



# 1 CLIMATIC CONDITIONS

## 1.1 Rainfall Performance

- For the month of February, the County received on average 4 to 5 days of rainfall across the Pastoral, Marginal Mixed Farming (MMF) and Mixed Farming (MF) zones, with majority of the days being characterised by moderate rainfall.
- The MMF zone reported 2 days of light rainfall and 3 days of Moderate to heavy rainfall with fair distribution. The Pastoral livelihood zones recorded 2 days of heavy rains and 2 days of light to moderate rainfall with fair distribution while the MF zone reported 2 days of heavy rains and 2 day of moderate rainfall with fair distribution.

## 1.2 Amount of Rainfall and Spatial Distribution

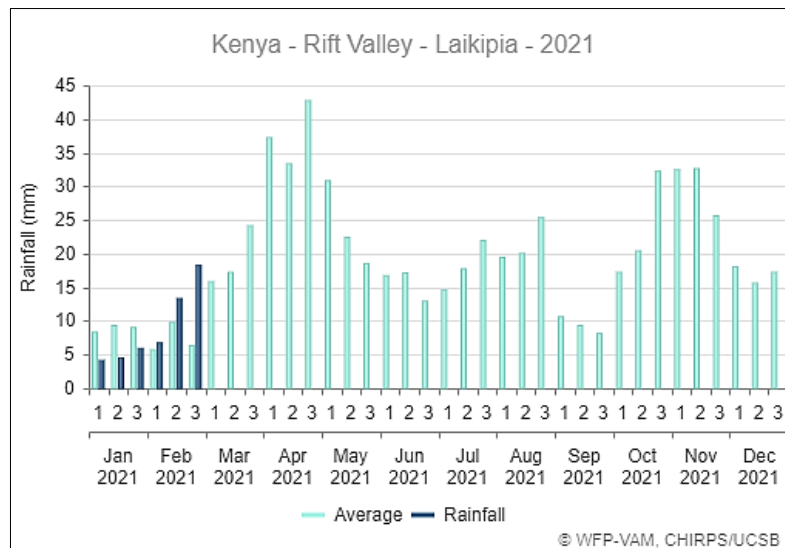


Figure 1: Rainfall (mm) for February 2021

Source – WFP VAM – CHIRPS

- For the month of February, the rains received amounted to 38.2 mm for the month, which is 175% of the long-term average of 21.8 mm by the same time and is above the normal range expected for the period.
- Compared to the previous month by the same time (14.5 mm), the amount of rainfall received has increased significantly.
- The temporal distribution of the rains was fair to poor whereas the spatial distribution was fair across the County.

## 2 IMPACT ON VEGETATION AND WATER

### 2.1 Vegetation Condition

#### 2.1.1 Vegetation Condition Index (VCI)

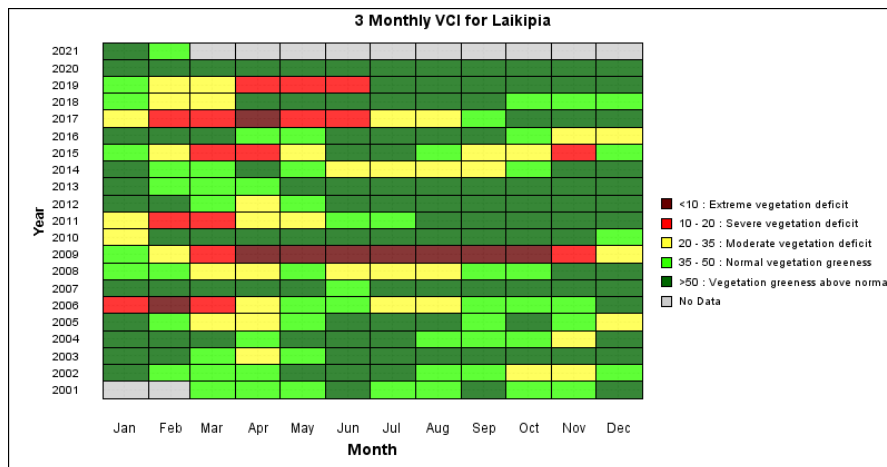


Figure 2: 3 Monthly VCI Matrix February 2021

Source - BOKU

- The VCI matrix above still indicates good vegetation condition, which has been the case since July 2019. However, from field observations, the vegetation condition in some areas across the Pastoral and MMF zones has declined and was fair to poor (especially in Ngobit, Salama, Tigithi, Segera wards, Mukogodo East and Sosian wards), which is largely attributed to low precipitation levels and long sunny spells recorded in the zones.
- The actual VCI (3 month) at 40.3 was within the normal range for the month but recorded a significant decline compared to the previous month (at 54.39). Laikipia East Sub County recorded the lowest VCI at 30.78 (moderate) down from 43.18 (normal) the previous month.

#### 2.1.2 Pasture

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

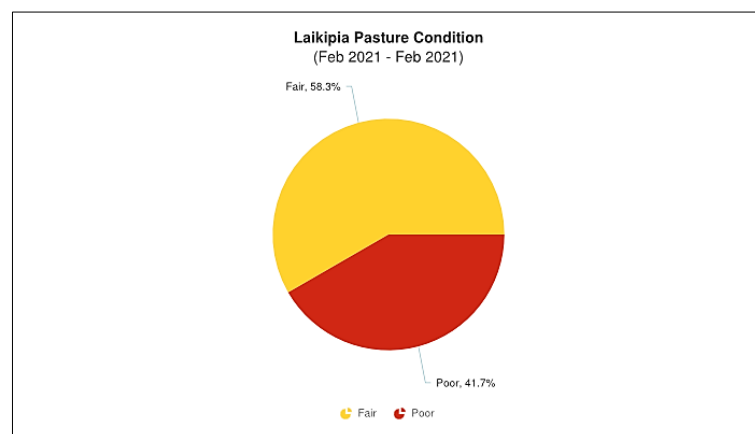


Figure 3: Pasture Condition February 2021

Source - KDEWS

- Compared to the previous month good (4.3%), fair (69.6%) and poor (26.1%) and in addition to field observation, the vegetation condition is largely fair but has deteriorated in both quantity and quality across all livelihood zones. The current trend is attributed to hot and dry conditions prevailing from December 2020 across the County. The OND rains were also below the expected levels at this time of the year. However, the county has received above normal off season rains.
- The current general situation is normally expected at this time of the year.
- There is no major constraint to pasture access.

### 2.1.3 Browse

- According to the key informants interviewed, the browse condition was good (20.8%), fair (45.8%) and poor (33.3%) as shown in the chart below.

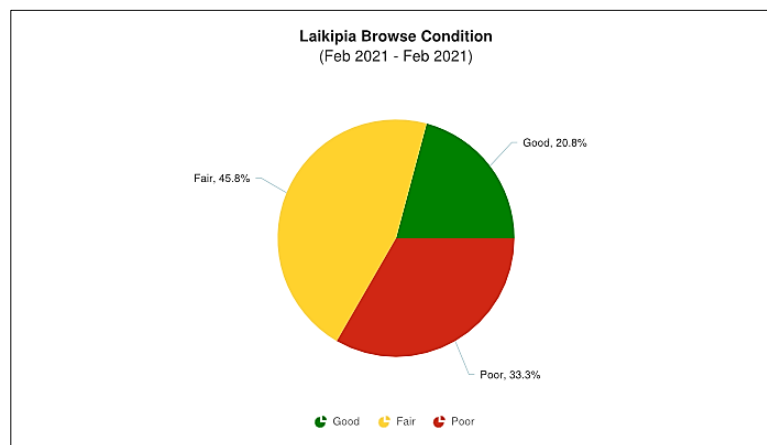


Figure 4: Browse Condition February 2021

Source - KDEWS

- Compared to the previous month: 21.7%), fair (60.9%) and poor (17.4%), the browse condition is largely fair but deteriorating in terms of quality and quantity.
- No major constraint to browse access was reported.

## 2.2 Water Resource

### 2.2.1 Sources

- The main water sources for the month under review for both domestic and livestock use in the County were pans and dams (34%), boreholes (18.9%), shallow wells (24.5%) and rivers (15.1%). Others were traditional river wells (7.5%), as shown in the chart below.

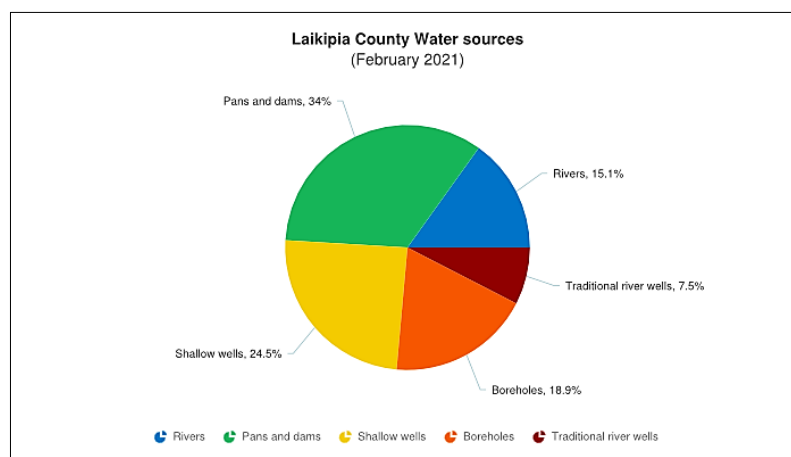


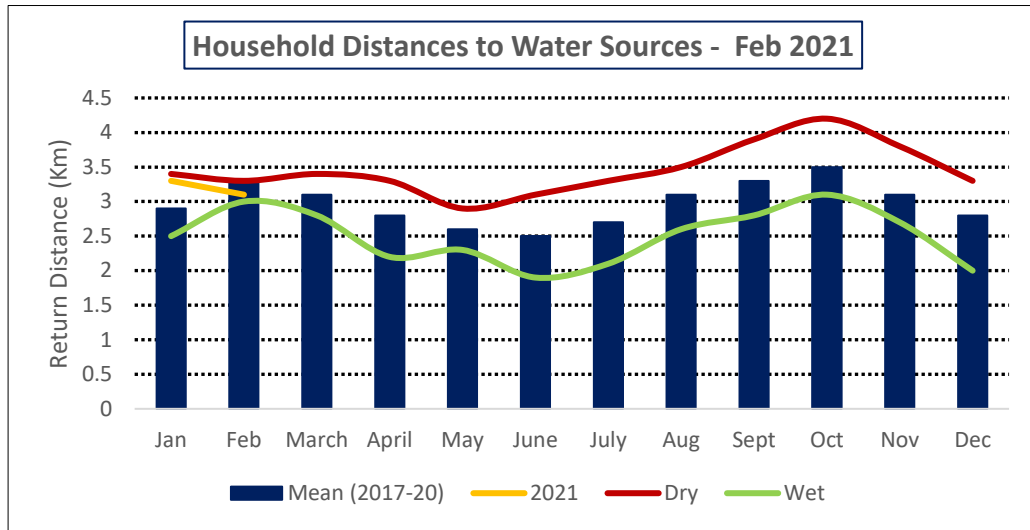
Figure 5: County Water Sources February 2021

Source - KDEWS

- Compared to the previous month: pans and dams (34.7%), boreholes (26.5%), shallow wells (14.3%), rivers (16.3%) and traditional river wells (8.2%). The water quantity is stable and there is a slight shift towards surface water sources, specifically shallow wells, and a decrease in the use of sub surface sources (boreholes and traditional river wells), indicating increased precipitation levels, which is attributed to the above normal off season rains.
- 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 – 3 months, traditional river wells – 3 months, pans and dams – 3 months).

### 2.2.2 Household Access and Utilization

- The average return distances from households to water sources was 3.1 Km in February, a slight decrease compared the previous month (at 3.3 Km). This trend can be attributed to the above normal off-season rains. The MMF zone recorded the farthest return distance of 4.2 Km.



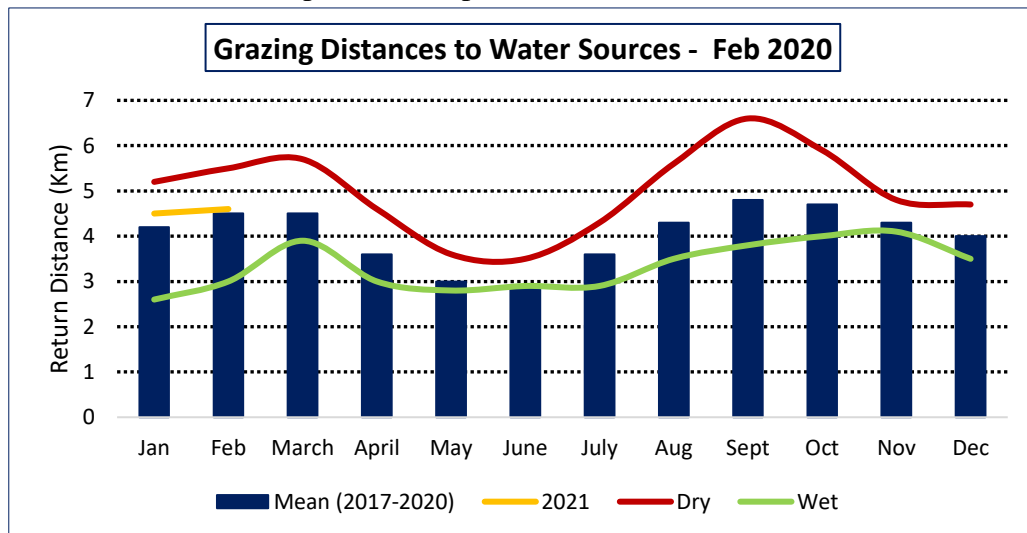
Graph 1: County Water Distances – February 2021

Source – KDEWS

- The current distances are slightly below the long-term average for the period.
- The current trend is attributed to the off-season rains which are above normal and the previous hot and dry conditions.
- There was no notable constraint to water access at water access points.

### 2.2.3 Livestock Access

- The average return distance from water sources to grazing areas was 4.6 km, a slight increase compared to the previous month (4.5km). The longest return distance of 5 km was recorded in the Pastoral zones, more compared to the previous month (4.6 Km).



Graph 2: County Water Distances to Grazing Areas – February 2021

Source – KDEWS

- The current distances were slightly above the long-term average for the month at 4.5 Km.
- The current grazing distance is attributed to the deteriorating vegetation condition across the County.

### 3 PRODUCTION INDICATORS

#### 3.1 Livestock Production

##### 3.1.1 Livestock Body Condition

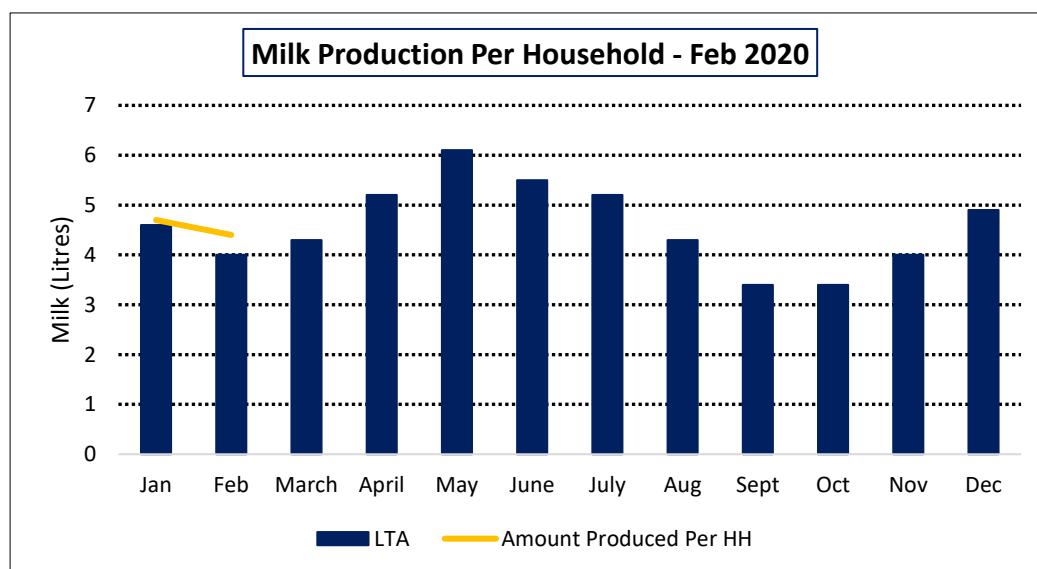
- During the month under review, the livestock body condition across the county was classified at level 4 (moderate, neither fat nor thin) to 5 (Normal).
- Generally, the livestock body condition was largely good for both grazers and browsers across all livelihood zones. The body condition is within the normal range for this time of the year except for some few pockets in the county.
- Compared to last month, the livestock body condition has remained stable. Most grazers range from moderate to normal.
- Compared to same time last year, the body condition of livestock is normal.

##### 3.1.2 Livestock Diseases and Deaths

- No livestock disease was reported at the sentinel sites during the period under observation.

#### 3.2 Milk Production

- The sampled households recorded an average milk production of 4.4 litres per household per day, a slight decrease compared to the previous month at 4.7 litres. The largest share of the increase was recorded in the MF zones. This milk was largely obtained from cattle.



Graph 3: Milk Production per Household – February 2021

Source - KDEWS

- The milk production is above the average levels (> 4 litres per household) expected at this time of the year.

#### 3.3 Rain-fed Crop Production

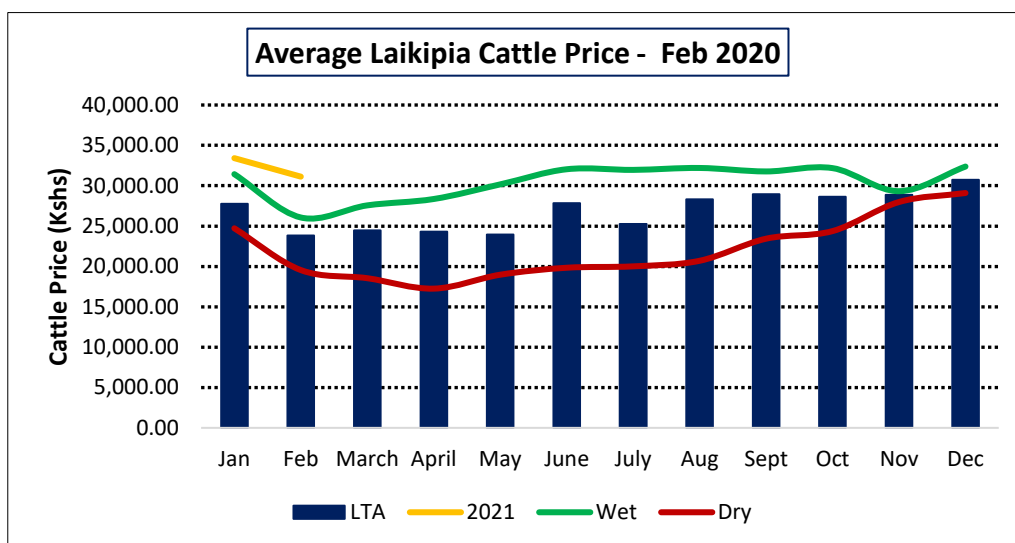
##### 3.3.1 Stage and Condition of Food Crops

- In the MF zone and some MMF zones, land preparation including tilling for the oncoming MAM rains has commenced while in other farms in MMF sowing season has commenced with the current rains received in anticipation ahead of the coming MAM season.
- Casual labour is available but daily wages have increased in some areas of the County.

## 4 MARKET PERFORMANCE

### 4.1 Livestock Marketing

#### 4.1.1 Cattle Prices (Market)

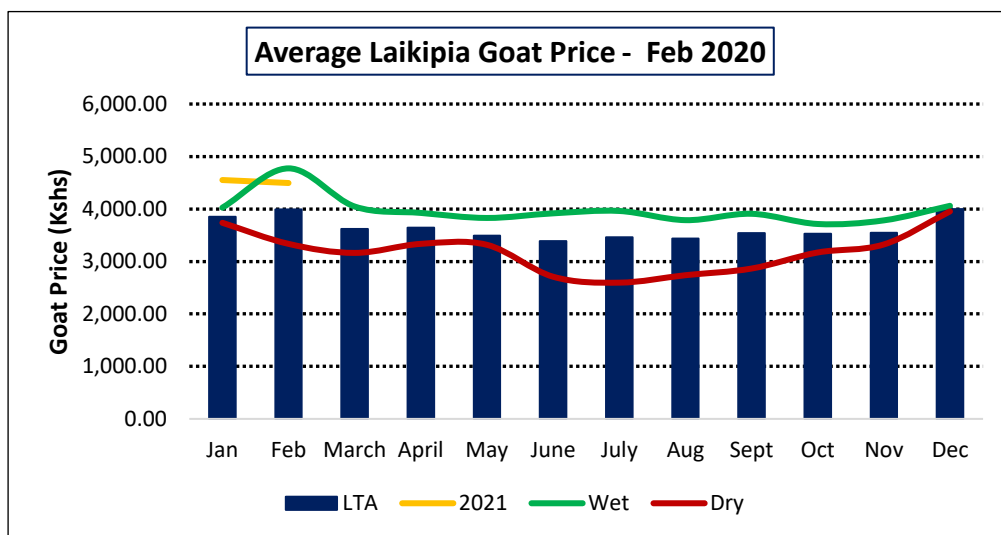


Graph 4: County Cattle Prices – February 2021

Source - KDEWS

- The County recorded an average cattle price of Kshs. 31,126 at the markets in February, same compared to the previous month at Kshs. 33,416. The current price decrease was attributed to decreased demand experienced after the festive season and increased supply at the markets. The prices are slightly more than the average expected for the period.
- The MMF zone recorded the highest cattle prices at Kshs. 40,000 (Sirima market).
- Compared to the long-term average, the current price is above what is expected for the month by approx. 30%.

#### 4.1.2 Small Ruminants Prices (Goat)



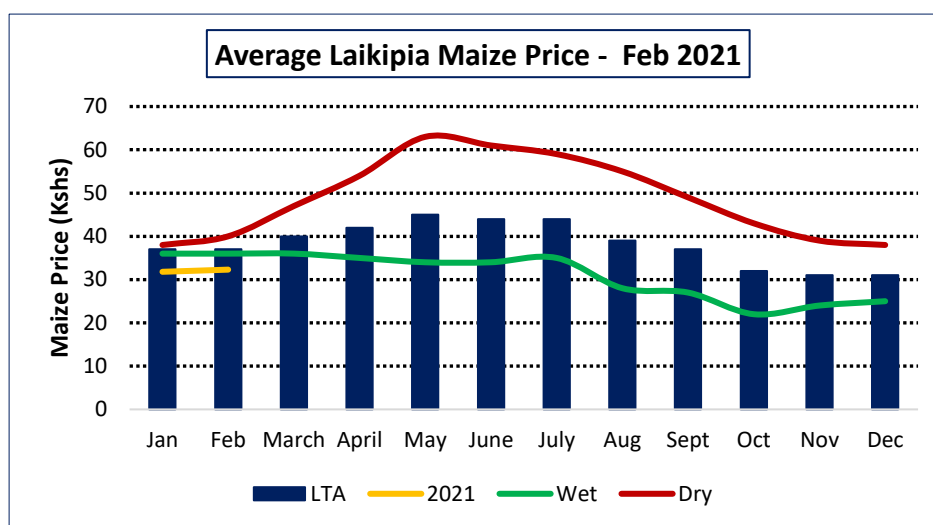
Graph 5: County Goat Prices – February 2021

Source - KDEWS

- During the month under review, the average price of a goat in Laikipia was recorded at Kshs. 4,495; a slight decrease (by 1%) compared to the previous month at Kshs. 4,552. The above average goat price was attributed to renewed demand as markets continue to normalise. The good prices can also be attributed to the good body condition.
- The highest average goat price was recorded in the MF zone at Kshs. 7,075.
- Compared to the long-term average, the current goat price was higher by 12% hence above the normal range for the period.

## 4.2 Crop Prices

### 4.2.1 Maize (market price)

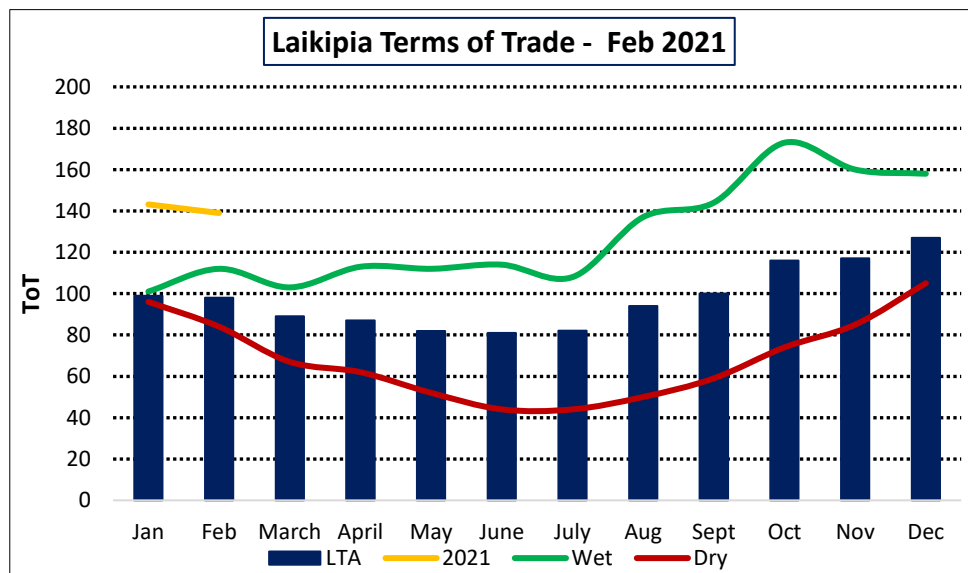


Graph 6: County Maize Prices – February 2021

Source - KDEWS

- The average maize price of Kshs. 32.3 per Kg was recorded at the markets as shown above, more or less same as the previous month at Kshs. 31.8. The prevailing market price was attributed to the stable maize supply both at the markets and at the household level due to recent maize harvests in some areas.
- The highest average market price of maize at Kshs.40 per Kg was recorded at Kimanjo (Pastoral) and Matanya (MMF) whereas the lowest at Kshs. 25 was recorded at Kinamba market (MF).
- Compared to the three-year average, the current price is slightly lower.

### 4.3 Livestock Price Ratio/Terms of Trade



Graph 7: Terms of Trade (Goat/ Maize) – February 2021

Source - KDEWS

- Conferring to the graph above, the February average price of a goat at Kshs. 4,495 was able to purchase 139 Kg of maize, a slight decrease compared to the previous month (at 143 Kg).
- The current trend in the ToT (Terms of Trade) can be attributed to the slight increase of maize at the markets. The ToT is still in favour of livestock keepers; they are able to purchase more cereal for the price of a goat compared to the long term average.
- When compared to the three-year average, the ToT is way above the normal range (by 42%) for the period.



#### 4.4 Implication on Food Security

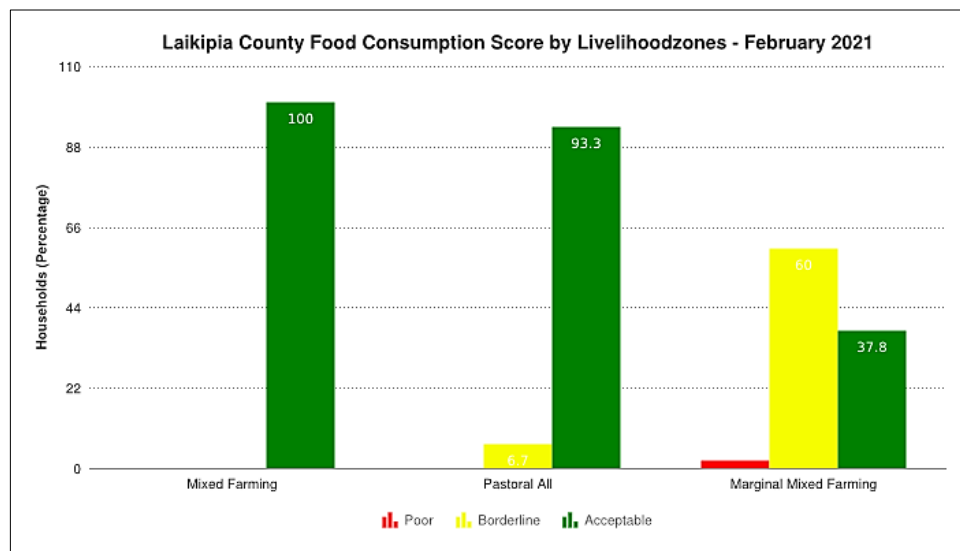
- Above normal conditions were recorded for most of the year 2020 and this was attributed to the significant positive effect of the off-season rains (July-Sept) on the vegetation (forage and browse), water availability and accessibility, crop and livestock production and food availability. This effect was complemented by the positive effects of the preceding MAM rains. The OND rains were expected to foster the above normal conditions across the county and have done so to some extent. However, according to recorded rainfall data and observations in the field, most parts of the county received below normal OND rains. This has resulted in the trend of indicators like vegetation condition and distance from water sources to grazing areas record an increase in 2021. The pasture and browse quality and quantity has also declined. Areas indicating effects of depressed rainfall are mostly in Laikipia East and North Sub Counties. However, February offseason rains have been above normal, resulting in the recharge of water sources and signs of regenerating vegetation.
- The livestock productivity is within the expected levels.

## 5 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 Milk Consumption

- During the month under review, the sampled households recorded an average milk consumption of 1.8 litre per day, same as the previous month, with most of the milk coming from cattle.
- The milk consumption level is within the normal (>1.8 litres) expected at this time of the year.
- For the MMF and MF zones, the larger percentage of the milk produced (75% and 69% respectively) was sold as households sought to raise income for other household needs whereas for Pastoral zones, 99% of the milk produced was used to supplement the diet.

### 5.2 Food Consumption Score



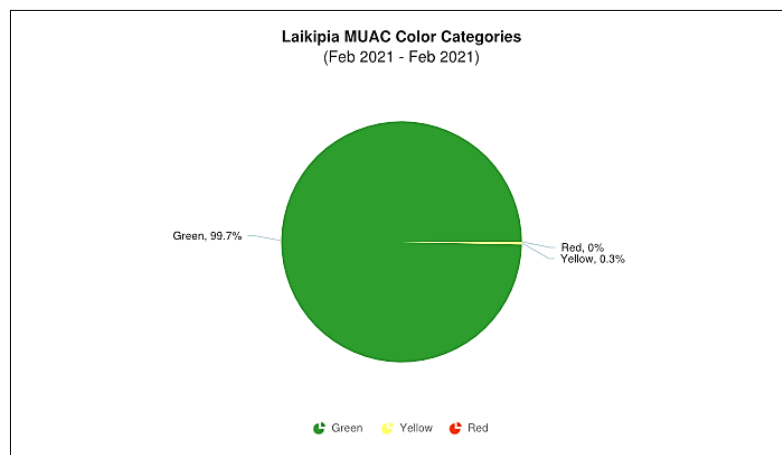
Graph 8: Food Consumption Score for February 2021

Source - KDEWS

- The graph above indicates that 100% of the sampled households in the Mixed Farming livelihood zone continued to maintain an acceptable food score. The Pastoral zone followed with an acceptable food score of 93.3% (same as the previous month) and a borderline food score of 6.7% (same as the previous month) hence indicating a stable dietary diversity compared to the previous month.
- 37.8% of the households in the Marginal Mixed Farming (MMF) zone had an acceptable score, 60% had a borderline score and 2.2% poor food score. This is a slight reduction compared to last month's 43.3% acceptable, 54.4% borderline and 2.2% poor, indicating a few areas in the MMF zone with increased borderline and poor dietary diversity.
- However, the household dietary diversity remained relatively stable across livelihood zones.

## 5.3 Health and Nutrition Status

### 5.3.1 Nutrition Status



Graph 9: Percentage of Children at Risk of Malnutrition for February 2021

Source - KDEWS

- The percentage of children under-five years of age who are at risk of malnutrition is 0.3%, a slight decrease compared to the previous month at 1.7%. The prevailing low percentage can be attributed to the stable food availability and dietary diversity across the county.
- There were no reported cases falling under SAM and MAM for the current month.

### 5.3.2 Health

- The County is still on alert for COVID-19 and isolation centres are functional.
- There were no reported major human diseases apart from reported cases of URTIs i.e. 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 and relying on well off relatives.

## 6 CURRENT INTERVENTION MEASURES (ACTION)

### 6.1 Non-Food Interventions

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

### 6.2 Food Aid

- No Food aid interventions were reported during the period under review.

## **7 EMERGING ISSUES**

### **7.1 Insecurity/Conflict/Human Displacement/ Pests and Diseases**

- Human- wildlife conflict cases were reported at Nadun'goro area (Pastoral zone) in Mukogodo East ward whereby elephants and baboons were destroying crops.

### **7.2 Migration**

- Cases of intra migration of livestock from were reported at Kimanjo and Olenaisho areas (Pastoral zone) in Mukogodo West and East Wards respectively and in migration of livestock from neighbouring Isiolo County in search of pasture.

### **7.3 Food Security Prognosis**

- Above normal conditions were recorded for most of the year 2020 and this was attributed to the significant positive effect of the off-season rains (July-Sept) on the vegetation (forage and browse), water availability and accessibility, crop and livestock production and food availability. The positive effects of the preceding MAM rains complemented this effect. The OND rains were expected to foster the above normal conditions across the county and have done so to some extent. However, according to recorded rainfall data and observations in the field, most parts of the county received below normal OND rains. This has resulted in the trend of indicators like vegetation condition and distance from water sources to grazing areas record an increase in 2021. The pasture and browse quality and quantity has also declined. Areas indicating effects of depressed rainfall are mostly in Laikipia East and North Sub Counties. However, February offseason rains have been above normal, resulting in the recharge of water sources and signs of regenerating vegetation.
- The livestock productivity is within the expected levels.
- The food security outlook for the county remains stable because of the good weather conditions experienced during most of the year 2020, whose spill over effects are still being felt in 2021. The current worst-case scenario is reduced household incomes due to reduced economic activity occasioned by the Covid-19 pandemic and diminishing food security due to previous below normal OND rains and the prevailing hot and dry conditions.

## **8 RECOMMENDATIONS**

- Sensitize farmers on conservation agriculture and the adoption of drought tolerant/ escaping crops as a way to maximise on crop yield. Action: ASDSP, County Govt.; relevant stakeholders
- Enhance animal disease surveillance along the stock migratory routes as migration cases increase. Action: County Govt. – Livestock.
- Repair and service strategic boreholes Action: County Govt (Water dept).
- Implement measures/ interventions geared towards mitigating conflict now and in future. Action: County Government, County Commissioner (Interior), KWS and Other stakeholders
- Implement projects geared towards enhancing community resilience and building new livelihoods, especially in consideration of the ongoing Covid-19 pandemic. Action: County Govt. and relevant stakeholders.
- Sensitize communities on post-harvest management, pasture management and water conservation techniques. Action: County Government (Agriculture, Livestock and Water departments).
- Advice communities on sanitation, hygiene and social distancing in order to mitigate the effects of the covid-19 pandemic. Action: County Govt. (Health and Water).

## REFERENCES

**MMF** – Marginal Mixed Farming Zone

**MF** – Mixed Farming Zone

**Pastoral Zone**

**MAM** – March, April and May rains

**OND** – October, November and December rains

**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 follows:

**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.