National Drought Management Authority
KWALE COUNTY
DROUGHT EARLY WARNING BULLETIN FOR FEBRUARY 2018

NDMA

A Vision 2030 Flagship Project

KENYA VISION 2030

FEBRUARY 2018 EW FLAG

Drought Status: NORMAL

Shughuli za kawaida

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Normal	Worsening
Livestock Farming	Normal	Worsening
County	Normal	Worsening
Biophysical Indicators	**Value**	**Normal Range/Value**
VCI	47.01	46
State of Water Sources	4 (Declining)	5
Production indicators	**Value**	**Normal**
Crop Condition (maize and legumes)	N/A (Already harvested)	N/A
Livestock Body Condition	2 (livestock farming) 2(mixed farming)	2 (livestock farming) 1(mixed farming)
Milk Production (Litres)	2.9	3.2
Livestock Migration Pattern	No migration	No migration
Livestock deaths (from drought)	Zero deaths	Zero deaths
Access Indicators	**Value**	**Normal**
Terms of trade	51.8	35.9
Milk Consumption (litres)	1.4	1.6
Return distance to water sources (km)	2.4	2.3
Utilization indicators	**Value**	**Normal**
Nutrition Status, MUAC (% at risk of malnutrition)	7.4	5.49

Drought Situation & EW Phase Classification

Biophysical Indicators
- Very minimal rainfall was received during the month
- The Vegetation Condition Index was normal at 47.01
- The state of water sources was below normal for this time of the year.

Socio Economic Indicators (Impact Indicators)

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

Access indicators
- The terms of trade were above normal for the month.
- Milk consumption was below normal.
- Return distances to water sources for households were above normal.
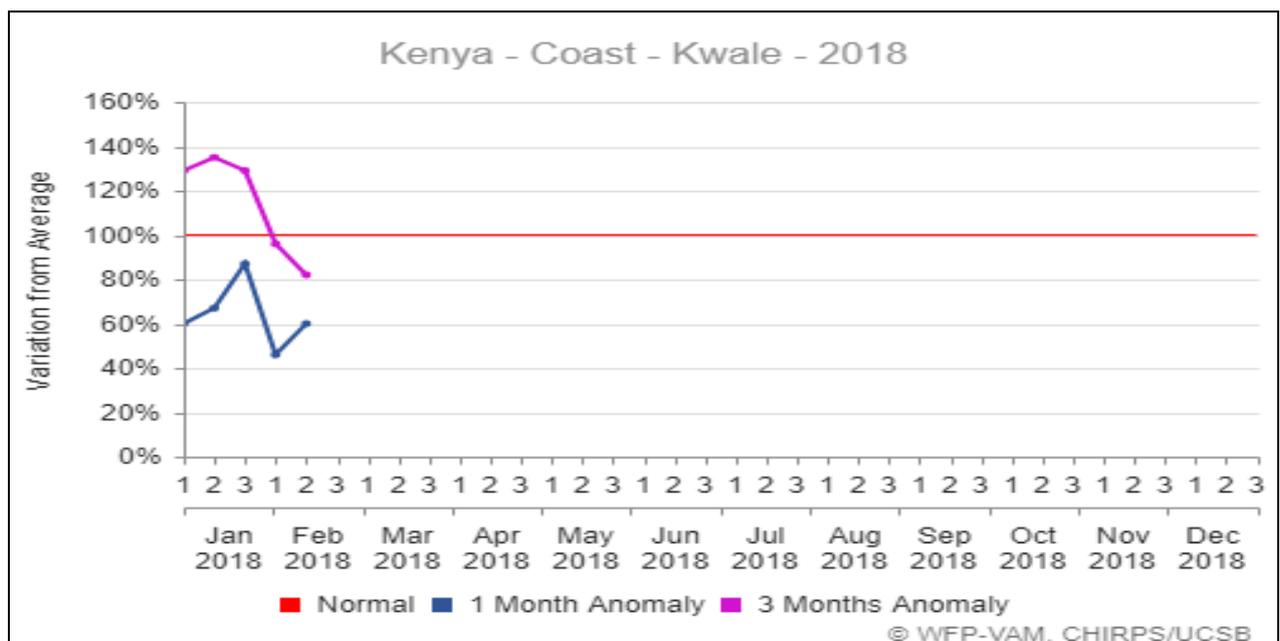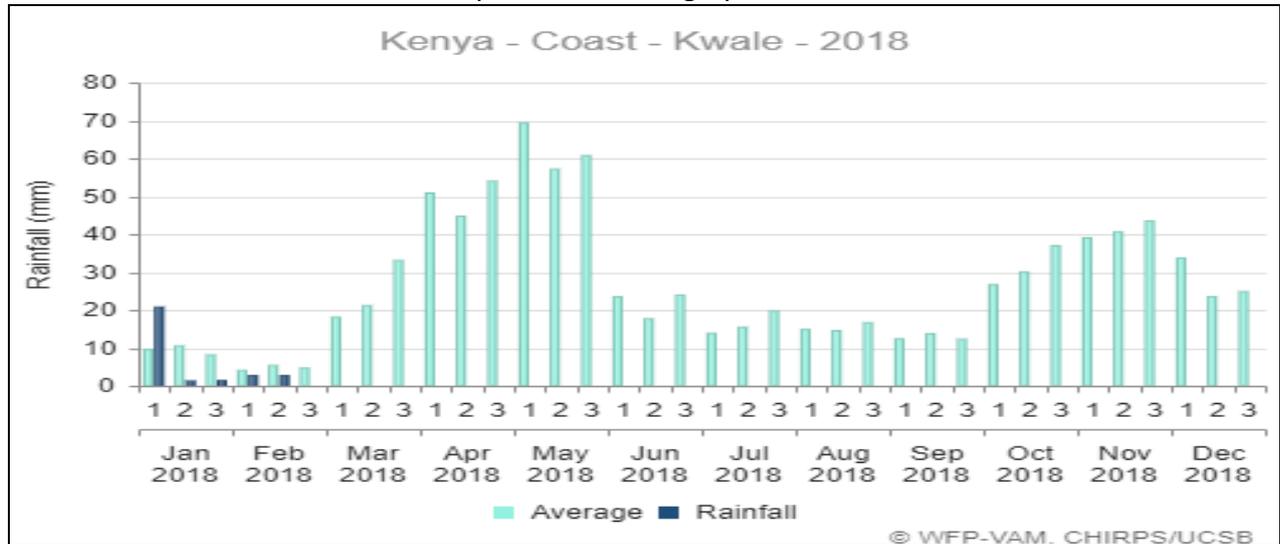
Utilization Indicators
- The proportion of children at risk of malnutrition was above-normal for this time of the year.

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

▪ An average of 2.6 mm of rainfall was received against a long-term average of 5 mm for the month. But in most past of the county, the dry spell and high temperatures continued.
▪ For the long rains, the onset is expected to be the third dekad of March 2018.
▪ The rainfall amounts have been provided in the graph below:

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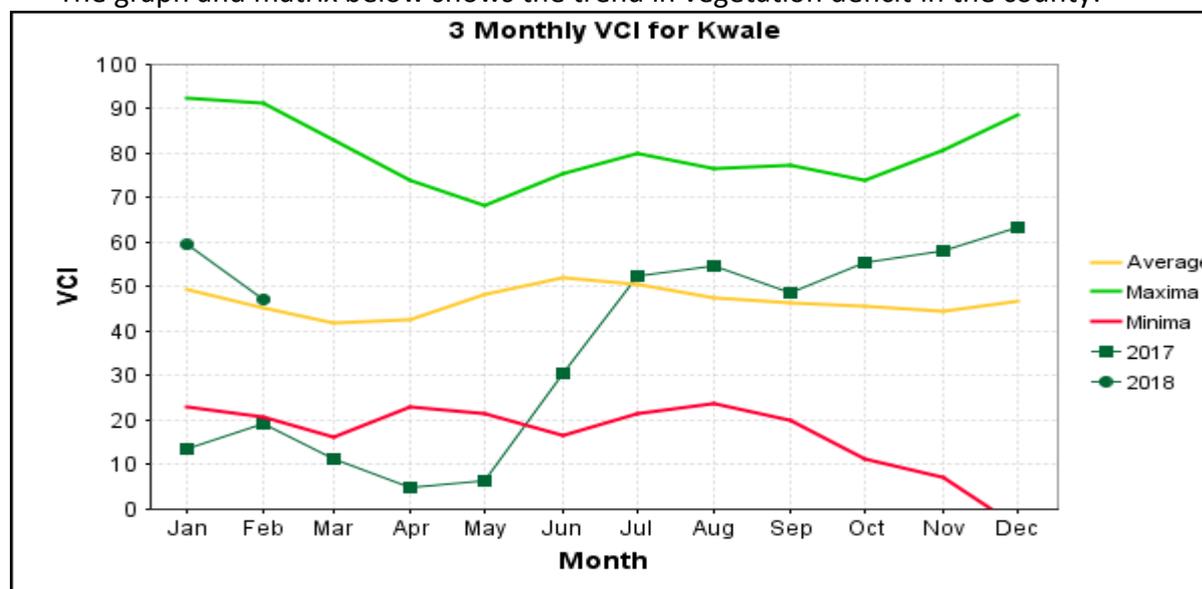# 2.   IMPACTS ON VEGETATION AND WATER
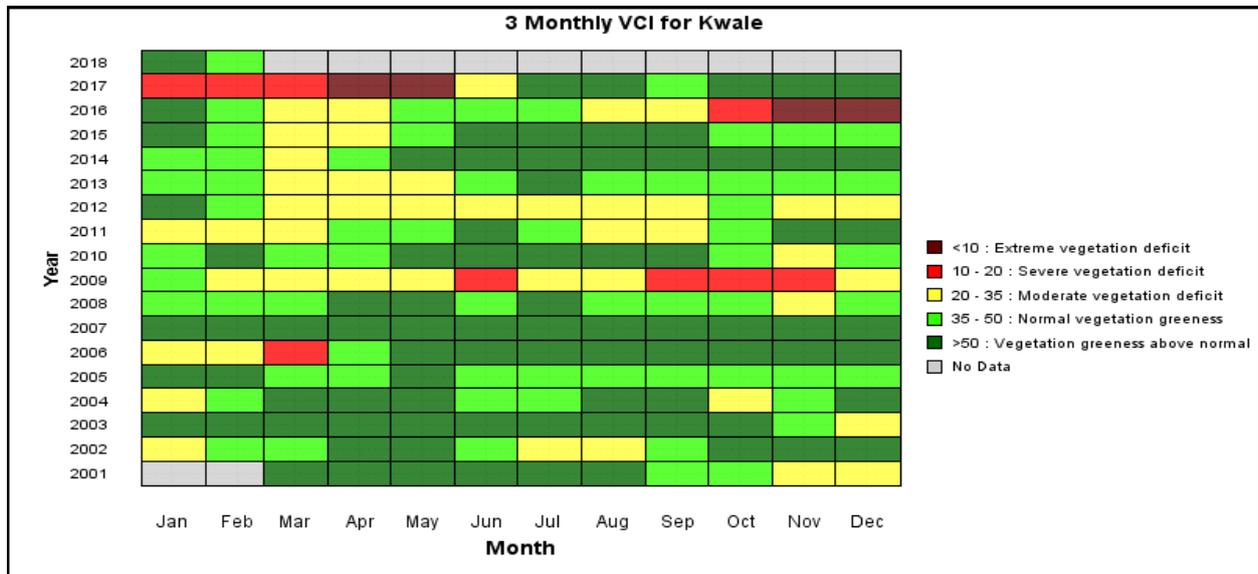
2.1   VEGETATION CONDITION

2.1 1   Vegetation Condition Index (VCI)
- The county is experiencing significant vegetation deficit this month but was classified in the normal vegetation deficit band with a VCI of 47.01 having deteriorated from 59.26 recorded in January.
- The deterioration in vegetation condition was attributed to cessation of rains in mid-December 2017 and high atmospheric temperatures which had hampered forage regeneration.
- All sub-counties registered decline in the VCI as illustrated in the graph below:

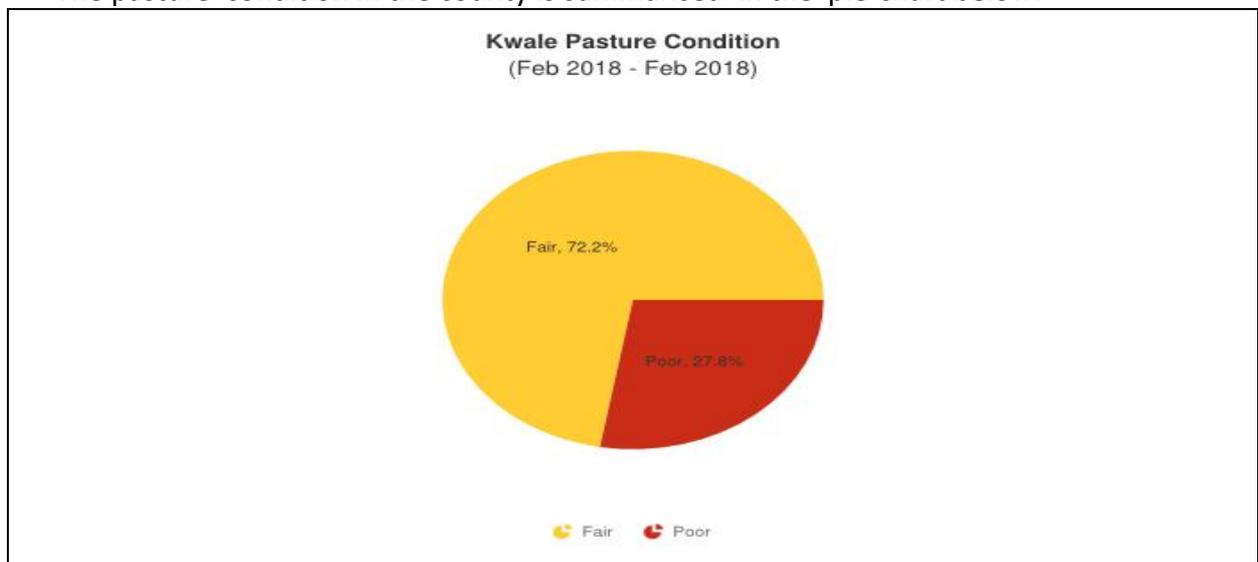| Sub-county	3-month VCI August 2017	3-month VCI September 2017	3-month VCI October 2017	3-month VCI November 2017	3-month VCI December 2017	3-month VCI January 2018	3-month VCI February 2018
Kinango	60.36	51.3	55.36	57.3	64.81	61.15	47.18
Lunga Lunga	51.73	46.03	52.32	57.67	63.05	57.41	43.91
Matuga	44.56	47.98	62.1	62.16	59.19	58.15	53.64
Msambweni	27.04	28.83	51.14	55.34	54.41	48.26	42.7
Kwale County	**54.63**	**48.9**	**55.36**	**57.91**	**63.18**	**59.26**	**47.01**

- Kinango, Lunga Lunga, and Msambweni sub-counties were in the normal vegetation condition category while Msambweni was in the above normal vegetation greenness band as indicated in the table above.
- The graph and matrix below shows the trend in vegetation deficit in the county:

KWALE FEBRUARY 2018 DROUGHT EARLY WARNING BULLETIN
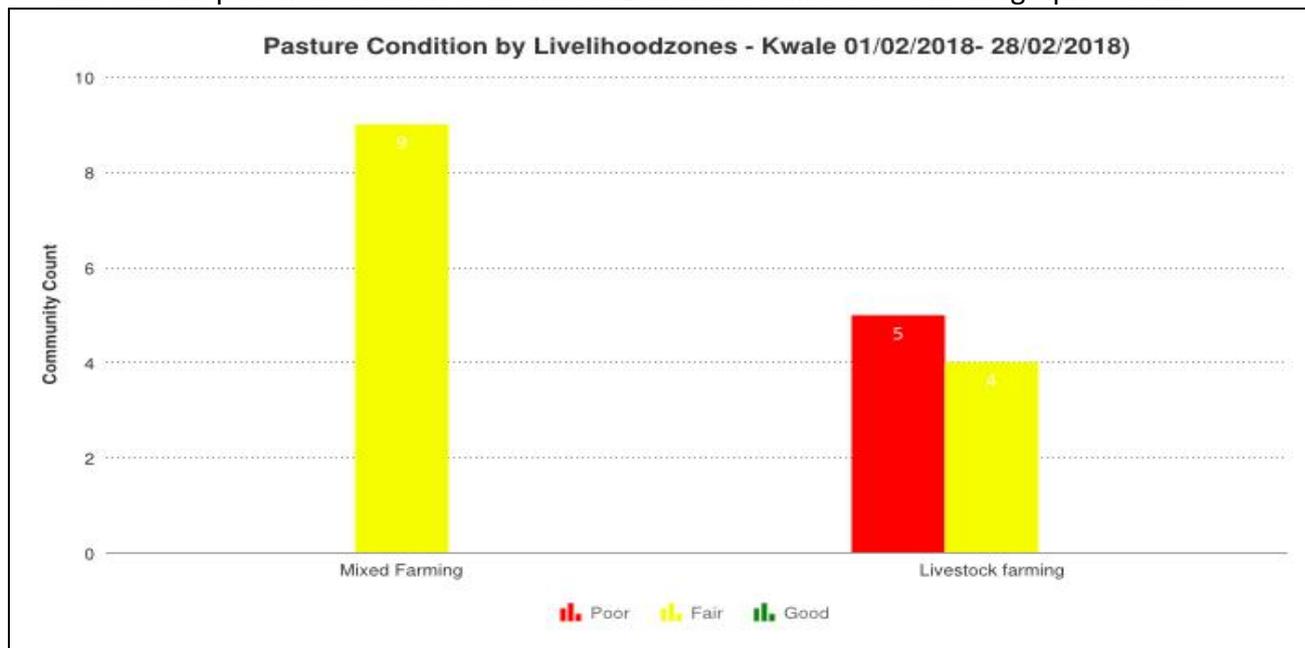
3 Monthly VCI for Kwale

2.1.2 Pasture

- 72.2 percent of the households interviewed reported fair pasture condition while the remaining 27.8 percent reported poor pasture. It is worth noting that no household reported good pasture condition this month compared to 61.1 percent the previous month. The deterioration in pasture condition is caused by dry spell which has been experienced since early January 2018.

- The pasture condition in the county is summarised in the pie-chart below:

Kwale Pasture Condition
(Feb 2018 - Feb 2018)

Fair, 72.2%
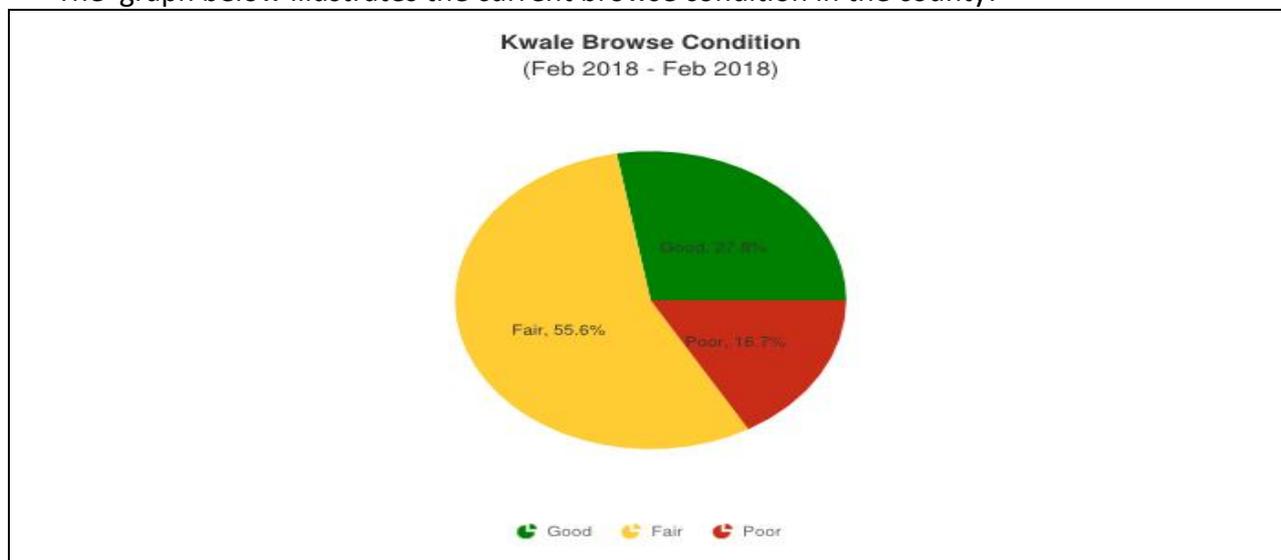
Poor, 27.8%

- Fair - Poor

- The available pasture is projected to last for two and one months in the mixed and livestock farming livelihood zones respectively.

- The current pasture condition at livelihood zone level is illustrated in the graph below:

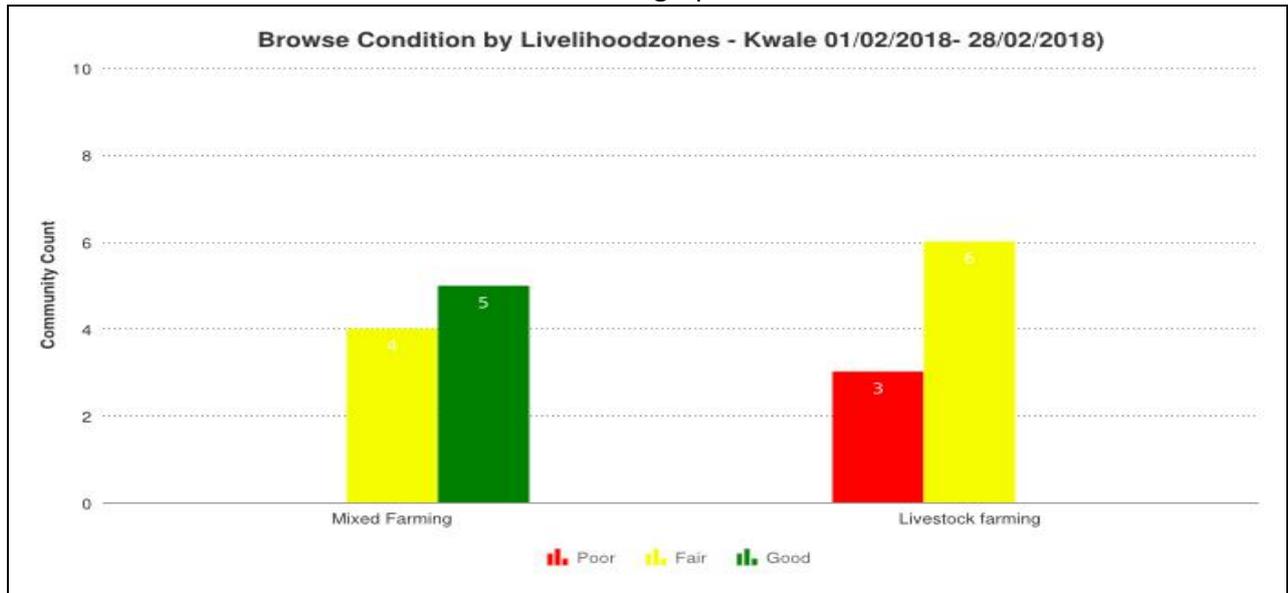Pasture Condition by Livelihoodzones - Kwale 01/02/2018- 28/02/2018)

2.1.3 Browse
- Majority (55.6 percent) of households interviewed reported fair browse condition while 27.8 percent and 16.7 percent reported good and poor browse condition respectively. The worsening conditions is brought by cessation of rains in December 2017. The available browse is likely to last for two and three months in the livestock and mixed farming livelihood zones respectively.
- The graph below illustrates the current browse condition in the county:

Kwale Browse Condition
(Feb 2018 - Feb 2018)

- At livelihood level, 55.6 percent of the respondents in the mixed farming zones reported good browse condition while none in the livestock farming zones.
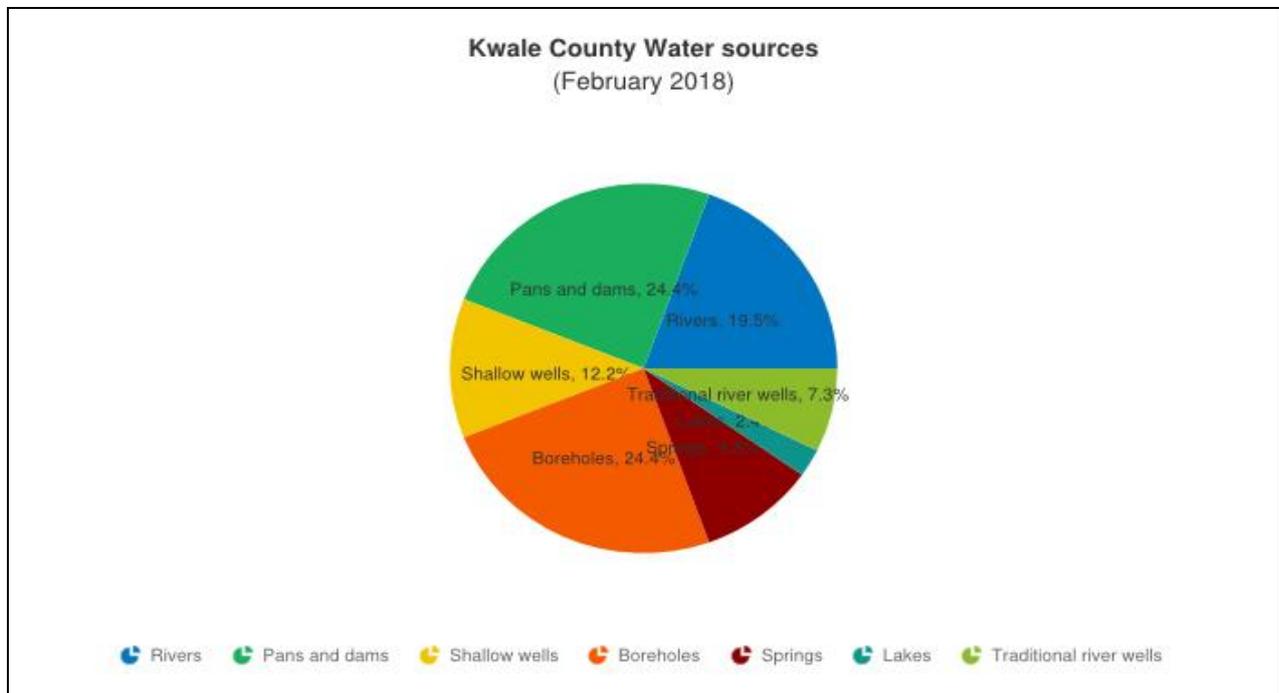- A third of households in the livestock farming zones reported poor browse condition.

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- The current browse condition is shown in the graph below:

Browse Condition by Livelihoodzones - Kwale 01/02/2018- 28/02/2018)

2.2   WATER RESOURCES

2.2.1 Sources

- The main water sources for the month were boreholes, pans and dams, rivers and shallow wells. Others included traditional water wells, lakes and springs as illustrated in the pie-chart below:

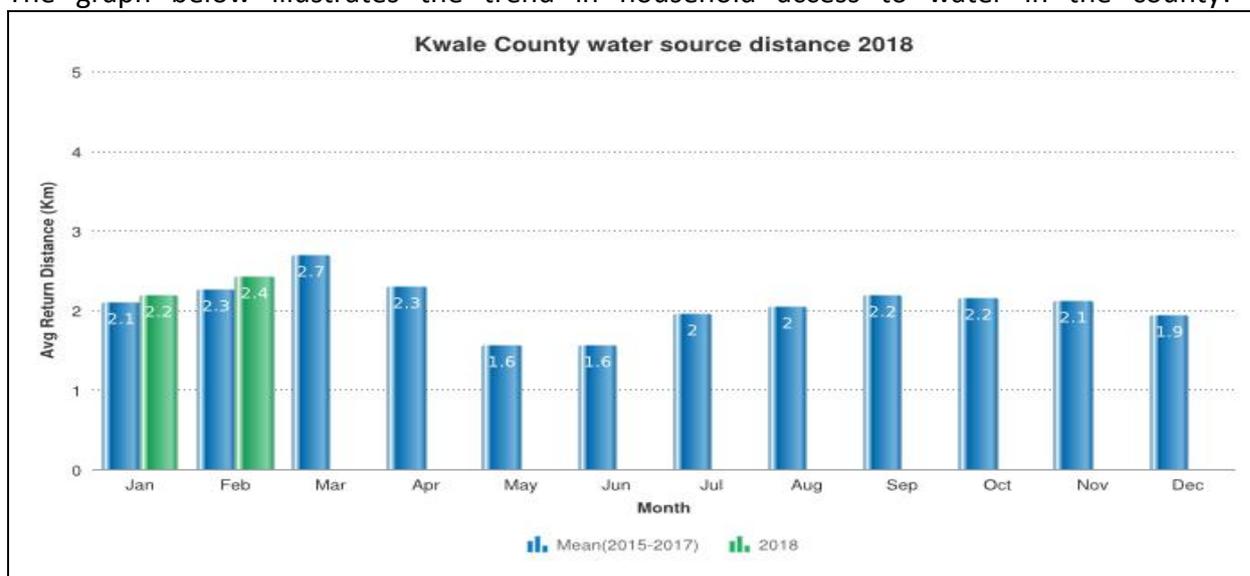**Kwale County Water sources**
(February 2018)

- Pans and dams which are the main sources of water in the livestock farming livelihood zone are less than 50 percent of their capacity and likely to hold water for approximately 2 months. In the mixed farming zones the main sources of water are shallow wells and boreholes and likely to dry up in less than 3 months unless it rains.

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- The general early warning classification categorizes the state of water resources at 4 implying it is declining largely attributed to the dry spell. (Below is a description of the state of water resources).

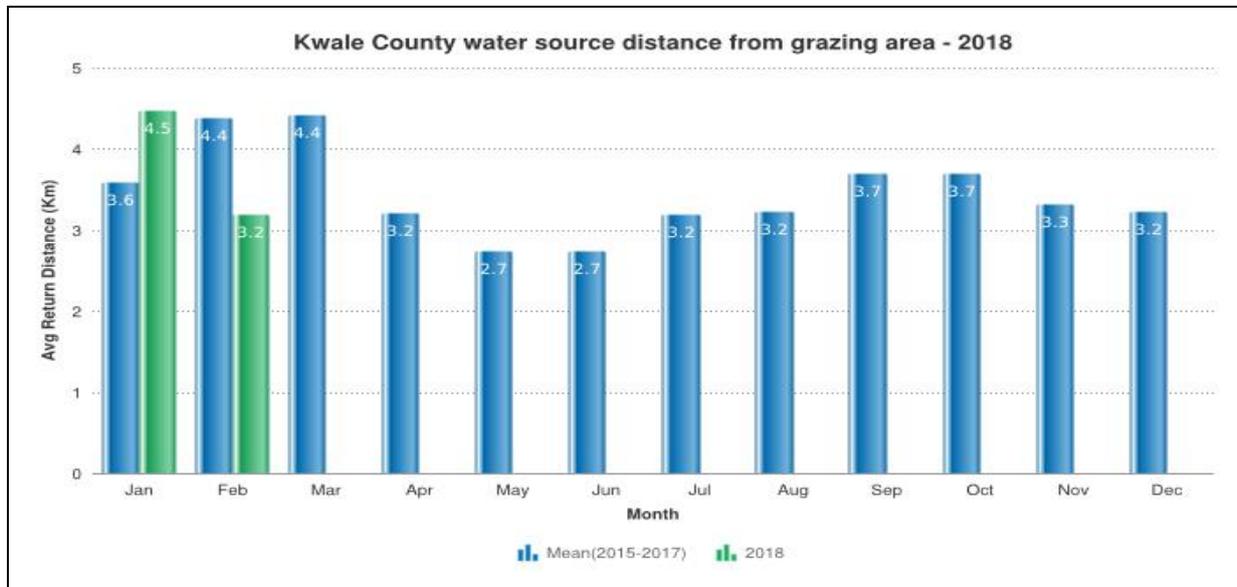| INDEX	STATE OF WATER SOURCE	DESCRIPTION
1	EMERGENCY SITUATION	All main water sources have dried up; only few boreholes still yielding significant amounts
2	STRONGLY INADEQUATE	Surface water sources have dried up while the underground water sources are yielding very little amounts of water. Breakages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

2.2.2 Household access and utilization
- The average return distance from households to the main water source increased from 2.2 km to 2.4 km this month.
- The distance was longer than the 2013-2017 long-term average (LTA) of 2.3 km.
- The graph below illustrates the trend in household access to water in the county:

2.2.3 Livestock access
- The average trekking distance to grazing areas was 3.2 km having decreased from 4.5km recorded the previous month. However, the distance was 27 percent higher than the 2013-2017 long-term average of 4.4km.
- The trend in trekking distances in the county is illustrated in the graph:
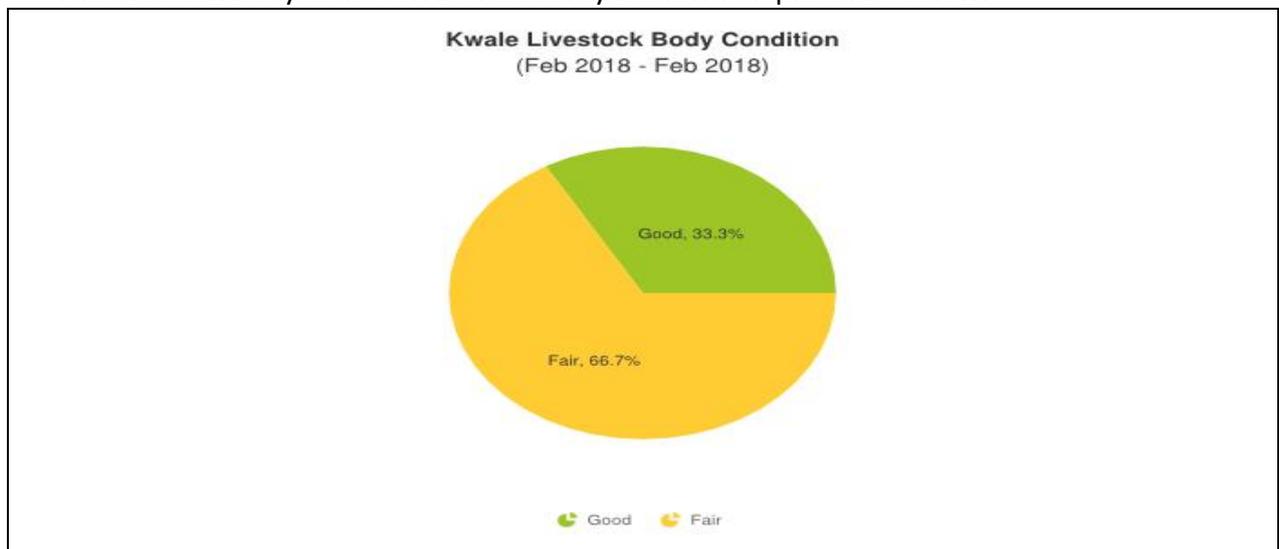
Kwale County water source distance from grazing area - 2018

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Only a third of the households interviewed reported good livestock body condition compared to two third the previous month. This deterioration is attributed to decline in quality and quantity of pasture.
- The livestock body condition in the county is shown in pie-chart below:

Kwale Livestock Body Condition
(Feb 2018 - Feb 2018)

Good, 33.3%

Fair, 66.7%

- The early warning classification for livestock body condition is 2 (moderate) for both livelihood zones.

- (See below the early warning classification table for livestock body condition).

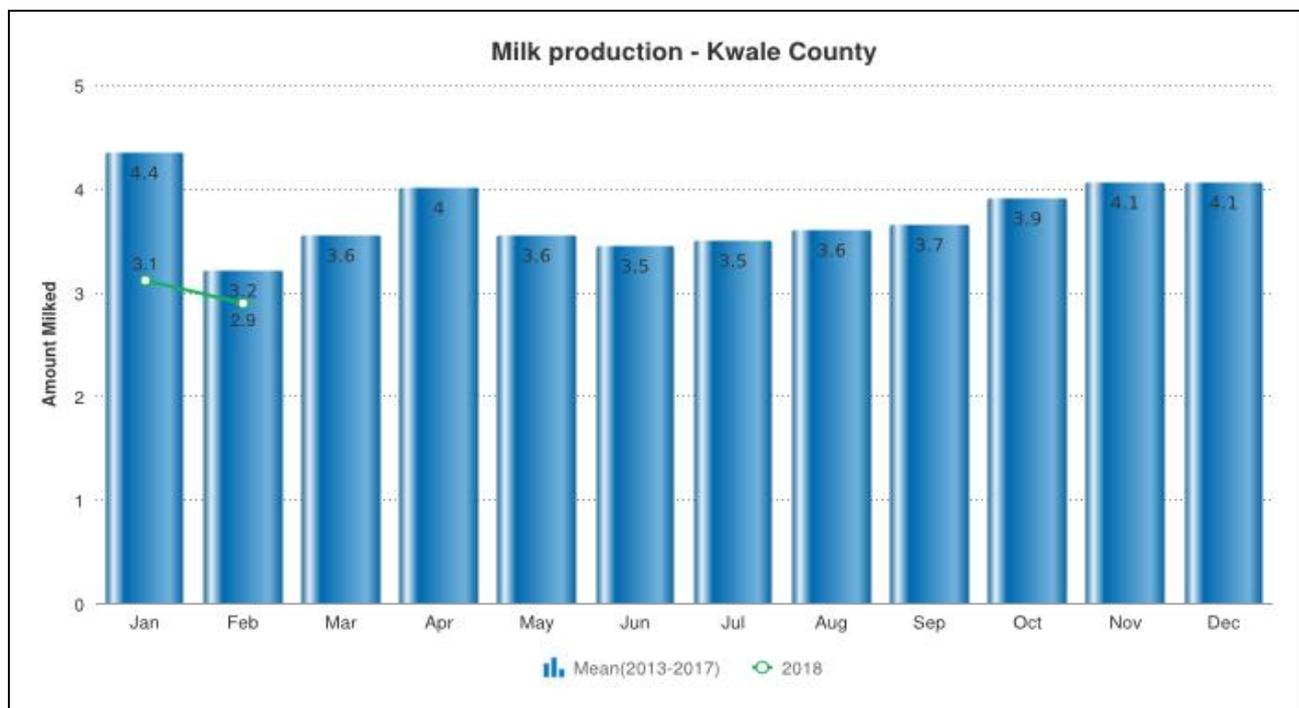| Level	Classification	Characteristics (this describes majority of the herd and not individual isolated Stock)
1	Normal	Very Fat Tail buried and in fat
		Fat, Blocky. Bone over back not visible
		Very Good Smooth with fat over back and tail head
		Good smooth appearance
2	Moderate	Moderate. neither fat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

- Given the diminishing forage as a result of the dry spell, the present livestock body condition is likely worsen till the onset of long rains season.

3.1.2 Livestock Diseases
- New Castle Disease and CCPP were also reported in Ndavaya and Kasemeni wards respectively.

3.1.3 Milk Production
- Cows remained the main producers of milk in the county similar to previous months.
- The average household milk production decreased from 3.1 litres in January to 2.9 litres in February. This lower-than-normal milk production trend is attributed to declining quality and quantity of pasture in the county.
- The milk production was 9 percent lower than the 2013-2017 LTA of 3.2 litres
- The graph below shows the trends in milk production in the county:

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3.2 RAIN-FED CROP PRODUCTION

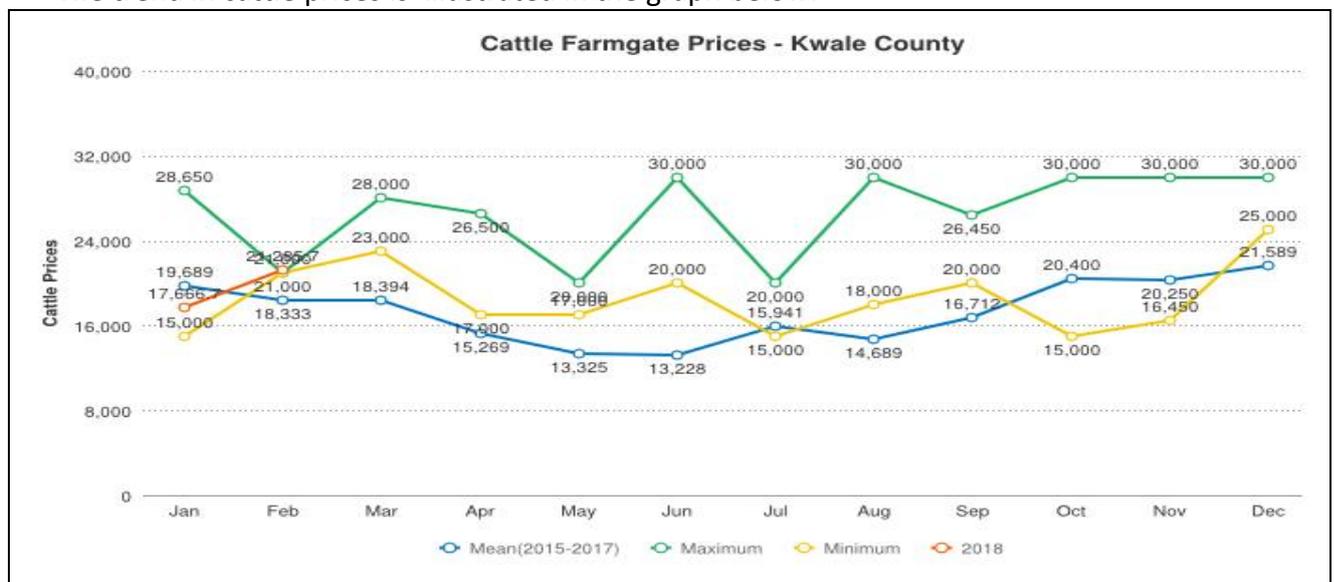### 3.2.1 Stage and condition of food crops

▪ Farmers are currently doing land preparation ready for the long rains season expected to begin in the third dekad of March 2018.

4.0   MARKET PERFORMANCE
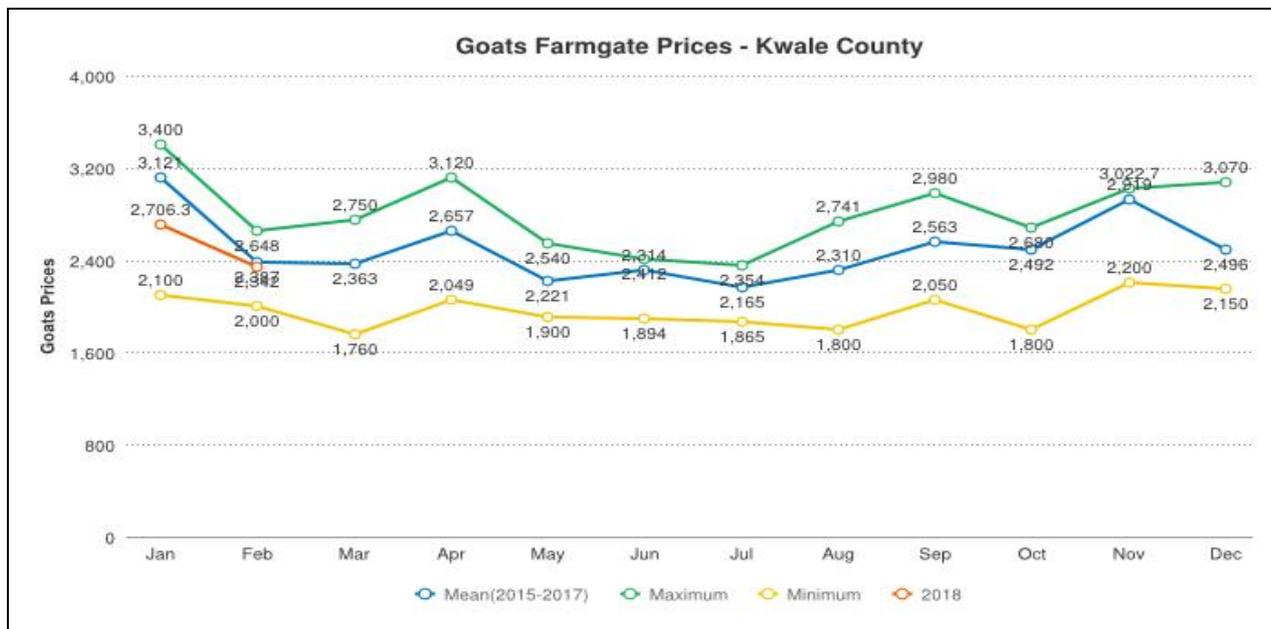
4.1   LIVESTOCK MARKETING

4.1.1 Cattle Prices

▪ The average selling price of a mature 3-year old bull slightly increased from Kshs 17,667 to Kshs. 21,286 in this reporting month.

▪ The price was 16 percent higher than the 2015-2017 LTA of Kshs 18,333

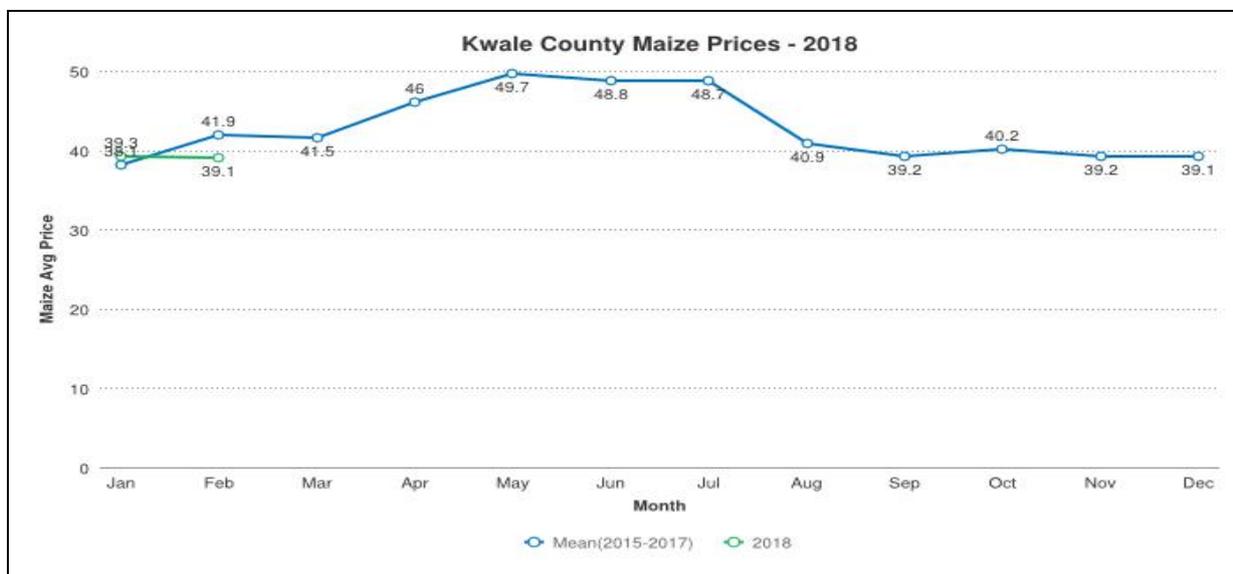▪ The trend in cattle prices is illustrated in the graph below:

4.1.2 Goat Prices

▪ The average selling price of a medium-sized three-year old goat reduced from Kshs. 2,706.3 to Kshs. 2,342 this reporting month. This is drop is attributed to foot and mouth disease and Contagious Caprine Pleuro Pneumonia reported in Ndavaya, Samburu-Chengoni and Macknon ward all in Kinango sub-county.

▪ However, the current prices were normal for this time of the year.

▪ Provided below is a graphical representation of the trend in goat prices in the county.

Goats Farmgate Prices - Kwale County
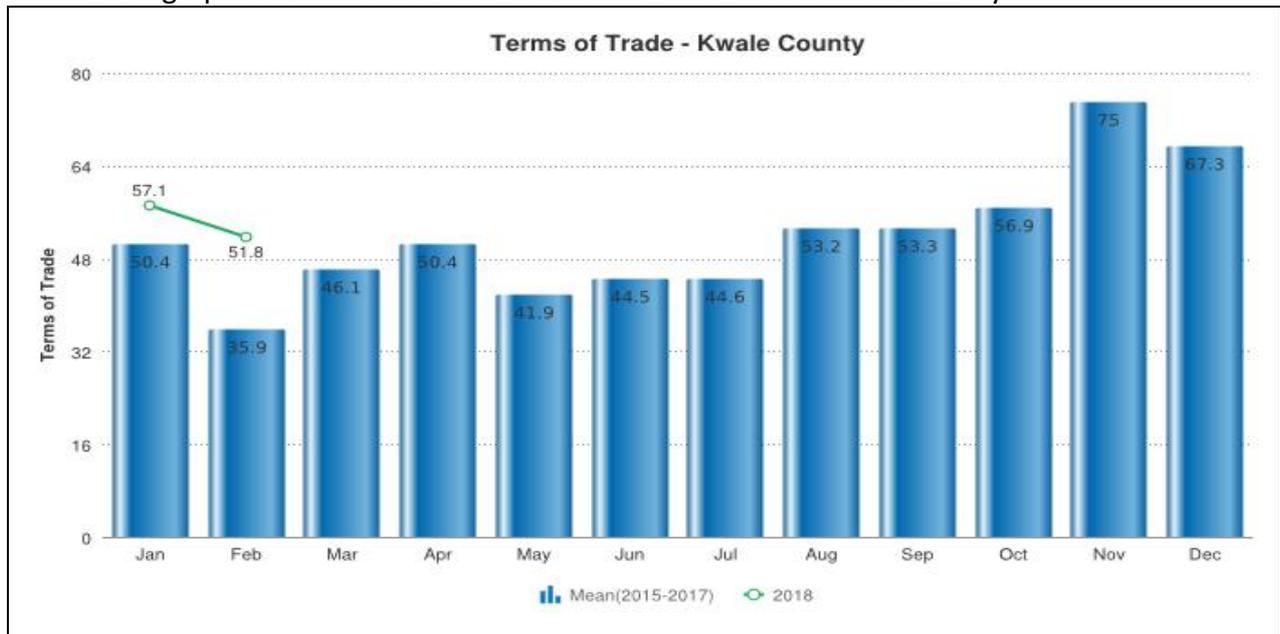
4.2   CROP PRICES

4.2.1   Maize
- A kilogram of maize was selling at an average price of Kshs. 39.1, a slight drop from Kshs 39.5 reported in January.
- The price was 6.7 percent higher than the long-term average of Kshs. 41.9
- The graph below shows the trend in maize prices in the county:

Kwale County Maize Prices - 2018

KWALE FEBRUARY 2018 DROUGHT EARLY WARNING BULLETIN

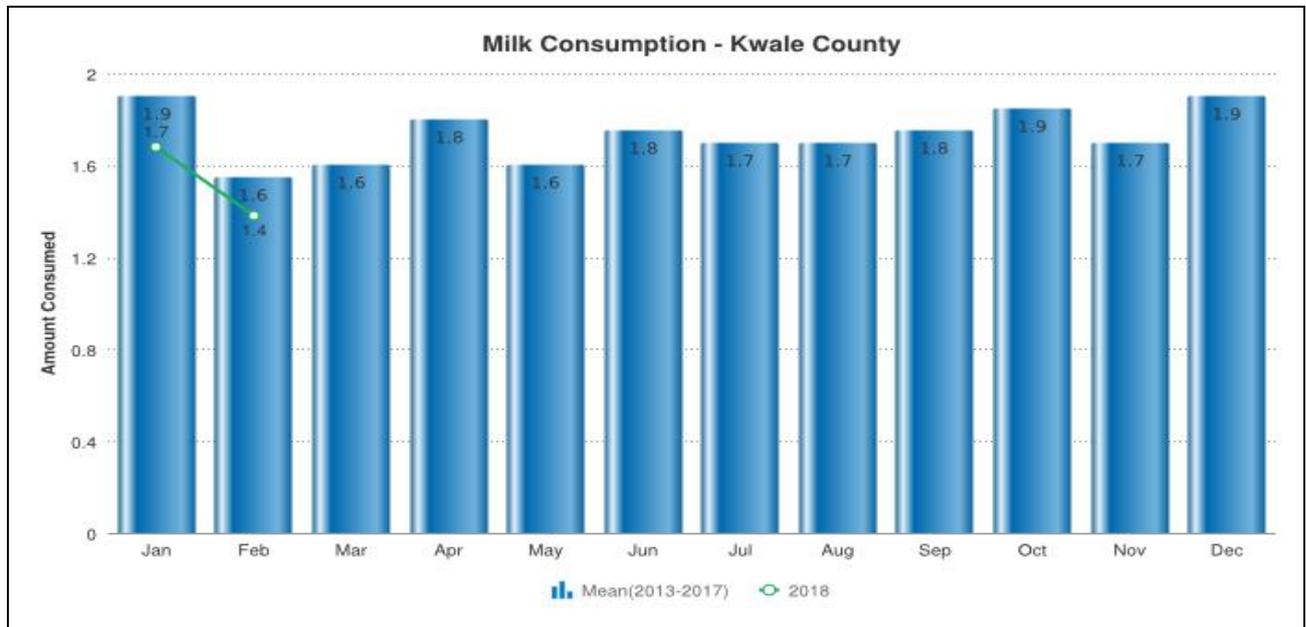## 4.3 TERMS OF TRADE (CASUAL LABOUR VERSUS MAIZE PRICES)

- Terms of trade reduced by 9.3 percent in January as households could currently purchase an average of 51.8 kilograms of maize from the proceeds of casual labour compared with 57.1 kilograms in January.
- This implies that households' purchasing power slightly weakened but was above normal for this time of the year.
- This month's terms of trade was 44.3 percent more than 35.9 kilograms recorded in the 2015-2017 LTA. This high-than-normal trend is attributed to increased activities in farms as land preparation is on-gong.
- The bar graph below illustrates the trend in terms of trade in the county:

5.0   FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

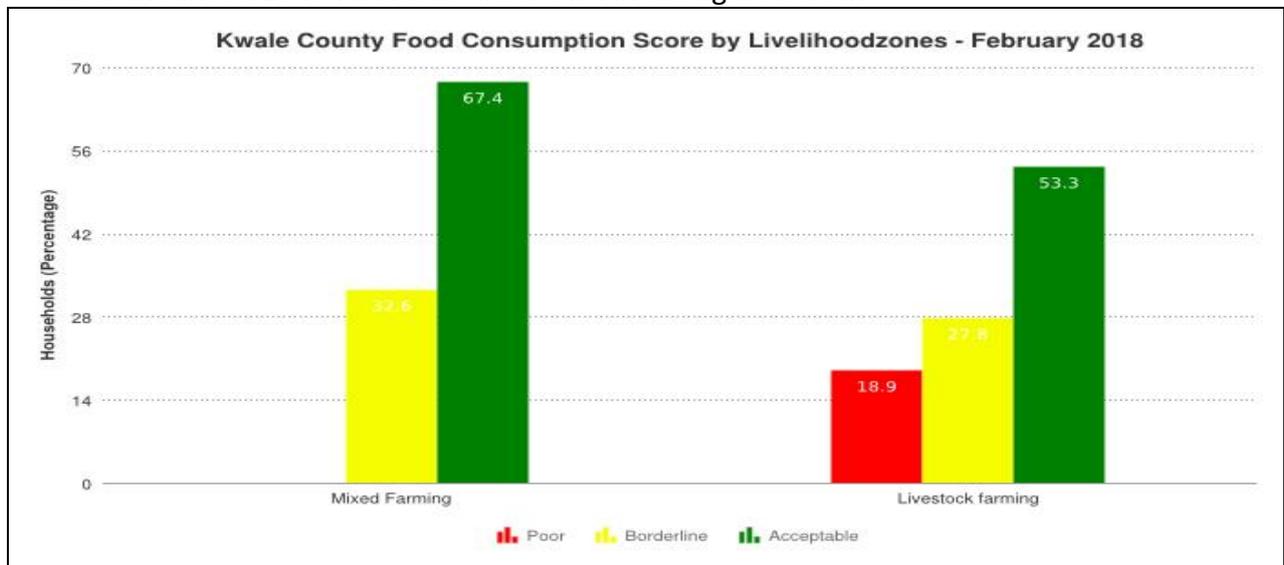- The average household milk consumption decreased from 1.7 litres to 1.4 litres recorded this reporting month. This is directly attributed to drop in milk production as a result of diminishing pastures and water.
- The milk consumption for the month was 12.5 percent lower than 1.6 litres 2013-2017 LTA and the trend is provided in the graph below:

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Milk Consumption - Kwale County

5.2   FOOD CONSUMPTION SCORE

- The percentage of households with acceptable food consumption score was 60.3 percent which is a drop from 67 percent recorded the previous month. The proportion with borderline and poor food consumption score was 30.2 and 9.5 percent respectively.
- This outcome implies that more than half of the population was consuming a staple and vegetables daily coupled with a frequent consumption of oil and pulses and occasionally dairy products, meat and fish.
- Inter-livelihood zone variations are shown in the figure below:

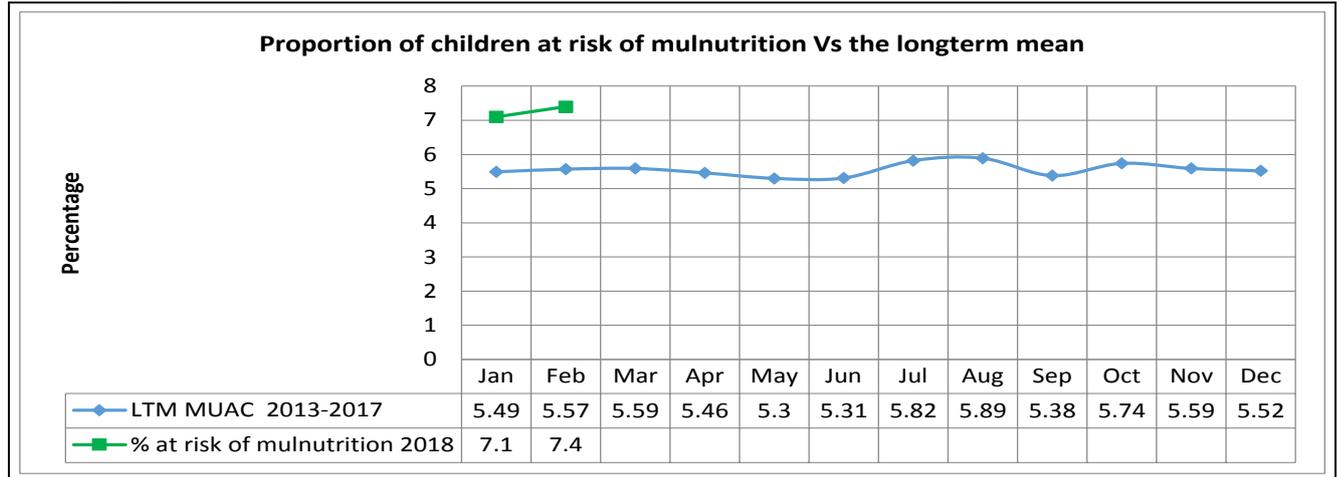Kwale County Food Consumption Score by Livelihoodzones - February 2018

- At livelihood zone level, the proportion with acceptable food consumption score in the mixed farming was 67.4 percent while in livestock farming was 53.3 percent.
- The proportion with poor food consumption score in the livestock livelihood zones increased from 16.9 percent to 18.9 percent.

KWALE FEBRUARY 2018 DROUGHT EARLY WARNING BULLETIN
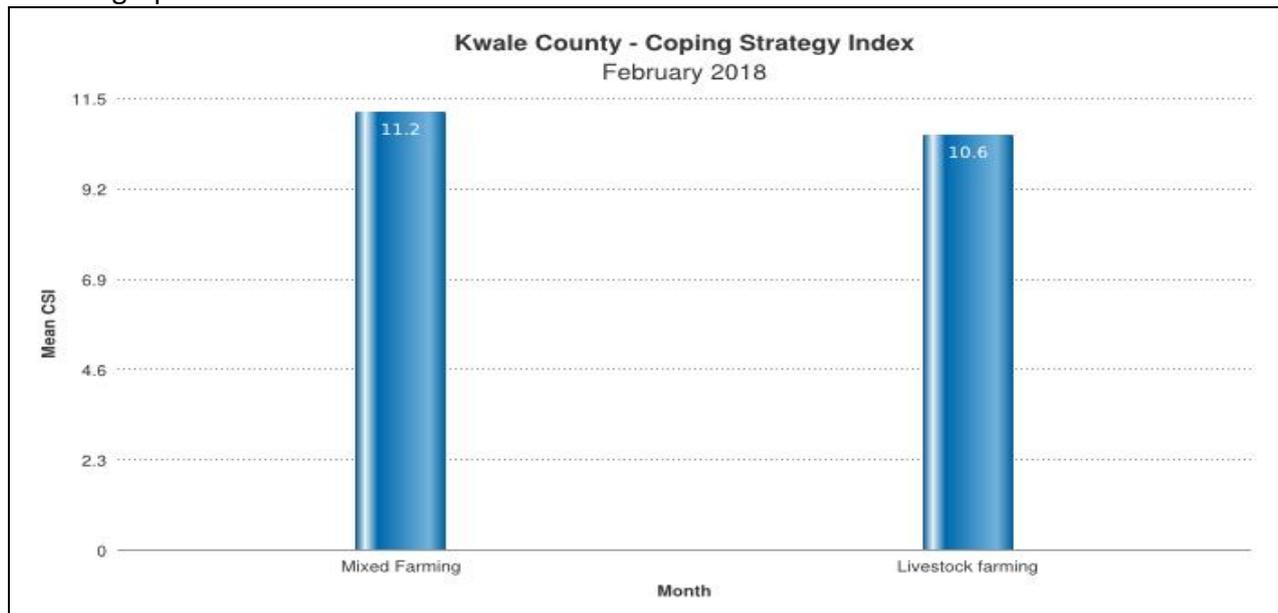
5.3   HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status
- The percentage of children aged below five years at risk of malnutrition as measured by MUAC was 7.4 compared to 7.1 registered the previous month.
- The current nutritional status was 29 percent worse than 5.5 percent of the children at risk in the 2013-2017 LTA.
- This higher-than-normal malnutrition trend in the county could be attributed to higher incidences of malaria and water borne diseases due to low uptake of water treatment tabs.
- A total of 1,041 children were sampled, of which 490 were females and 551 were males.
- The graph below shows the trend in malnutrition rates in the county:

Proportion of children at risk of mulnutrition Vs the longterm mean

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
LTM MUAC 2013-2017	5.49	5.57	5.59	5.46	5.3	5.31	5.82	5.89	5.38	5.74	5.59	5.52
% at risk of mulnutrition 2018	7.1	7.4										

5.4   COPING STRATEGIES
- The county's coping strategy index (CSI) was 10.87 similar to the previous month.
- The most commonly employed coping strategies included reduction in portion sizes of meals, relying on cheaper or less preferred food and spent savings.
- At livelihood zone level, 11.2 and 10.6 were recorded in the mixed and livestock farming livelihood zones respectively.
- The graph below shows the current situation at livelihood zone level:

Kwale County - Coping Strategy Index
February 2018

Mixed Farming	Livestock farming
11.2	10.6

6. CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

o **Water**
  - NDMA with funding from European Union is expanding the Kwa-Diki water pan in Puma ward Kinango sub-county, excavation works is ongoing.

o **Health and Nutrition department**
- The department continued with the routine activities for the department which included: screening for malnutrition, referral and treatment of the malnourished, vitamin A supplementation, administration of iron and folic acid to pregnant mothers, growth monitoring and immunization of children and promotion of good hygiene practises like hand washing in schools.

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement
- No cases of insecurity, conflict or human displacement were reported this month.

7.2 Migration
- No migration was reported this month.

7.3 FOOD SECURITY PROGNOSIS
- Currently households have harvested yields (maize, green grams and cowpeas) from the short rains season and the stocks will last for between one to two months. Also some perennial crops like cassava, coconuts and local vegetables have been harvested and will further help households meet minimal dietary requirements and boost household food availability.
- However, the current dry spell has started to affect livestock productivity owed to rapid depletion of pasture and browse. This will impact negatively on household income as less livestock products such as milk are available for consumption or sale. Also body condition of livestock will deteriorate hence fetching low prices in the markets and negatively affecting household purchasing power.
- Due to high temperatures, evaporation rates in water sources have increased and will affect water availability for households and livestock.
- Therefore, the food security situation in the county is likely to deteriorate till the next harvest expected in June 2018.

8. RECOMMENDATIONS
- Carry out of survey to ascertain the causes of the higher-than-normal levels of malnutrition across the county from August 2017 to date. **Action**- department of Health and Nutrition.
- Continued disease surveillance for CBPP, CCPP and FMD that were reported in Kinango sub-county. **Action-**Department of Veterinary Services.
- Undertake construction of rain-water harvesting structures in schools and health facilities before the onset of the long rain season. **Action** – Department of water and infrastructure
- Enhance advocacy for early land preparation and planting to abhor fall army worm infestation. **Action** – Department of Agriculture