



National Drought Management Authority
LAIKIPIA COUNTY
DROUGHT EARLY WARNING BULLETIN FOR JUNE 2020

JUNE 2020 EW PHASE: NORMAL



Drought Situation & EW Phase Classification

Biophysical Indicators

Rainfall:

Performance: the county received 4 to 12 days of moderate rains to light showers across the livelihood zones. The temporal distribution of the rains was fair to good whereas the spatial distribution was fair.

Vegetation Condition:

- The Vegetation Condition Index (VCI) was above the normal range for the period, indicating a largely good state of pasture and browse.
- The available pasture and browse can last for two to four months, depending on the area.

Socio Economic Indicators (Impact Indicators)

Production Indicators:

- There were no reported cases of livestock migration from neighbouring counties
- The body condition of animals was above the normal range for the period.

Access indicators:

- The terms of trade were above the normal range
- Milk consumption within the normal range
- The return distance from water sources to grazing areas was within normal range.

Utilization indicators:

- All within the normal range.

LIVELIHOOD ZONE	EW PHASE	TREND
PASTORAL	Normal	Stable
MMF	Normal	Stable
MF	Normal	Stable
COUNTY	Normal	Stable
Biophysical Indicators	Value	Normal range
% of Average rainfall	136%	80-120%
VCI (1 month)	79.4	35.0-50.0
State of Water Sources	5	5
Production indicators	Value	Normal range
Livestock Migration Pattern	No Migration	No Migration
Livestock Body Condition	4-5	4-5
Milk Production (Lt)	-	> 4
Reported livestock deaths (due to drought)	No death	No death
Crops area planted (%)	-	% of LTA
Access Indicators	Value	Normal ranges
Terms of Trade (ToT)	115	81
Milk Consumption (Lt)	-	>1.5
Return Distance (Water Sources to households)	2.4	<2.8
Return Distance (water sources to grazing areas)	3.3	<3.6
Utilisation indicators	Value	Normal ranges
MUAC (Mid at risk)	-	< 18
Coping Strategy Index (CSI)	-	<1

<ul style="list-style-type: none"> ▪ Short rains harvests ▪ Short dry spell ▪ Reduced milk yields ▪ Increased HH Food Stocks ▪ Land preparation 	<ul style="list-style-type: none"> ▪ Planting/Weeding ▪ Long rains ▪ High Calving Rate ▪ Milk Yields Increase 	<ul style="list-style-type: none"> ▪ Long rains harvests ▪ A long dry spell ▪ Land preparation ▪ Increased HH Food Stocks ▪ Kidding (Sept) 	<ul style="list-style-type: none"> ▪ Short rains ▪ Planting/weeding 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1 CLIMATIC CONDITIONS

1.1 Rainfall Performance

- During the month under review, the County received on average 4 to 12 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 5 to 7 days of moderate rainfall and 2 days of light showers with fair to good distribution, the Pastoral livelihood zones recorded 3 days of moderate rainfall with fair to good distribution, while the MF zone reported 9 days of rains (7 moderate, and 2 light) with fair distribution.

1.2 Amount of Rainfall and Spatial Distribution

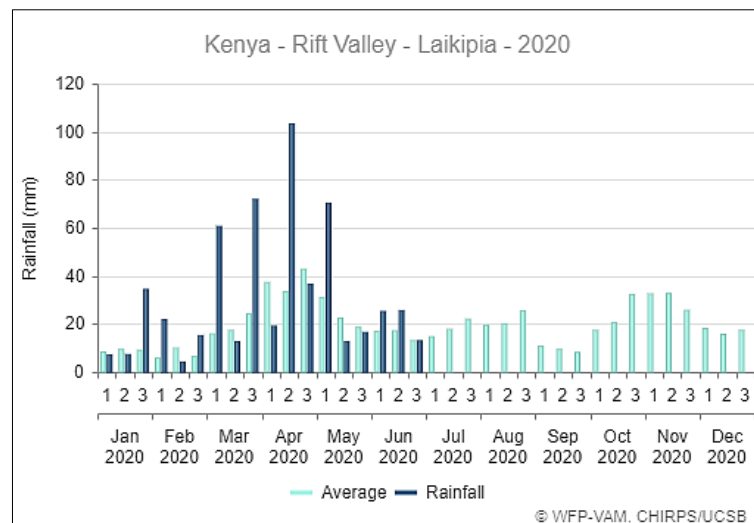


Figure 1: Rainfall (mm) for June 2020

Source – WFP VAM - CHIRPS

- The rains received amounted to 63.5 mm in the month of June, which is 136% of the long-term average of 46.7 mm by the same time. The rainfall is above the normal range expected for the period.
- Compared to the previous month (99.2 mm), the amount of rainfall received has declined, which is expected after cessation of the MAM rains.
- The temporal distribution of the rains was fair to good while the spatial distribution was fair.

2 IMPACT ON VEGETATION AND WATER

2.1 Vegetation Condition

2.1.1 Vegetation Condition Index (VCI)

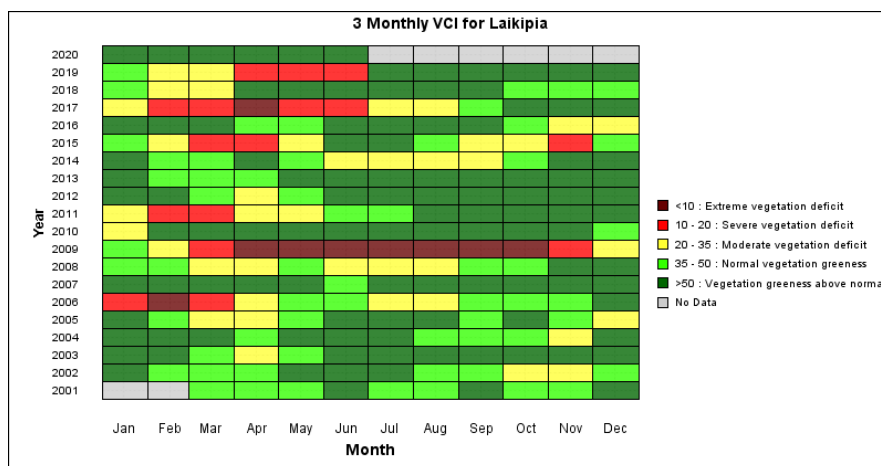


Figure 2: 3 Monthly VCI Matrix June 2020

Source - BOKU

- The VCI matrix above indicates very good vegetation condition, which has been the case since July 2019. However, from field observations, the vegetation condition in some small pockets across the Pastoral and MMF zones was fair (especially in Ngobit and Tigithi wards), which is largely attributed to moderate precipitation levels recorded in the zones.
- The actual VCI (3 month) at 79.4 was above the normal range for the month and a slight improvement compared to the previous month (at 72.7).

2.1.2 Pasture

- Key informant interviews indicated that the pasture condition was largely good (62.5%) and fair (37.5%) as shown in the chart below.

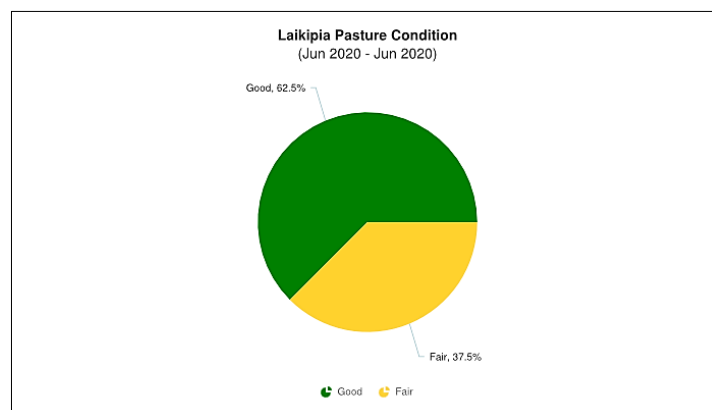


Figure 3: Pasture Condition June 2020

Source - KDEWS

- Compared to the previous month and in addition to field observation, the vegetation condition is largely good and has remained stable in both quantity and quality across all livelihood zones. The current situation is above the normal 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 (79.2%) and fair (20.8%) as shown in the chart below.

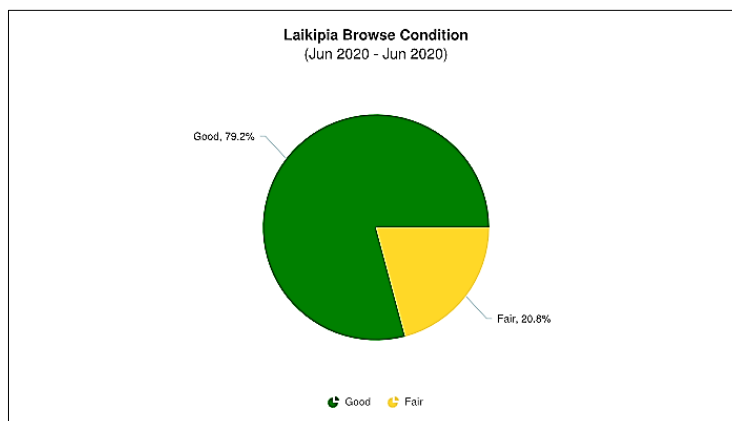


Figure 4: Browse condition June 2020

Source - KDEWS

- Compared to the previous month: good (83.3%) and fair (16.7%), the browse condition is largely good in term of quality and quantity but has recorded a light decline.
- 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 (32%), boreholes (26%), shallow wells (18%) and rivers (16%). Others were traditional river wells (8%).

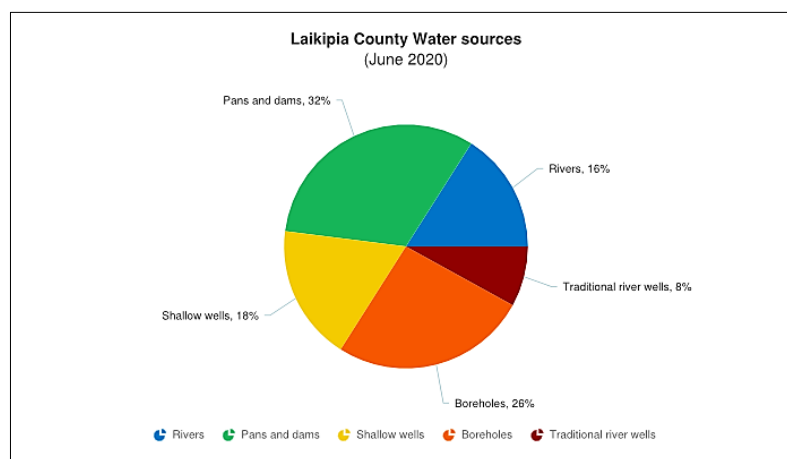


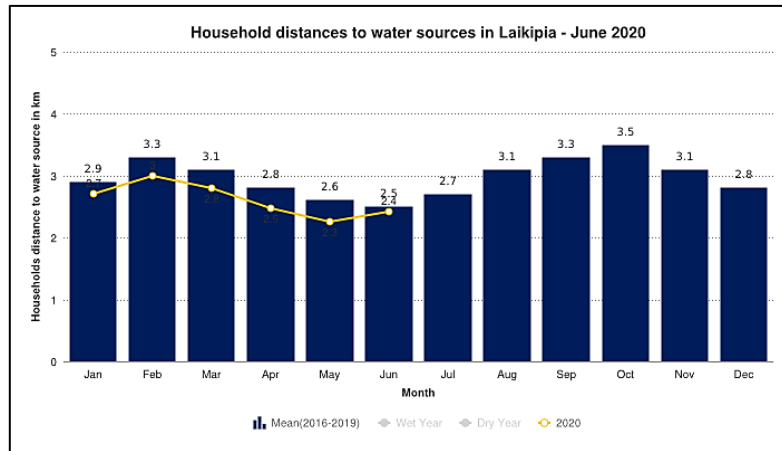
Figure 5: County Water Sources June 2020

Source - KDEWS

- Compared to the previous month: pans and dams (32%), boreholes (24%), shallow wells (18%), rivers (18%) and traditional river wells (8%), the water quantity is stable and there is a slight shift towards sub-surface water sources, specifically boreholes, indicating a slight decrease 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 – 3 months, pans and dams – 3 months), MMF (borehole – permanent, seasonal rivers – 3.5 months, pans and dams – 3 months), MF (shallow wells – 2 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 slightly increased to 2.4 km in June, up from 2.3 Km previous month. This can be attributed to the cessation of MAM rains resulting in decreased precipitation. The Pastoral zone recorded the farthest return distance of 3 Km.



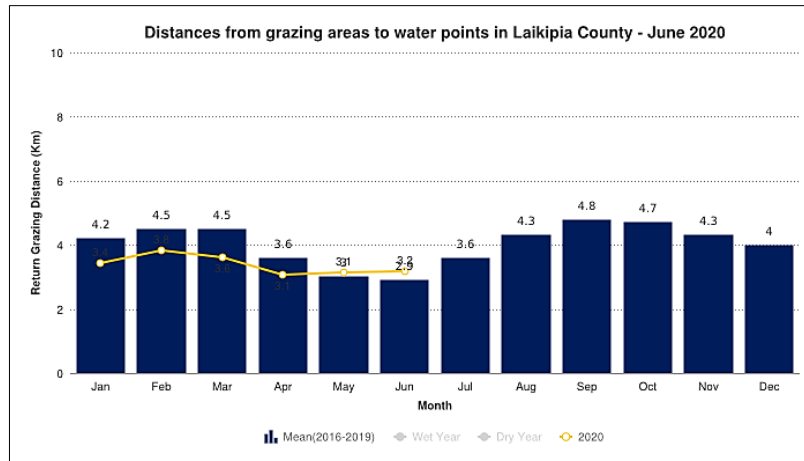
Graph 1: County Water Distances – June 2020

Source – KDEWS

- The current distances are slightly below the long-term average for the period.
- The stable distances are attributed to the previous above normal MAM rains and ongoing precipitation.
- There was no notable constraint to water access.

2.2.3 Livestock Access

- The average return distance from water sources to grazing areas has slightly increased to 3.3 km, up from 3.1 Km the previous month. The longest return distance of 3.5 km was recorded in the MMF zones, slightly more compared to the previous month (3.4 Km).



Graph 2: County Water Distances to Grazing Areas – June 2020

Source - KDEWS

- The current distances were more or less same as the long-term average for the month. This is attributed to the previous off season rains and the ongoing long season rainfall.

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) but leaning towards 5 (Normal).
- Generally, the livestock body condition was largely good 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 improved. Most grazers range from moderate to normal.
- Compared to same time last year, the body condition of livestock is above normal.

3.1.2 Livestock Diseases and Deaths

- No livestock diseases and deaths were reported in the county.

3.2 Rain-fed Crop Production

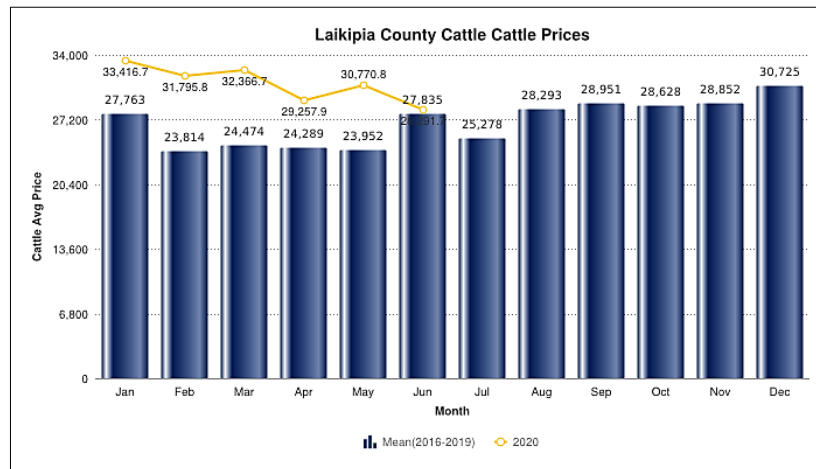
3.2.1 Stage and Condition of Food Crops

- In the MF zone, maize is above the knee and beans are flowering while wheat planting is ongoing. In the MMF zone, different crops are at different stages of growth depending on when an individual farm was planted. In some areas, maize is at tussling and milking. Beans – physiologically mature, potatoes - moulding stage. In other areas, maize is 30 to 40 cm high. For farmers who do conservation agriculture, their crops are at early stages of germination.
- In the Pastoral zones, maize is more than 30cm high, beans – maturing stage.
- In terms of farm activities, harvesting of beans, potatoes and peas in parts of MMF zone, while in some parts of MF zone harvesting of maize and beans was reported depending on when an individual farm was planted. Second weeding, top dressing and spraying of herbicides is ongoing in other farms across the MF and MMF zones.
- Casual labour is available but daily wages have increased in some areas of the County. Casual labourers are concerned about Covid-19 pandemic.

4 MARKET PERFORMANCE

4.1 Livestock Marketing

4.1.1 Cattle Prices (Market)

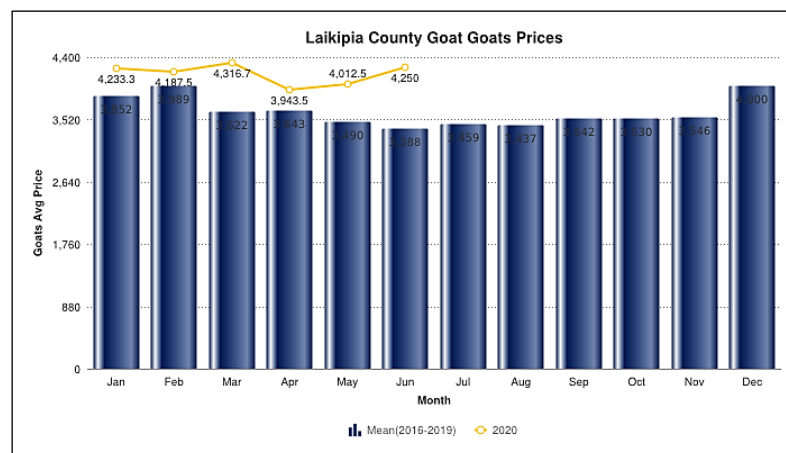


Graph 3: County Cattle Prices – June 2020

Source - KDEWS

- During the month under review, the County recorded an average cattle price of Kshs. 27,835 at the markets, a 9.5% decrease compared to the previous month. The current price increase is attributed to the increase in supply as markets normalise to effects of Covid-19. The prices are more or less what is expected for the period.
- The MMF zone recorded the highest cattle prices at Kshs. 40,000.
- Compared to the long-term average, the current price is about what is expected for the month.

4.1.2 Small Ruminants Prices (Goat)



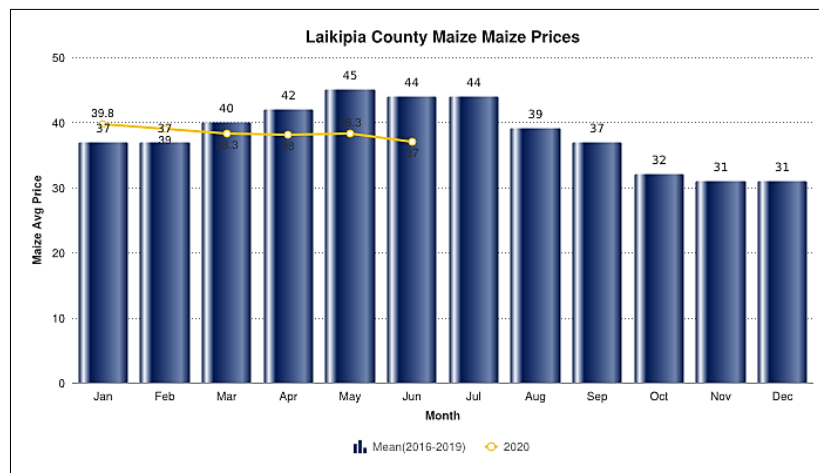
Graph 4: County Goat Prices – June 2020

Source - KDEWS

- During the month under review, the average price of a goat in Laikipia was recorded at Kshs. 4,250; a slight increase (by 6%) compared to the previous month (at Kshs. 4,013). The slight increase in goat price was attributed to renewed demand as markets normalise to effects of Covid-19. 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. 7,100.
- Compared to the long-term average, the current goat price was higher by 25% hence way above the normal range for the period.

4.2 Crop Prices

4.2.1 Maize (market price)

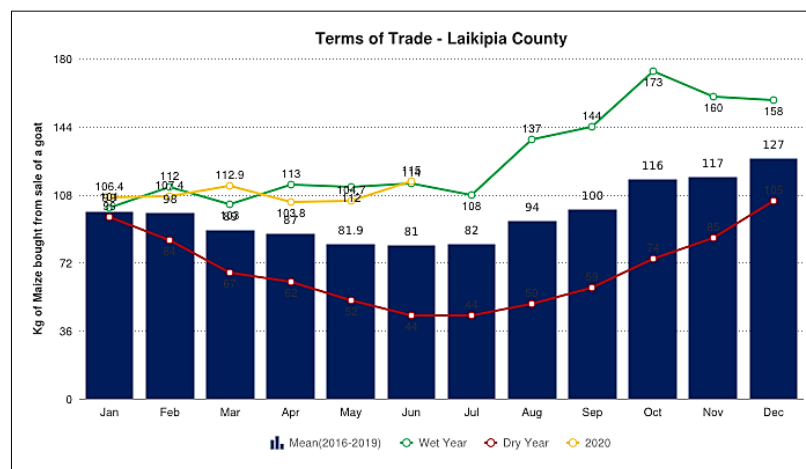


Graph 5: County Maize Prices – June 2020

Source - KDEWS

- The average maize price of Kshs. 37 per Kg was recorded at the markets as shown above, same as the previous month. The prevailing market price was attributed to the stable maize supply both at the markets and at the household level due to ongoing piecemeal harvests in some areas.
- The highest average market price of maize at Kshs.45 per Kg was recorded at Kimanjo market (Pastoral) whereas the lowest at Kshs. 28 was recorded at Sirima market (MMF).
- Compared to the three-year average, the current price is lower by 19%.

4.3 Livestock Price Ratio/Terms of Trade



Graph 6: Terms of Trade (Goat/ Maize) – June 2020

Source - KDEWS

- Referring to the graph above, the June average price of a goat at Kshs. 4,250 was able to purchase 115 Kg of maize, a significant increase compared to the previous month (at 104.7 Kg).
- The current trend in the ToT (Terms of Trade) can be attributed to the stable goat prices 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 above the normal range (by 42%) for the period.

4.4 Implication on Food Security

- The MAM rains ceased after the first dekad of May. They rains have had a significant positive effect on the vegetation (forage and browse), water availability and accessibility, crop and livestock production and food availability. This effect was complemented the positive effects of the preceding off-season rains and the above normal OND rains. This has resulted in above normal conditions across most of the County.
- The 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 Health and Nutrition Status

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

5.1.1 Health

- The County is on high alert for COVID-19 and isolation centres have been set up. Screening is ongoing along major highways in the County.
- There were no reported major human diseases apart from cases of common cold, flu and fever affecting both adults and children across the sentinel sites during the period under review.

5.2 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

- The County government of Laikipia is distributing sanitizers, masks and creating awareness through social media, road broadcasts, radio announcements and talk shows. Regular meetings are conducted by the health department and partners to review strategies and monitor the disease epidemiology.
- The county government is undertaking gravelling of roads in Rumuruti and Segera wards (Pastoral and MMF zone respectively) to ease movement of people and goods in the ward.

6.2 Food Aid

- No food aid interventions were reported in the sentinel sites during the period under review. However, Laikipia County government has formed a committee to receive donations from well-wishers in order to support vulnerable households as a result of Covid-19. The committee has distributed food donations in low income urban and peri urban areas.

7 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement/ Pests and Diseases

- Cases of human – human conflict were reported in Mukogodo forest (Pastoral zone) whereby armed bandits stole cattle from Murua (Ilgwesi Mukugodo East Ward) killing one police reservist and wounding another one in the process.
- Due to poor roads in most areas of the county, the cost of transportation has increased and vegetable prices have gone down resulting in low returns for farmers in the MF and MMF zones.

7.2 Migration

- No significant migration was reported for the period.

7.3 Food Security Prognosis

- The MAM rains ceased after the first dekad of May. They rains have had a significant positive effect on the vegetation (forage and browse), water availability and accessibility, crop and livestock production and food availability. This effect was complemented the positive effects of the preceding off-season rains and the above normal OND rains. This has resulted in above normal conditions across most of the County.
- The 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 across all zones.
- Generally, the food security outlook for the county is stable because of the good weather situation. The current worst-case scenario is strained supply at the markets due to restricted movement and reduced household incomes (due to layoffs) and reduced economic activity occasioned by the Covid-19 pandemic.

8 RECOMMENDATIONS

- Advise communities on sanitation, hygiene and social distancing in order to mitigate the effects of the covid-19 pandemic. **Action: County Govt. (Health and Water).**
- Implement projects geared towards enhancing community resilience and building new livelihoods, especially in consideration of the ongoing Covid-19 pandemic i.e. implementing fisheries development program in local pans and dams. **Action: County Govt. and relevant stakeholders.**
- Sensitize communities on food preservation, pasture management and water conservation techniques. **Action: County Government (Agriculture, Livestock and Water departments).**
- Implement measures/ interventions geared towards mitigating conflict now and in future. **Action: County Government, County Commissioner (Interior) and Other stakeholders**
- Rehabilitate water sources such as silted pans and dams, broken down boreholes. **Action: County Govt, NDMA and Other relevant stakeholders**
- Implement measures/interventions towards curbing human-wildlife conflicts. **Action: KWS, Local Community.**
- Sensitize farmers on conservation agriculture and the adoption of drought tolerant crops as a way to maximise on crop yield. **Action: ASDSP, County Govt.; relevant stakeholders.**
- Enhance animal disease surveillance and interventions 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.
Recovery: 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.