access indicators**

- Terms of trade (casual labour to maize) were significantly below-normal implying considerably reduced household purchasing power for this time of the year.
- Milk consumption was slightly below seasonal ranges this month.
- Distances to water points for household consumption were higher than seasonal ranges for the month.

**Utilization Indicators**

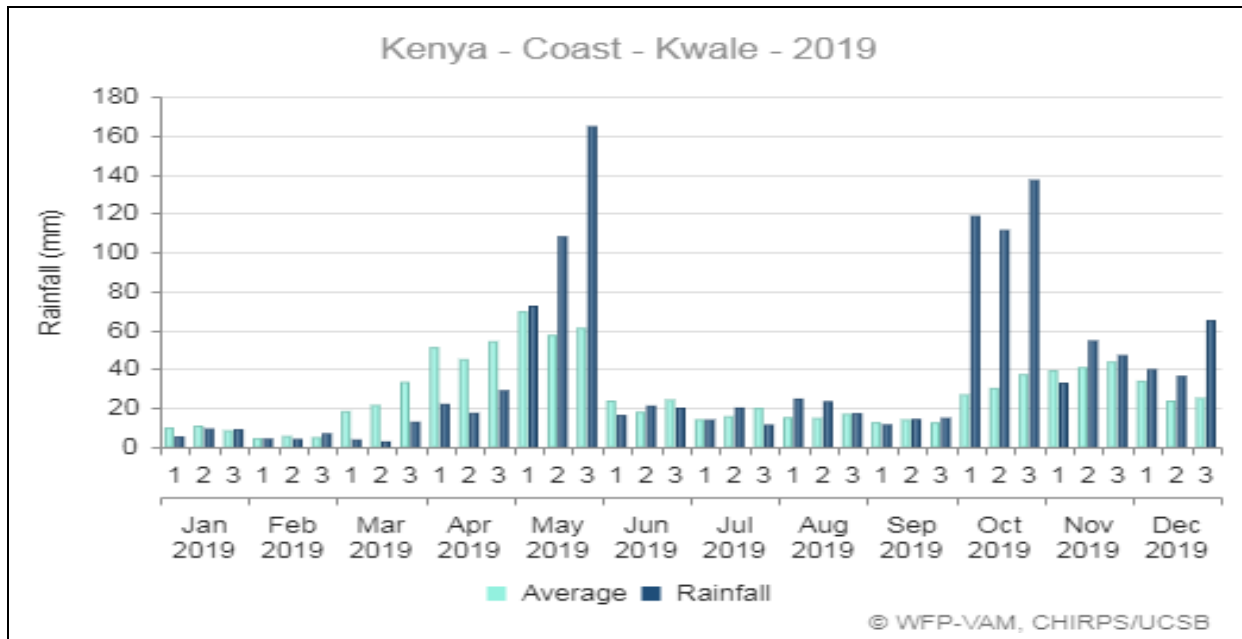
- The proportion of children at risk of malnutrition was slightly above-normal implying a worsened nutritional status for children aged 0-5 years for this time of the year.

**Seasonal Calendar**

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

## 1.1 RAINFALL PERFORMANCE

- The onset of the short rains season was timely in the first dekad of October as shown in the graph below.
- Rainfall amounts were above-normal in all three dekads recording 39.5mm, 36mm and 64.7 mm in dekads one, two and three respectively in comparison with 33.6mm, 23.4mm and 24.8mm in their respective long-term averages.
- The spatial distribution was fair and the temporal distribution good similar to last month.
- It was projected that the season would end this month.

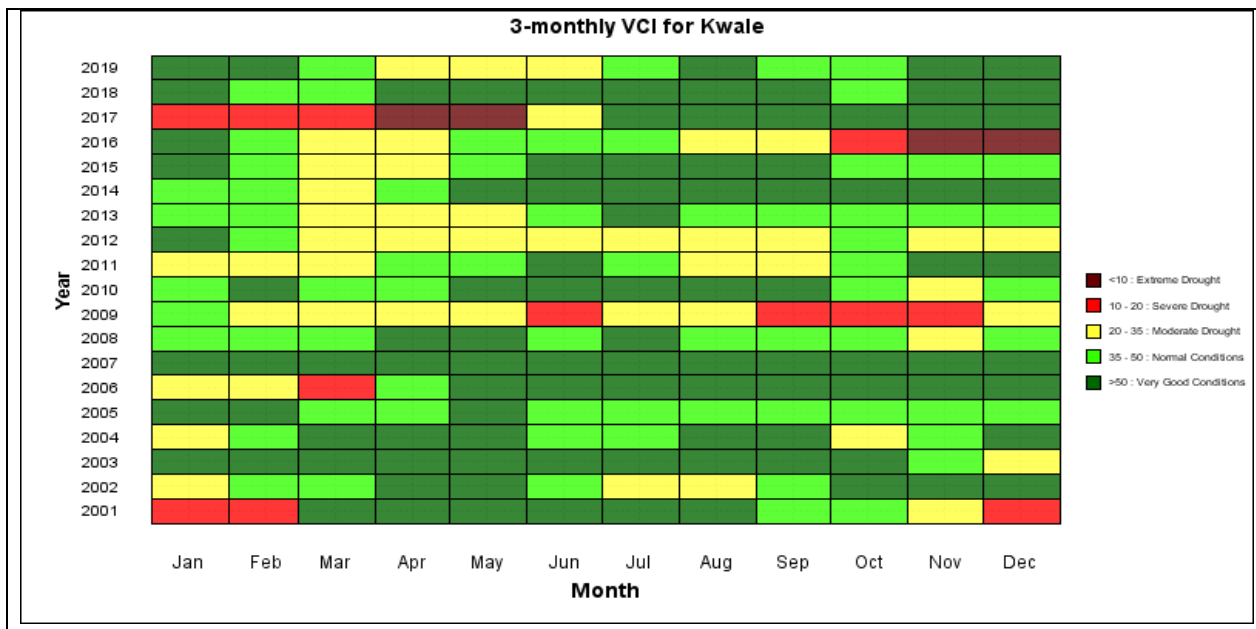


## 2. IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

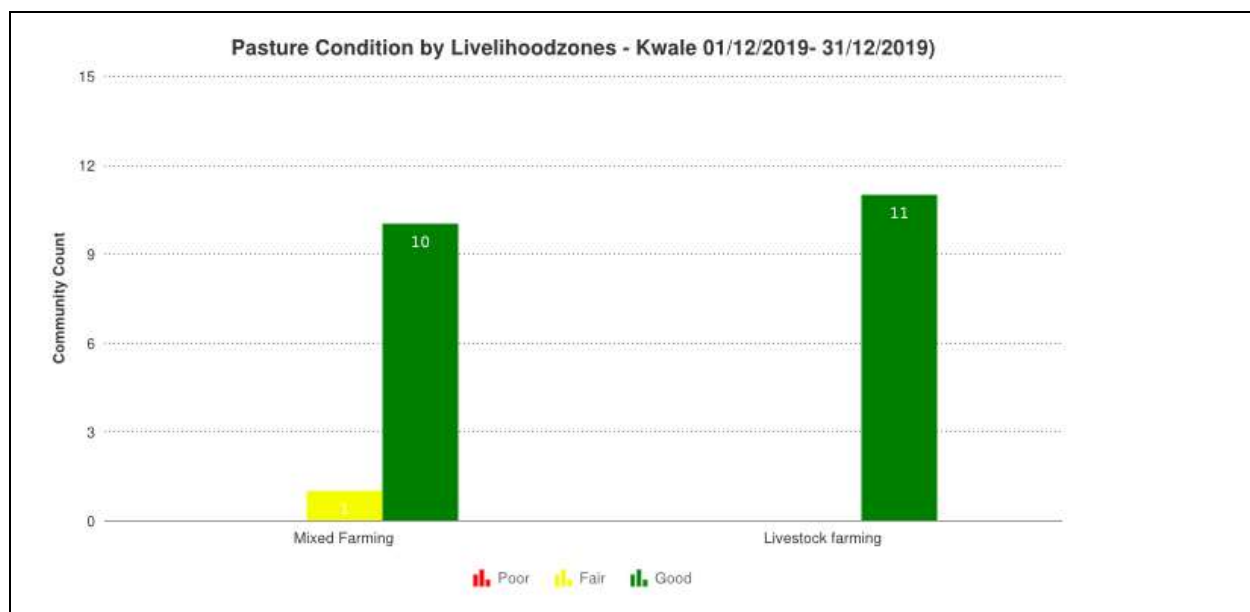
#### 2.1.1 Vegetation Condition Index (VCI)

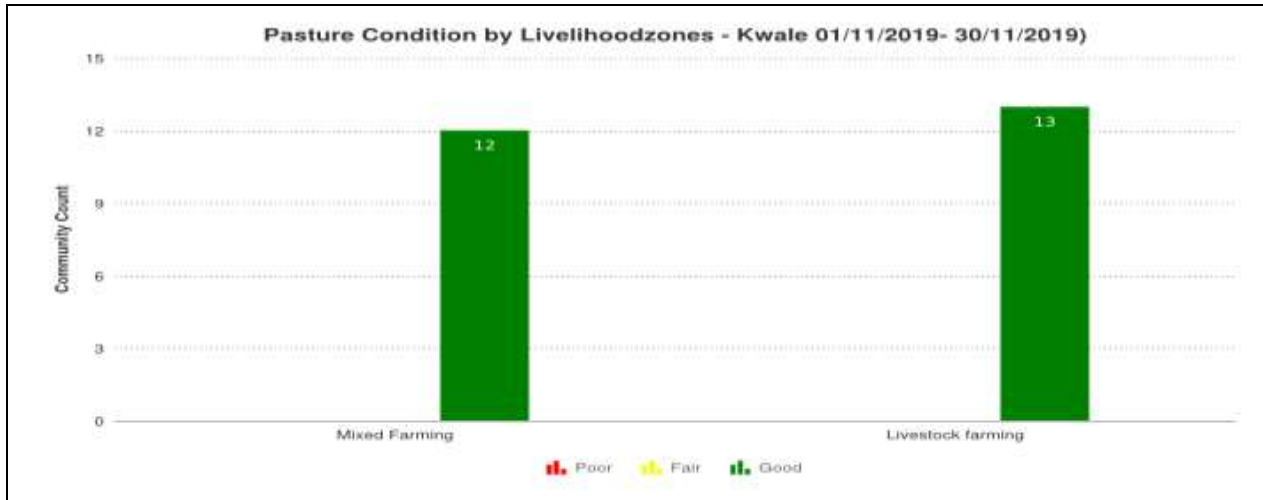
- A significant improvement in the county’s vegetation greenness was recorded as the 3-monthly VCI increased from 66.81 in November to 85.02 in December.
- Therefore, the county was classified in the ‘vegetation greenness above-normal’ band similar to last month as shown in the matrix below.
- The livestock farming livelihood zone, comprising majorly of Kinango and Lunga Lunga Sub-counties, recorded the most significant improvement.
- Kinango Sub-county recorded a VCI of 86.49 in December having increased considerably from 64.46 in November while Lunga Lunga Sub-county recorded 88.08 compared with 70.19 during the same period.
- The mixed farming livelihood zone, comprising majorly of Matuga and Msambweni Sub-counties, also recorded some improvement.
- The index in Matuga and Msambweni Sub-counties increased from 68.89 and 70.67 respectively in November to 77.03 and 73.21 respectively in December.
- Therefore, all four sub-counties were categorized in the ‘vegetation greenness above normal’ band, similar to the county.
- The significant improvement in the county’s vegetation greenness could largely be attributed to the higher-than-normal rainfall amounts that were received during the month under review.
- The current situation was similar to the same time last year.



### 2.1.2 Pasture

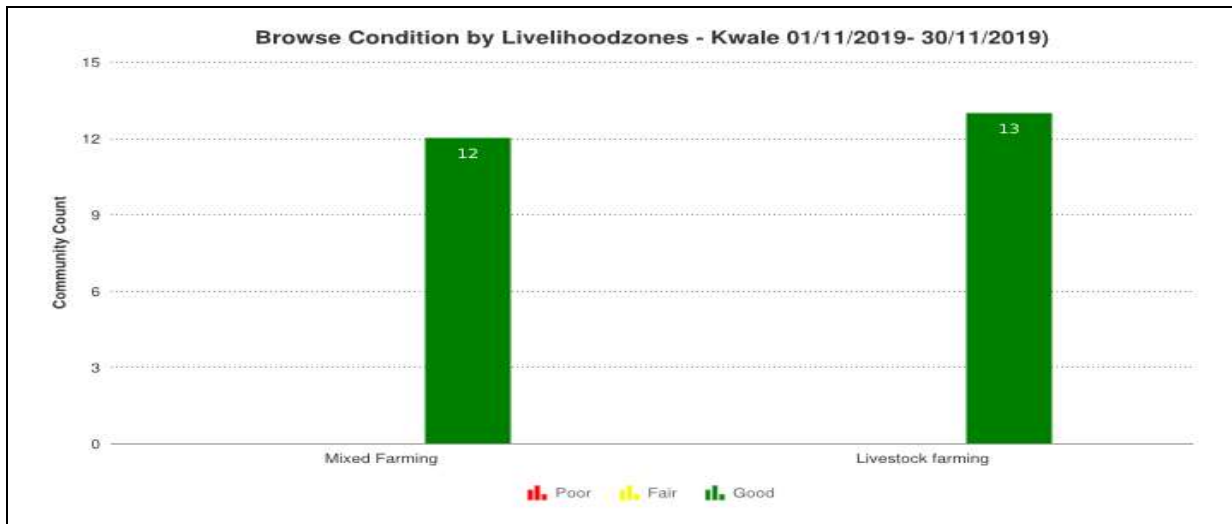
- The pasture condition this month remained stable as approximately 95.5 percent of households reported good condition this month compared with 100 percent last month.
- It was equally stable at livelihood zone level as shown in the graphs below.
- The available pasture was likely to last at least three and six months in the livestock farming and mixed farming livelihood zones respectively.

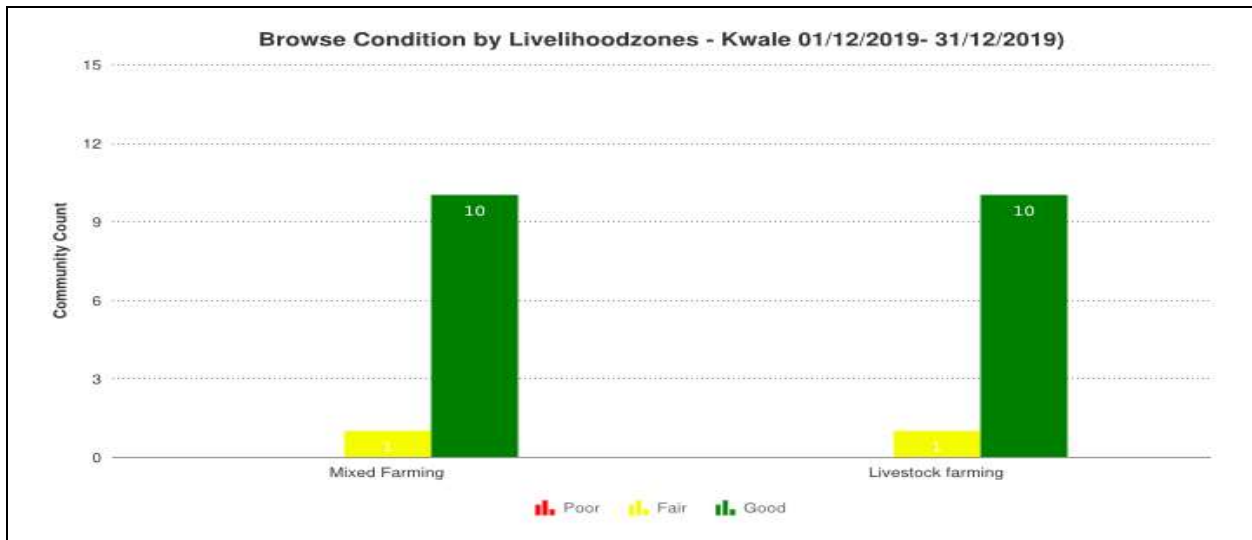




### 2.1.3 Browse

- A stable trend was recorded in browse condition this month as approximately 90.1 percent of households reported good condition in comparison with all households (100 percent) last month.
- A similar trend was recorded at livelihood zone level as shown in the graphs below.
- The browse available was estimated to last approximately six months in both livelihood zones.

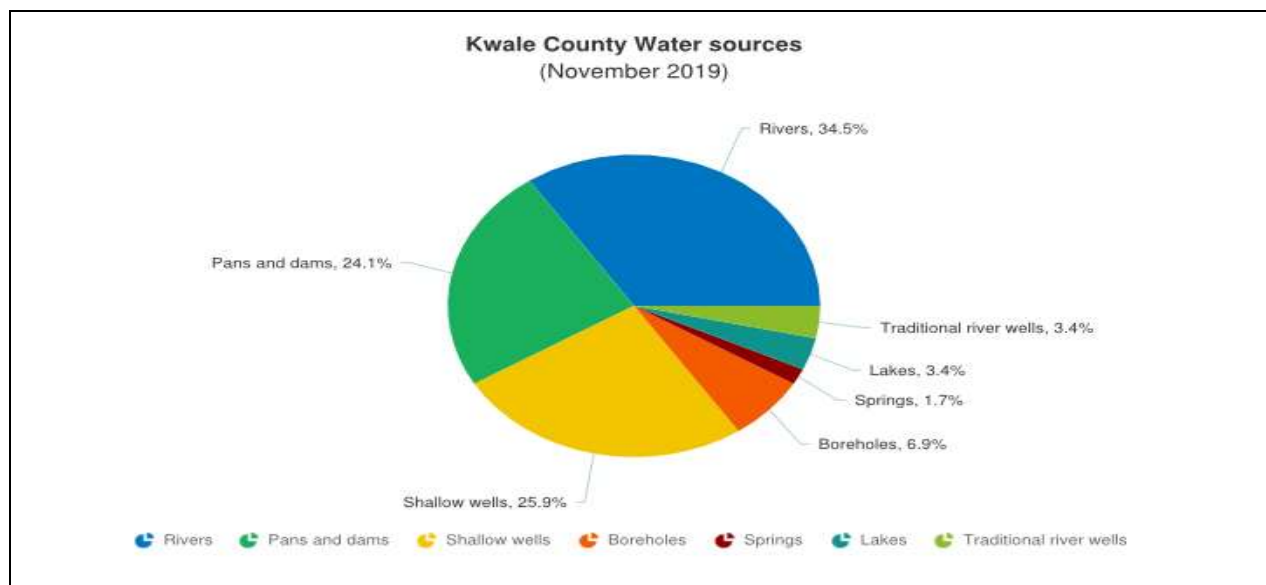


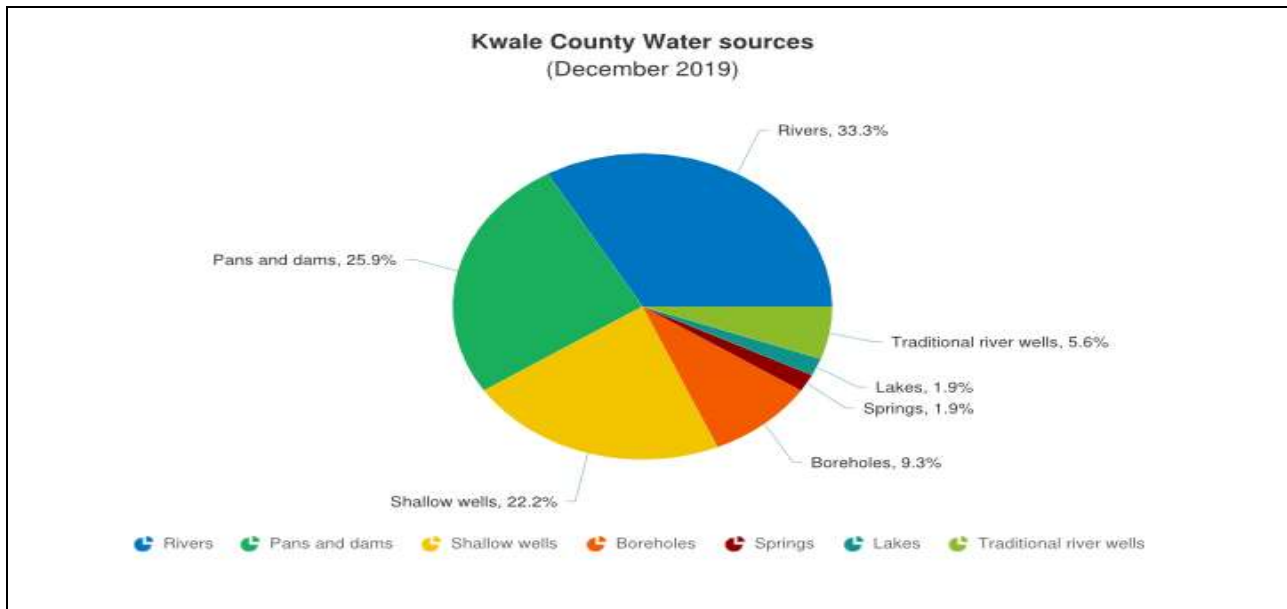


## 2.2 WATER RESOURCES

### 2.2.1 Sources

- The main water sources for domestic use this month include pans, dams, rivers and shallow wells similar to November.
- The sources were those normally used during this time of the year and the proportion of households relying on these sources had not also changed significantly as shown in the pie-charts below.



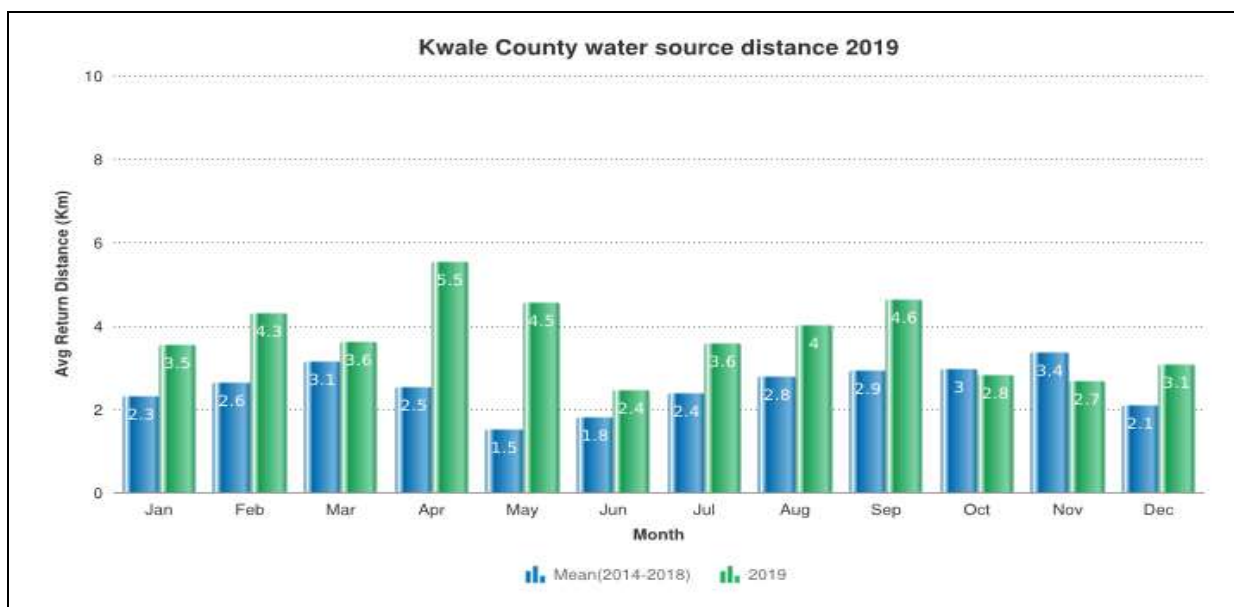


- The status of water resources was normal for this time of the year (see the table below).

INDEX	STATE OF WATER SOURCE	DESCRIPTION
1	<b>EMERGENCY SITUATION</b>	All main water sources have dried up; only few boreholes still yielding significant amounts
2	<b>STRONGLY INADEQUATE</b>	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	<b>INADEQUATE</b>	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	<b>DECLINING</b>	The water availability is below normal for the period
5	<b>NORMAL</b>	The water availability is normal for the period
6	<b>GOOD</b>	The water availability is above normal for the period

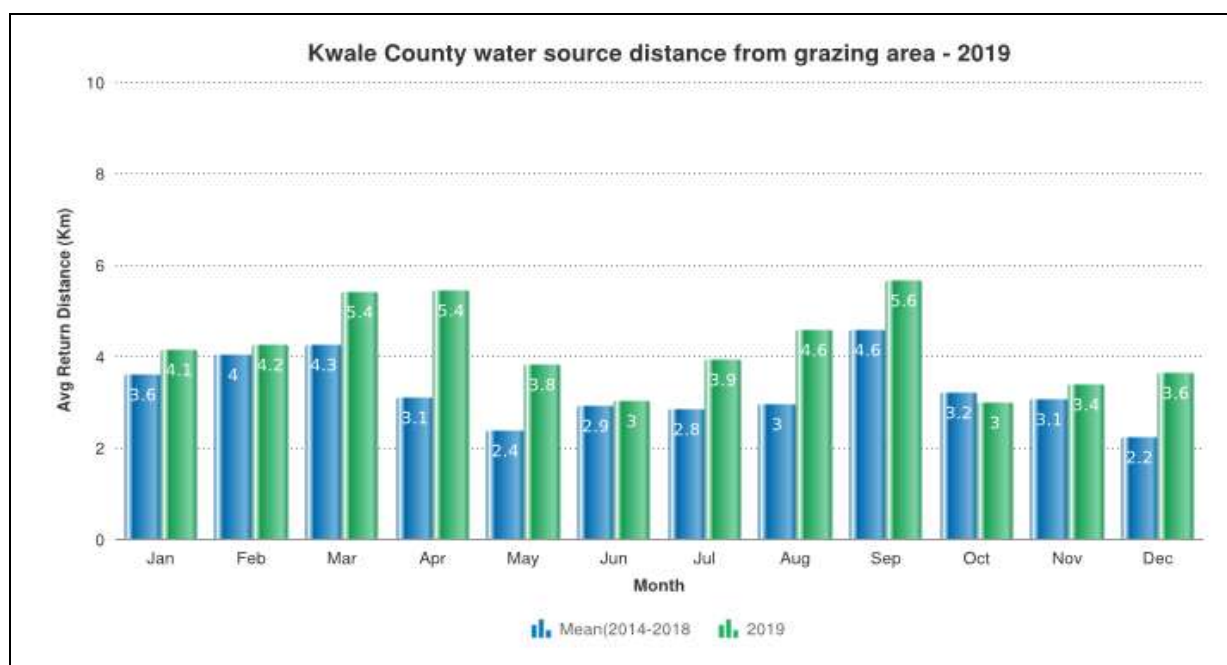
### 2.2.2 Household access and utilization

- No significant change was recorded in the average distance walked by households to water points this month as a distance of 3.1 km was posted in comparison with 2.7 km in November.
- The trend in distances to water sources for households is shown in the graph below.
- However, despite this stability, households had to walk slightly longer distances than normal in comparison with 2.1 km recorded in the 2014-2018 LTA.
- Minimal variations at livelihood zone level were also recorded as an average of 1.5km and 1.2km were recorded in the mixed farming and livestock farming livelihood zones respectively.
- A similar stable trend was displayed compared with last month from 2.0 km to 1.5 km in the mixed farming livelihood zone and from 0.7 km to 1.2 km in the livestock farming one.



### 2.2.3 Livestock access to water

- The distance walked by livestock in search of water from grazing areas remained relatively stable as it was recorded at 3.6 km in December compared with 3.4 km recorded in November.
- However, despite the relative month-to-month stability, the distance was higher than the seasonal norm which was recorded at 2.2 km in the 2014-2018 LTA.
- Livestock in the livestock farming livelihood zone walked the shortest distance at 1.2 km while those in the mixed farming one walked the longest at 2.5 km.
- The trend in the distance walked by livestock has been illustrated in the graph below.



### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

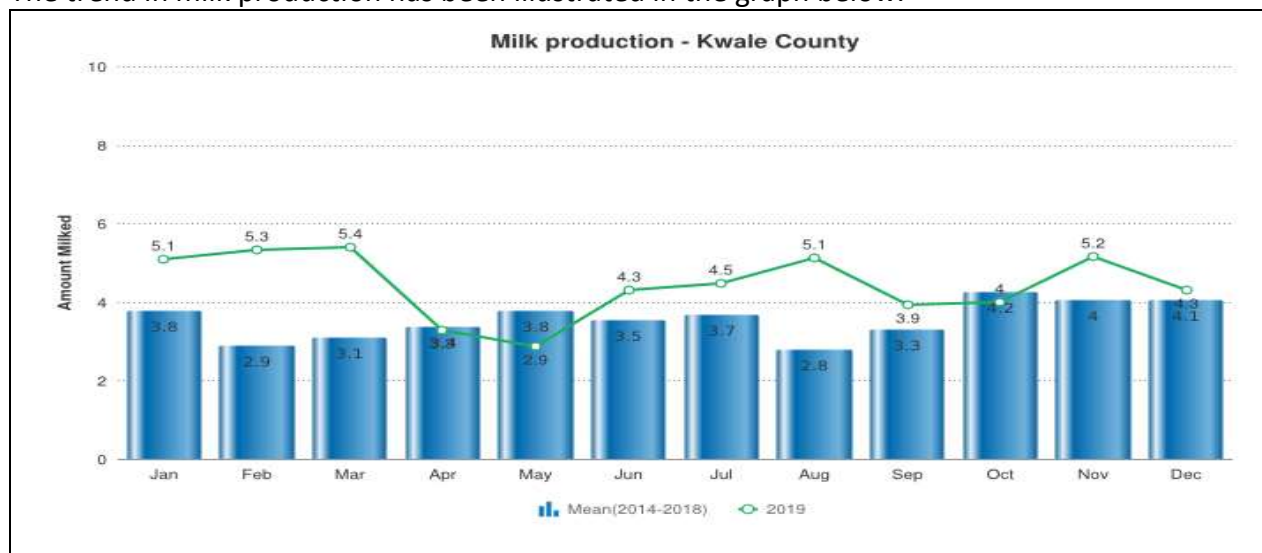
##### 3.1.1 Livestock Body Condition

- The livestock body condition for most livestock was moderate, implying neither fat nor thin as described in the table below.

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

##### 3.1.2 Milk Production

- The main milk producers this month were cattle which was normal and similar to last month.
- The production reduced by a 17.3 percent margin from an average of 5.2 litres in November to 4.3 litres in December.
- However, despite the decline, it was within seasonal norms in comparison with the 2014-2018 LTA recorded at 4.1 litres.
- The trend in milk production has been illustrated in the graph below.



### 3.2 RAIN-FED CROP PRODUCTION

#### 3.2.1 Stage and condition of food crops

- Maize, green grams and cow peas were the three main crops grown during this season.
- Maize was at the tasselling and grain-filling stages and was in fair condition while normally it would be good.
- A fall army-worm infestation was also reported which had destroyed approximately eight percent of the crop.



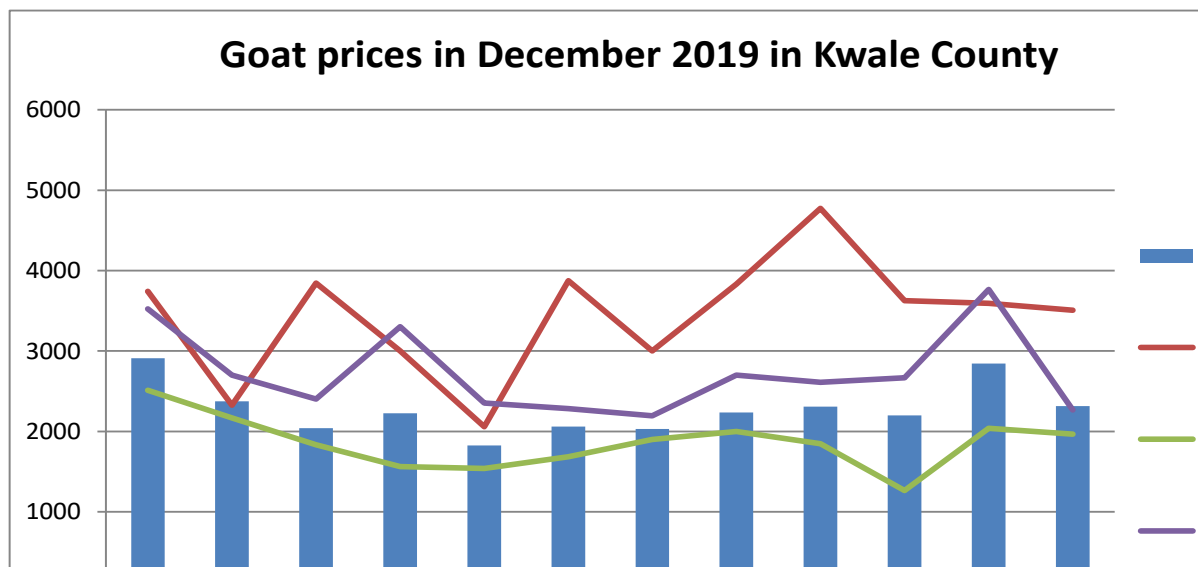
- Leaching and water-logging which occurred earlier in the season had resulted in a poorer-than-normal maize crop condition and may likely lead to reduced production.
- Green grams and cowpeas were at flowering stage and were also in fair condition compared with good normally.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Goat prices

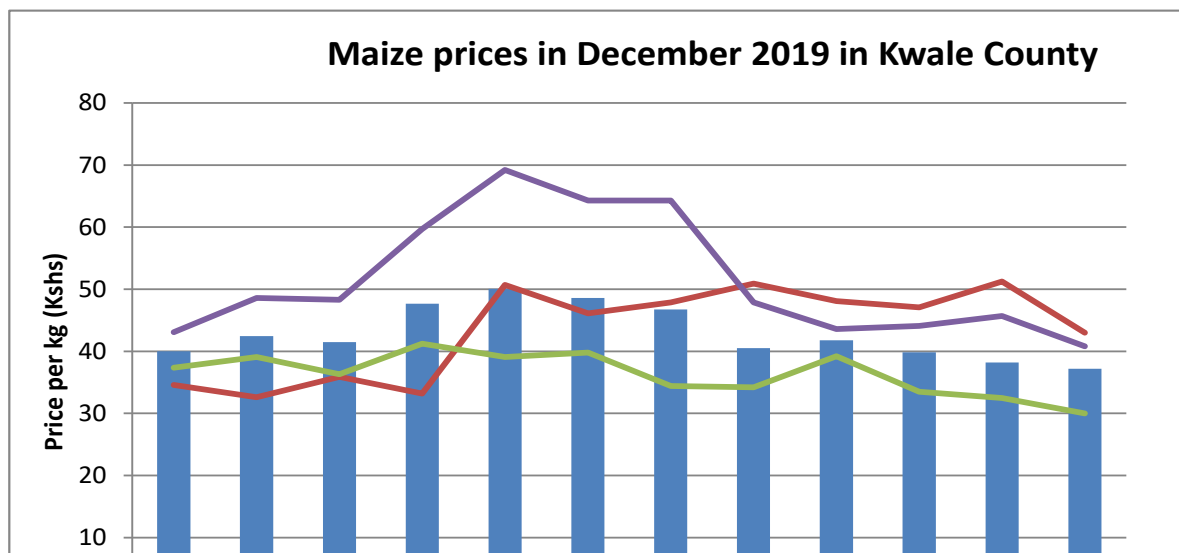
- The selling price of a medium-sized three-year old buck was Kshs 3,507.1 having maintained a stable trend from Kshs 3,592.3 recorded last month.
- The price was higher than expected for this time of the year in comparison with Kshs 2,316.2 recorded in the 2016-2018 LTA.
- It was also higher than the highest price ever recorded in the county at Kshs 2,266.8 as shown below.



### 4.2 CROP PRICES

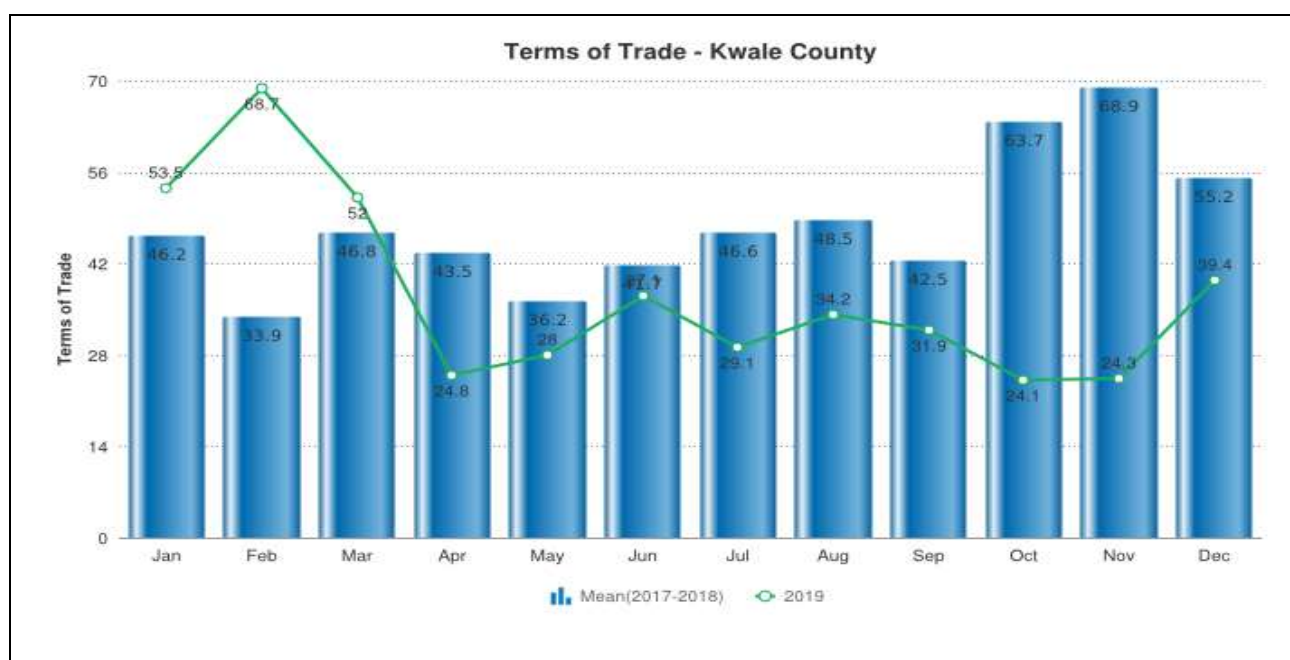
#### 4.2.1 Maize

- A kilogram of maize was retailing at Kshs 43 in December having reduced by a 16.1 percent margin from Kshs 51.25 in November.
- The price was also 15.6 percent higher than Kshs 37.2 recorded in the 2016-2018 LTA.
- In addition, it was 5.1 percent higher than Kshs 40.8, the highest price ever recorded as shown in the graph below.



#### 4.3 TERMS OF TRADE (ToT) - CASUAL LABOUR VERSUS MAIZE PRICES

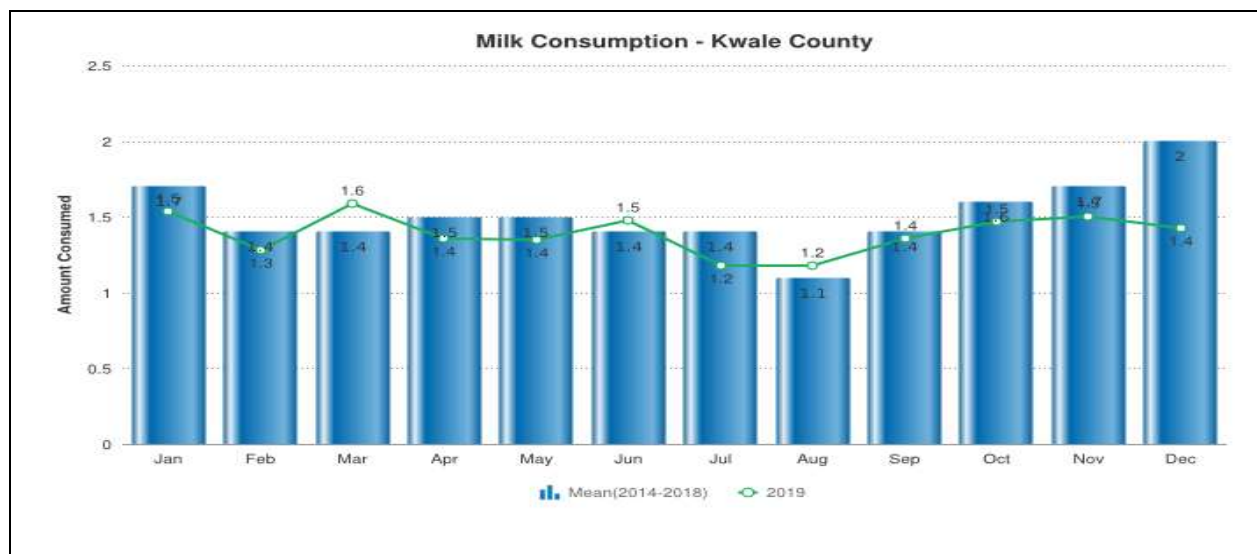
- There was an increase in the ToT from 24.3 in November to 39.4 in December as shown in the graph below.
- However, it was 28.6 percent lower than expected for this time of the year in comparison with 55.2 posted in the 2017-2018 LTA.
- The implication was that although the household purchasing power had increased compared with last month hence enabling them to purchase a higher quantity of maize from the proceeds earned from casual labour, it had reduced in comparison with normal times.
- With the rains having eased off considerably compared with previous months, households were able to access a higher area of land for on-farm activities, unlike in October and November when the soils were too soggy to plough, weed or plant due to high rainfall amounts in October.
- Casual labour opportunities had therefore increased with the reduced rainfall in December that consequently led to increased income.



## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

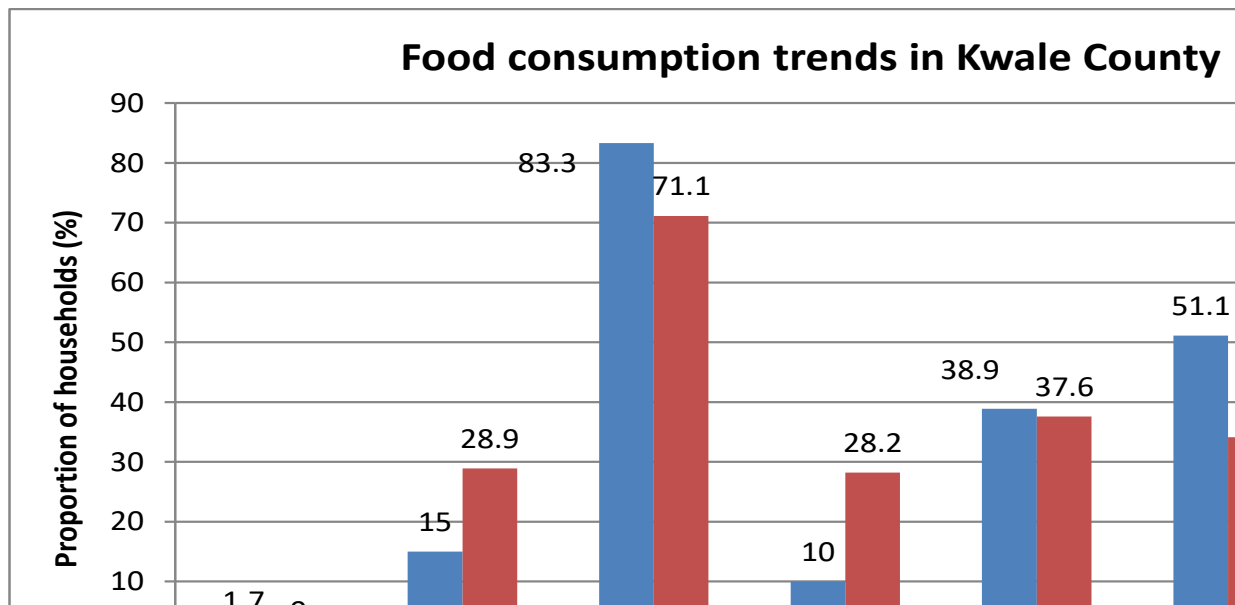
## 5.1 MILK CONSUMPTION

- A stable trend was recorded in the average milk consumption which was posted at 1.4 litres in December compared with 1.5 litres in November.
- The consumption was however, 30 percent lower than normal in comparison with 2.0 litres recorded in the 2014-2018 LTA as shown in the graph below.



## 5.2 FOOD CONSUMPTION SCORE

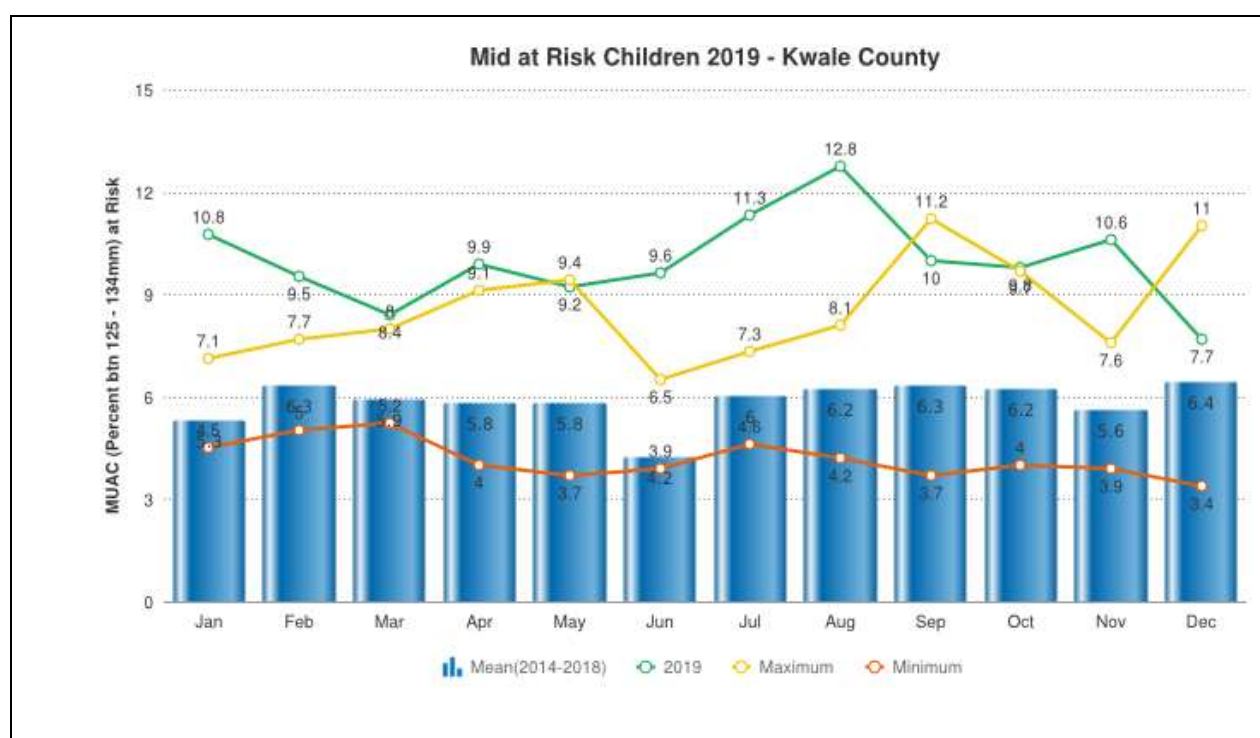
- There was a relative stability in the county's food consumption score as it averaged 40.4 in December similar to November.
- The highest score this month was posted in the mixed farming livelihood zone at 49.3 having maintained a stable trend from 48.2 recorded last month.
- The livestock farming livelihood zone recorded the lowest score at 30.9 also having maintained relative stability from 32.6 recorded in November.
- The proportion of households with a poor food consumption score in the county increased by a 31.8 percent margin from 10.7 percent in November to 14.1 percent in December.
- In addition, the percentage of households with acceptable food consumption had decreased by a 13.8 percent margin from 61 percent last month to 52.6 percent this month.
- The implication was therefore that dietary diversity, meal frequency and nutritional value of food had generally reduced in the county in comparison with November.
- At livelihood zone level, the food consumption patterns were varied.
- No households recorded poor food consumption in the mixed farming livelihood zone this month having registered an insignificant change from a similar time last year, as shown in the graph below.
- However, the proportion more than doubled during the same period in the livestock farming livelihood zone from 10 percent in December last year to 28.2 percent this month.
- Food consumption patterns were therefore significantly better in the mixed farming livelihood zone in comparison to the livestock farming one as illustrated in the graph below.



## 5.3 HEALTH AND NUTRITION STATUS

### 5.3.1 Nutrition Status

- The determination of the proportion at risk of malnutrition for children aged below five years was estimated using the mid-upper arm circumference (MUAC) method from a sample population of 1,013 children; 576 males and 437 females.
- The proportion at risk of malnutrition was 7.7 percent compared with 10.6 percent recorded last month, indicative of a 27.4 percent reduction in this population.
- The same proportion was however, 20.3 percent higher than normal in the 2014-2018 LTA recorded at 6.4 percent as shown in the graph below.
- The implication was therefore that the nutritional status of children aged below five years had improved in comparison with last month but had remained worse than normal.



## **5.4 COPING STRATEGIES**

- The reducing coping strategy index (rCSI) was recorded at 13.5 in December having remained stable in comparison with 13.7 posted in November.
- Therefore, no significant changes had been recorded in the frequency and severity of consumption-based coping strategies employed to bridge food consumption deficits during the two-month period.
- The highest coping strategy was posted in the mixed farming livelihood zone at 13.7 having maintained a stable trend from 13.9 recorded in November.
- The least coping strategy was recorded in the livestock farming livelihood zone at 13.2 having also maintained a similar trend compared with 13.4 posted last month.

## **6. CURRENT INTERVENTION MEASURES**

### **6.1 NON-FOOD INTERVENTIONS**

#### **○ Agriculture department**

- The department provided tractor ploughing services in all sub-counties with approximately 2,587 acres ploughed against a target of 6,000 acres.
- KCEP-CRAL program was recruiting farmers for subsidized inputs including seeds, fertilizers, pest control and cereal storage for one acre of land.

## **7. EMERGING ISSUES**

### **7.1 Insecurity/Conflict/Human Displacement**

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

### **7.2 Migration**

- There was no migration reported in December.

## **8. RECOMMENDATIONS**

- Post-harvest management training for farmers who are set to harvest the short rain season crop early next year.
- Monitoring of incidences of fall army worm infestation that have been reported to have destroyed eight percent of maize across the county.