

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



A Vision 2030 Flagship Project



**JUNE 2019 EW FLAG**



**Early Warning (EW) Phase Classification**

Livelihood Zone	Phase	Trend
Mixed Farming	Alert	Stable
Livestock Farming	Alert	Improving
County	Alert	Improving
Biophysical Indicators	Value	Normal Range/Value
VCI	28.48	>50
State of Water Sources	5	5
Production indicators	Value	Normal
Crop Condition (maize and legumes)	Fair	Good
Livestock Body Condition	2 – moderate (livestock farming and mixed farming livelihood zones)	2 – moderate (livestock farming and mixed farming livelihood zones)
Milk Production (Litres)	4.3	3.5
Livestock Migration Pattern	No migration	No migration
Livestock deaths (from drought)	Zero deaths	Zero deaths
Access Indicators	Value	Normal
Terms of trade	36.5	41.4
Milk Consumption (litres)	1.6	1.4
Return distance to water sources for households (km)	2.7	1.8
Cost of water (Kshs per 20 litres)	3-5	3-5
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	9.6	4.2

**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

- All three dekads of the month received below-normal rainfall during the month.
- The Vegetation Condition Index (VCI) was significantly below-average for this time of the year.
- The state of water sources was normal for June.

**Socio Economic Indicators (Impact Indicators)**

**Production indicators**

- Livestock body condition remained normal at the moderate early warning classification similar to May.
- Milk production was 22.9 percent above-average during the month.
- There were no deaths related to drought or migration reported in June.

**Access indicators**

- Terms of trade (casual labour to maize) were 12.5 percent above-average implying slightly increased household purchasing power compared with normal times.
- Milk consumption was normal during the month.
- Distances to water sources for domestic consumption were slightly above-average compared with normal times although the cost of water remained normal at Kshs 3-5.

**Utilization Indicators**

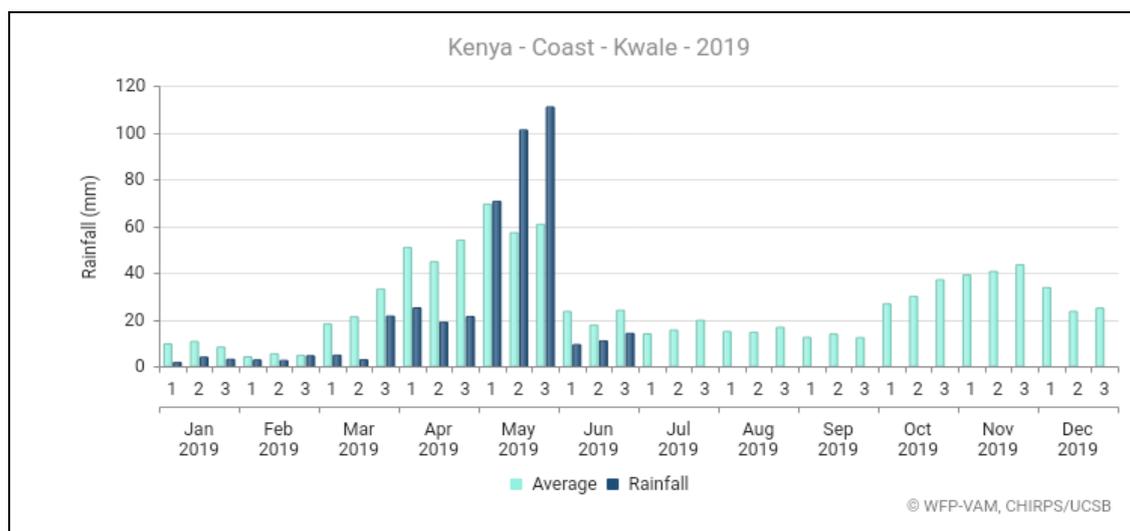
- The prevalence of children at risk of malnutrition was more than double that expected at this time of the year implying significant deterioration in nutritional status of children aged below five years compared with normal times.

**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 March-April-May long rains season delayed by two dekads occurring in the third dekad of March compared with the first dekad normally.
- The county received below-average rainfall throughout the month of June as shown in the graph below.
- In addition, the amounts received this month were considerably lower than those received in May.
- The temporal rainfall distribution was good during the month as all three dekads received rainfall.
- The spatial distribution was even as both the mixed farming and livestock farming livelihood zones received some rains.
- The season has, in effect, ended although showers were experienced throughout the month of June.



## 2. IMPACTS ON VEGETATION AND WATER

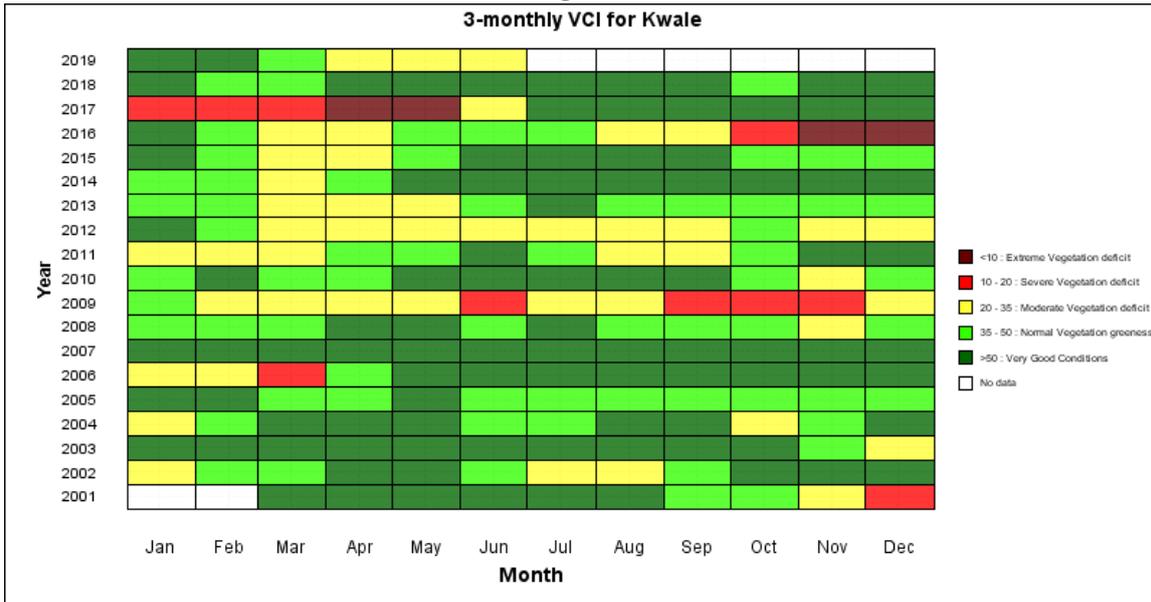
### 2.1 VEGETATION CONDITION

#### 2.1.1 Vegetation Condition Index (VCI)

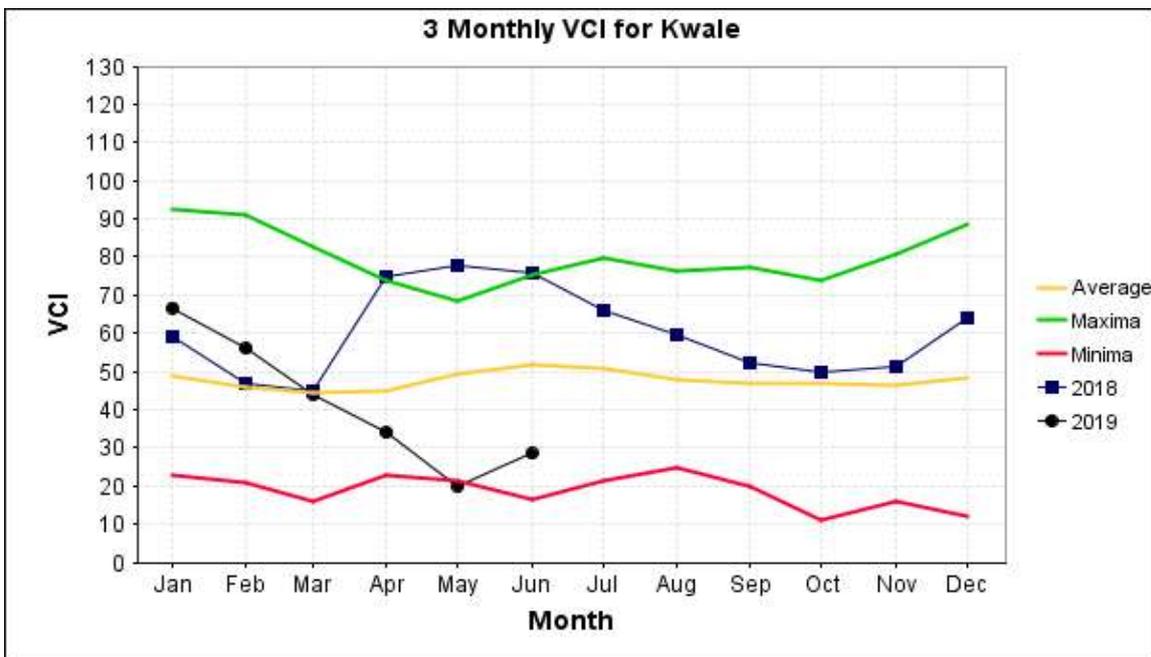
- There was a slight improvement in vegetation greenness in the county as an increase in the VCI was recorded from an index of 20 in May to 28.48 in June as shown in the table below. The county was therefore classified in the moderate vegetation deficit band as shown in the matrix below.
- There was also a considerable improvement in vegetation condition in the livestock farming livelihood zone as the index increased by 55.7 and 64.1 percent in Kinango and Lunga Lunga Sub-counties respectively from indices of 19.25 and 16.92 recorded in the respective sub-counties in May.
- The indices are shown in the table below.

Region	May 2019	June 2019
Kwale	20	28.48
Kinango Sub-county	19.25	29.96
Lunga Lunga Sub-county	16.92	27.77
Matuga Sub-county	27	24.78
Msambweni Sub-county	26.51	23.74

- However, the index remained fairly stable as compared with last month in Matuga and Msambweni Sub-counties in the mixed farming livelihood zone as shown in the table above.



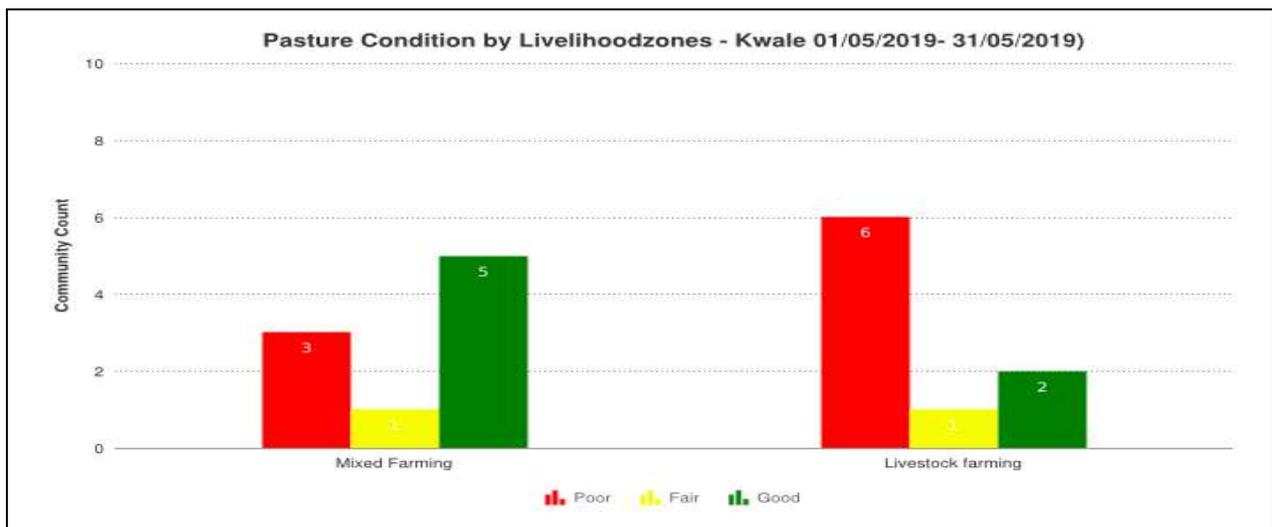
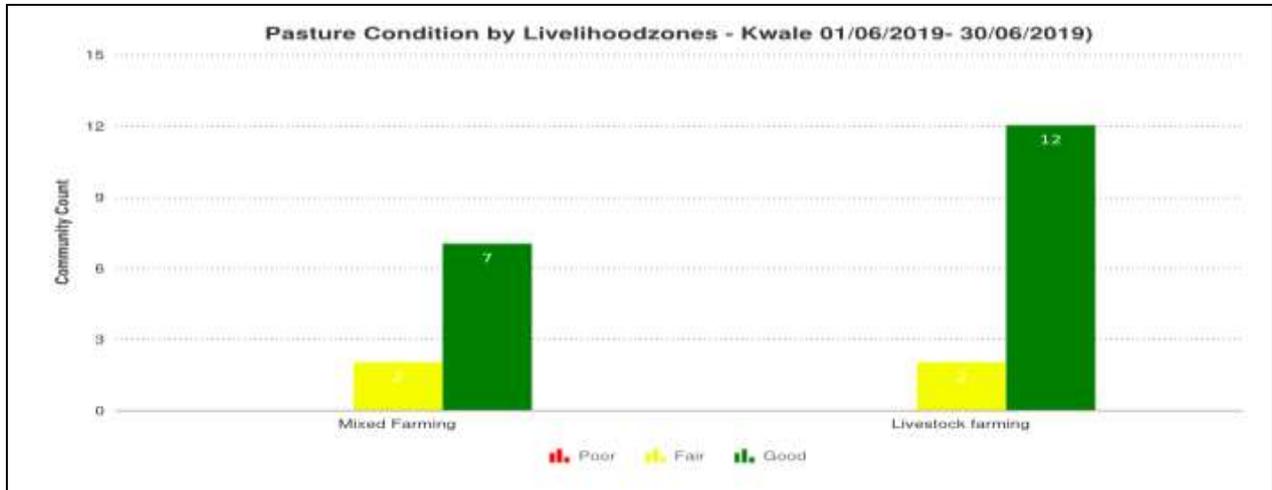
- However, despite the improvement in the vegetation condition in the county compared with last month, it still remained relatively lower than the normal estimated at an index of 52 implying a significant deficit in vegetation greenness compared with normal times.
- It also was worse than a similar time last year as shown in the matrix above.
- The graph below shows the 3-monthly VCI values for the county.



- In addition to being lower-than-average in the county in general, the vegetation condition was also below-average in all four sub-counties.
- It was even lower than the least value of VCI ever recorded since 2001 in Msambweni and Matuga Sub-counties.
- Although the vegetation condition was worse than normal, it was expected that it would improve given that vegetation matter was still seeding and maturing from the rains received.

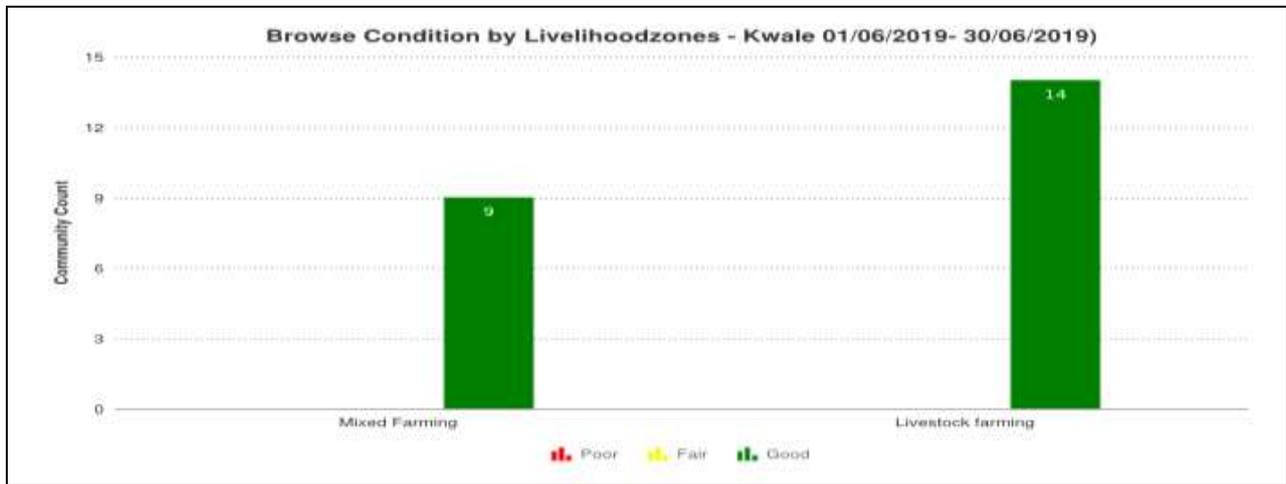
### 2.1.2 Pasture

- There was a significant improvement in pasture condition this month compared with last month as no household report poor condition compared with 50 percent in May. In addition, 82.6 percent of households reported good condition compared with none in May.
- The improvement was also recorded at livelihood zone level as most households reported good condition compared with last month as shown in the graphs below, and was attributed to the above-average rains received in May that rejuvenated pasture.



### 2.1.3 Browse

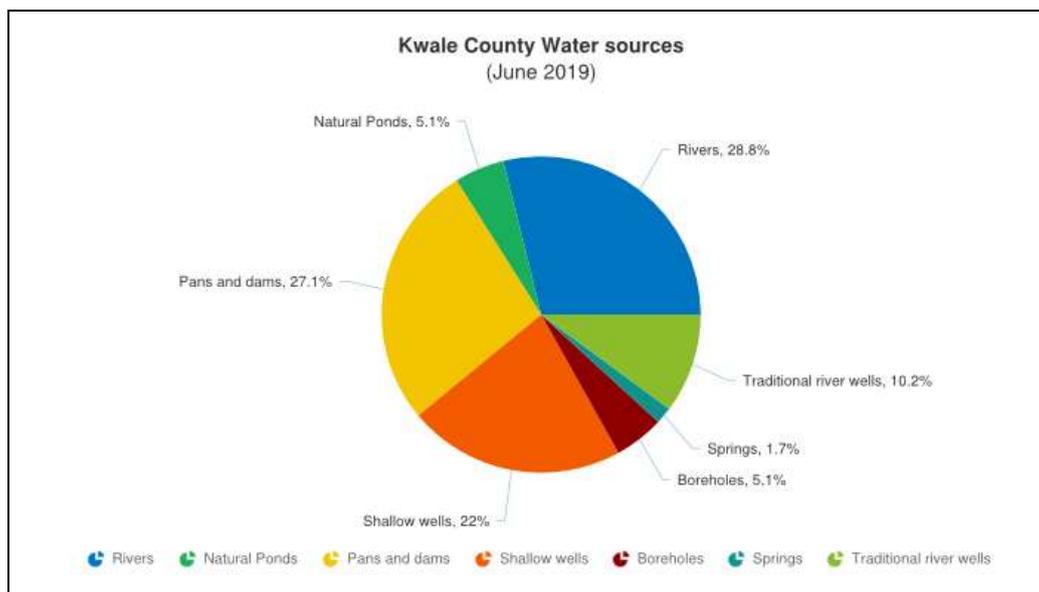
- An improvement was similarly recorded in the browse condition as no household reported poor condition in June compared with 33 percent in May.
- Both the livestock farming and mixed farming livelihood zones recorded good browse condition as shown in the graph below.
- The improvement was owed to the above-average rainfall experienced in May and continued off-season showers in June that facilitated the replenishment of browse across the county.



## 2.2 WATER RESOURCES

### 2.2.1 Sources

- Rivers, shallow wells, pans and dams were the major sources of water in the county similar to last month.
- Other sources of water are shown in the pie-chart below.



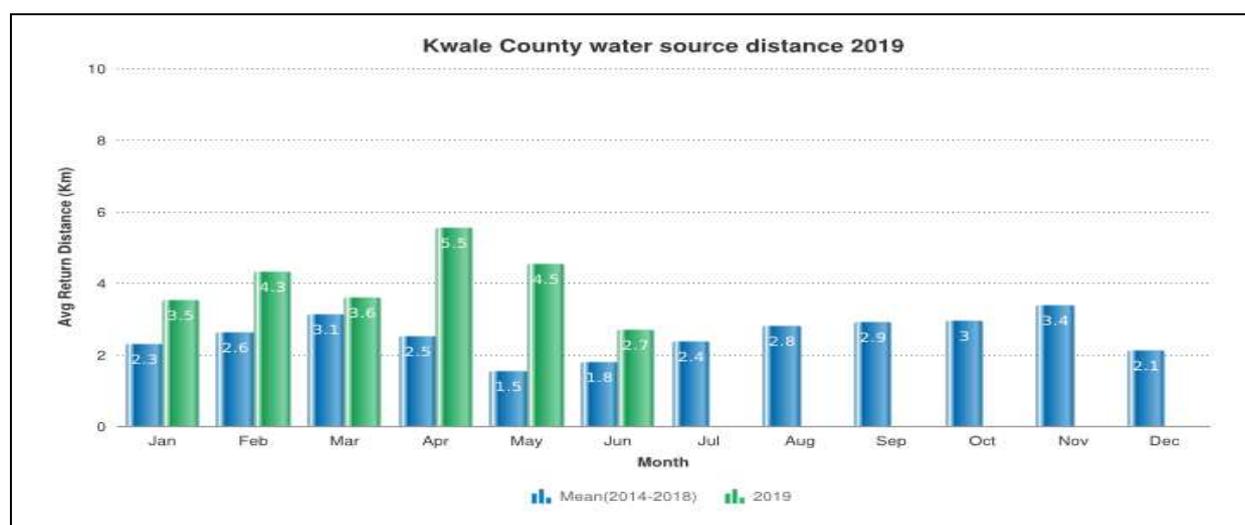
- The water sources' status in the county was classified as 5 which is normal for this time of the year as described in the table below.

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

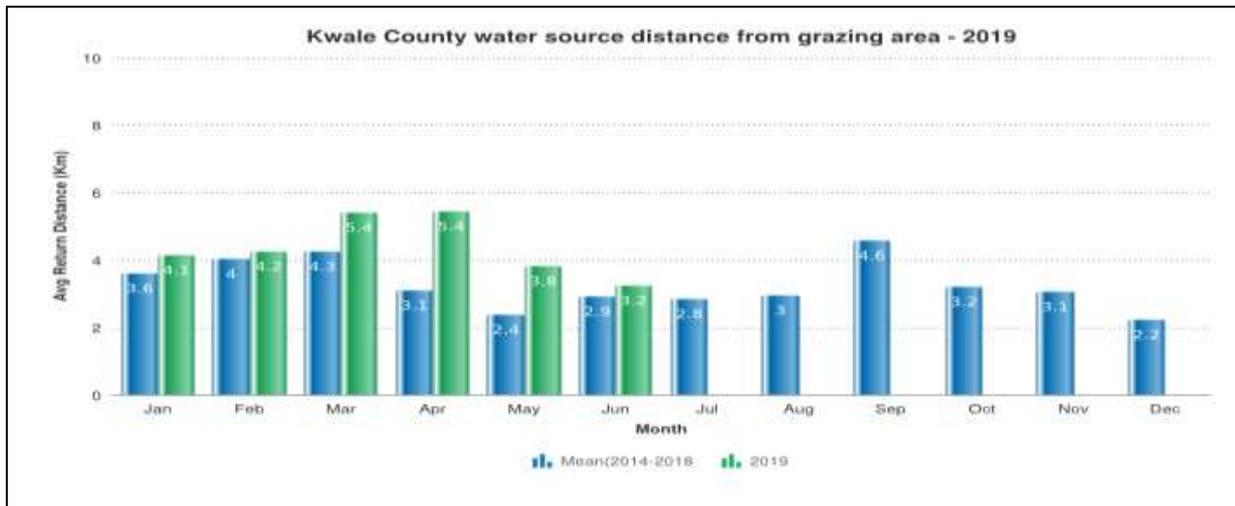
- There was a 40 percent decrease in the distance trekked by households from homesteads to water points from 4.5 km recorded in May to 2.7 km in June as shown in the graph below.
- The significantly above-average rains recorded last month recharged most water sources thereby reducing the distance households had to walk to fetch water.
- However, the distance recorded during the month was slightly higher by almost a kilometre compared with 1.8 km expected at this time of the year in the 2014-2018 LTA.



- The percentage of households paying for water was estimated at 18.1 percent in June compared with 47.2 percent last month.
- The reduction in the proportion paying for water could be attributed to increased water availability after the rains recharged water sources last month.
- The cost of a 20-litre jerry can averaged between Kshs three and five across both the mixed farming and livestock farming livelihood zones.
- Approximately 29 percent of households treated water before consumption this month compared with 31.1 percent in May.
- The larger proportion of those who treated water favoured the use of water treatment chemicals approximated at 64.7 percent, while the remaining 35.5 percent used the filtration method.
- Considering that over half of the county's population depended on open water sources such as rivers, pans and dams, the low proportion treating water before consumption predisposes them to water-borne diseases due to the compromised hygiene practice.

### 2.2.3 Livestock access to water

- A stable trend was recorded in the trekking distance from watering points to grazing areas by livestock as it averaged 3.2 km in June compared with 3.8 km recorded last month.
- The distance was also within seasonal ranges when compared with 2.9 km recorded in the 2014-2018 LTA as shown in the graph below.



### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

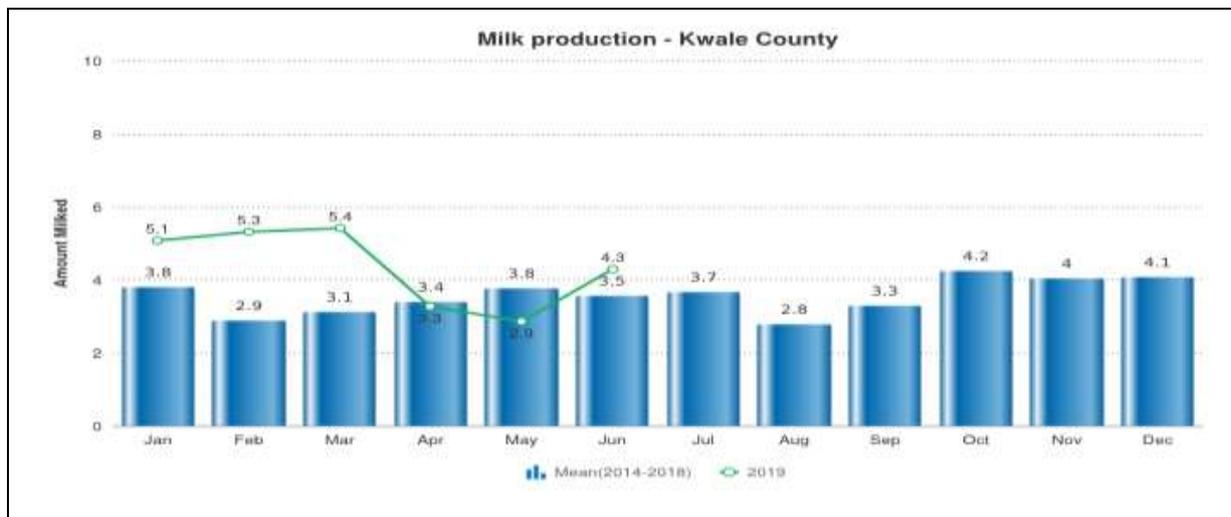
##### 3.1.1 Livestock Body Condition

- The body condition of livestock improved slightly this month as households that reported good condition increased from 33.3 percent in May to 50 percent in June.
- Improved rangeland conditions compared with last month could be the major reason for the improvement in body condition in both small and large stock.
- However, the early warning classification for body condition remained 2 at moderate implying neither thin nor fat as shown in the table below which was normal for this time of the year.

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

- Milk was obtained mainly from cattle this month which was normal.
- Average household milk production was 4.3 litres in June having increased by a 48.3 percent margin from an average of 2.9 litres recorded in May.
- Improved pasture availability could have contributed to the increased production compared with last month.
- The milk production was also 22.9 percent higher than expected for this time of the year compared with 3.5 litres recorded in the 2014-2018 LTA as shown in the graph below.



### 3.2 RAIN-FED CROP PRODUCTION

#### 3.2.1 Stage and condition of food crops

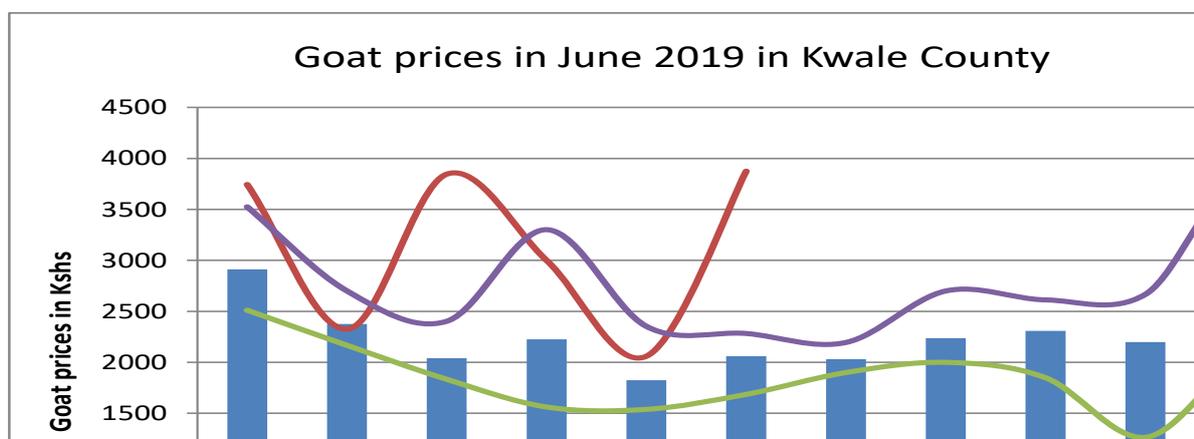
- Maize, green grams and cowpeas were the main crops grown this season. Most of the maize on the farmers were slightly above knee-length and just beginning to tussle.
- The pulses were in fair condition mainly because of the off-season showers that were currently on-going in the county. However, there was a potential below-average crop production due to a shortened rainy season and poor temporal rainfall distribution.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Goat prices

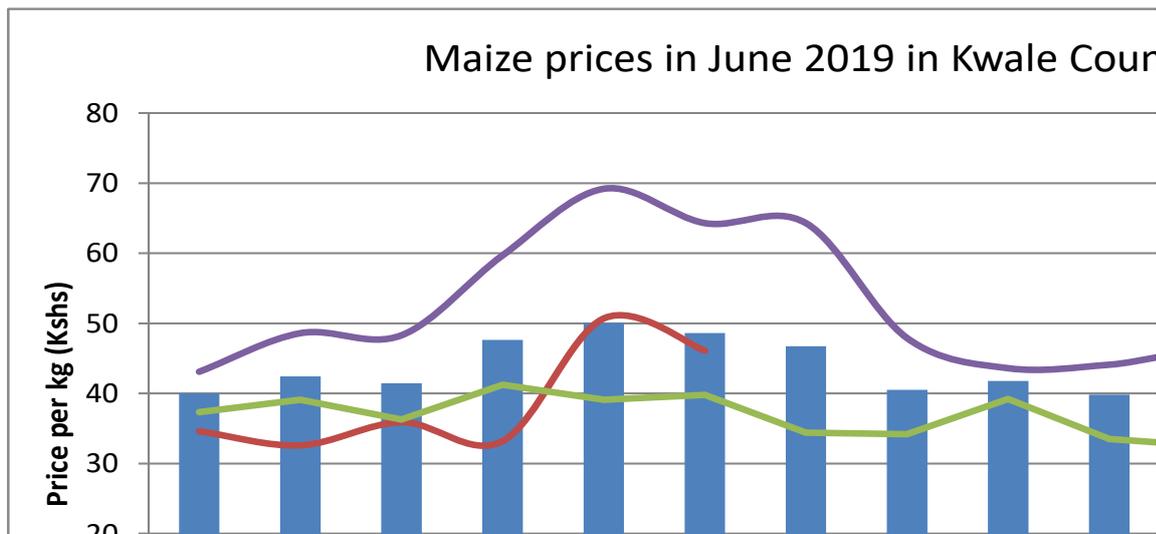
- The price of a medium-sized three-year-old buck was Kshs 3,875 in June having increased from Kshs 2,060 recorded in May.
- The increase in price could be attributed to the improved body condition in goats.
- The price was significantly higher than Kshs 2059.33 recorded in the 2016-2018 LTA as shown in the graph below.



### 4.2 CROP PRICES

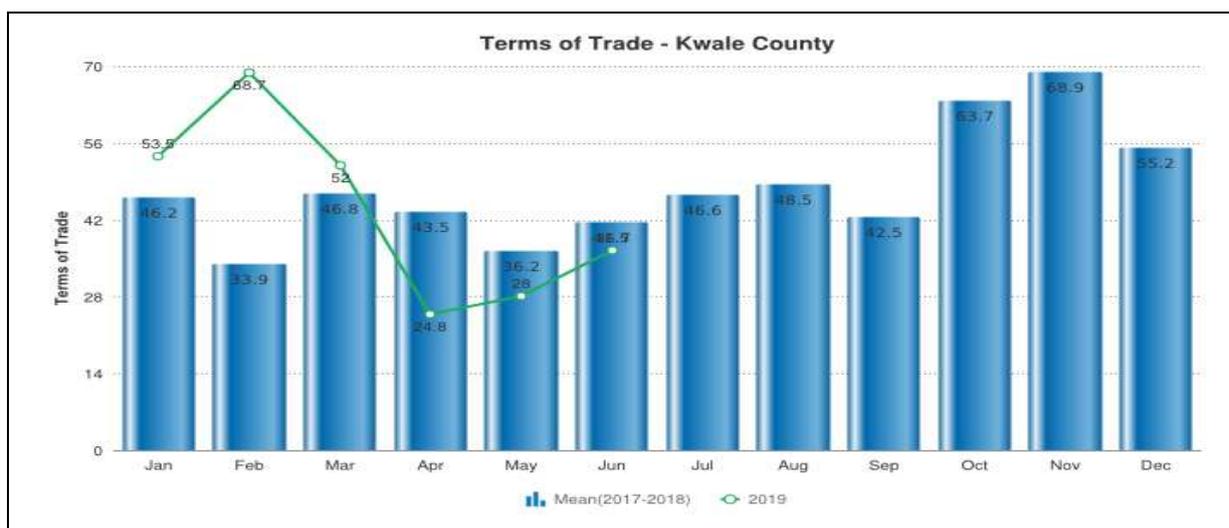
#### 4.2.1 Maize

- The retail price of a kilogram of maize was Kshs 46.1 in June having remained fairly stable despite a marginal dip in price compared with Kshs 50.7 recorded in May as shown in the graph below.
- The price was fairly within the seasonal ranges of Kshs 48.6 recorded in the 2016-2018 LTA.



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

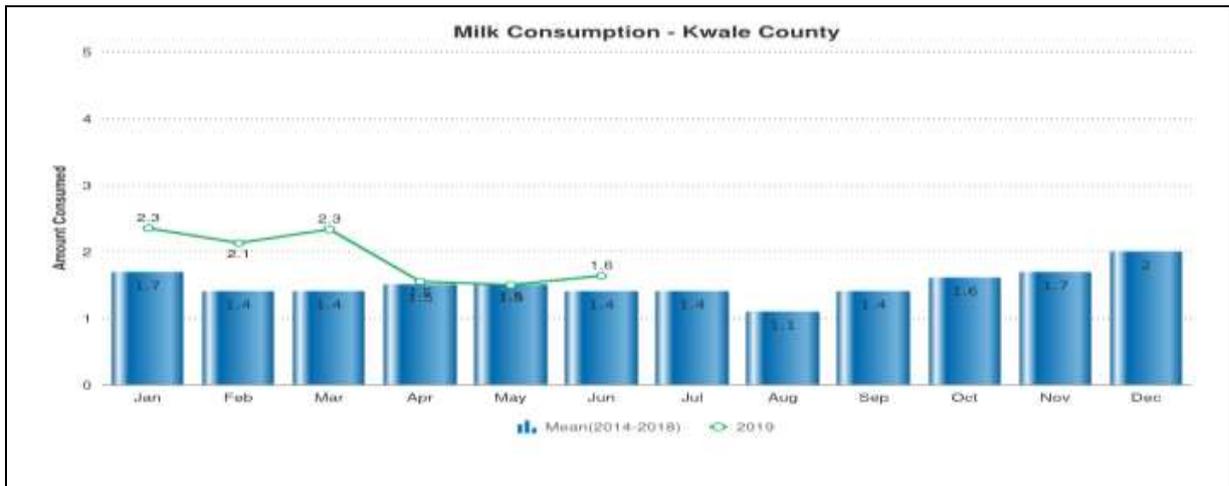
- The ToT increased by 30.4 percent from 28 in May to 36.5 in June as shown in the graph below.
- The increase could be attributed to the slightly reduced maize prices compared with last month against increased income from casual labour.
- The increase implied improved household purchasing power as households were able to purchase a higher quantity of maize in June from the proceeds of casual labour compared with May.
- However, despite the improvement compared with last month, it was lower than expected for this time of the year by approximately 12.5 percent compared with 41.7 in the 2017-2018 LTA.
- The implication was therefore that household purchasing power was slightly worse off than normal.



## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

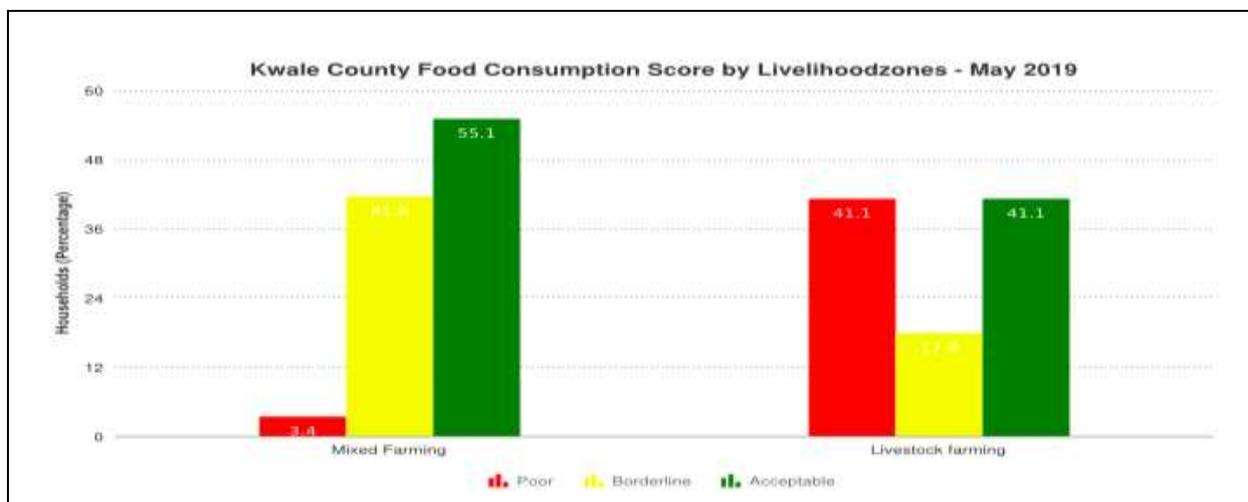
### 5.1 MILK CONSUMPTION

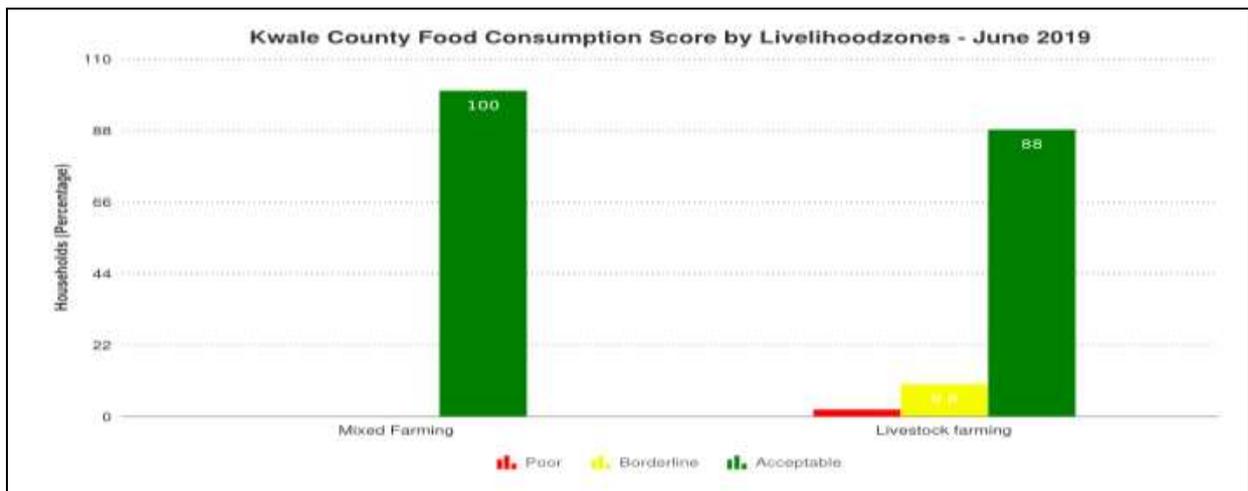
- Average milk consumption remained relatively stable in the county as it was recorded at 1.6 litres having registered an insignificant change from 1.5 litres recorded in May.
- It was also normal for this time of the year as illustrated in the graph below.



## 5.2 FOOD CONSUMPTION SCORE

- The aggregate food consumption score for the county was 39.9 in June having increased slightly from 35.7 recorded in May.
- The mixed farming livelihood zone recorded the highest score at 48.1 in June having increased by 16.7 percent from 41.2 recorded in May.
- The least score was posted in the livestock farming livelihood zone and recorded as 31.7 in June having remained relatively stable compared with May's 30.3.
- The proportions of households with poor, borderline and acceptable food consumption were estimated at 13.4, 27.4 and 59.2 percent respectively in June compared with 22.3, 29.6 and 48 percent respectively in May.
- There had therefore been a decrease in the proportion of households with poor food consumption with an implication of an increase in the one that was accessing food with adequate frequency, dietary diversity and nutritional value in June compared with May.
- Food consumption patterns were slightly better in the mixed farming livelihood zone evidenced by the higher food consumption score and the fact that no household reported having had poor food consumption during the month compared with the livestock farming one.
- The following two graphs illustrate the varying food consumption patterns in May and June at livelihood zone level.

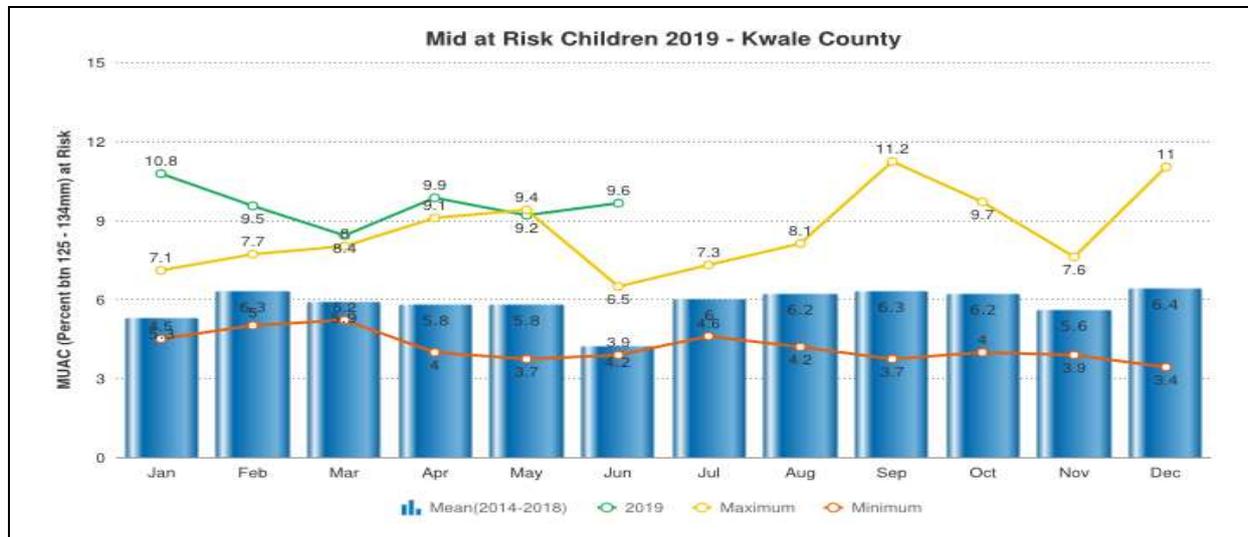




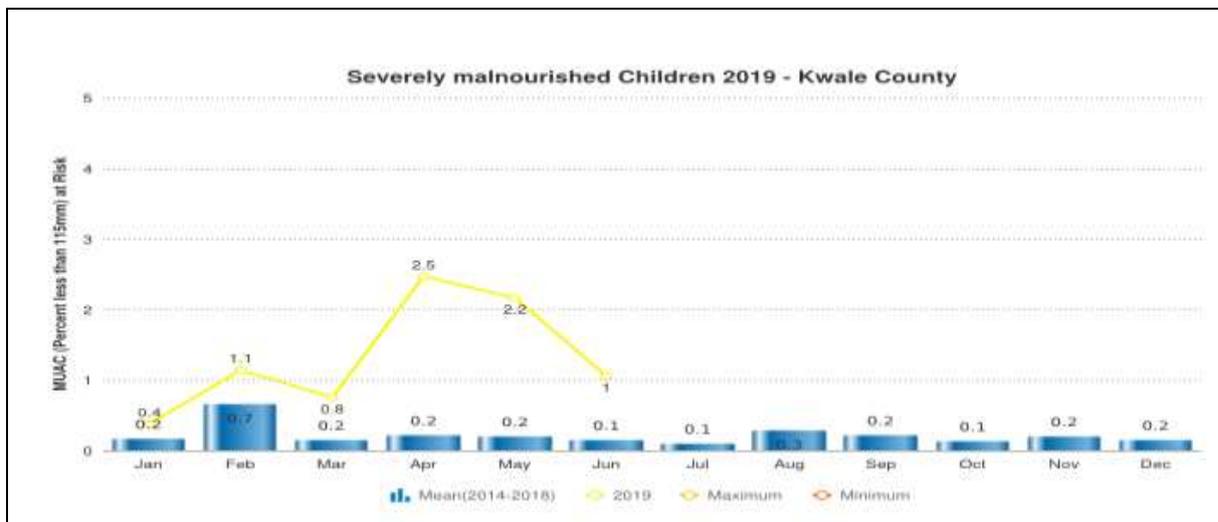
### 5.3 HEALTH AND NUTRITION STATUS

#### 5.3.1 Nutrition Status

- The mid-upper arm circumference method was used to determine the proportion of children at risk of malnutrition which was approximated at 9.6 percent in June having remained stable compared with 9.4 percent recorded in May.
- The prevalence of those at risk was higher than the highest proportion ever recorded in the county which was estimated at 6.5 percent.
- It was also more than double that expected normally which was estimated at 4.2 percent in the 2014-2018 LTA as shown in the graph below.



- The proportion of children who were severely malnourished was almost halved this month to 1.0 percent in June from 2.2 percent in May.
- The proportion was also higher than expected for this time of the year approximated at 0.1 percent in the 2014-2018 LTA as shown in the graph below.



- With the prevalence of children at risk of malnutrition and those who are severely malnourished being above their seasonal norms, the nutritional status of children is therefore worse than normal.

#### 5.4 COPING STRATEGIES

- The reduced coping strategy index (rCSI) for the county this month was 14.4 having decreased by 24.6 percent from 19.1 in May.
- The reduction implied a decrease in the engagement of consumption-based coping strategies to curb food consumption gaps.
- The mixed farming livelihood zone recorded the highest index of 16 having reduced from 19.1 in May while the livestock farming livelihood zone recorded the least at 12.7 having maintained a stable trend compared with 13 in May.
- Fewer consumption-related coping mechanisms were therefore employed to reduce food gaps in both livelihood zones compared with last month.
- However, households in the mixed farming livelihood zone were employing more coping strategies and at a higher frequency than the livestock farming one which could explain why they had better food consumption as evidenced by the higher food consumption score.

### 6. CURRENT INTERVENTION MEASURES

#### 6.1 NON-FOOD INTERVENTIONS

##### ○ Livestock department

The department undertook the following interventions in June:

- A total of 330 breeding bucks (30 per ward) were distributed in the following 11 wards: Mwavumbo, Kasemeni, McKinnon Road, Puma, Ndavaya, Tiwi, Pongwe/Kikoneni, Mwereni, Kubo South, Gombato Bongwe and Ramisi.

##### ○ Agriculture department

- National Agricultural and Rural Inclusive Growth Project (NARIGP) funded by the World Bank that seeks to enhance productivity and profitability undertook the following in June:

- The launching of tomato and green gram value chain platform to act as a coordinating unit for the mentioned value chains.
- Community-Driven Development Committee members from eight wards were trained on drafting of micro-proposals for projects to be funded and produced micro-proposals for projects

targeting value chains (tomato, green gram, apiculture and dairy), sustainable land management, nutritional mainstreaming and vulnerable and marginalized groups.

○ **Nutrition department**

- The department conducted routine activities including supplementary/therapeutic food distribution, vitamin A supplementation, growth monitoring and health education programs.

## **7. EMERGING ISSUES**

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

- No cases of insecurity, human displacement or conflict were recorded in June.

### **7.2 Migration**

- No migration was reported during the month under review.

### **7.3 FOOD SECURITY PROGNOSIS**

Agricultural activities during the season spurred opportunities from casual labour and have afforded most poor households access to food with household food stocks having run out. Livestock production has also significantly benefitted from improved availability of rangeland resources such as forage and water, and has supplemented domestic incomes in both the livestock and mixed farming livelihood zones. These positive impacts have occurred at a time when staple prices were on the rise and have cushioned households from acute food stress as they afforded them some income. It is for this reason that food consumption gaps decreased this month as well as coping mechanisms to help curb them. A similar trend is envisaged in the coming months as casual labour opportunities will still be available as households embark on the second-stage weeding and ultimately harvesting end of next month. Food access is therefore likely to continue to be assured for more than half of the population that relies on casual labour for income. The nutritional status of children may also be improved although this may be hindered by other factors such as hygiene practices which have been reported to be sub-optimal.

## **8. RECOMMENDATIONS**

- Despite the improvement in the vegetation condition and food consumption patterns compared with last month, it was still imperative to keep monitoring Lunga Lunga and Kinango Sub-counties due to the deficits that are still present in both indicators.
- Continuous monitoring of the condition of the on-farm crops given that the temporal distribution of rainfall this season has been poor yet it is the most depended upon for crop production in the county.