



# 1 CLIMATIC CONDITIONS

## 1.1 Rainfall Onset

- Laikipia experienced the onset of the OND (October-November-December) rains properly on the first week of October. However, there were off-season rains since July.
- The onset of rains was earlier than normal, as it is usually expected to commence by the third week of October.

## 1.2 Rainfall Performance

- During the month of October, the county received on average 6 to 12 days of moderate to heavy rains across the Pastoral, Marginal Mixed Farming (MMF) and Mixed Farming (MF) zones, with majority of the days being of heavy rains.
- The temporal distribution of the rains was fair while the spatial distribution was fair to poor. The MMF reported 6 to 10 days of moderate to heavy showers with fair to poor distribution, the Pastoral livelihood zones recorded 8 days to 12 days of moderate to heavy rains with good to fair distribution, while the Mixed farming zone reported 7 to 11 days days of moderate to heavy rains with fair distribution.

## 1.3 Amount of Rainfall and Spatial Distribution

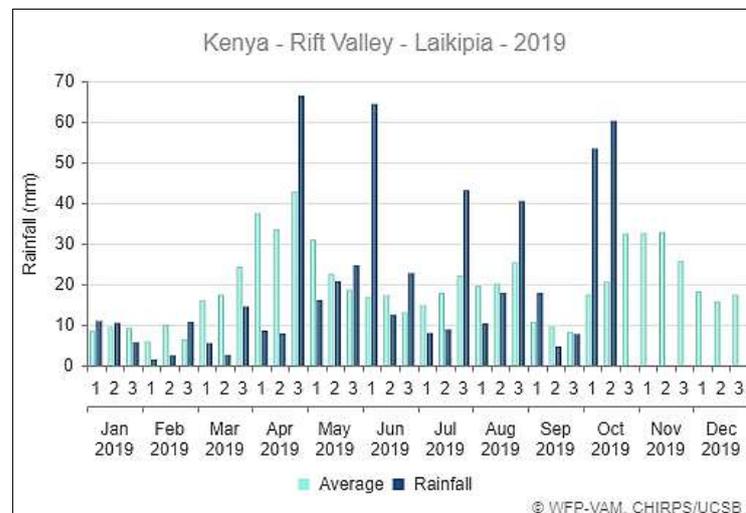


Figure 1: Rainfall (mm) for Oct 2019

Source – WFP VAM - CHIRPS

- The amount of the rains received amounted to 113.2 mm by the second dekad of October, which is 203% of the long-term average of 37.6 mm by the same time. The rainfall is way above the normal range expected for the period.

## 2 IMPACT ON VEGETATION AND WATER

### 2.1 Vegetation Condition

#### 2.1.1 Vegetation Condition Index (VCI)

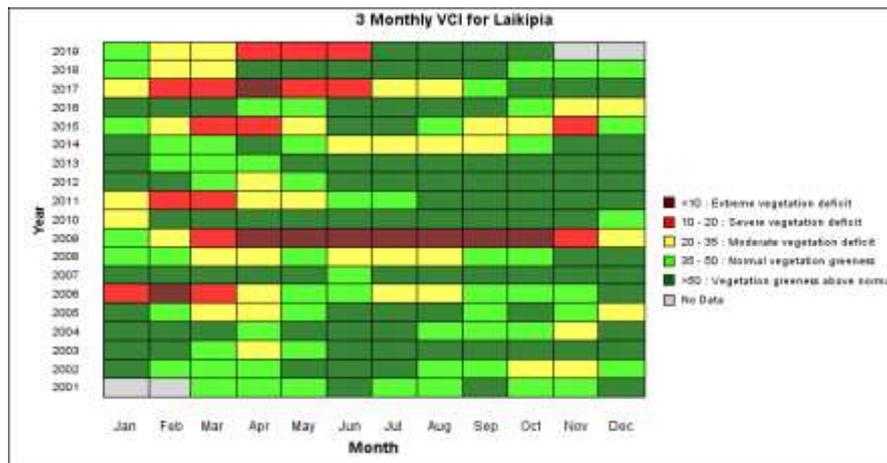


Figure 2: 3 monthly VCI Matrix Oct 2019

Source - BOKU

- The VCI matrix above indicates very good vegetation condition, which has been the case for the previous three months. However, from field observations, the vegetation condition in some pockets across the Pastoral and MMF zones was fair, which is largely attributed to moderate precipitation levels recorded in the zones.
- The actual VCI (3 month) at 70.3 was way above the normal range for the month.

#### 2.1.2 Pasture

- Key informant interviews indicated that the pasture condition was partly good (41.7%), fair (58.3%) as shown in the chart below.

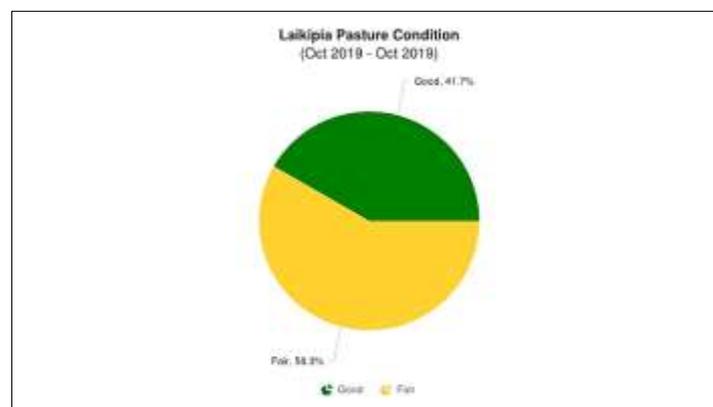


Figure 3: Pasture Condition Oct 2019

Source - KDEWS

- Compared to the previous month (good (16.7%), fair (62.5%) and poor (20.8%)), the vegetation condition recorded improvement in both quantity and quality across all livelihood zones except in some pockets of Pastoral and MMF zones that received depressed rains and had influx of livestock. The current situation is above the normal expected at this time of the year.
- The major constraint to pasture access in areas that received depressed rainfall was distances to grazing areas.

### 2.1.3 Browse

- According to the key informants interviewed, the browse condition was good (79.2%) and fair (20.8%) as shown in the chart below.

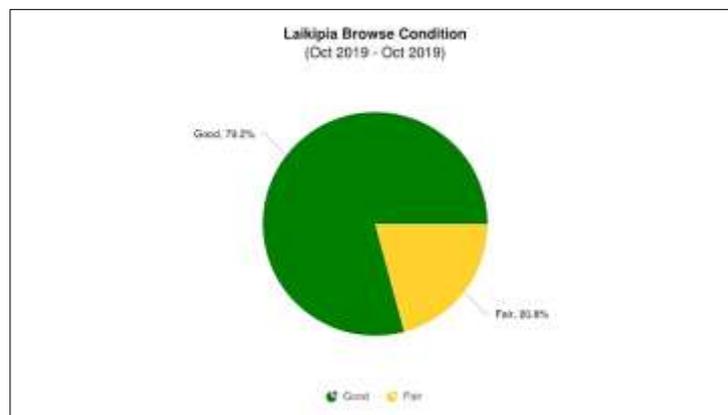


Figure 4: Browse condition Oct 2019

Source - KDEWS

- Compared to the previous month (good (37.5%) and fair (54.2%) and poor (8.3%)), the browse condition recorded a significant improvement. No major constraint to browse access was reported.

## 2.2 Water Resource

### 2.2.1 Sources

- During the month under review, the main water sources for domestic and livestock use in the County were pans and dams (30.2%), boreholes (26.4%), shallow wells (20.8%) and rivers (15.1%). Others were traditional river wells (7.5%) and springs (1.9%).

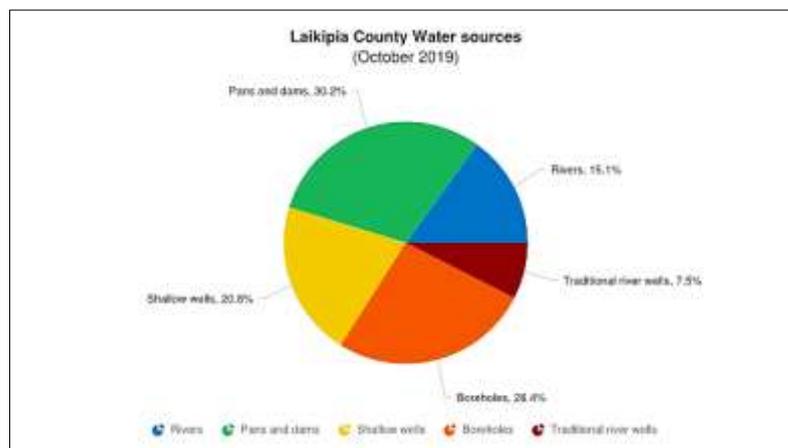


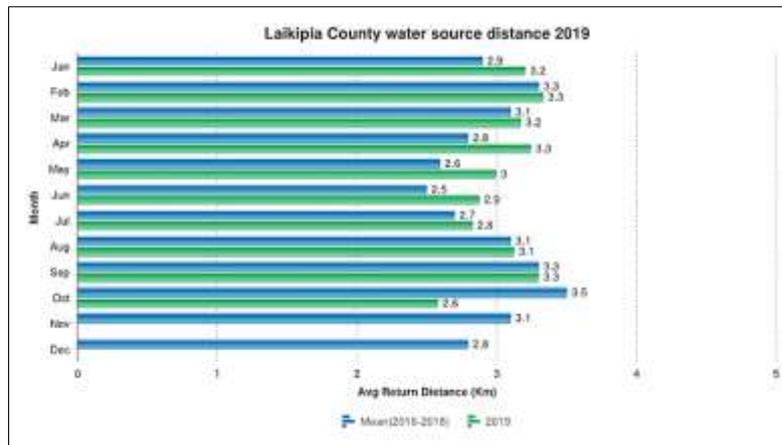
Figure 5: County Water Sources Oct 2019

Source - KDEWS

- Compared to the previous month, pans and dams (28.8%), boreholes (25%), shallow wells (21.2%) and rivers (15.4%). Others were traditional river wells (7.7%) and springs (1.9%), the water quantity is stable and there is a shift towards surface water sources, indicating an increase in precipitation levels, which is expected at this time of the year.
- The main water sources are expected to last as follows: - Pastoral (boreholes - permanent, seasonal rivers – 2 months, pans and dams – 3 months), MMF (borehole – permanent, seasonal rivers – 2 months, pans and dams – 3 months), MF (shallow wells – 2 months, traditional river wells – 4 months, pans and dams – 3 months).

### 2.2.2 Household Access and Utilization

- The average return distances from households to water sources decreased to 2.6 km in October, down from 3.3 km in September. The Pastoral zone recorded the farthest return distance of 3.8 km.



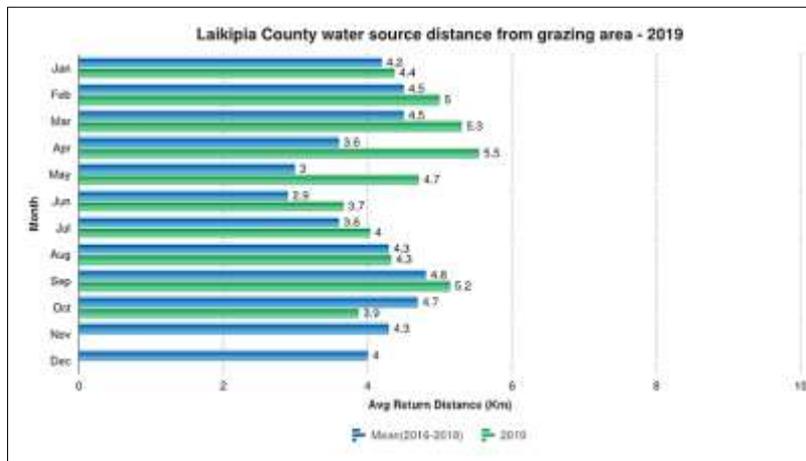
Graph 1: County Water Distances – Oct 2019

Source - KDEWS

- The current distances are way below the long-term average.
- The stable distances are attributed to the off-season rains experienced since July.
- The main constraint to water access is pollution.

### 2.2.3 Livestock Access

- The average return distance from water sources to grazing areas has significantly decreased to 3.9 km, down from 5.2 km in September. The longest return distance of 4.5 km was recorded in the Pastoral zones, which is a substantial decrease compared to 5.3 km the previous month.



Graph 2: County Water Distances to Grazing Areas – Oct 2019

Source - KDEWS

- The current distances were below the long-term average for the month. This is attributed to the off-season rains.

### **3 PRODUCTION INDICATORS**

#### **3.1 Livestock Production**

##### **3.1.1 Livestock Body Condition**

- For the month of October, the livestock body condition across the County was classified at level 4 (moderate, neither fat nor thin) and showed improvement.
- Generally, the livestock body condition was largely fair for both grazers and browsers across all livelihood zones. The body condition is above the normal for this time of the year.
- Compared to last month, the livestock body condition has shown improvement. Most grazers are neither fat nor thin.
- Compared to same time last year, the body condition of livestock is normal.

##### **3.1.2 Milk Production**

- The sampled households recorded an average milk production of 4.9 litres per household per day, a slight increase compared to the previous month at 4.8 litres. The largest share of the increase was recorded in the MF and MMF zones. This milk was largely obtained from cattle.
- The milk production is above the average levels (> 4 litres per household) expected at this time of the year.

#### **3.2 Rain-fed Crop Production**

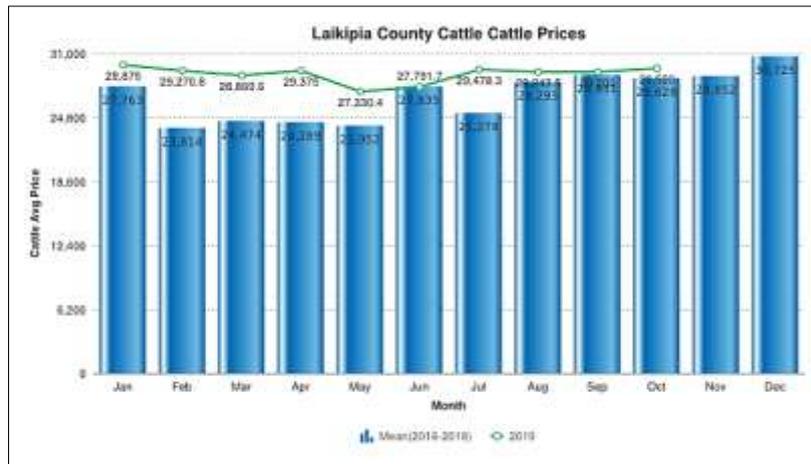
##### **3.2.1 Stage and Condition of Food Crops**

- In some places in the MMF zone, maize growth ranged from germination to 25 inches for those who planted before onset and after onset. Beans were at vegetative stage; potatoes were at first moulding whereas wheat was at 15 inches. In other areas in the same zone, drying maize was still on the farms (due to the previous off-season rains). In these areas, some of the maize did not fill up well hence likelihood of low harvests. In the MF zone, maize was mature and drying while in other areas, it was nearing maturity and was likely to rot because of heavy rains. Wheat was at harvesting stage and farmers were experiencing challenges due to the rains. For some pockets of the Pastoral zone where they do farm, all crops were at germination stage.
- Casual labour is available in plenty at this time.

## 4 MARKET PERFORMANCE

### 4.1 Livestock Marketing

#### 4.1.1 Cattle Prices (Market)

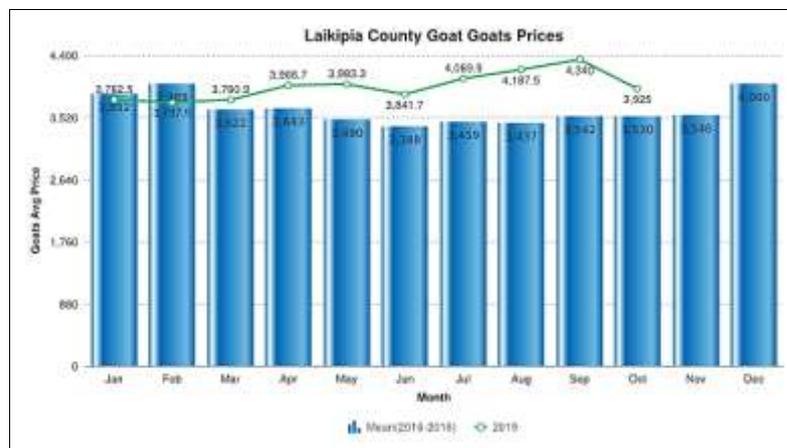


Graph 3: County Cattle Prices - Oct 2019

Source - KDEWS

- During the month under review, the County recorded an average cattle price of Kshs. 29,500 at the markets, more or less the same compared to the previous month. The current price is attributed to the fair body condition of the livestock on sale.
- The MMF zone recorded the highest cattle price.
- Compared to the long-term average, the current price is slightly above by 3%.

#### 4.1.2 Small Ruminants Prices (Goat)



Graph 4: County Goat Prices - Oct 2019

Source - KDEWS

- During the month under review, the average price of a goat in Laikipia was recorded at Kshs. 3,925; a slight (6%) decrease compared to the previous month. The decrease in goat price was attributed to the increased supply at the markets.
- The lowest goat price was recorded in the MMF zone.
- Compared to the long-term average, the current goat price was higher by 11% hence above the normal range for the period.

## 4.2 Crop Prices

### 4.2.1 Maize (market price)

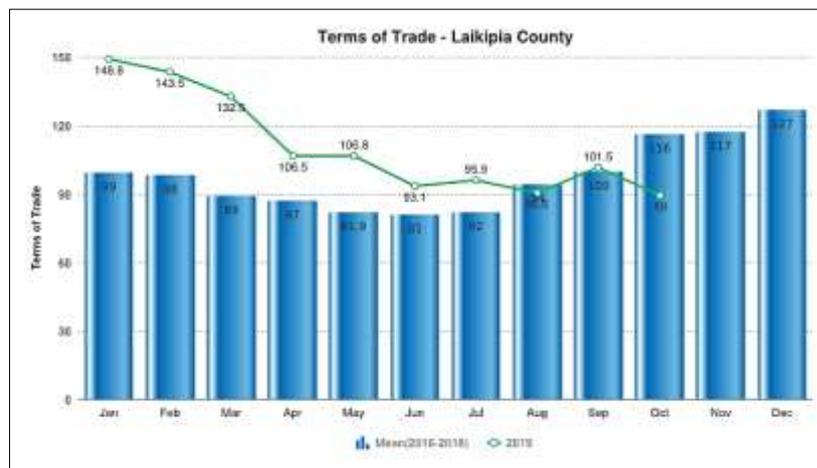


Graph 5: County Maize Prices – Oct 2019

Source - KDEWS

- The average maize price of Kshs. 44 per Kg was recorded at the markets as shown above, a slight (3%) increase compared to the previous month. The slight increase in market price was attributed to the slight decrease in maize supply both at the markets and at the household level.
- The highest average market price of maize at Kshs.52 per Kg was recorded at Sirima market (MMF) whereas the lowest at Kshs. 35 was recorded at Timau market.
- Compared to the three-year average, the current price is higher by 37%.

### 4.3 Livestock Price Ratio/Terms of Trade



Graph 6: Terms of Trade (Goat/ Maize) - Oct 2019

Source - KDEWS

- According to the graph above, the October average price of a goat at Kshs. 3,925 was able to purchase 89 Kg of maize, a significant decrease compared to the previous month at 101 Kg.
- The current trend in the ToT (Terms of Trade) can be attributed to the increase in maize prices and decrease in goat prices at the markets. For October, The ToT has slightly shifted in favour of cereal farmers; they are able to purchase more goats for the price of maize compared to the previous month.
- When compared to the three-year average, the ToT is below the normal range for the period.

#### **4.4 Implication on Food Security**

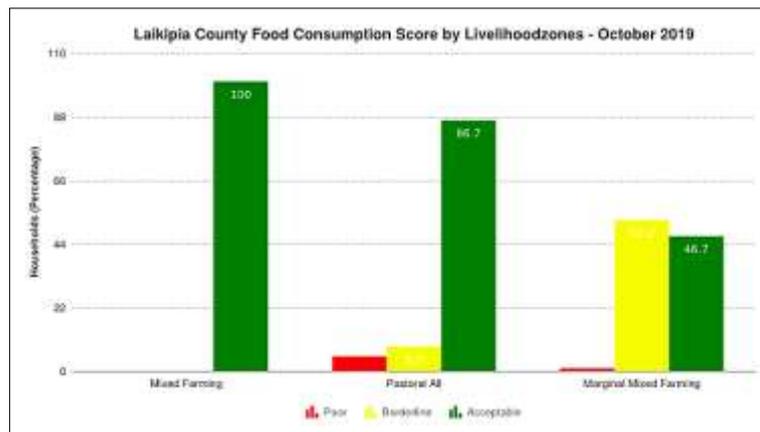
- The ongoing OND rains are above normal and have had a significant effect on the vegetation, water availability and accessibility, crop and livestock production food availability. The rains have complemented the positive effects of the previous off-season rains recorded in the June-August period.
- The heavy rains have, however, had a somewhat negative effect on areas, which still had maize and wheat on the farms and have complicated harvesting; hence, some crop yield loss may be experienced as a result.
- Some pockets of the County have not experienced heavy precipitation during the period under review i.e. parts of Sosian ward.
- Livestock productivity is within the expected levels and in some places above normal compared to same time last year. The received rains have contributed positively to indicators such as distance to water sources, forage availability and water availability.

## 5 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 Milk Consumption

- During the month under review, the sampled households recorded an average milk consumption of 2 litres per day, slightly more than the previous month, with most of the milk coming from cattle.
- The milk consumption level is within the normal (>1.6 litres) expected at this time of the year.
- For the MMF and MF zones, the larger percentage of the milk produced (57% and 69% respectively) was sold as households sought to raise income for other household needs whereas for Pastoral zones, 99.2% of the milk produced was used to supplement the diet.

### 5.2 Food Consumption Score



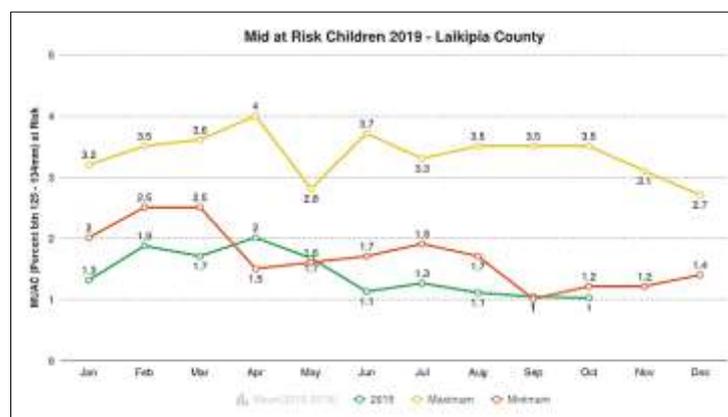
Graph 7: Food Consumption Score for Nov 2019

Source - KDEWS

- According to the graph above, all of the sampled households in the Mixed Farming livelihood zone maintained an acceptable food score. The Pastoral zone followed with an acceptable food score of 86.7%, a borderline food score of 8.5% (slightly higher than the previous month at 6%) and a poor food score of 5% (slightly higher than the previous month at 3.3%) hence indicating a stable dietary diversity albeit with a slight decrease of the same.
- 46.7% of the households in the Marginal Mixed Farming (MMF) zone had an acceptable score, 52.2% had a borderline score whereas 1.1% had a poor food score. This is a slight improvement compared to last month's 46.7% acceptable and 51.1% borderline and 2.2% poor.
- The household dietary diversity remained stable across all the livelihood zones except some areas in the Pastoral and MMF zones.

### 5.3 Health and Nutrition Status

#### 5.3.1 Nutrition Status



Graph 8: Percentage of children at risk of malnutrition for Oct 2019

Source - KDEWS

- The percentage of children under-five years of age who are at risk of malnutrition is 1%, same

as the previous month.

- There were no reported cases falling under SAM and MAM for the current month.

#### **5.3.2 Health**

- There were no reported major human diseases apart from minor cases of common cold, flu and fever affecting both adults and children across the sentinel sites during the period under review.

#### **5.4 Consumption based coping strategies**

- The most common types of the strategies employed were borrowing and purchasing food on credit, relying on well off relatives.

### **6 CURRENT INTERVENTION MEASURES (ACTION)**

#### **6.1 Non-Food Interventions**

- No non-food interventions were reported in the sentinel sites during the period under review.

#### **6.2 Food Aid**

- No food aid interventions were reported in the sentinel sites during the period under review.

## 7 EMERGING ISSUES

### 7.1 Insecurity/Conflict/Human Displacement

- There was an operation by the Kenya Police Reservists to recover animals stolen from Meru County and hidden in Mukogodo forest. It was reported that all animals had been recovered.
- Human–wildlife conflict was also reported at Survey (MMF) in Sosian Ward whereby elephants were reported to have invaded farms.

### 7.2 Migration

- No major migration movements were recorded for the reporting period. However, animals, which had migrated to Olenaisho ranch, Naibunga conservancy and Mt. Kenya forests, had not returned by the end of October.

### 7.3 Food Security Prognosis

- The ongoing above normal OND rains have had a significant effect on the vegetation, water availability and accessibility, crop and livestock production and food availability. The rains have complemented the positive effects of the previous off-season rains recorded in the June-August period
- The heavy rains have, however, had a somewhat negative effect on areas; which still had maize and wheat on the farms and have complicated harvesting; hence, some crop yield loss may be experienced as a result.
- Some pockets of the County have not experienced heavy precipitation during the period under review i.e. parts of Sosian ward.
- Livestock productivity is within the expected levels and in some places above normal compared to same time last year. The received rains have contributed positively to indicators such as distance to water sources, forage availability and water availability.
- Food consumption indicators are within the normal range albeit with some pockets in the Pastoral and MMF zones, which are experiencing minimal food stress.
- Generally, the food security outlook for the county is expected to improve in the immediate short term because of the early onset of the OND rains. The current worst-case scenario is minimal food stress in the pockets experiencing a smaller amount of precipitation compared to the general trend.

## 8 RECOMMENDATIONS

- Advise communities on sanitation and hygiene. **Action: County Govt. (Health and Water).**
- Sensitize farmers on conservation agriculture and the adoption of drought resilient crops as a way to maximise on crop yield. **Action: FAO, ASDSP, County Govt.; and private stakeholders.**
- Sensitize communities on pasture management and water conservation techniques. **Action: County Government (Livestock and Water departments).**
- Implement measures/interventions geared towards curbing human-wildlife conflicts. **Action: KWS, Local Community.**
- Enhance animal disease surveillance to curb animal production losses. Action: County Govt. – Livestock.

## REFERENCES

### Livelihood zones

MMF – Marginal Mixed Farming Zone

MF – Mixed Farming Zone

Pastoral Zone

**Table 1: Drought Phase Classification**

Normal	Alert	Alarm	Emergency
All environmental Agricultural and pastoral indicators are within the seasonal ranges	Biophysical drought indicators move outside seasonal ranges	Environmental and at least three production indicators are outside long term seasonal ranges	All Environmental, Metrological and Production indicators are outside normal ranges.
<b>Recovery:</b> The drought phase must have reached at least Alarm stage. Recovery starts after the end of drought as signalled by the environmental indicators returning to seasonal norms; local economies starting to recover			

**Table 2: Standardized Precipitation Index (SPI)**

Color	SPI Values	Meteorological Drought Category
	> +1.5 or more	Wet Conditions
	0 to +1.5	No drought
	-0.1 to -0.99	Mild drought
	-1 to -1.99	Severe drought
	<-2 and less	Extreme drought

**Table 3: Vegetation Condition Index Values (VCI)**

Color	VCI values	Agricultural Drought Category
	3-monthly average	
	≥50	Wet
	35 to 50	No agricultural drought
	21 to 34	Moderate agricultural drought
	10 to 20	Severe agricultural drought
	<10	Extreme agricultural drought

**Table 4: Livestock Body Condition**

Level	Classification	Characteristics (this describes majority of the herd and not individual isolated Stock)
5	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
4	Moderate	Moderate. neither fat nor thin
3	Stressed	Borderline fore-ribs not visible. 12th & 13th ribs visible
2	Critical	Thin fore ribs visible
1	Emaciated	Very thin no fat, bones visible
		Emaciated, little muscle left

### Definition of Early Warning Phases

The EW phases are defined as follow:

**NORMAL:** The normal phase occurs when **biophysical drought indicators (VCI and SPI) show no unusual fluctuations** hence remain within the expected ranges for the time of the year in a given livelihood zone, division or county

**ALERT:** The alert phase is when either the **vegetation condition index or the standard precipitation index (biophysical indicators) show unusual fluctuations below expected seasonal ranges** within the whole county/sub-county or livelihood zones.

**ALARM:** The alarm phase occurs when both **biophysical and at least three production indicators fluctuate outside expected seasonal ranges** affecting the local economy. The production indicators to be considered are livestock body condition, crop condition, milk production, livestock migration and livestock mortality rate.

If **access indicators** (impact on market, access to food and water) move outside the normal range, the status remains at “alarm” but with a worsening trend. Proposed access indicators include ToT, price of cereals, availability of cereals and legumes, and milk consumption. The trend will be further worsening when also welfare indicators (MUAC and CSI) start moving outside the normal ranges.

**EMERGENCY:** In the emergency phase, **all indicators are outside of normal ranges**, local production systems have collapsed within the dominant economy. The emergency phase affects asset status and purchasing power to extent that seriously threatens food security. As a result, coping strategy index, malnutrition (MUAC) and livestock mortality rates move above emergency thresholds.

**RECOVERY:** **Environmental indicators returning to seasonal norms.** The drought phase must have reached at least Alarm stage. Recovery starts after the end of drought as signalled by the environmental indicators returning to seasonal norms while production indicators are still outside the normal seasonal range but local economies start to recover. The status changes to normal once the bio physical and production indicators are back to normal range.