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

NDMA

A Vision 2030 Flagship Project

KENYA VISION 2030

OCTOBER 2019 EW FLAG

Drought Status: NORMAL

Shughuli za kawaida

Drought Situation & EW Phase Classification
Biophysical Indicators
- Significantly above-normal rains were received in October.
- The VCI for the month was normal.
- The state of water sources was normal for this time of the year.

Socio Economic Indicators (Impact Indicators)

Production indicators
- Livestock body condition remained at the moderate early warning classification and normal similar to September.
- Milk production was within seasonal ranges.
- No migration or drought-related deaths were recorded in October.

Access indicators
- Terms of trade (casual labour to maize) were 50 percent below-normal implying significantly reduced purchasing power at household level for this time of the year.
- Milk consumption was within seasonal ranges this month.
- Distances to watering points for domestic consumption were normal in October.
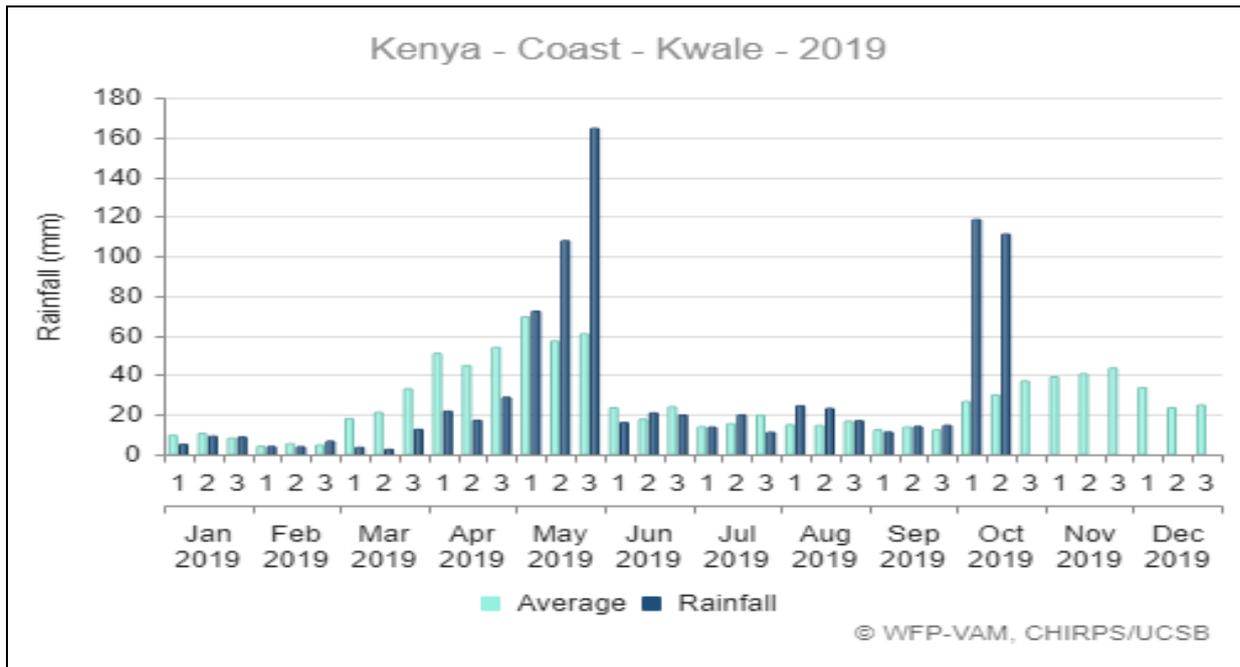
Utilization Indicators
- The prevalence of children at risk of malnutrition was above-normal for this time of the year implying a worsened nutritional status for children aged below five years compared with a similar time in a normal year

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Normal	Improving
Livestock Farming	Normal	Stable
County	Normal	Stable
Biophysical Indicators	**Value**	**Normal Range/Value**
VCI	47.63	50
State of Water Sources	5	5
Production indicators	**Value**	**Normal**
Crop Condition (maize and legumes)	-	-
Livestock Body Condition	2 – moderate (livestock farming and mixed farming livelihood zones)	2 – moderate (livestock farming and mixed farming livelihood zones)
Milk Production (Litres)	4.2	4.0
Livestock Migration Pattern	No migration	No migration
Livestock deaths (from drought)	Zero deaths	Zero deaths
Access Indicators	**Value**	**Normal**
Terms of trade	24.1	63.7
Milk Consumption (litres)	1.5	1.6
Return distance to water sources for households (km)	2.8	3.0
Utilization indicators	**Value**	**Normal**
Nutrition Status, MUAC (% at risk of malnutrition)	9.9	6.2

Seasonal Calendar

- Short rains harvests - Short dry spell - Reduced milk yields - Increased household food stocks - Land preparation	- Planting/weeding - Long rains - High calving rate - Milk yields Increase	- Long rains harvests - A long dry spell - Land preparation - Increased household food stocks - Kidding (Sept)	- Short rains - Planting/weeding
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1.1 RAINFALL PERFORMANCE

▪ The onset of the short rains season in the county was timely in the first dekad of October as shown in the graph below.

▪ Both the first and the second dekads received significantly higher-than-average rainfall as shown in the same diagram. The situation was the same in both livestock farming and mixed farming livelihood zones.

▪ The spatial distribution of rainfall has been fairly even as both livelihood zones continued to receive rainfall during most days of the month.

▪ The temporal distribution was good as all dekads received rainfall during the month.

▪ According to estimates by the county's meteorological department, the rains will continue through to mid-December and will maintain an above-average trend until then.
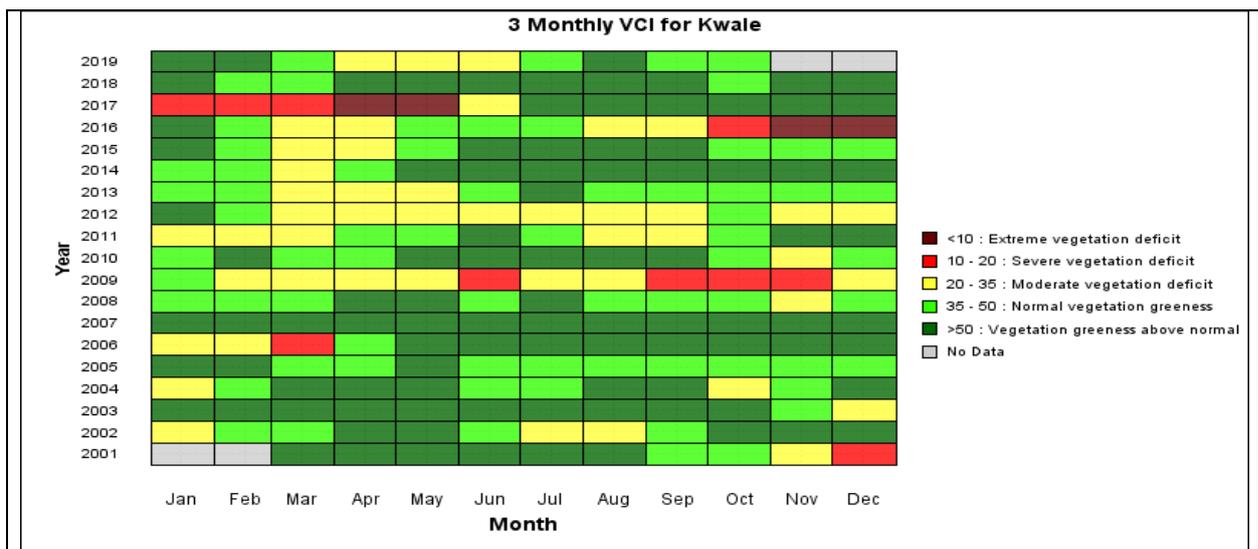

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION
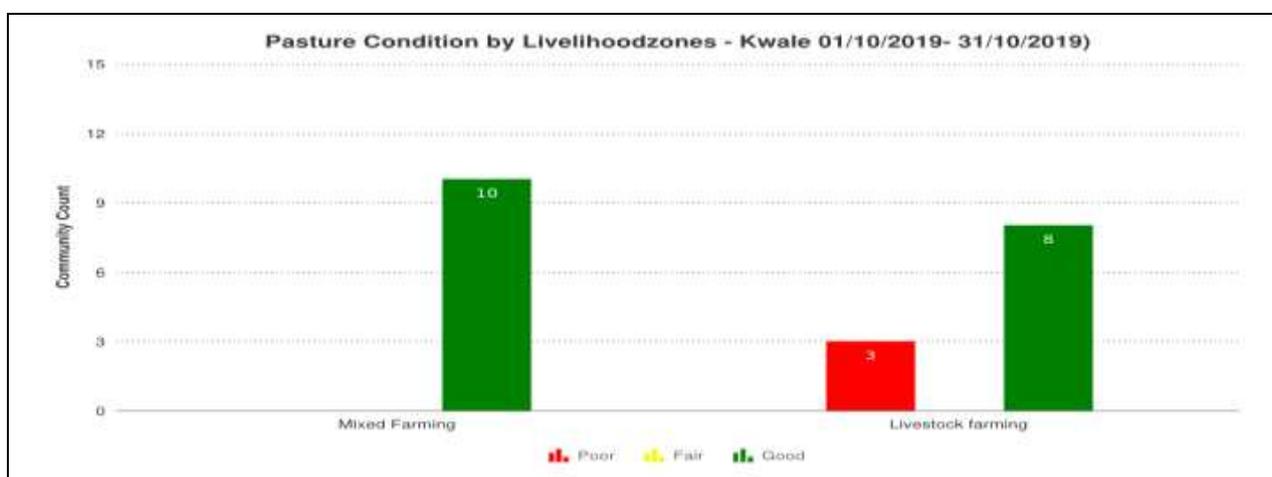
2.1 1   Vegetation Condition Index (VCI)

▪ The county's vegetation condition remained similar to last month as the 3-monthly VCI of 47.63 was recorded in October compared with 47.77 posted in September.

▪ The county therefore remained in the 'normal vegetation greenness' band similar to last month.

▪ The trend was maintained in most parts of the livestock farming livelihood zone comprised of largely Kinango and Lunga Lunga Sub-counties, which recorded indices of 41.65 and 49.01 respectively in October compared with 42.62 and 50.62 respectively in September.

▪ The livestock farming livelihood zone was therefore classified in the same band as the county.

▪ Vegetation greenness improved slightly in the mixed farming livelihood zone comprising largely of Matuga and Msambweni Sub-counties.

▪ This was manifested in a marginal increase in the index from 60.97 in September to 64.42 October in Matuga Sub-county and from 61.78 to 69.45 in Msambweni Sub-county during the same period.

▪ Both sub-counties in the mixed farming livelihood zone were therefore categorized in the 'vegetation greenness above-normal' category.
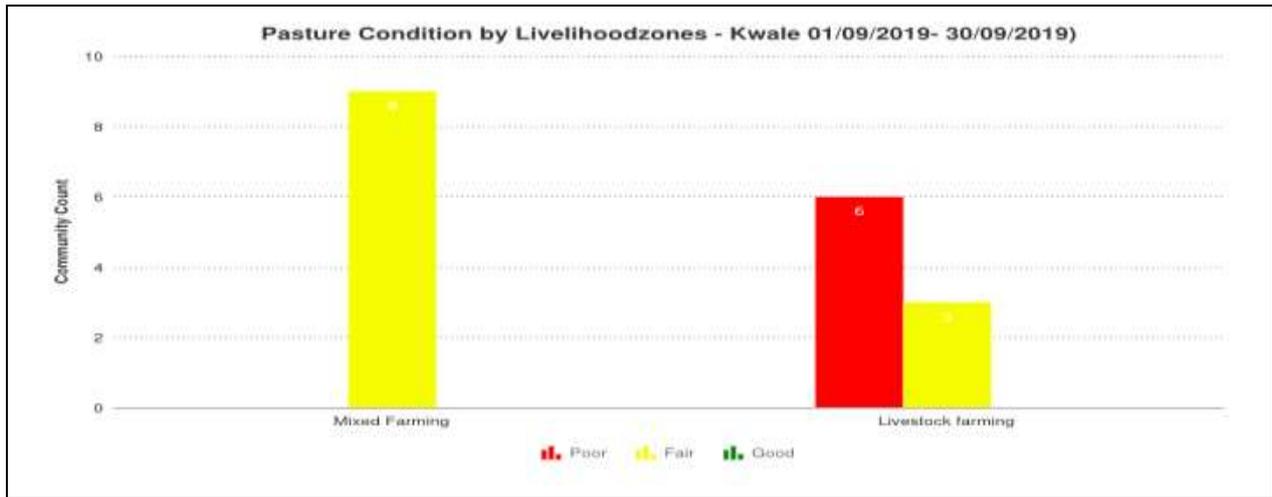
- A snapshot of the county's current vegetation condition in comparison with previous years dating back to 2001 is provided in the matrix below.
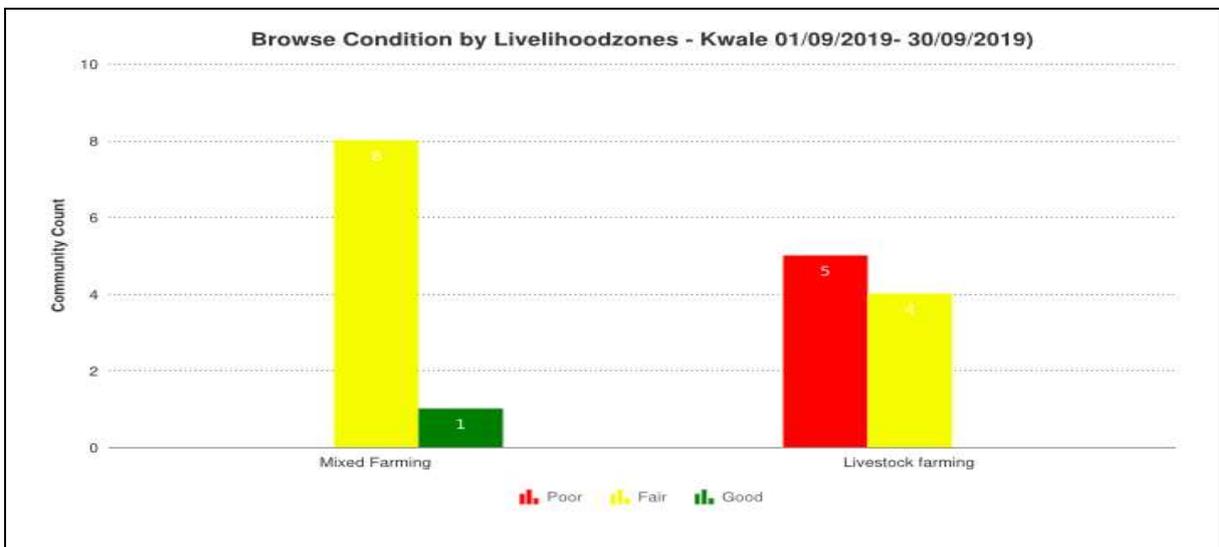

2.1.2 Pasture

- A slight improvement was recorded in pasture condition compared with last month as approximately 14.3 percent of households reported poor condition in October compared with 33.3 percent in September.
- The improvement was most pronounced in the mixed farming livelihood zone where approximately all households interviewed recorded good pasture condition in October, compared with a similar proportion that had reported fair condition last month.
- Additionally, the proportion of households that had reported poor condition in the livestock farming livelihood zone reduced by half compared with last month. While no household had reported good condition last month in this zone, a majority of households reported it this month, further corroborating the improvement in pasture condition.
- However, even with the improvement, the condition was better in the mixed farming livelihood zone compared with the livestock farming one.
- The improvement in pasture condition could be attributed to the above-average rainfall that was conducive for pasture regrowth, a trend that was likely to improve through to the cessation of the rains in mid-December.
- The pasture condition in the county during the current and past months was as shown in the figures below.

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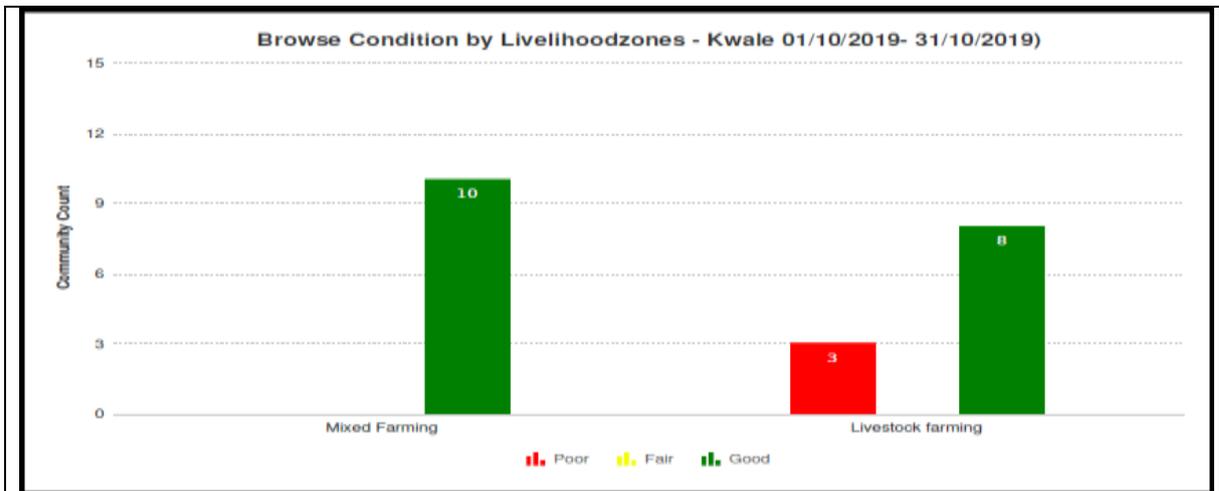**Pasture Condition by Livelihoodzones - Kwale 01/09/2019- 30/09/2019)**

2.1.3 Browse

- There was a significant improvement in browse condition as the proportion of households who reported good browse condition increased substantively from 5.6 percent in September to 85.7 percent in October.
- The improvement was pronounced in both livelihood zones as the majority of households recorded good browse condition this month compared with an insignificant proportion last month as shown in the two graphs below.
- However, although the improvement was significant in both livelihood zones, the mixed farming zone posted better condition compared with the livestock farming one.
- The improved browse condition was occasioned by the above-average rains received in the first two dekads of the county.
- It was estimated to last approximately six months in the mixed farming livelihood zone and five months in the livestock farming one.

Browse Condition by Livelihoodzones - Kwale 01/09/2019- 30/09/2019)

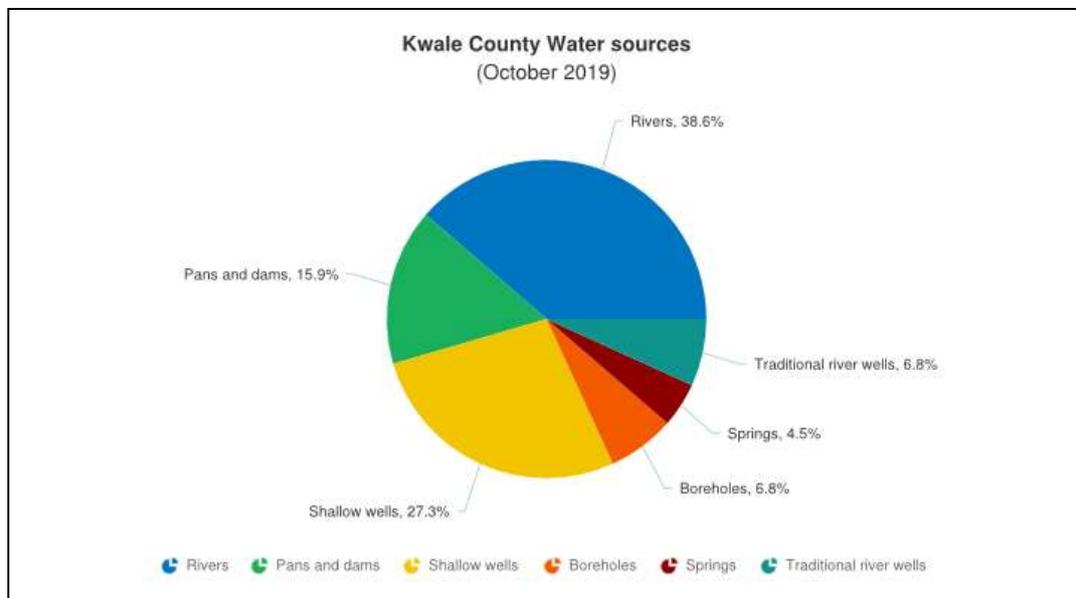Browse Condition by Livelihoodzones - Kwale 01/10/2019- 31/10/2019)

2.2 WATER RESOURCES

2.2.1 Sources

- Rivers, shallow wells and pans/dams were the main sources of water for domestic use in t order for the month of October.
- Most water sources were recharged from the current rains.
- The sources were the same ones mainly relied upon in September.
- The proportion of households relying on rivers and shallow wells increased from 30 and 20 percent respectively in September to 38.6 and 27.5 percent respectively in October.
- However, the proportion relying on pans/dams reduced from 27.5 percent in September to 15.9 percent in October.
- The sources of water in the county were as shown in the pie-chart below.

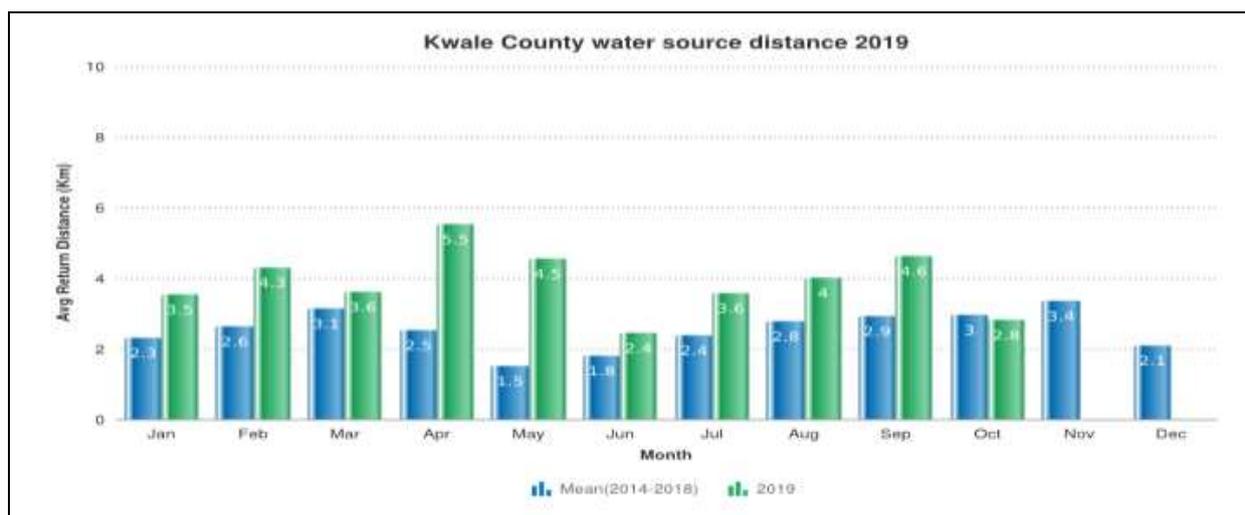Kwale County Water sources (October 2019)

- The status of water sources in the county was 5 with an implication of normal water availability in comparison to a similar time in a normal year as is described in the table below.

INDEX	STATE OF WATER SOURCE	DESCRIPTION
1	EMERGENCY SITUATION	All main water sources have dried up; only few boreholes still yielding significant amounts

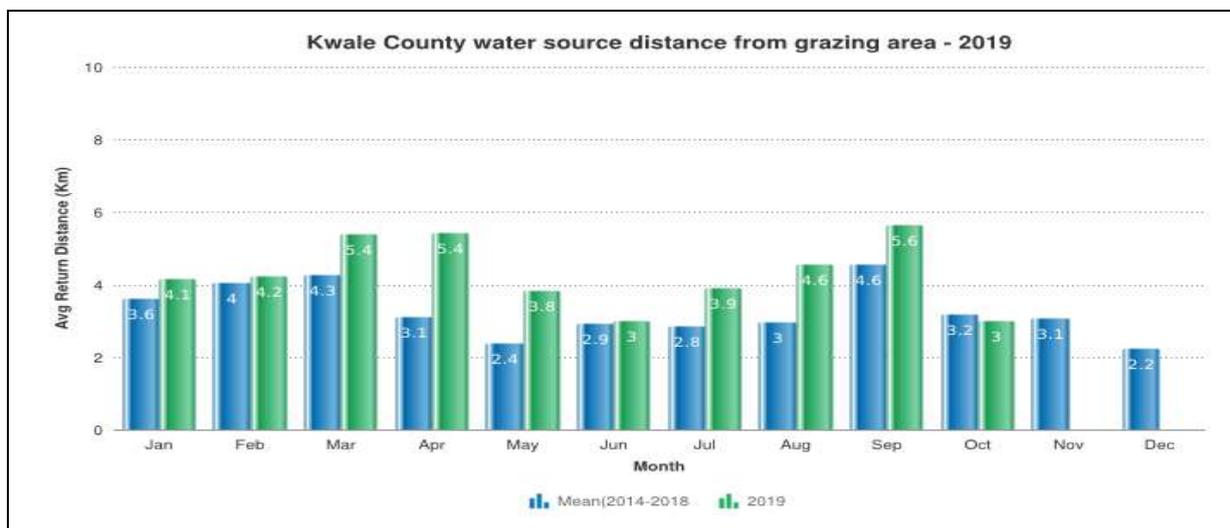| 2	**STRONGLY INADEQUATE**	Surface water sources have dried up while the underground water sources are yielding very little amounts of water. Breakages of boreholes contribute to worsen the situation. Acute water shortage in many areas within the livelihood
3	**INADEQUATE**	Surface water sources have 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

- The average distance walked by households to fetch water at water points reduced from 4.6 km in September to 2.8 km in October as shown in the graph below.
- The reduction in the distance walked could have been occasioned by the increase in water availability as sources were recharged from the rains.
- The distance was normal and expected for this time of the year in comparison to 3.0 km recorded in the 2014-2018 LTA as shown below.
- Households walked an average of 1.7 and 1.1 km to water sources in the mixed farming and livestock farming livelihood zones respectively which were also within seasonal ranges.

2.2.3 Livestock access to water

- Livestock had a relatively easier access to water sources this month compared with last month as the distance they walked to water sources was almost halved from 5.6 km in September to 3.0 km in October as shown in the figure below.
- With the on-going rains, rangeland resources were improved and distances from grazing areas to watering points therefore reduced, a trend that was likely to be sustained through to the end of the season.
- Access to water for livestock was equally within seasonal norms as the normal distance was estimated at 3.2 km in the 2014-2018 LTA as illustrated below.

Kwale County water source distance from grazing area - 2019

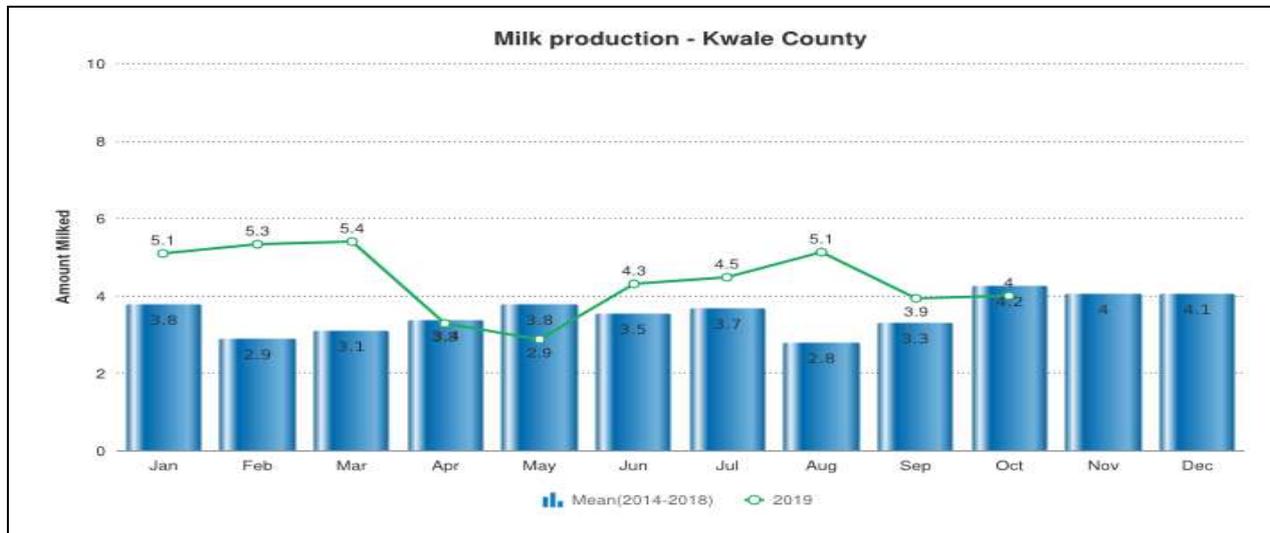## 3.0 PRODUCTION INDICATORS

3.1   LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The livestock body condition in the county remained good in October similar to September.
- The early warning classification remained moderate (neither fat nor thin) similar to September as described in the table below.
- The body condition is projected to remain the same and even register some improvements given the projected availability of pastoral resources such as forage and water through to at least December.

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 mainly produced from cattle this month similar to September which was normal.
- Milk production remained similar to last month at 4.0 litres on average in October compared with 3.9 litres recorded in September.
- It was however, expected to increase with the projected improvement in rangeland resources in the next two months.
- The production was within seasonal norms compared with 4.2 litres posted in the 2014-2018 LTA.
- Milk production trends in the county are illustrated in the graph below.

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Milk production - Kwale County

3.2 RAIN-FED CROP PRODUCTION
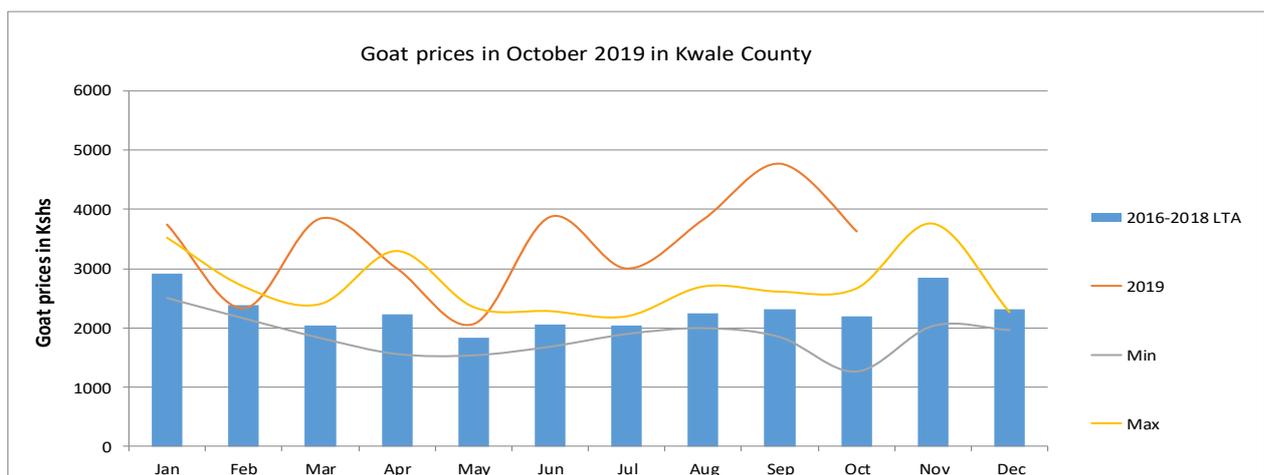### 3.2.1 Stage and condition of food crops
- The main food crops normally grown in the county during the short rains season include maize, green grams and cowpeas.
- Although efforts are on-going to prepare land and plant by farmers, there has been a challenge achieving much acreage mainly because of soggy soils.
- Tractor ploughing funded by the county targeting 6000 hectares has faced the same challenge as they get stuck in the farms. Therefore, planting has delayed in the county with Lunga Lunga Sub-county being the most affected.
- Water-logging has also affected production in Nyalani Irrigation Scheme particularly for kales and was also likely to affect any crops planted for the season since rains are projected to continue with a heavy intensity.

4.0   MARKET PERFORMANCE

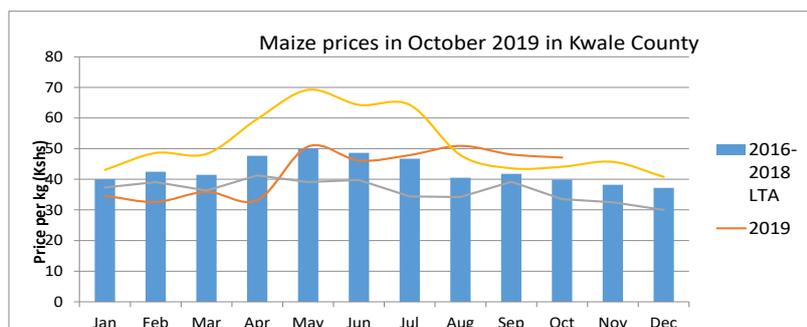## 4.1   LIVESTOCK MARKETING

4.1.1 Goat prices
- The selling price of a three-year old buck of medium size was Kshs 3,628.6 in October having reduced by a 24.0 percent margin from Kshs 4,775 recorded in September.
- However, despite the decline in price, it was still higher than normal in comparison to the 2016-2018 LTA.
- Additionally, it was 17.5 percent higher than maximum price ever recorded in the county recorded at Kshs 2,666.7 as shown in the graph below.

Goat prices in October 2019 in Kwale County
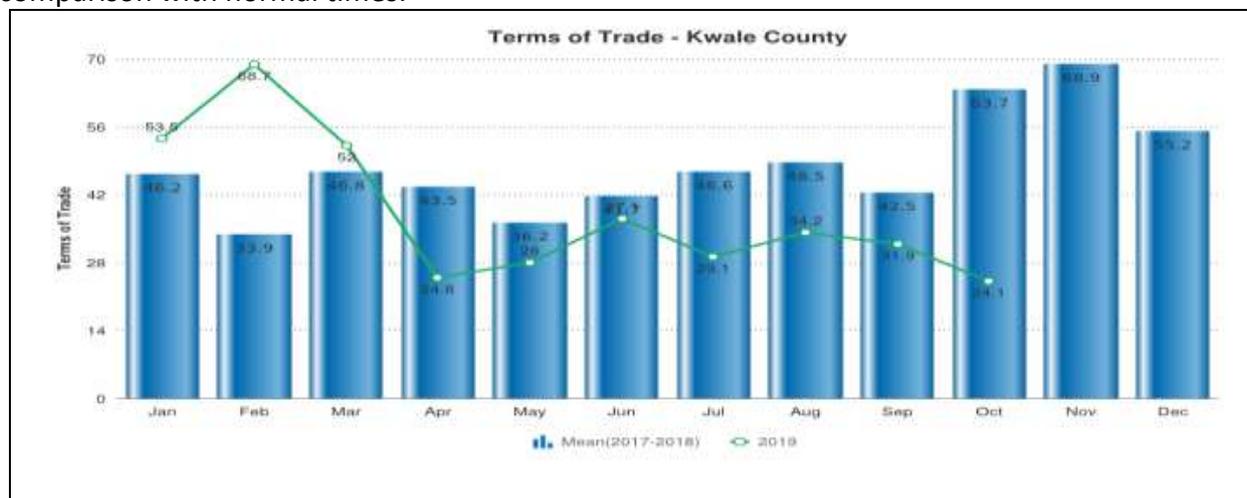
4.2 CROP PRICES

4.2.1 Maize

- A kilogram of maize was trading at Kshs 47.1 in October having maintained a stable trend in comparison to Kshs 48.1 recorded in September.
- However, despite the stability in price, it was 18.3 percent higher than normal when compared with Kshs 39.83 recorded in the 2014-2016 LTA as illustrated in the graph below.
- Maize, the county's staple, remained in great demand due to reduced availability as the last season crop had failed to replenish stocks in the market, thereby necessitating traders to import more of the commodity. Its price was therefore higher than normal for this reason.

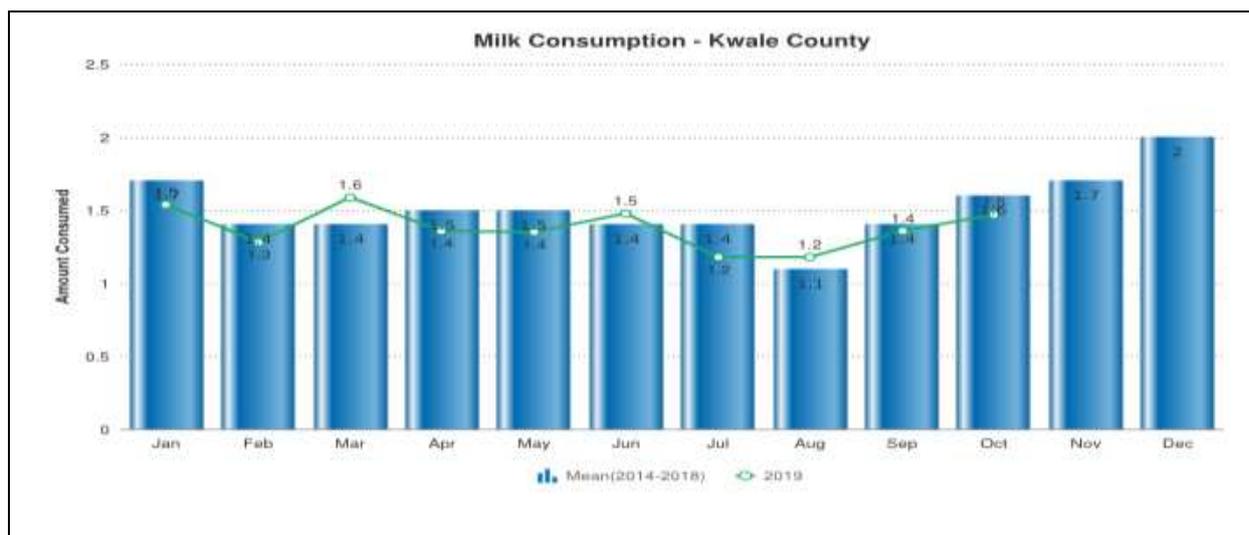## 4.3 TERMS OF TRADE (ToT) - CASUAL LABOUR VERSUS MAIZE PRICES

- The ToT reduced from 31.9 in September to 24.1 in October.
- The reduction in ToT could have resulted from reduced availability of casual labour opportunities as households could not engage in many on-farm activities due to the above-normal rains that had made the soils too soggy for ploughing and/or planting.
- It had also reduced by more than 50 percent compared with 63.7 recorded in the 2017-2018 LTA as shown in the graph below.
- The reduction in ToT was indicative of a 24.5 percent decrease in household purchasing power as they were able to purchase a lower quantity of maize from the proceeds of casual labour this month compared with September.
- It also implied that household purchasing power had been eroded by more than 50 percent in comparison with normal times.

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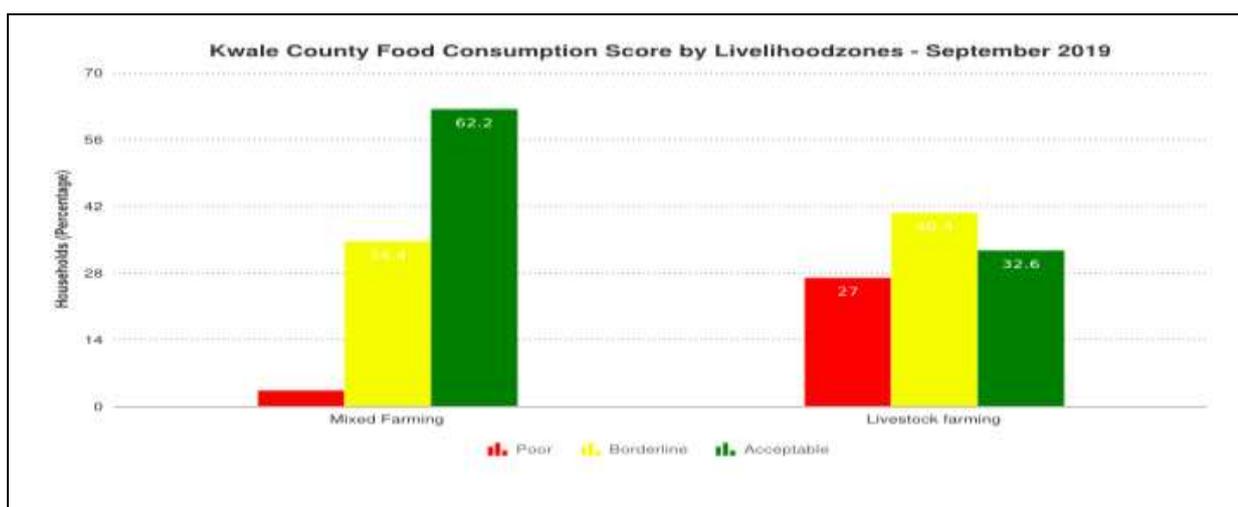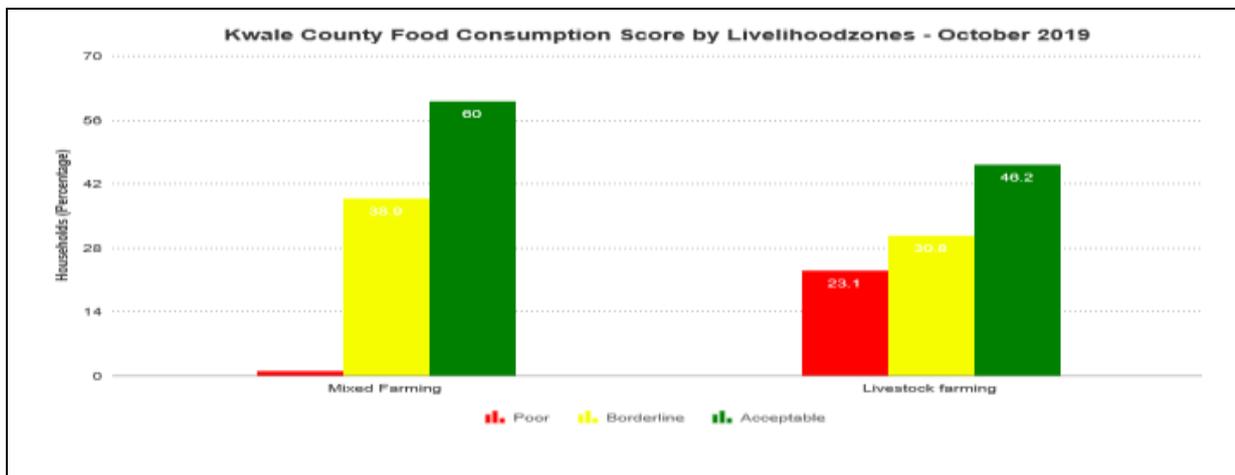
5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION
- Milk consumption maintained a stable trend in the county from an average 1.4 litres in September to 1.5 litres posted this month.
- The average consumption was within seasonal ranges compared with the 2014-2018 LTA recorded as 1.6 litres.
- Milk consumption trends in the county are illustrated in the graph below.
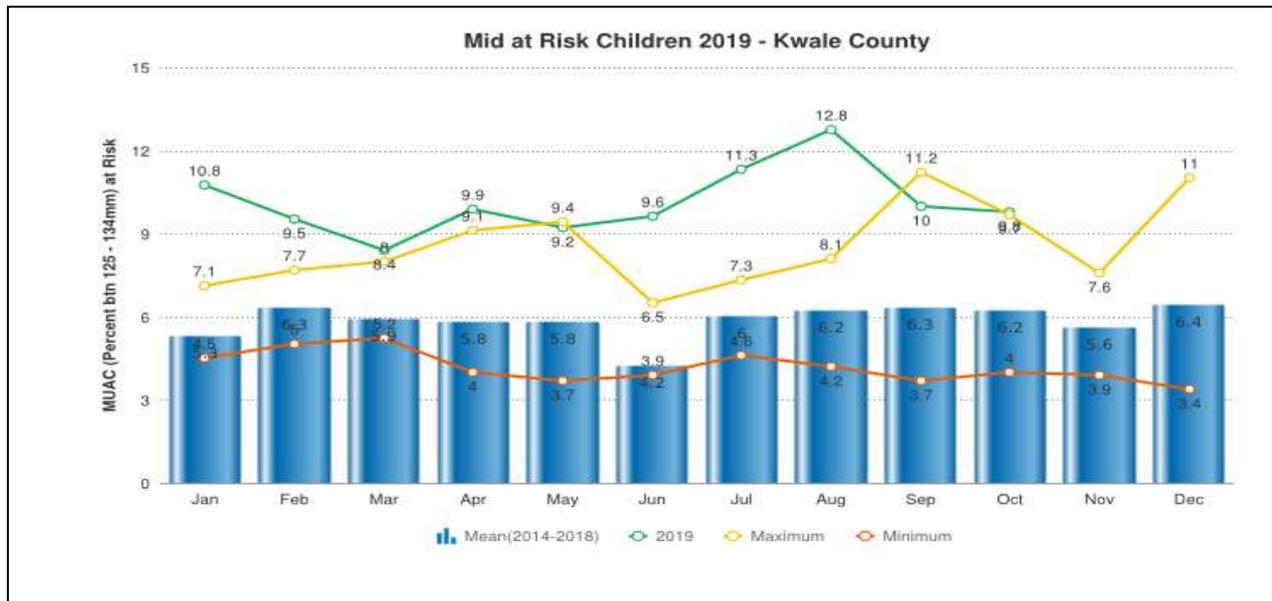

5.2 FOOD CONSUMPTION SCORE
- A stable trend was recorded in the food consumption score in the county at 38.5 in October compared with 38.0 posted in September.
- The mixed farming livelihood zone posted the highest score at 43.4 this month in comparison with 45.3 recorded in the month of September.
- The lowest score was recorded in the livestock farming livelihood zone at 33.6 in comparison with 30.7 in September.
- Therefore, the stability in the county's food consumption patterns was also reflected at the livelihood zone level, also illustrated in the graphs below.
- The graphs also provide the proportion of households in each food consumption group namely: poor, borderline and acceptable for the current and previous months for comparison purposes.
- The implication was that food frequency, dietary diversity and nutritional value of food had maintained a stable trend.

Kwale County Food Consumption Score by Livelihoodzones - October 2019

Kwale County Food Consumption Score by Livelihoodzones - September 2019

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The proportion of children at risk of malnutrition was determined by the mid-upper arm circumference and was approximated at 9.9 percent in October having maintained a stable trend from 10.0 percent recorded last month.
- Although the proportion remained stable in comparison with last month, it coincided with the highest proportion ever recorded in the county as illustrated in the figure below.
- It was also higher than the 2016-2018 LTA recorded at 6.2 percent for the month of October.
- The implication was that although the nutritional status of children had maintained a stable trend compared with last month, it was worse than normal and was the worst ever recorded in the county.

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Mid at Risk Children 2019 - Kwale County

5.4 COPING STRATEGIES

- The county's mean reduced coping strategy index (rCSI) in October was 13.1 having maintained a relatively stable trend compared with 14.1 posted in September.
- The implication was that there had not been a significant change in the frequency or severity of consumption-based coping strategies engaged to curb food gaps.
- This stability was equally reflected at livelihood zone level where the mixed farming livelihood zone posted an index of 13.2 in October compared with 14.6 in September, while the livestock farming livelihood zone recorded 13.4 compared with 13.5 during the same period.

6. CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS
o Agriculture department

- The department engaged in tractor ploughing in 745 acres against a target of 6,000 acres. The low achievement compared with the target was occasioned by excessive flooding of farms which made it difficult to plough.
- The department received a total of 26,244 coconut seedlings ready for distribution to farmers.
- Kenya Cereal Enhancement Program - Climate Resilient Alternative Livelihoods (KCEP-CRAL) had distributed maize, cowpeas and green grams to farmers through an e-voucher system. Follow-up visits to the program beneficiaries on post-harvest management was conducted during the month under review.

o Nutrition department

- The department carried out *malezi bora* campaigns in October during which routine activities including health and nutrition education programs, growth monitoring for children aged below five years and distribution of therapeutic/supplementary food. Vitamin A supplementation and deworming was also conducted in Early Childhood Development centres.
- The department began development of the county nutrition action plan to guide the implementation of nutrition activities in the county.

7. EMERGING ISSUES
7.1 Insecurity/Conflict/Human Displacement

- No cases of conflict, human displacement or insecurity was reported during the month under review.

7.2   Migration
- No migration was reported in October.

7.3   FOOD SECURITY PROGNOSIS

Reliance on markets in the county was currently higher than normal as households would ordinarily have some food stocks in store from the previous season's harvest which had failed. This has coincided with significantly eroded household purchasing power as casual labour opportunities are literally unavailable due to the prevailing weather conditions. Although the onset of the short rain season had been expected to spur increased farm labour opportunities and consequently household incomes, it has been counter-productive as the heavy rains have reduced these opportunities instead. Food access is therefore likely to be constrained in the coming comes as acreage under crop production may reduce which will impact significantly on the crop farmers who rely on this season to plant short-season crops such as cowpeas and green grams. The current conditions are also conducive for bacterial and fungal crop diseases which may further reduce crop production realized from the reduced acreage. For livestock farmers, the current rains have resulted in significant improvements in pasture and water availability which will likely sustain livestock production. However, the higher-than-normal amounts of rains currently being received in the county are equally conducive for zoonotic diseases such as the Rift Valley Fever, for which the county has been a hotspot in the past. Livestock production may therefore be compromised as a result of this. Therefore, with reduced food availability and access, significant consumption gaps are likely to be recorded in the months to come and households are likely to increase engagement in consumption-based coping strategies in frequency and severity. The proportion of children at risk of malnutrition is also likely to increase compounded by other non-food security related causes such as poor sanitation, hygiene and childcare practices.

8.   RECOMMENDATIONS
- Constant monitoring of the impact of the rains on major food-security related sectors such as:
  a. agriculture – monitor washing away of farm inputs, acreage achieved or not achieved due to flooding, bacterial and fungal disease incidences
  b. livestock – monitor loss of livestock due to floods, resurgence of Rift Valley Fever
  c. water - monitor breaching of water sources and destruction of auxiliary structures
  d. health - upscale disease surveillance mechanisms for water-borne diseases, epidemic-prone diseases, monitor destruction of toilets and health facilities
  e. education – monitor access of students to schools,
  f. roads/public works – monitor destruction of access roads and other infrastructure