

National Drought Management Authority
KWALE COUNTY
DROUGHT EARLY WARNING BULLETIN MARCH 2019



A Vision 2030 Flagship Project



MARCH 2019 EW FLAG

Drought Status: NORMAL



Shughull za kawaida

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Normal	Deteriorating
Livestock Farming	Normal	Deteriorating
County	Normal	Deteriorating
Biophysical Indicators	Value	Normal Range/Value
VCI	43.91	40
State of Water Sources	5	5
Production indicators	Value	Normal
Crop Condition (maize and legumes)	N/A	N/A
Livestock Body Condition	2 – moderate (livestock farming and mixed farming livelihood zones)	2 – moderate (livestock farming and mixed farming livelihood zones)
Milk Production (Litres)	5.4	3.1
Livestock Migration Pattern	No migration	No migration
Livestock deaths (from drought)	Zero deaths	Zero deaths
Access Indicators	Value	Normal
Terms of trade	54.2	46.8
Milk Consumption (litres)	2.3	1.4
Return distance to water sources for households (km)	3.6	3.1
Cost of water (Kshs per 20 litres)	3-5	3-5
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	8.0	5.9

Drought Situation & EW Phase Classification

Biophysical Indicators

- Minimal rainfall amounts were received this month which was not normal as the rains ought to have begun.
- The Vegetation Condition Index (VCI) was slightly above-normal at 43.91 compared with 40 normally.
- 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 the moderate early warning classification similar to last month.
- Milk production was slightly above-average for the month.
- There were no drought-related deaths or migration events during the month.

Access indicators

- Terms of trade (casual labour to maize) were above-average this month implying improved household purchasing power compared with normal times.
- Milk consumption was above-average this month.
- Access to water for domestic consumption was slightly higher than normal for this time of the year.
- The cost of water remained at Kshs 3-5 which was normal.

Utilization Indicators

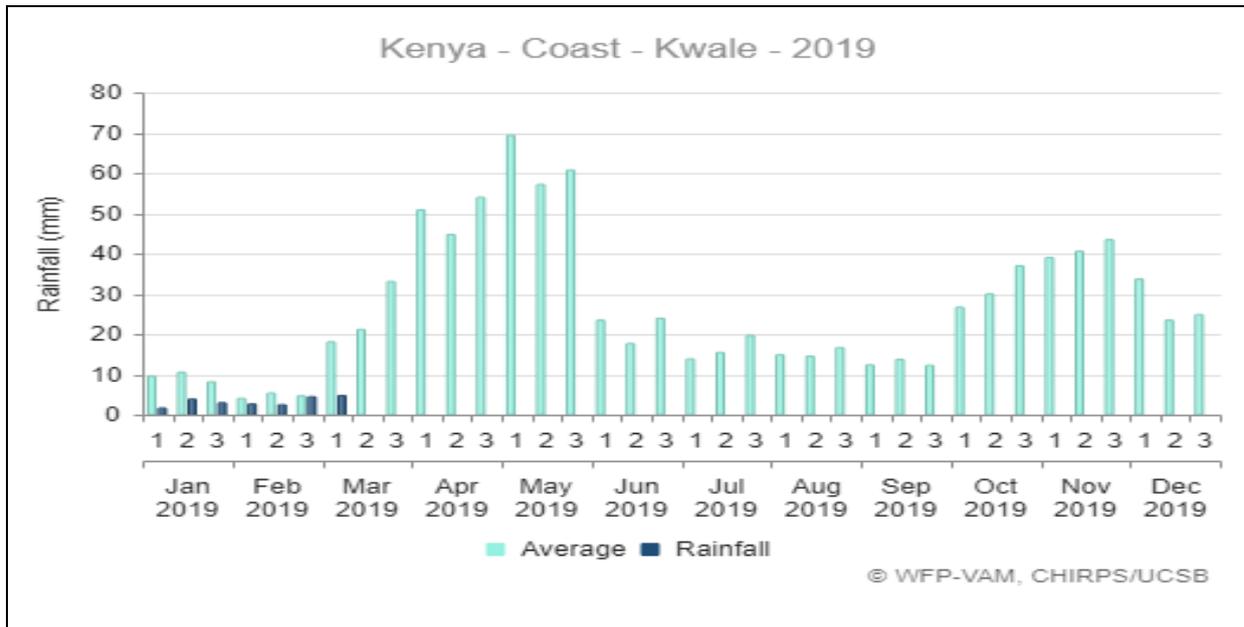
- The prevalence of children at risk of malnutrition was above-average implying a deteriorated nutritional status of children compared with normal times.

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

- Minimal rains were received during the month which was not normal as shown in the graph below.
- The rainfall distribution was uneven in space and poor in time.

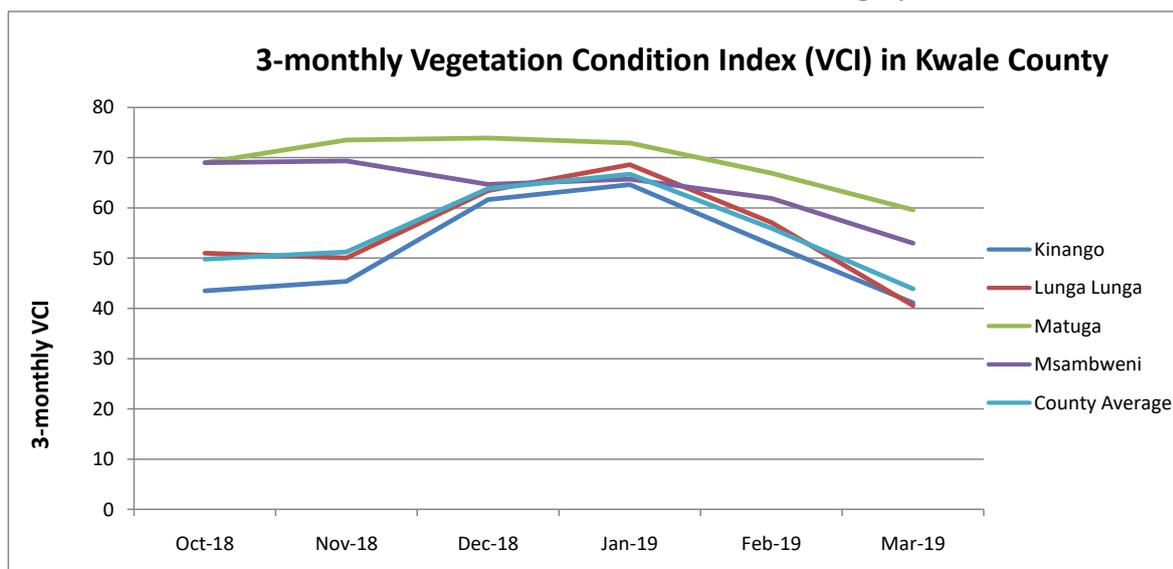


2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

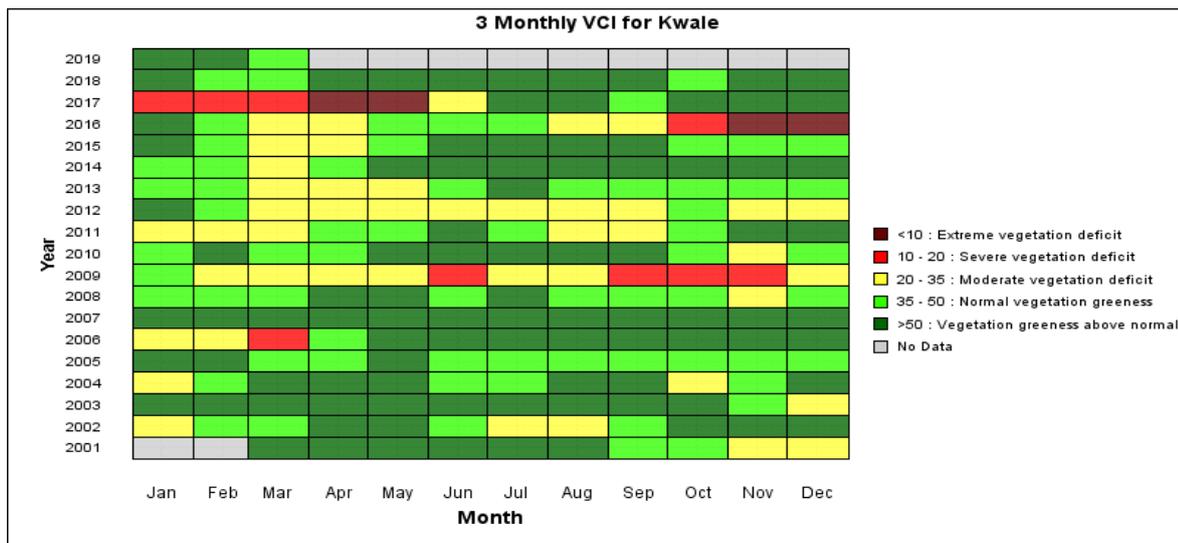
2.1.1 Vegetation Condition Index (VCI)

- The vegetation greenness in the county worsened by 21.5 percent compared with last month as the 3-monthly VCI reduced from 55.97 in February to 43.91 in March.
- Prevailing high temperatures could have caused the deterioration in the vegetation condition as they could have resulted to drying up of the vegetation available.
- The deterioration was evident in all sub-counties as shown in the graph below.

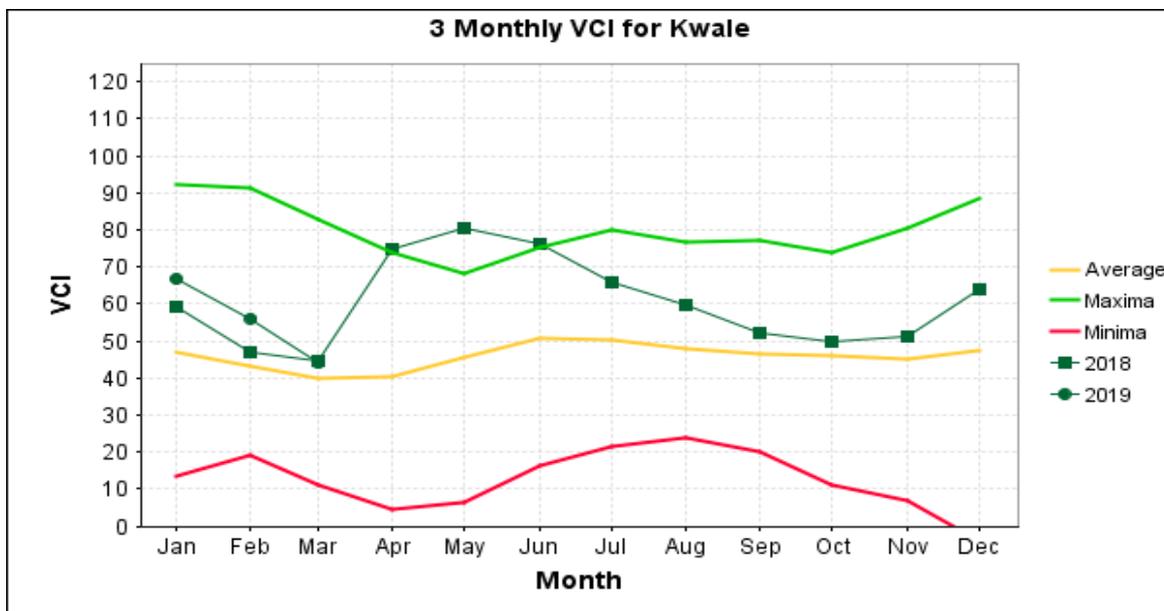


- With the recorded deterioration, the county slipped in to a slightly worse vegetation classification band of 'normal vegetation greenness' compared with the previous month's band

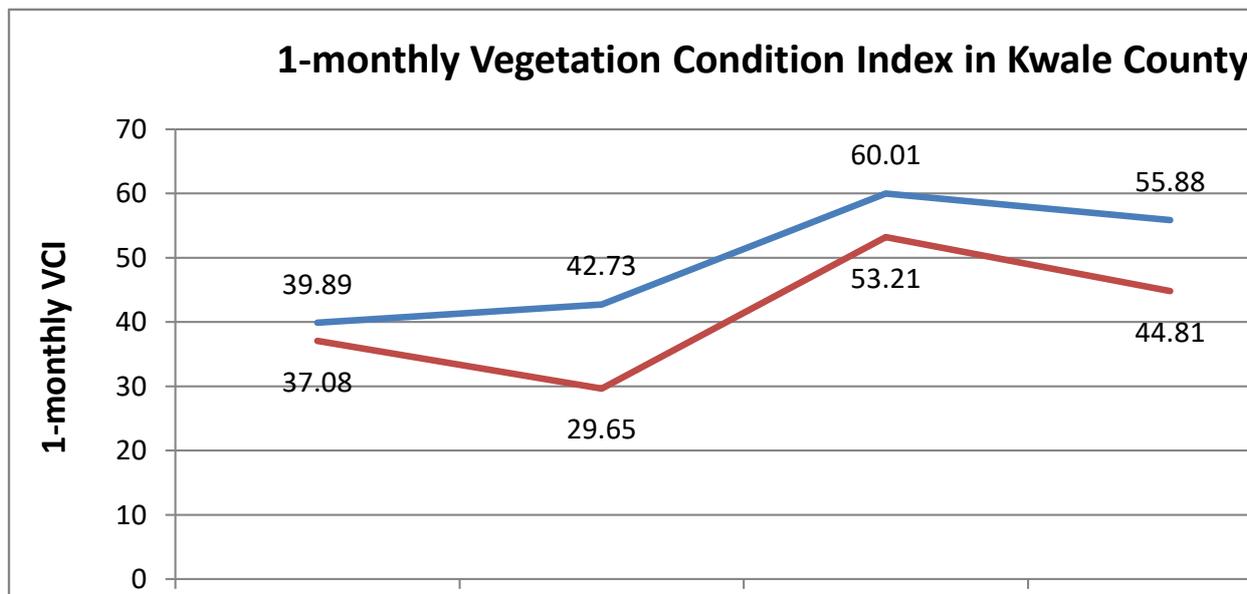
of 'vegetation greenness above-normal'. The state of the vegetation is shown in the matrix below.



- The situation was also similar in the livestock farming livelihood zone (comprising parts of Kinango and Lunga Lunga Sub-counties) which had also worsened to the 'normal vegetation greenness'. However, the mixed farming livelihood zone (comprising parts of Matuga and Msambweni Sub-counties) remained in the 'vegetation greenness above-normal' band similar to last month.
- The current conditions were similar to those recorded at this time last year as shown in the graph below.



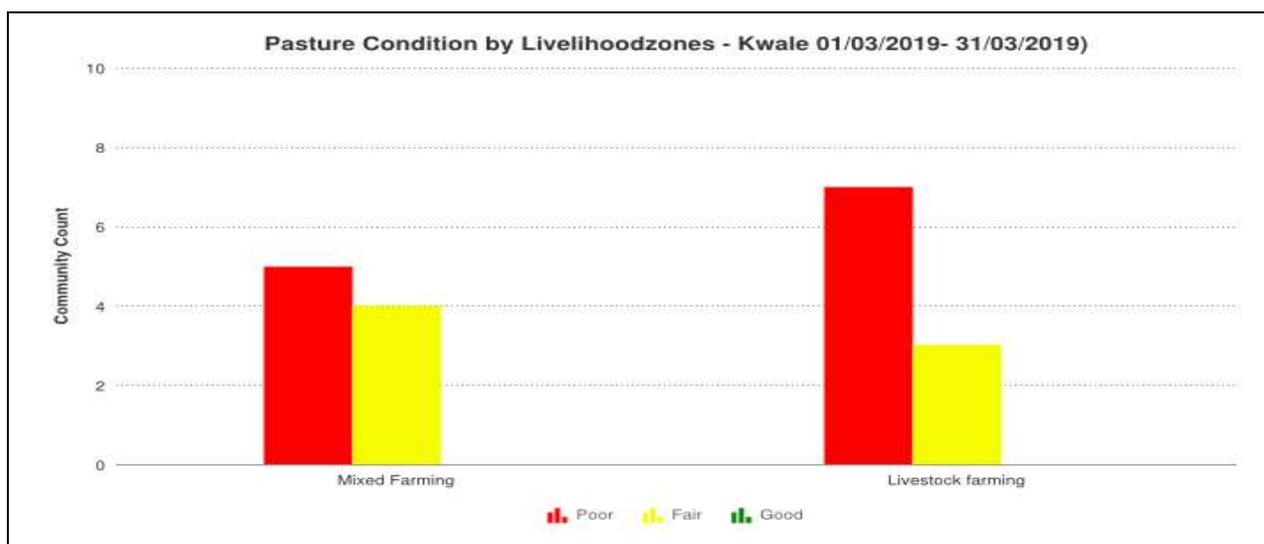
- It was also important to note that the 1-month VCI had recorded a decrease in all four sub-counties signifying deteriorated vegetation condition.
- The highest deterioration was recorded in Lunga Lunga Sub-county as shown in the graph below therefore placing it on alert since it posted moderate vegetation deficit at an index of 29.65.



- The least deterioration was posted in Kinango Sub-county which could be attributed to the showers received in the last dekad of February that could have replenished some vegetative matter.
- The 1-month VCI therefore categorized Msambweni and Kinango Sub-counties in the ‘normal vegetation greenness’ band and Matuga Sub-county in the ‘vegetation greenness above-normal’ band.

2.1.2 Pasture

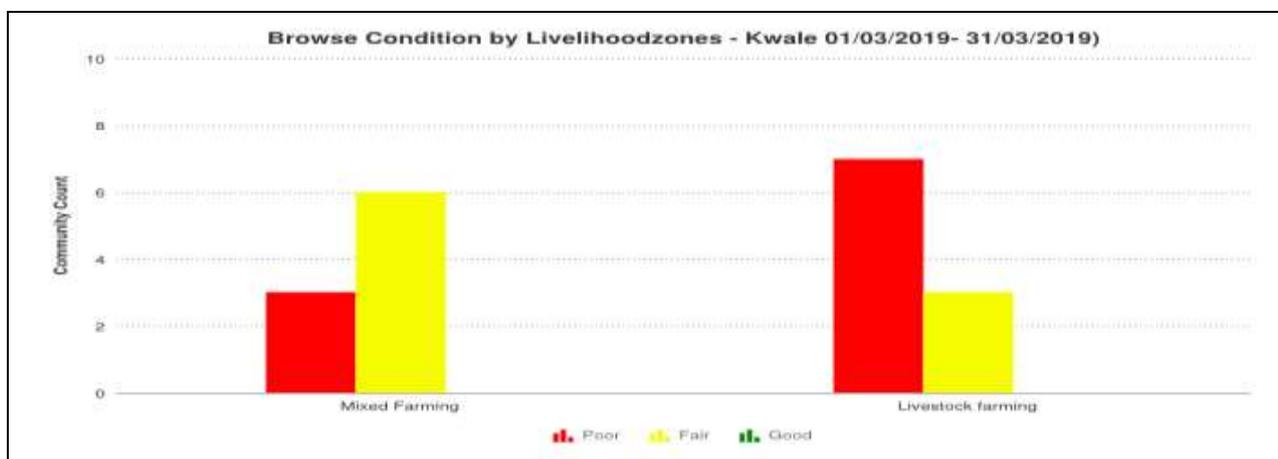
- Pasture condition deteriorated this month as approximately 63.2 percent of households reported pasture to be in poor condition compared to 50 percent in February.
- The deterioration corroborated the worsened vegetation condition and consequently increased trekking distances to water points for livestock in the county compared with last month.
- The condition of pasture was worse in the livestock farming livelihood zone in comparison to that in the mixed farming livelihood zone as more households in the former reported poor condition as shown in the graph below.



- The available pasture is estimated to last approximately one and three months in the livestock farming and mixed farming livelihood zones respectively.

2.1.3 Browse

- Browse condition worsened this month as approximately 52.6 percent of households reported poor condition in March compared with 44.4 percent last month.
- The livestock farming livelihood zone posted worse browse condition compared with the mixed farming one as more households in the former reported poor conditions as shown in the graph below.

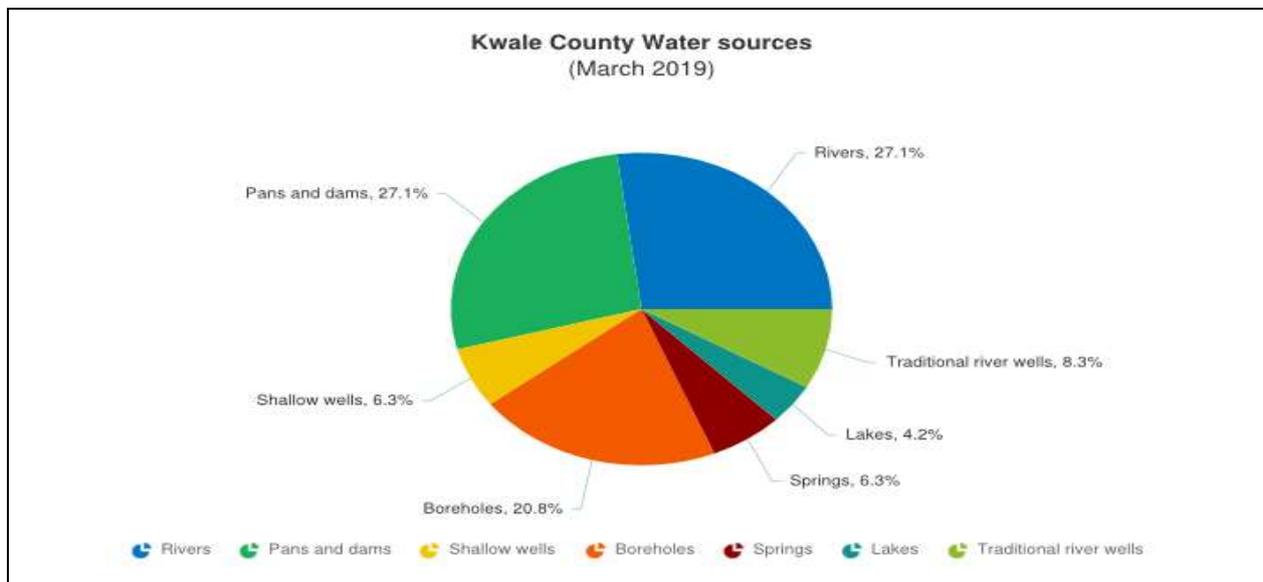


- The available quantity of browse is estimated to last two months through to May in both livelihood zones if the rains do not begin at the end of this month.

2.2 WATER RESOURCES

2.2.1 Sources

- The major water sources for household use included pans and dams on which approximately 27.1 percent of households relied in March. This proportion was comparable to 29.2 percent who relied on the same sources last month.
- In addition, 27.1 and 20.8 percent of households relied on rivers and boreholes respectively this month compared with 8.3 and 25 percent for the respective sources in February.
- The increase in the proportion of households relying on rivers may have increased because some areas in Kinango Sub-county had received some rainfall in the last dekad of February which recharged some open water sources. These sources were yet to have their volumes reduced from evaporation due to the high temperatures currently being experienced.
- The other major water sources were as shown in the graph below.

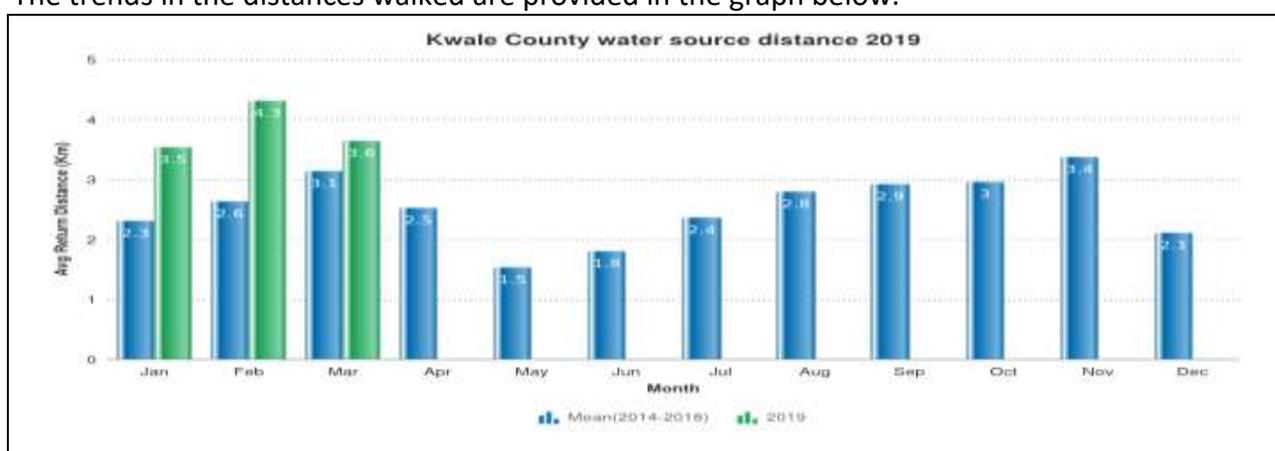


- The status of water sources was therefore normal for the month similar to last month (see below for the description of water sources' states).

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

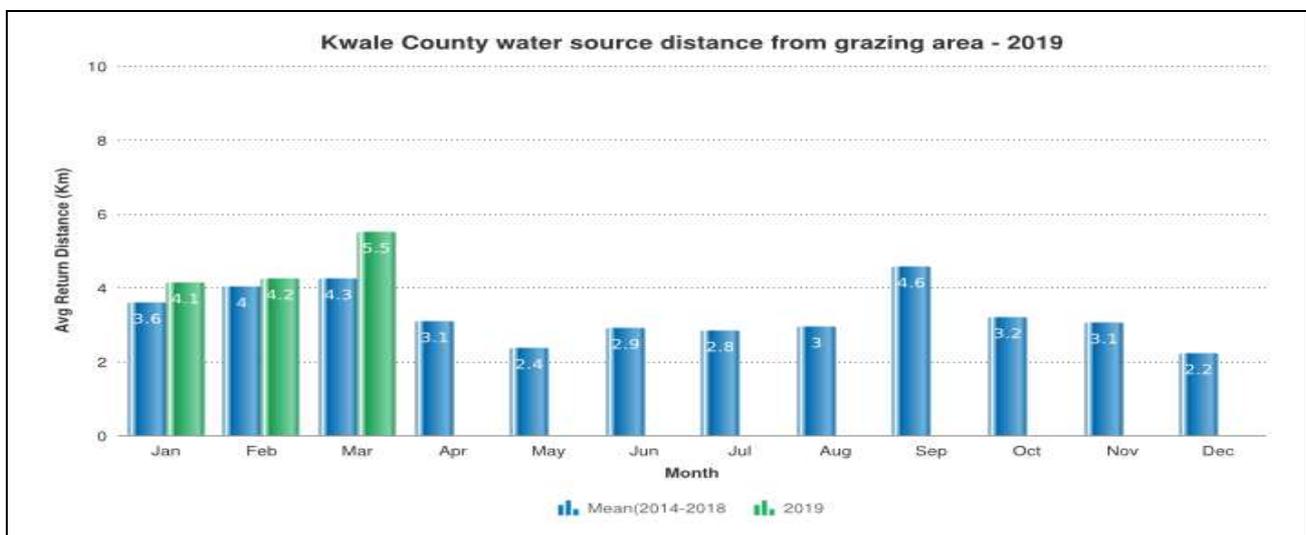
- Access to water for household use was slightly better this month compared to last month as households walked an average 3.6 km having reduced by a 16.3 percent margin from 4.3 km in February. The current distances were above the 2014-2018 LTA by approximately 16.1 percent.
- The trends in the distances walked are provided in the graph below.



- The average water consumption per person per day (pppd) was 17.33 litres in March compared with 16.1 litres recorded in February.
- The livestock farming livelihood zone posted the highest consumption at an average of 22.67 litres this month having increased marginally from 20.8 litres in February.
- The mixed farming livelihood zone recorded the least consumption at 12.33 litres this month having also increased slightly from 11.4 litres last month.
- The proportion of households paying for water increased slightly from 25.6 percent in February to 37.5 percent in March.
- The highest percentage of those paying for water were recorded in the mixed farming livelihood zone estimated at 58.6 percent in March in comparison to 40.9 percent recorded in January.
- The least percentage was recorded in the livestock farming livelihood zone at 16.9 percent having also increased from 10.9 percent posted in February.
- However, despite the increase in the population paying for water, the cost had remained stable at between Kshs three and five per 20-litre jerry can with no variations at livelihood zone level.
- Additional costs of water consumption were incurred during its transportation in a few areas in both livelihood zones where vendors charged between Kshs 10 and 30 to transport a 20-litre jerry can.
- Charges were highest in the mixed farming livelihood zone at between Kshs 15-30 and least in the livestock farming one at an average of Kshs 10.
- The proportion treating water in the county increased by 35.5 percent this month from an estimated 17.2 percent last month to an approximated 23.3 percent in March.
- Approximately 39.1 percent treated water this month in the mixed farming livelihood zone having increased from 23.9 percent in February. However, this proportion had decreased by approximately 38 percent in the livestock farming livelihood zone from 10.9 percent last month to 7.9 percent this month.

2.2.3 Livestock access to water

- The return trekking distance to water points from grazing areas averaged 5.5 km this month having increased by a 31 percent margin from 4.2 km last month.
- The increase could have been due to the drying of pasture due to the prevailing high temperatures that was also manifested in the deteriorated pasture conditions and the reduction in the county's vegetation greenness.
- The distance posted this month was 27.9 percent higher than that recorded in the 2014-2018 LTA of 4.3 km as shown in the diagram below.



3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

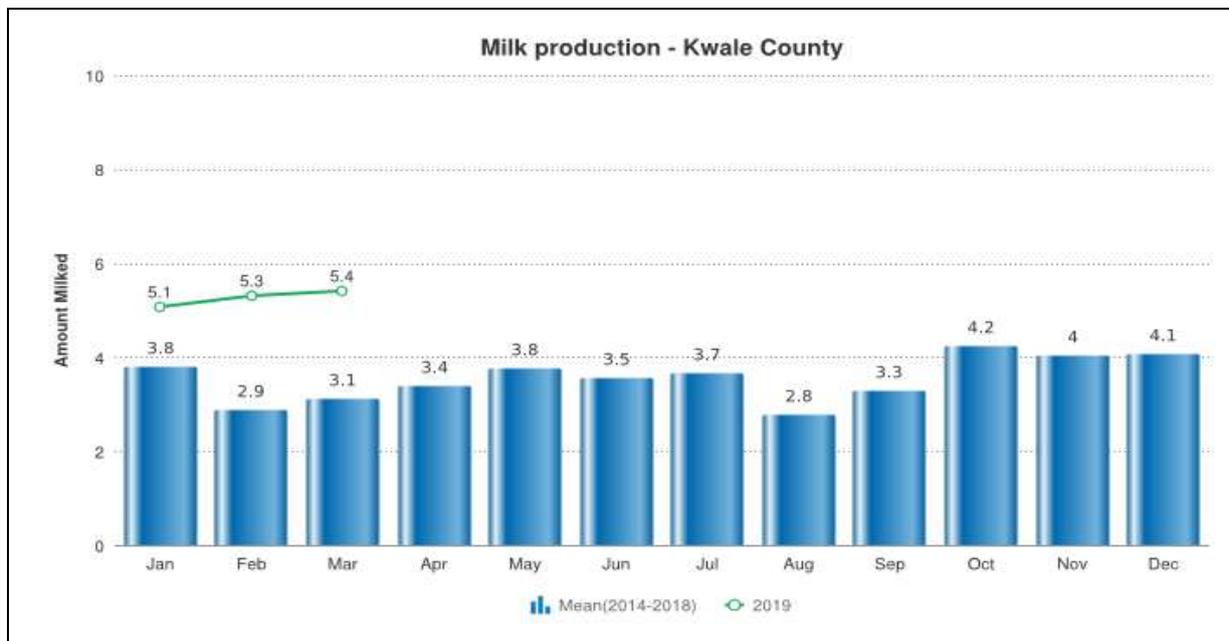
3.1.1 Livestock Body Condition

- Livestock body condition deteriorated slightly this month as approximately 33.3 percent of households reported good condition compared with 50 percent last month.
- The deteriorated condition could have been occasioned by the slightly increased distances to watering points and the deteriorated forage conditions across the county.
- However, the early warning classification remains 2 implying that most livestock were at moderate and therefore neither fat nor thin body condition similar to last month as shown 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

- Milk was produced from cattle this month similar to last month and was also normal.
- The average household milk production was 5.4 litres in March having remained stable compared with 5.3 litres recorded in February.
- Although pastoral resources such as water and pasture showed signs of reduced availability, they were yet to impact on milk production. However, a significant decrease in their availability next month is bound to result in decreased milk production that may be evident then.
- Milk production remained above normal for this time of the year compared with 3.1 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

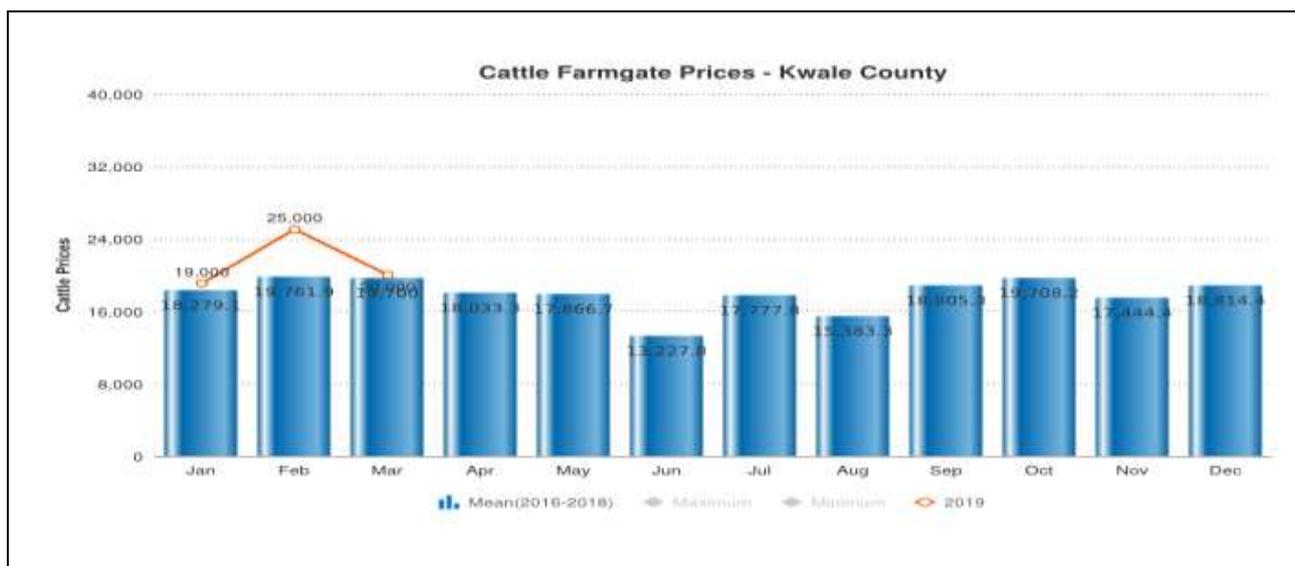
- There are currently no crops on the farms as land preparation activities were on-going in both livelihood zones.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle prices

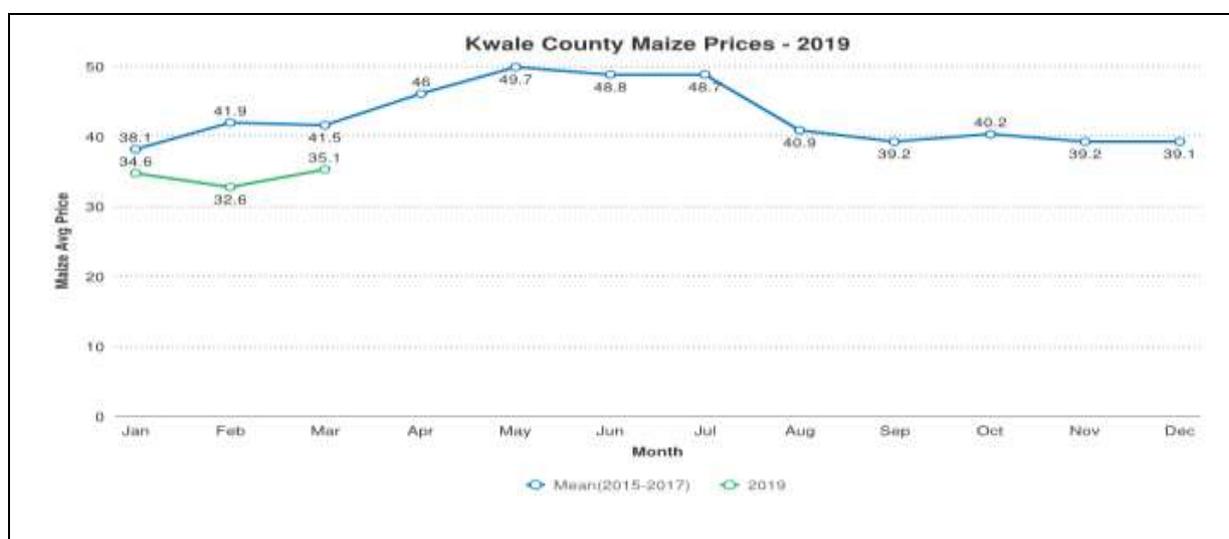
- The average price of a 3-year old bull was Kshs 20,000 in March having reduced by a 20 percent margin from Kshs 25,000 recorded last month.
- The reduction could have been occasioned by the reduced availability of pasture and water compared with last month.
- However, the price was normal for this time of the year as it was within the seasonal average of Kshs 19,700 in the 2016-2018 LTA.



4.2 CROP PRICES

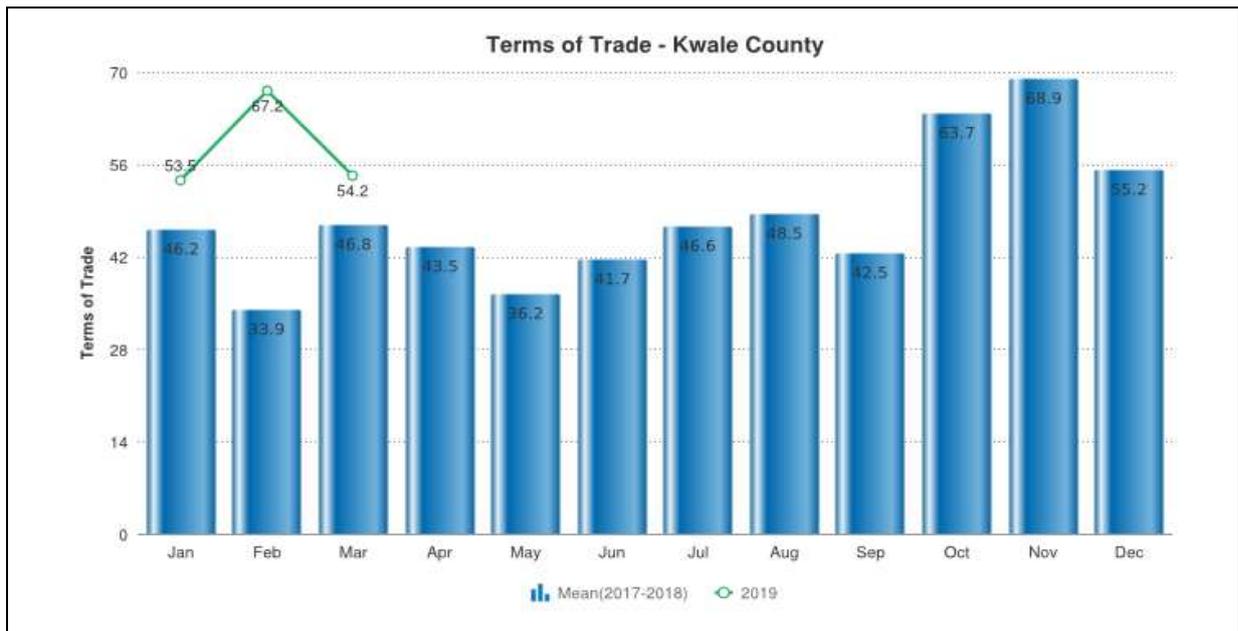
4.2.1 Maize

- Maize was retailing at Kshs 35.1 having increased by a 7.7 percent margin from Kshs 32.6 posted in February.
- Despite the marginal increase, the price was 19.6 percent lower than Kshs 41.5 recorded in the 2016-2018 LTA as shown in graph below.



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

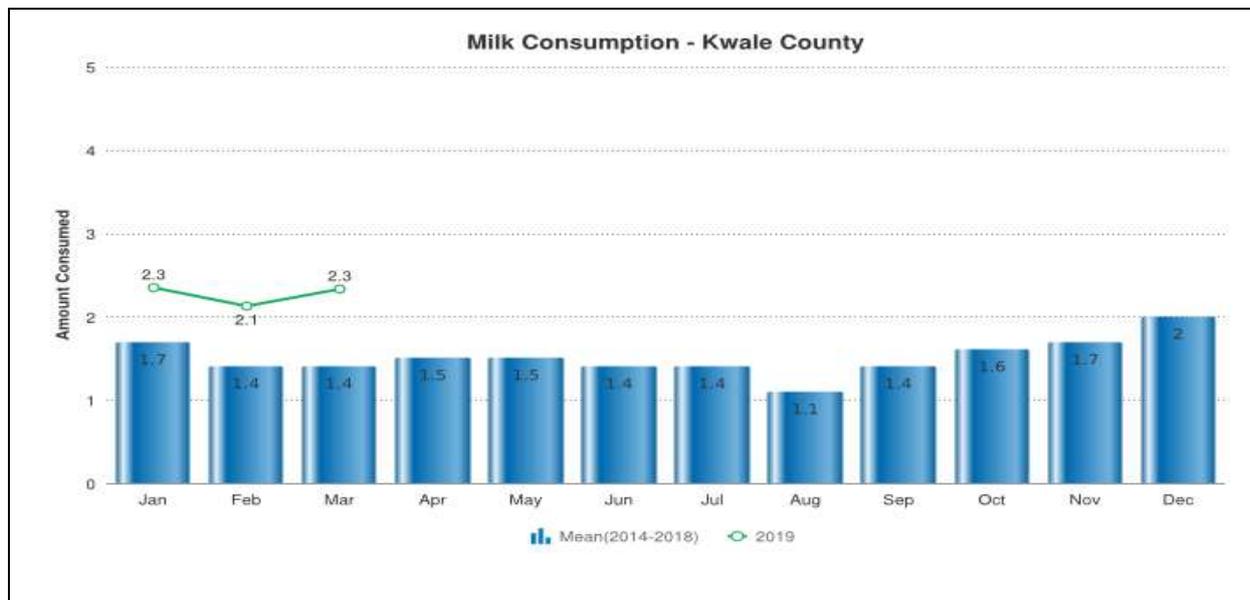
- The ToT decreased by 19.3 percent this month from 67.2 last month to 54.2 in March as shown in the graph below.
- The implication was that households' purchasing power had slightly reduced as they were able to buy a lower quantity of maize from the proceeds of casual labour in March compared with February.
- However, despite the decrease, the ToT was 15.8 percent above normal which was recorded as 46.8 in the 2017-2018 LTA.
- The graph below shows the trends in ToT in the county.



5.0 FOOD CONSUMPTION AND NUTRITION STATUS

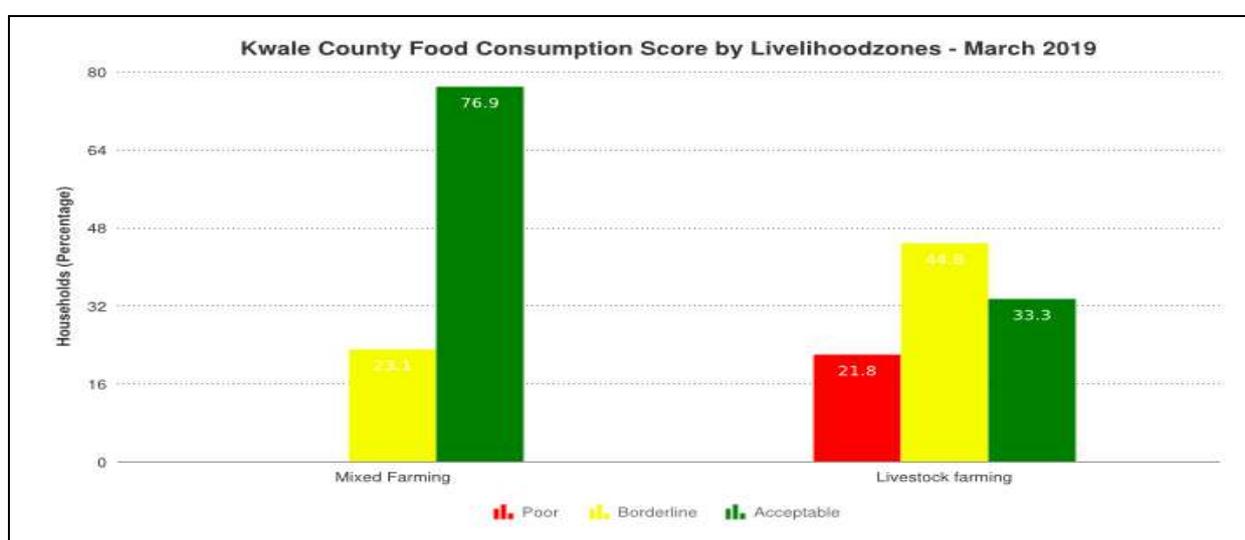
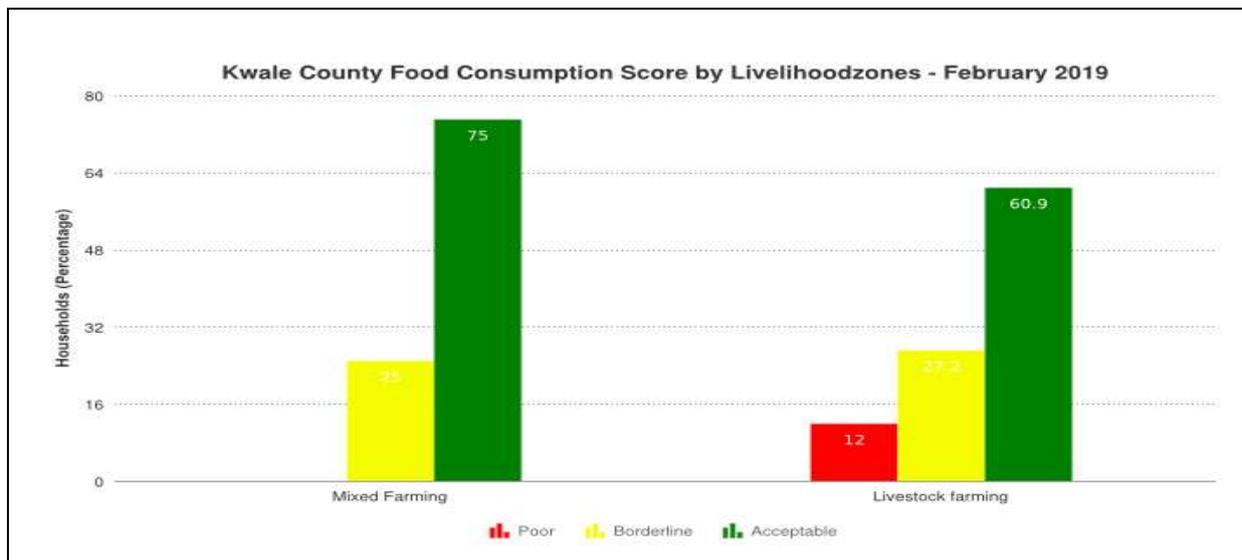
5.1 MILK CONSUMPTION

- Milk consumption averaged 2.3 litres per household having remained stable compared with 2.1 litres posted in February.
- Average milk consumption has remained above-average compared with the 2014-2018 LTA which was recorded as 1.4 litres.

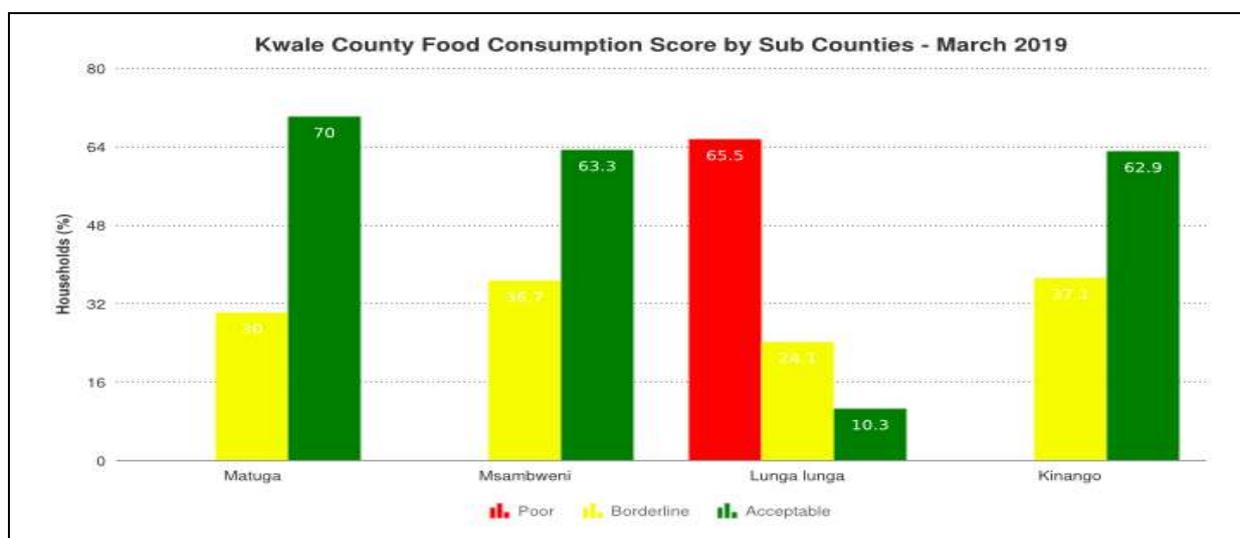


5.2 FOOD CONSUMPTION SCORE

- The proportion of households in the poor, borderline and acceptable food consumption groups was 10.7, 33.7 and 55.6 percent respectively.
- In comparison with the proportions last month, the proportions in the poor and borderline food consumption groups had marginally increased as they had been recorded as 6.11 and 2.11 percent respectively in February.
- The proportion with acceptable food consumption had reduced from 67.77 percent in February to 55.6 in March.
- The county's food consumption score this month averaged 38.6 having reduced from 41.4 recorded in January.
- The increase in the proportion of households in the poor food consumption category and the slight reduction in the average food consumption score compared to last month point to slight reductions in food frequency, dietary diversity and nutritional value of diets.
- The implication was therefore that food consumption gaps had generally marginally increased in the county. However, they were only largely evident in the livestock farming livelihood zone where the food consumption score had decreased from 38.7 last month to 33.4 in March.
- The proportion of households in the poor category also increased from 12 percent in February to 21.8 percent in March in the same zone.
- In the mixed farming livelihood zone, the average food consumption score was similar to last month's at 44. The stability in food consumption patterns in the zone was also evident in the proportions in various food consumption groups as approximately 76.9 percent of households had acceptable food consumption last month compared with 75 this month as shown in the graphs below.



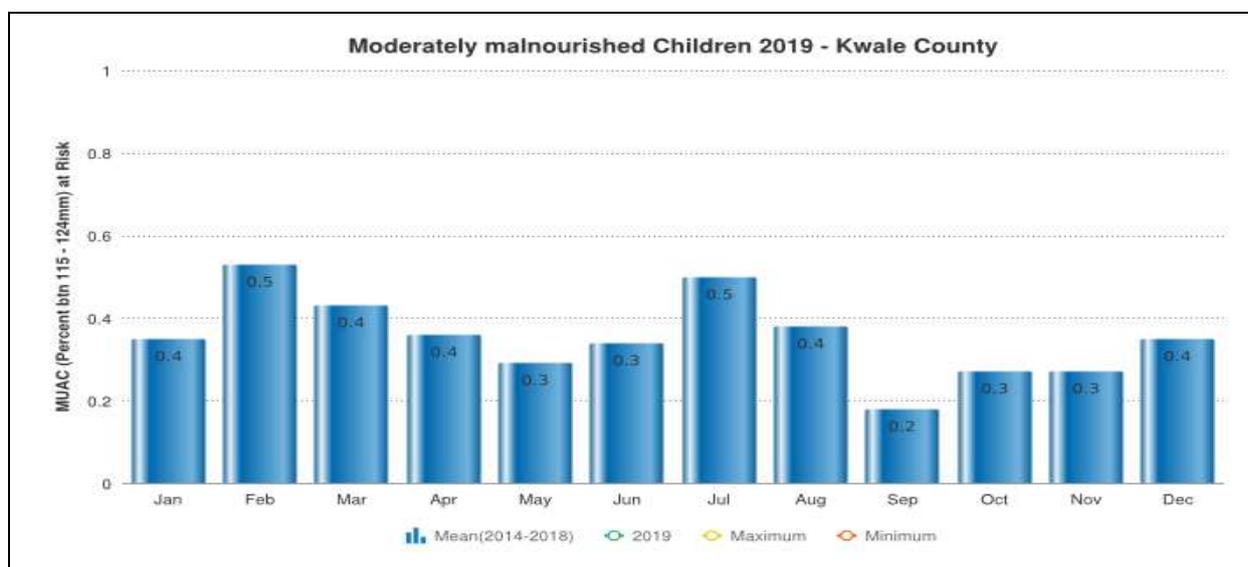
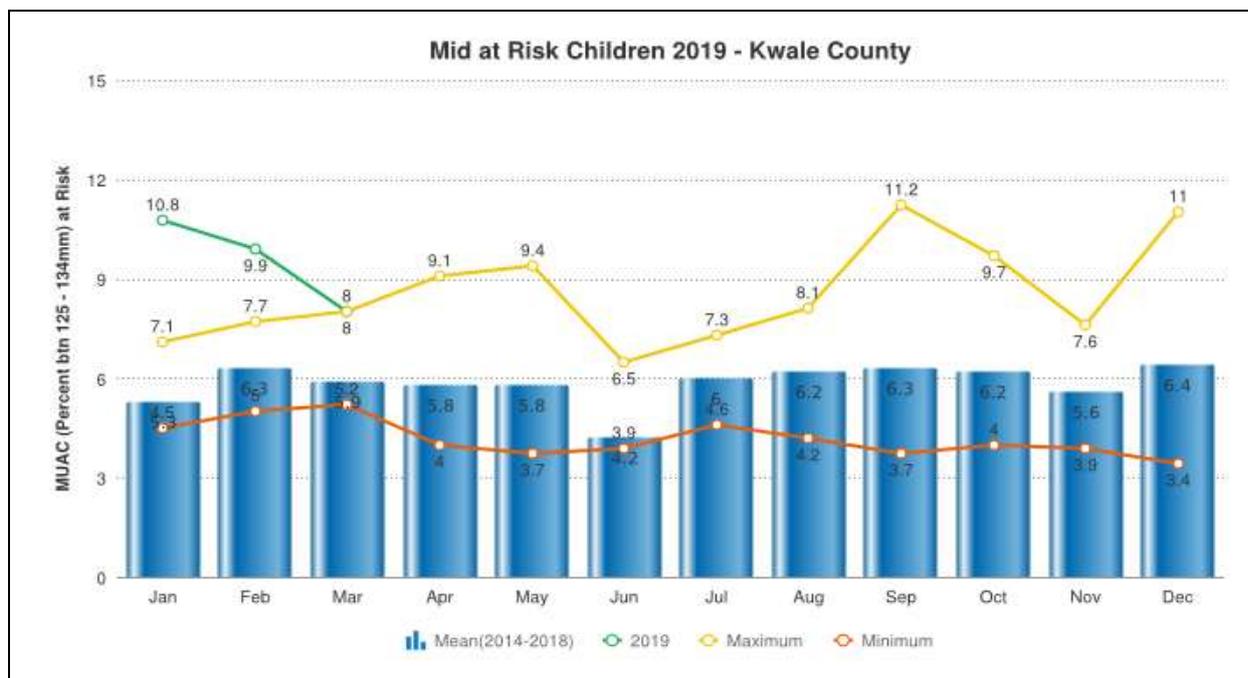
- It was also important to note that all the households in the livestock farming livelihood zone who recorded in the poor food consumption group were all from Lunga Lunga Sub-county as shown in the graph below.



5.3 HEALTH AND NUTRITION STATUS

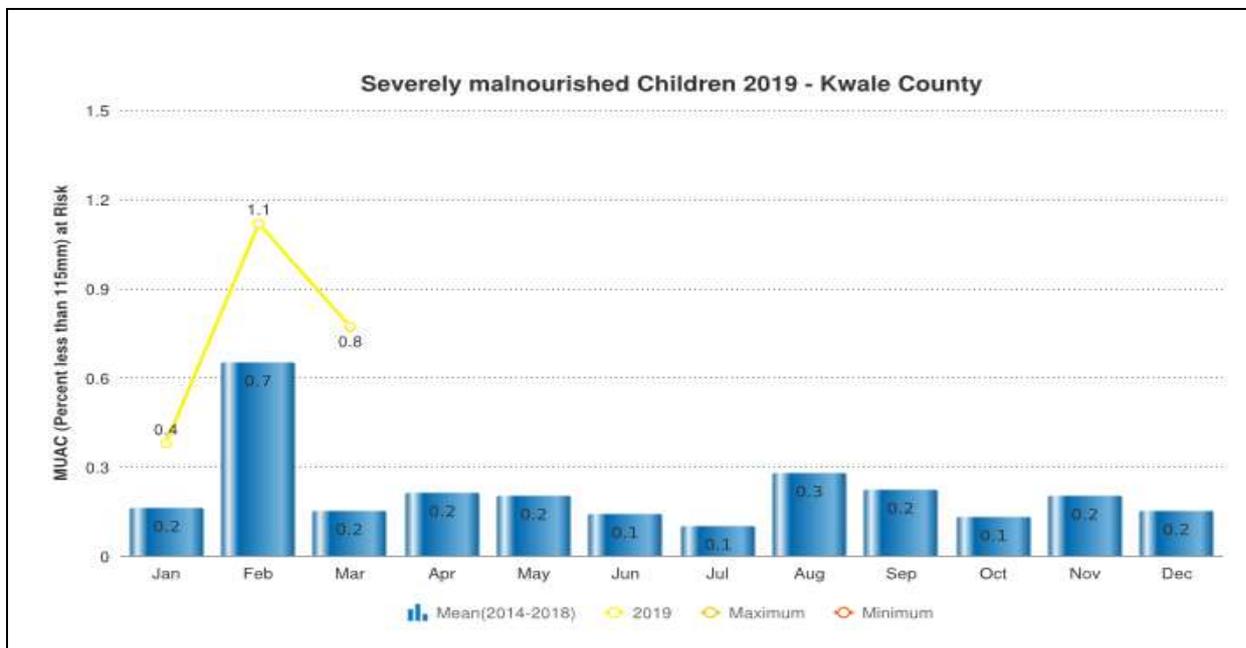
5.3.1 Nutrition Status

- A total of 1052 children were sampled for the purpose of estimating the proportion of children at risk of malnutrition in March where 552 were males and 500 were females.
- The Mid-Upper Arm Circumference method was used for the estimation whose findings were that the prevalence of children at risk (MUAC 125mm-134mm), moderately malnourished (MUAC<125mm) and severely malnourished (MUAC<115mm) was eight, zero and 0.8 percent respectively as shown in the graphs below.



- The prevalence of those at risk reduced by 19.2 percent from 9.9 percent in February to eight percent in March while that for the moderately at risk remained the same as last month at zero percent.

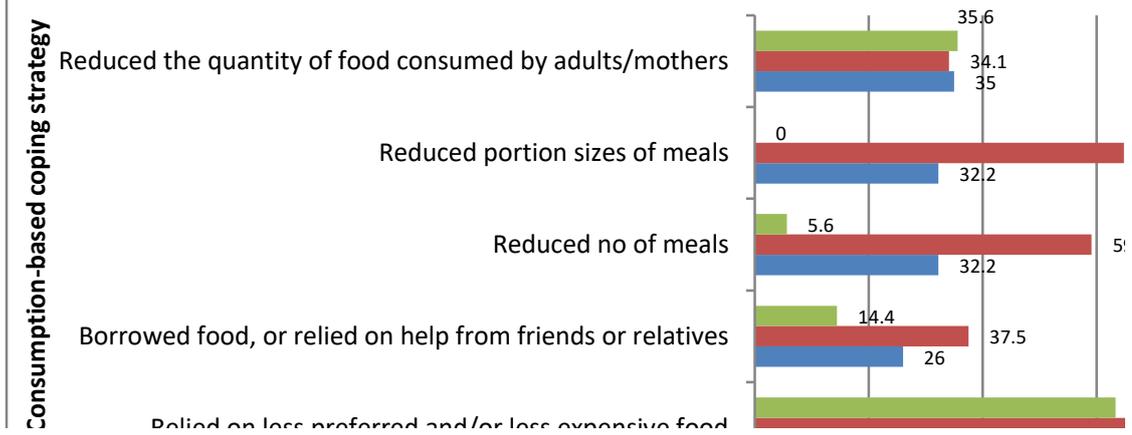
- However, despite the reduction in the proportion of children at risk compared with last month, it was higher than normal in comparison with the 2014-2018 LTA which was recorded at 5.9 percent.
- The prevalence of the severely malnourished also reduced by 27.3 percent from 1.1 percent in February to 0.8 percent this month as shown in the graph below. It was also above the 2014-2018 LTA which was recorded at 0.2 percent at this time of the year.



5.4 COPING STRATEGIES

- The reduced coping strategy index (rCSI) averaged 11.8 this month having remained relatively stable compared with 10.24 posted in February.
- The stability was reflected in the mixed farming livelihood zone where an index of 12.6 had been posted in March compared with 11.9 recorded in February. Households had therefore not significantly increased or reduced the frequency and number of consumption-based coping strategies to bridge food consumption deficits.
- However, there was an increase in the index in the livestock farming livelihood zone by approximately 26.4 percent from 8.7 percent in February to 11.0 percent in March. Households in this zone had therefore slightly increased the number and severity of consumption-based coping strategies compared with last month.
- The following graph shows the prevalence of the five consumption-based coping strategies in March.

Prevalence of consumption-based coping strategies in March 2 Kwale County



- The most prevalent coping strategy that was employed this month to meet food consumption gaps was the reliance on less preferred and/or less expensive food similar to last month. Approximately 66.1 percent of the households engaged it in March compared with 62.2 percent in February.
- The least employed coping strategy in March was borrowing food or reliance on help from relatives or friends on which approximately 26 percent of the households relied on to bridge food gaps. The proportion relying on this strategy had also slightly increased compared with last month where approximately 22 percent had engaged it.
- A higher proportion of households engaged consumption-based coping strategies in the mixed farming livelihood zone compared with the livestock farming one. This could be the reason those in the former had maintained relatively better food consumption patterns compared with those in the latter as recorded in the food consumption score.

6. CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

○ Agriculture department

The following interventions were carried out by the agriculture department in March

- Distribution of maize seeds purchased by the county government for the long rains season. A total of 120 tonnes was distributed targeting 15,000 farmers in all the 20 wards.
- Food and Agriculture Organization (FAO) undertook the following activities in March:
 - continued with training of farmers on conservation agriculture
 - training of trainers of facilitators (TOFs) on post-harvest management of pulses.

○ Nutrition department

The department carried out the following interventions in March:

- Population Services Kenya supported monthly community dialogues on nutrition in Matuga Sub-county.
- Afya Pwani supported procurement of anthropometric equipment for the county.
- Routine services were carried out including screening for malnutrition, growth monitoring, conducting outreaches, micronutrient supplementation and health education.

○ Education department

- The county government's early childhood development education (ECDE) department was providing fortified porridge to all children in ECDE institutions.

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- No cases of human displacement, conflict or insecurity were reported in March

7.2 Migration

- No migration was recorded during the month under review.

7.3 FOOD SECURITY PROGNOSIS

- Most households have depleted food stocks and were currently market-dependent. Land preparation activities were on-going in most parts of the county and casual labour opportunities were available.
- Terms of trade (casual labour to maize prices) were above-normal and therefore favourable as maize prices remained lower than normal.
- Although the rains received this month did little to rejuvenate forage, it is expected that they will at least do so by next month, inasmuch as they are projected to have below-normal tendencies.
- Livestock production is therefore likely to continue to be supported, the income from which will supplement domestic earnings from casual labour opportunities.
- Although maize prices are expected to record marginal increases as from next month, food access will still be possible even for poor households who will purchase food from stores which were well provisioned with food commodities.
- Therefore, it is possible that some households will experience some slight food gaps forcing them to increase their frequency and severity of coping strategies to a small extent.

8. RECOMMENDATIONS

- Close monitoring of the long rains season and its impacts on crop production as this was the county's main season.
- Close monitoring of availability of pasture and browse in both livelihood zones.
- Close monitoring of Lunga Lunga Sub-county which has already experienced a moderate deficit in vegetation matter and also has high food consumption gaps.
- Conduct rapid nutrition assessment to establish the reason for above-normal malnutrition rates in the county.