



# 1 CLIMATIC CONDITIONS

## 1.1 Rainfall Distribution and Onset

- The long rains season constitutes an important period in Laikipia County where most of the on farm and other social economic activities are optimized during the period. The highest MAM seasonal rainfall amounts (greater than 300mm) are normally observed in Laikipia West and parts of Laikipia East during MAM season.
- The March-April-May (MAM) 2023 Long Rains seasonal rainfall in Laikipia county is likely to be slightly below the long-term average amounts for the Season (highly depressed in some areas) according to the KMD forecast.

## 1.2 Forecasted Onset, Cessation and Distribution of MAM 2023 Rainfall.

- The predicted onsets, cessations and distribution of rainfall were derived from statistical analysis of past years. The analogue years (which showed similar statistical characteristics to the current year) were 2017 and 2021.

No	Region	Onset Dates	Cessation Dates	Distribution
1	Western part of Laikipia	Rainfall onset was from 3 <sup>rd</sup> to 4 <sup>th</sup> week of March	Rainfall will continue to the month of June 2023	Fair to poor
2	Eastern parts of Laikipia	Rainfall onset was from March to the 1 <sup>st</sup> week of April	3 <sup>rd</sup> week to 4 <sup>th</sup> week of May 2023	Fair to poor

## 1.3 Amount of Rainfall and Spatial Distribution.

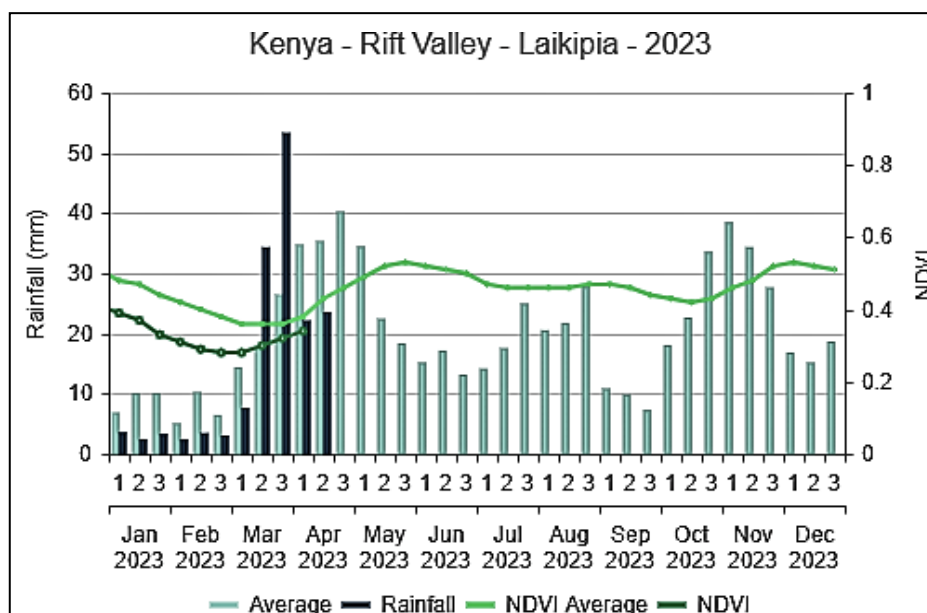


Figure 1: Rainfall (mm) for April 2023

Source – WFP VAM – CHIRPS

- According to KMD weather station from 30 station recordings during the month under review, Laikipia County received an average rainfall figure of 45.5mm between 10-15 rainy days across all the livelihood zones.

- Significant amount of rains with highest recording of 135mm and above was recorded in Ol-Pajeta, Lokusero, Ngobit, Nyahururu, Areas adjacent to Mount Kenya and part of Laikipia North during the month under review.
- The Rainfall intensity was high in 2<sup>nd</sup> week of April with good distribution both in time and space as most areas reported heavy most areas reporting heavy and isolated storms.
- However, some isolated spots in Mukogodo west in Laikipia North sub county did not received rains such as Impala ranch until the 3<sup>rd</sup> week of the month.

## 2.0 IMPACT ON VEGETATION AND WATER

### 2.1 Vegetation Condition

#### 2.1.1 Vegetation Condition Index (VCI) Laikipia County

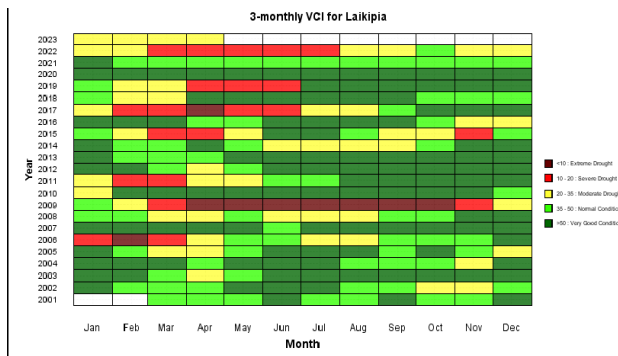


Figure 2.1.3 Monthly VCI Matrix April 2023  
Source - BOKU

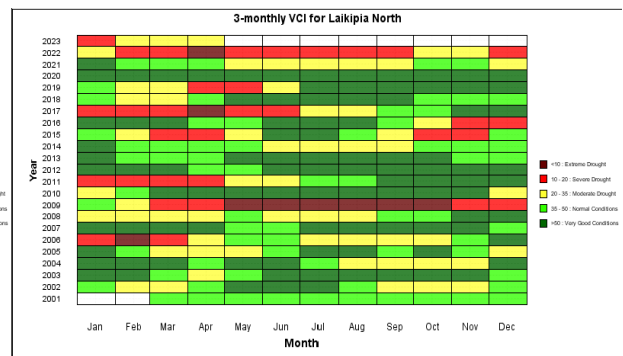


Figure 2.1.4 Monthly VCI Matrix-Laikipia North April 2023

- During the month under review, the County vegetation condition index is in moderate band of 28.04 compared to previous month vegetation condition index of 30.53.
- The 3-month VCI has slightly decreased when compared to previous month VCI due to anomalies with NDVI.
- The VCI in Laikipia North and Laikipia west are in 27.08 and 23.06 band respectively. Laikipia West VCI deteriorated from the previous month of 26.75 value to 23.06 during the month under review.

#### 2.1.2 Pasture.

- As depicted by Chart 1 shown below, the current pasture condition is fair to good both in terms of quality and quantity across all the livelihood zones.
- All the livelihood zones reported improved pasture condition as result of effects of rains which has been experienced during the month.
- Pasture situation is poor in few isolated spots in Impala ranch Mukogodo west ward, this was observed during the transect drive.
- The pasture condition is gradually improving both in terms of quality and quantity and expected to be normal in subsequent month due to MAM rains across the County.
- No major factors have been reported limiting access to pasture during the month under review.

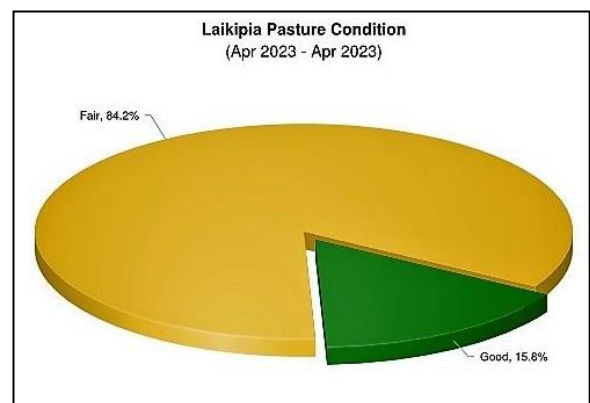


Chart 1; Pasture Condition, April 2023 Source KDEWS

### 2.1.3 Browse

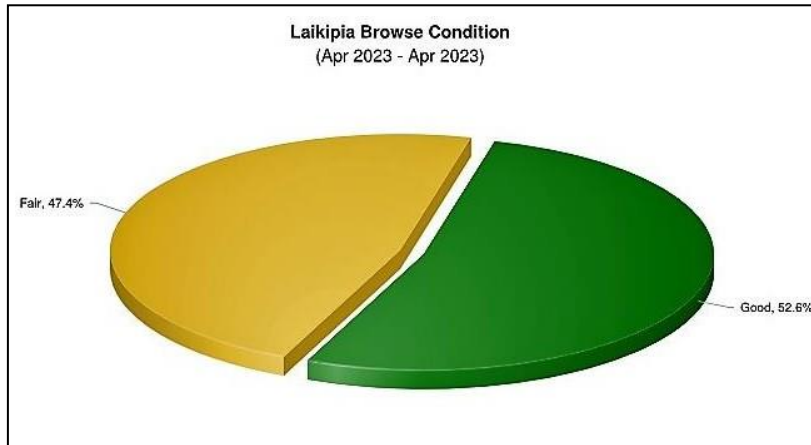


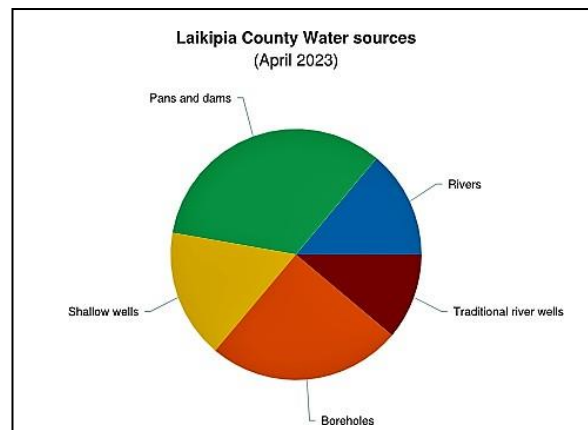
Chart 2; Browse condition April 2023 - Source -KDEWS

- As depicted in chart 2 above, the current browse condition across all the livelihood zone is fair to good with 47.4% and 52.6% key informant interviewed reporting fair and good respectively.
- When compared to previous month the browse condition has improved considerably both in terms of quality and quantity due to long rains season performance in the County.
- The browse condition is expected to improve further in coming months as result of normal to near normal rains across all the livelihood zones.
- No major constraint has been reported to hinder access due to improved availability of browse across the grazing areas as result of rains.
- The current browse condition is projected to last in next 4-5 months in pastoral, MF livelihood zones while 6 months in MMF zones.

## 2.2 Water Resource

### 2.2.1 Sources

- The main water sources for both household and livestock use during the month across all livelihood zones are; Rivers, pans and dams, Boreholes, shallow wells, traditional river wells piped water system and storage tanks from harvested rains water.
- During the month under review, 90 percent of open water sources have been reported to have recharged across all livelihood zones as result of rains experienced in month of March and April thus improving access to water.
- The current water sources are projected to last the county for the next 4 months in Pastoral livelihood zones, 4-5 months in MMF and 6 months in MF livelihood zones.



Laikipia County Water Sources. April 2023 Source KDEWS

### 2.2.2 Household Access and Utilization

- The fig.3 show the County average household water distances one way from water sources across all the livelihood zones.
- The average household water trekking distance during the month is recorded to be 1.5km from 2.9km recorded in previous month.
- The current household distance has reduced significantly when compared to previous month by 48.3 percent.
- The decrease in trekking distances for households across the livelihood zones is as results of recharge of open water sources and recharge of storage tanks collected from the rain water during the period.
- As a result, the current household water trekking distance is below the long-term average of 2.8km by 46.4 percent.
- The water distance for households during the month is below both wet year period and dry year period ever recorded in last 5 years.
- The average household water distances across the livelihood zone is expected to remain below the LTA in subsequent month as result of ongoing rains across the County.

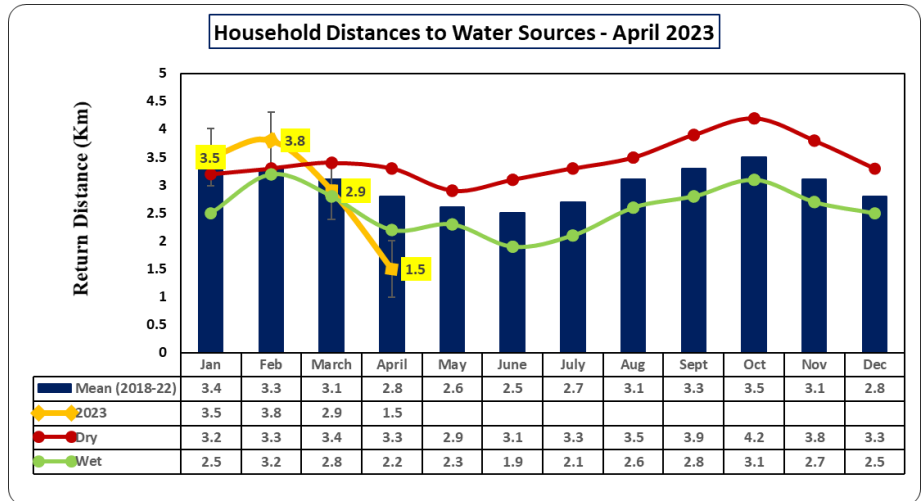


Figure 3: County Water Distances – April 2023 Source – KDEWS.

### 2.2.3 Livestock Access

- figure 4 below show the average livestock trekking distances from grazing area to water sources during the month of April.
- the average livestock trekking distance from water sources to grazing areas is recorded as 4.4km which is 13.7 percent below 5.1km trekking distance recorded in previous month of March.

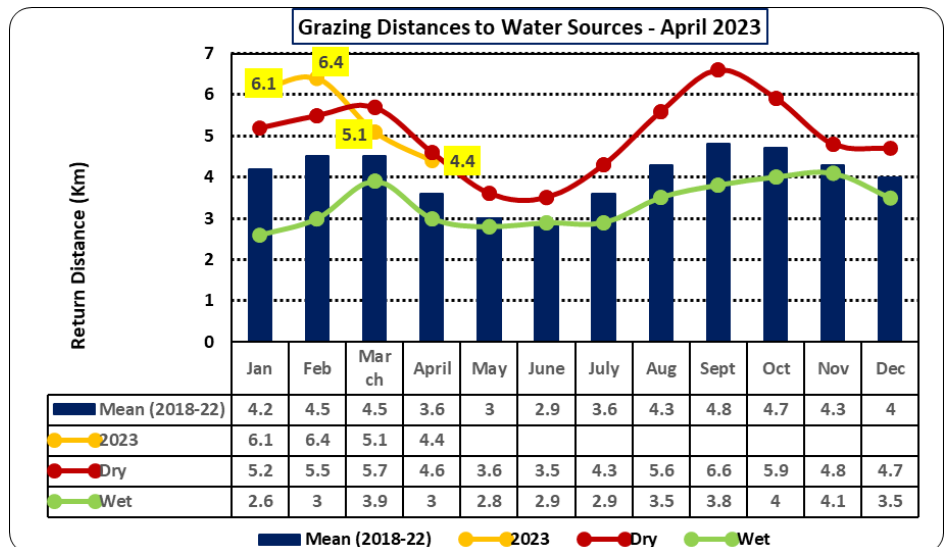


Figure 4: County Water Distances to Grazing Areas – April 2023 Source – KDEWS

- The decrease in trekking distances from grazing area is attributed to availability of pasture and water as result of ongoing MAM rains across all the livelihood zone which made it easier for livestock to access water sources.

- The current average trekking distance across the county is slightly above the LTA of 3.6km by 22 percent during the reporting period.
- Pastoral livelihood zone recorded longest trekking distances during the month from grazing area to water point at 3.7 km while shortest trekking distance is recorded in MF zone at 1km.
- Livestock trekking distances across the County is expected to decrease further in subsequent month due to improve pasture and water availability as result of MAM rains during across the County.

### 3.0 PRODUCTION INDICATORS

#### 3.1 Livestock Production

##### 3.1.1 Livestock Body Condition

- Livestock body condition in pastoral and MMF livelihood zone are gradually improving from poor body condition recorded in previous months to fair during the current month.
- Livestock body condition is expected to improve in subsequent months as pasture and browse condition is improving in quality and quantity as result of MAM rains.

##### 3.1.2 Livestock Diseases and Deaths

- No major livestock diseases outbreak or deaths were reported save for few cases of CBPP in goats around Mukogodo west ward during the period under review.

##### 3.1.3 Milk Production

- As indicated by figure 5 below, the average household's milk production during the month under review is 3.2 liters/household/day a slight improvement from 2.9ltrs/hh/day recorded in previous month.

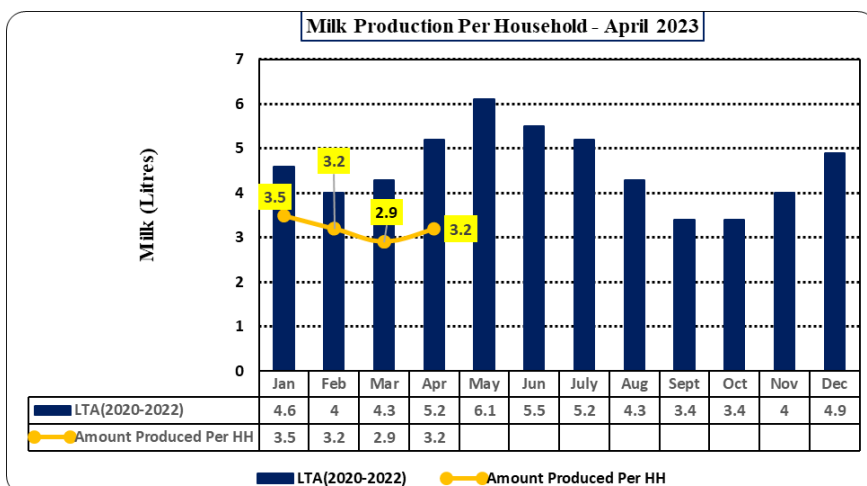


Figure 5: Milk Production per Household – April 2023 Source – KDEWS

- The current average milk production per household/day slightly increased by 10.3 % when compared to previous month.
- However, the average milk production is still below the LTA during the month as result of below normal pasture across the livelihood zone.
- Milk is majorly obtained from cow in Laikipia County but few from sheep among the pastoral communities. 1 liter of milk is sold at Ksh 70 in major urban town such as Nanyuki and Nyahururu while in Pastoral livelihood zone and some parts of MMF zone a liter of milk is sold around Ksh 80-120.

### 3.2 RAIN-FED CROP PRODUCTION.

#### 3.2.1 Stage and Condition of Food Crops

- The main activities in the farm during the month under review is planting of food crops such as maize, beans, wheat and potatoes. Most crops are at germinating stage while early planted crops are at flowering stage.

### 4.0 MARKET PERFORMANCE

#### 4.1 Livestock Marketing

##### 4.1.1 Cattle Prices (Market)

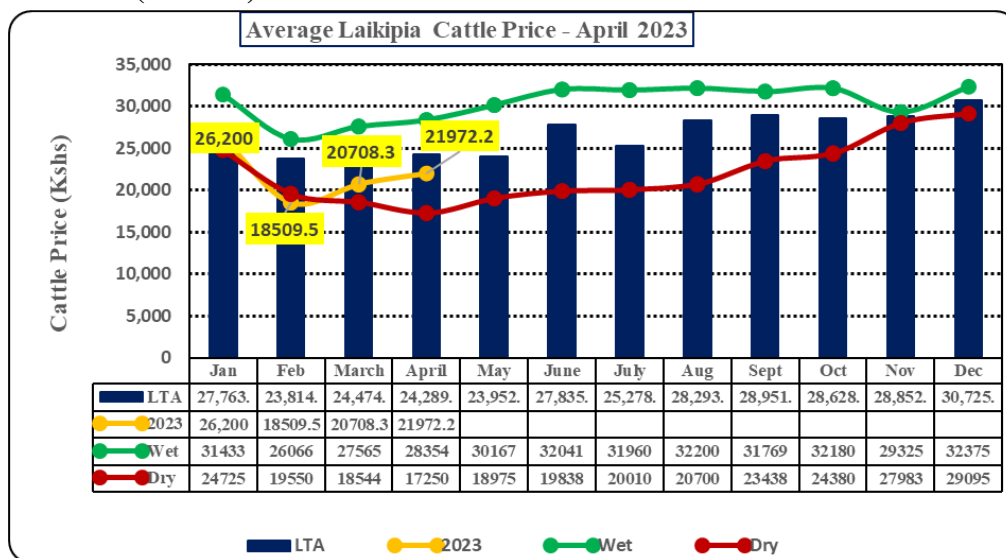


Figure 6: Laikipia County Cattle Prices – April 2023 Source – KDEWS

- The figure 6 above, show the average County Cattle prices during the month under review which recorded Ksh 21,972.2 slightly improved by 6 percent from Ksh.20,708 recorded in previous month of March.
- The slight increase in Cattle price is attributed to improved livestock body condition and increased in number of traders at the market.
- The primary livestock markets across the County are Doldol Timau, Matanya, Kimanjo, Ngare-Ng'iro and Mourak in pastoral zones and Rumuruti, Sipili and Ol Moran in MF zone and cattle, sheep and goats are the main species traded in the market. All market is reported operating normally across the County.
- However, the current Cattle price is still below long-term average cattle price of Ksh 24,289 by 9.5% during the month under review.
- The highest Cattle price is recorded in Sirima market at Ksh 30,000 while lowest recorded in Olmoran market at Kshs.17,500 an improvement compared to previous month.
- The Cattle prices will likely increase to normal range in subsequent months as livestock body condition is expected to gradually improve as result of forage availability.

##### 4.1.2 Small Ruminants Prices (Goat)

- As indicated in figure 7 shown below, the County average goat price during the month under review is Ksh. 4,616.7 slightly above previous month average price of Ksh 4,583.
- The slight improvement in current average goat price is attributed to improved forage condition due to rains that improved forage condition.
- However, the current goat price is above the LTA price of Kshs 4,616.7 by 27 percent during the month under review.

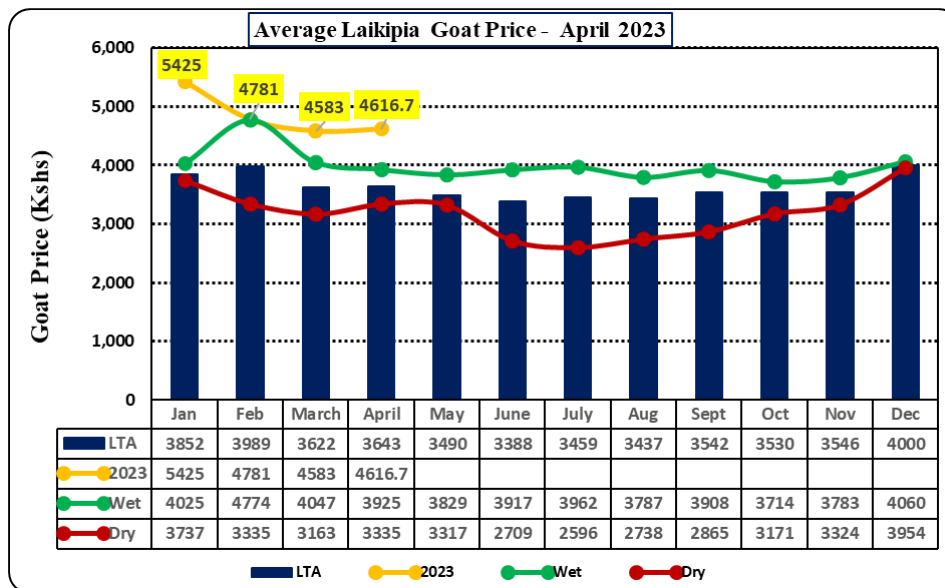


Figure 7: Laikipia County Goat Prices – April 2023 Source – KDEWS

- The highest goat price is recorded in Kinamba market at Ksh.6,500 while lowest goat price price is recorded in Kimanjo market at Kshs.2,567 during the month under review.
- The average goat price across all the livelihood zone is expected to improve in coming months due to improved pasture and body condition.

## 4.2 Crop Prices

### 4.2.1 Maize (market price)

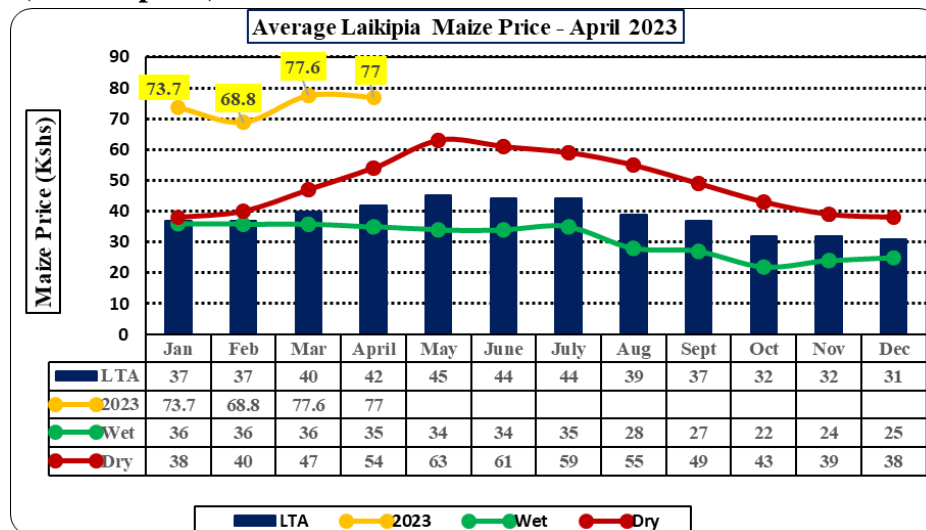


Figure 8; County Maize Prices – April 2023 Source – KDEWS

- As depicted in Fig. 8 above, the average maize commodity price is Ksh 77/kg during the month under review. When compared with the previous month maize price of 76.9/kg, the current maize price is in stable condition.
- The stable maize price is attributed to high demands of maize by the farmers for planting during the season and high cost of living.
- However, the average maize price is 83.3 percent above the long-term average when compared to the five-year average price of Kshs.42/kg during the current month.



- During the month maize is sold at different market prices across different livelihood zones. In Ngobit ward maize is sold at Kshs 95, in Kinamba it sold at Kshs 65 while in other sites the retail price ranges from Kshs 95-110
- The average maize price is expected to remain above long-term average in coming months.

#### 4.2.2 Livestock Price Ratio/Terms of Trade

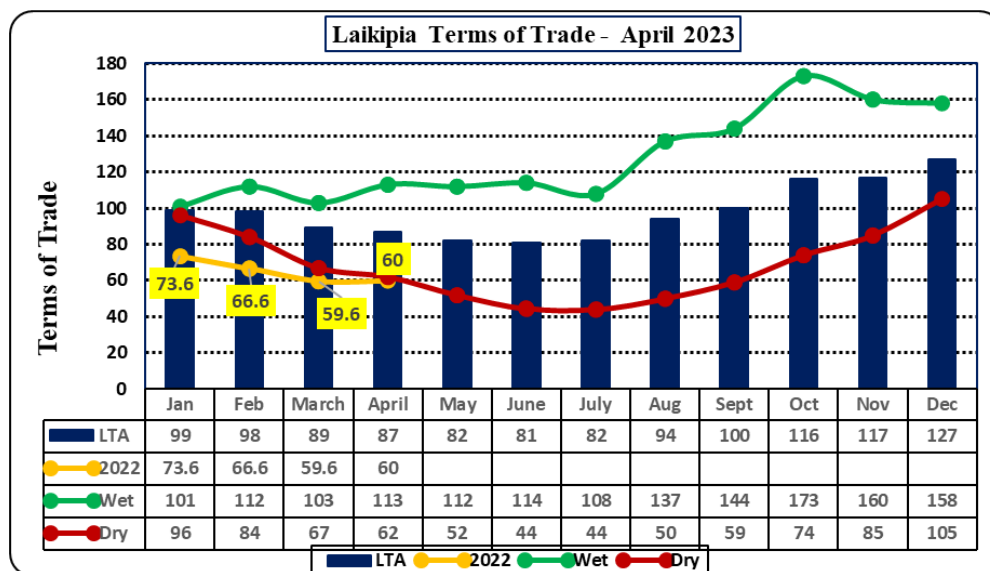


Figure 9: Terms of Trade (Goat/Maize) – April 2023

Source – KDEWS

- As depicted in figure 9 above, the County Term of Trade during the month were 60 kilogram in exchange for the sale of medium size goat similar to previous month ToT of 59.6 kilogram.
- The stability in ToT with previous month is attributed to stable maize price and slightly improved goat price during the current month across all the livelihood zone.
- However, the current ToT is way below the long-term average of 87 kilogram by 31 percent when compared and hence not favourable to livestock keepers due to continued high maize price across the County.
- The terms of trade are likely to remain below the LTA as Maize price is expected to remain high while Goat price is expected to gradually improve due to continued improvement in pasture and browse condition across all the livelihood zones.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 Milk Consumption

- Milk consumption across all the livelihood zones is still below normal as result of below normal milk production in the County.
- Milk consumption is expected to improve slightly in coming months as result of rains which will directly improve pasture regeneration.

#### 5.1.1 Food Consumption Score

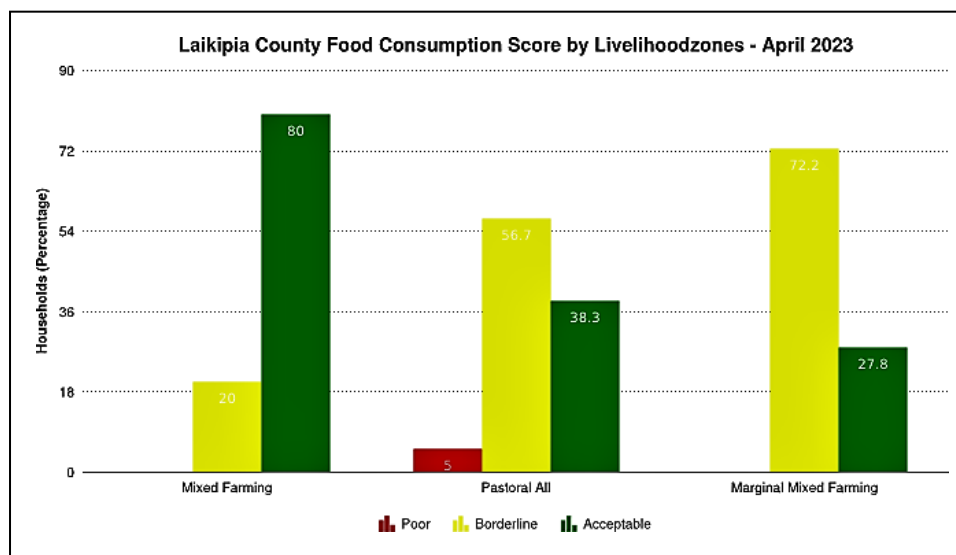


Figure 10: Food Consumption Score for April 2023

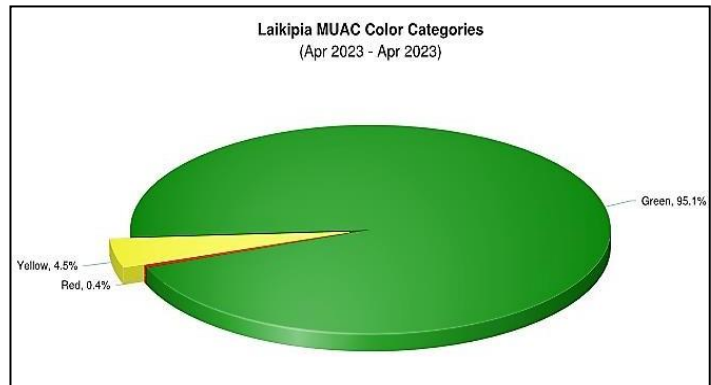
Source - KDEWS

- As indicated in figure 10 above, 80% of the sampled households in the Mixed Farming livelihood zone are in acceptable food consumption score while the proportion of households in Pastoral livelihood zone in acceptable, borderline and poor FCS is 38.3 percent, 56.7 percent and 5% respectively.
- Majority of households in Pastoral and MMF livelihood zone are in borderline FCS. For MMF livelihood zones, the proportion of households in Acceptable and borderline FCS are 27.8 percent and 72.2 percent respectively during the month under review.
- Majority of households consume meal 2 times in 24-hour recall period across the livelihood zones as result of high cost of food commodities and effect of drought that increased the cost of living in the County.
- Food consumption in MMF and Pastoral livelihood zone is expected to improve in coming months as milk production and consumption at households will gradually improve.

## 5.2 Health and Nutrition Status

### 5.2.1 Nutrition Status

- As illustrated in Chart 4 above, the proportion of children under five years of age who are moderately malnourished during the month under review show MAM and SAM of prevalence of 4.5% for the sampled children at sentinel site.
- The situation has worsened compared to previous month MAM and SAM of 3.9%. The significant increase of about 69.6 percent is attributed to increase in staple food and product prices coupled with below normal milk production and consumption at household levels.
- When compared to the previous month, the proportion of children with MUAC in moderate malnutrition have deteriorated.



*Chart 4: percentage of Children at Risk of Malnutrition; April 2023. Source- KDEWS*

### 5.1.2 Health

- There is no major disease outbreak reported in the County during the month due to improved uptake of health and nutrition preventive measures attributed to the integrated outreaches, increased coverage of immunization and vitamin A supplementation across the county. Immunization and Vitamin A supplementation coverage have direct correlation in boosting body immunity hence declining diseases.

### 5.1.3 Consumption based coping strategies

- Due to high cost of food commodity prices, most households' opted to eat once a day meal, porridge instead of milk, allowing children to eat instead of adults and reducing meal size for the families.
- In Pastoral livelihood zone where there was no milk production and consumption, children below 5 years were not able to take a glass of milk while adults commonly consumed tea with no milk. This was noticed during the monthly drought monitoring exercise and discussions with Key informants and households in the field. The poor dietary diversity can be attributed to the impact of prolonged drought that resulted to depressed crop production and high food prices.

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

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

- No non-food intervention was reported in the County during the period under review

### **6.2 Food Aid**

- During the month under review Laikipia County benefited from relief food funded by private sectors through NDMA and National steering committee on drought response.
- The relief food consignment consists of 6kg of maize flour, 3kg of uji-mix, 8kg of rice, 3kg of beans, 1kg cooking oil and 1kg salt packed in 1 hamper was distributed to 7480 households each getting 1 hamper (22kg of food commodities).
- The areas that benefited from one off relief food distributions are; Sosian ward (3149 households), Segera ward (1431 households), Umande ward 768 households in Laikipia East sub counties. In Laikipia North, sub county Mukogodo west and Mukogodo east each received 1564 and 2132 households benefited.

## **6.0 EMERGING ISSUES/ PROGNOSIS**

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

- No major security challenges reported during the month under review.

### **6.3 Migration**

- In-Migration of animals from Mt. Kenya area, Aberdere forest and Nyeri County observed in early April.

### **6.4 Food Security Prognosis**

- Due to ongoing MAM rainy season, pasture and browse condition is expected to improve both in terms of quality and quantity therefore improving the Vegetation condition index in subsequent month.
- Household and livestock watering distances are 1.5km and 4.4 km respectively during the month which indicate a significant decrease compared to previous month due to continued recharge of open water sources. Therefore, the distance to water sources is expected to decrease further in subsequent month as rains progress into next month.
- Milk production and consumption is currently below normal due to inadequate pasture and deteriorated livestock body condition, these scenarios are expected to improve in coming months due to improve pasture condition both in terms of quality and quantity as livestock body condition improves.
- Terms of trade are still unfavourable for the livestock keepers due to high cost of food commodities; the ToT is likely to remain below the LTA as Maize price is expected to remain high whereas Goat price is expected to gradually improve due to expected change in pasture and browse condition across all the livelihood zones.
- Livestock body condition is expected to improve further as pasture and browse condition is expected to improve both in terms of quality and quantity.
- The County VCI is currently 28.04 which is indicative of moderate drought condition, the VCI is expected to improve significantly in coming months as result of improved forage condition.

## 7 RECOMMENDATIONS

- Provision of subsidized fertilizer, foliar and insecticides to control pest and diseases to farmers to boost crop production in the County.
- Enhance resilience building activities in the County to build capacity of local communities to withstand climate related shocks. **Action: County Government, County Commissioner (Interior), NDMA and Other stakeholders.**
- Implement measures/ interventions geared towards mitigating Human-Wildlife conflict now and in future. **Action: County Government, County Commissioner (Interior), KWS and Other stakeholders**
- Implement projects geared towards enhancing community resilience i.e. water, crop and pasture development projects etc. **Action: County Govt. and relevant stakeholders**

## 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
Green	> +1.5 or more	Wet Conditions
Light Green	0 to +1.5	No drought
Yellow	-0.1 to -0.99	Mild drought
Red	-1 to -1.99	Severe drought
Dark Red	<-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 signaled 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.