

# National Drought Management Authority

MERU (MERU-NORTH) COUNTY

DROUGHT EARLY WARNING BULLETIN FOR MAY 2022




A Vision 2030 Flagship Project



## MAY 2022 EW PHASE

**Drought Status: ALERT**



**Maandalizi ya mapema**

### Drought Situation & EW Phase Classification

#### Biophysical Indicators

**Rainfall:** The month of May marked the cessation of the 'long rain season in most parts of the county. A Few places experienced below average rainfall.

**Vegetation condition:** The county recorded normal vegetation greenness across the livelihood zones. The pasture and browse condition were fair in the mixed and rainfed zones and poor in the Agro pastoral especially Buuri East and Igembe North.

#### Socio Economic Indicators (Impact Indicators)

**Production Indicators:** crops are at grain filling stage in the rainfed zone and in fair condition and at podding stage in the mixed zones and in poor condition. The Agro pastoral zone recorded total crop failure. The livestock body condition for small stock and cattle is fair across the zones. Milk production has slightly decreased and significantly below the long-term average (LTA).

**Access Indicators:** The average return distances to water sources for livestock and households have remained stable compared to April and markedly above the LTA. Milk consumption per household (HH) per day decreased compared to April and below the LTA. Terms of Trade (TOT) remained unfavourable decreasing compared to April and significantly below the LTA.

**Utilization Indicator:** 8.3 percent of households were within the poor consumption score, 57.5 percent at acceptable and 34.17 percent at borderline. 96.9 percent of children were under the green band with the remaining 3.1 percent under yellow.

Early Warning Phase Classification		
Livelihood Zone	Phase	Trend
Mixed Farming	Alert	Stable
Agro - Pastoral	Alert	Stable
Rain Fed Cropping	Normal	Worsening
<b>County</b>	<b>Alert</b>	<b>Stable</b>
Biophysical Indicators	Value	Normal Range/ Value
Rainfall (% of Normal)	31.39	80 – 120
VCI-3Month	38.87	35 – 50
Production indicators	Value	Normal
Maize Crop Condition	poor	Good
Livestock Body Condition for cattle	Fair	Good
Milk Production per HH/ day	1.1	2.0litres
Livestock Migration Pattern	External migration	No migration
Access Indicators	Value	Normal
Terms of Trade (ToT)	68	138
Milk Consumption per HH/ day	1.1	1.3Litres
Return HHs distance to water sources	10.7	5.5Km
Water source return distance from grazing areas	14.2	8.6Km
Cost of water (20 litres)	Ksh 2.5-5.00	Ksh 2.5 - 5.00
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	<span style="color: green;">G</span> 96.9% <span style="color: yellow;">Y</span> = 3.1% <span style="color: red;">R</span> = 0%	0
Copying strategy Index (CSI)	10.9	<15

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

# 1. CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

- The month of May marked the cessation of the long rain season over most parts of the county.
- The rains remained significantly below the long-term average and uneven in distribution both in time and space.
- In May 2022, most parts of the agro-pastoral and mixed livelihood areas such as Igembe North, Tigania East, Tigania West and Buuri East experienced dry weather condition.
- According to the WFP –VAM, the rains received in the month were significantly below their long-term decadal values.

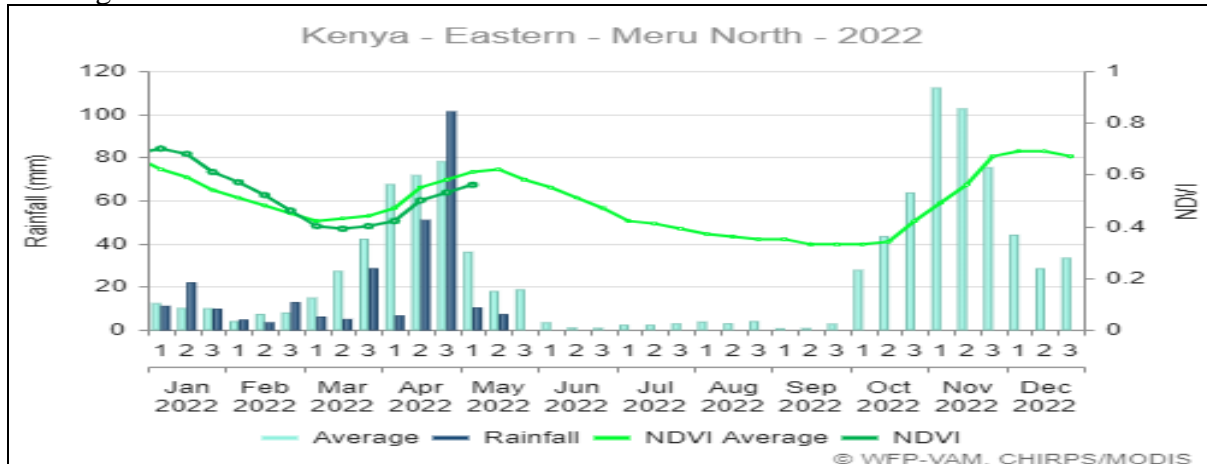


Figure 1: Rainfall estimates in Meru North

- From the figure 1 above the Rainfall for Estimate (RFE) amounts for the first dekad and second dekad were significantly below their long-term averages.
- The County received an average of 8.4115 mm compared to the long-term average of 26.795 mm for the same period. The first dekad received 9.97 mm and second dekad received 6.853 mm of rainfall.
- Normalized Difference Vegetation Index (NDVI) for the first dekad was below the normal averages

## 2. IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

#### 2.1.1 Vegetation Condition Index (VCI)

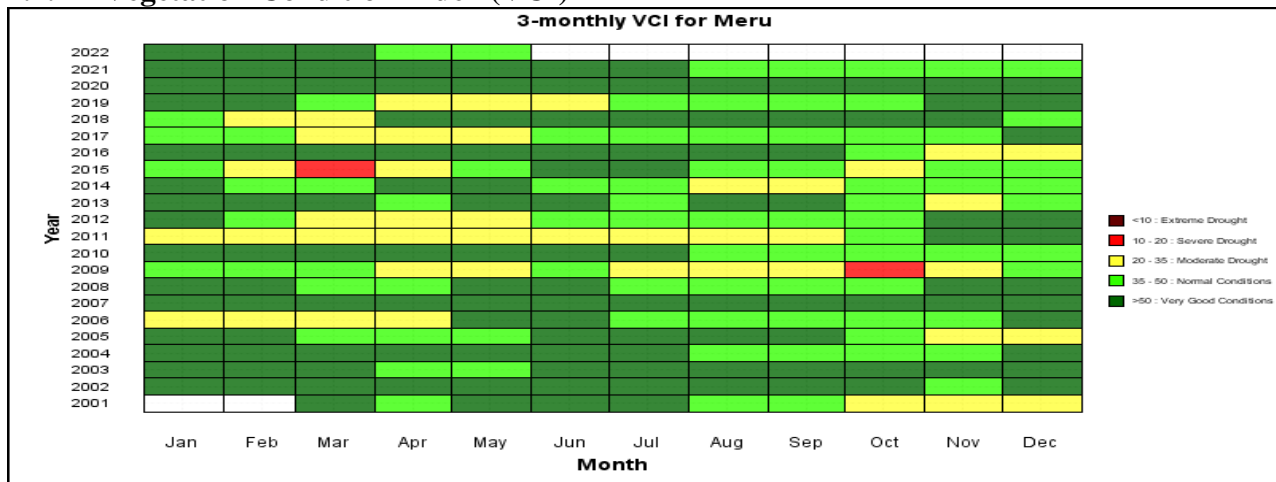


Figure 2: Three-monthly VCI for Meru County [Source: MODIS Data]

- From the figure (2) shown above, the County vegetation condition in the month under review is within the normal vegetation greenness as depicted by a vegetation condition index (VCI).
- May 2022 showed deterioration in the vegetation condition in most sub-counties as compared to the previous month of March 2022 worse. The deterioration is associated with the late onset and early cessation of long rains of 2022 in most parts of the County.
- One sub-county; Igembe North is in severe vegetation deficit. Buuri East Sub-County is in moderate vegetation deficit hence close monitoring and response plans. Three Sub-Counties; Igembe Central, Tigania East and Tigania West recorded normal vegetation greenness while North Imenti, Central Imenti, Igembe South and South Imenti recorded above normal vegetation greenness.
- Generally, when compared to similar period last year and the long-term average, the current condition of vegetation is worse

### 2.1.2 Pasture Condition

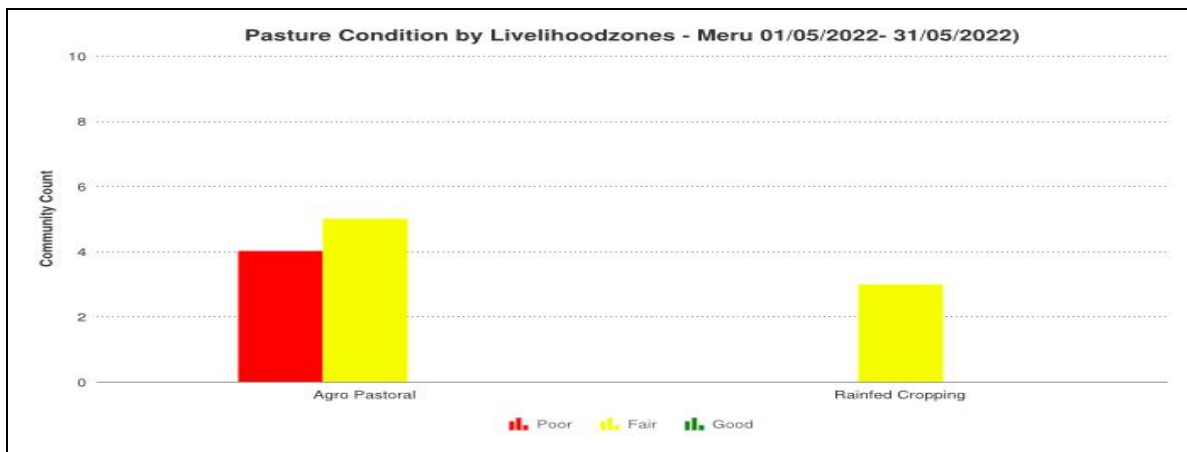


Figure 3: Pasture condition in Meru County

- The pasture condition was fair in the rainfed zone, poor to fair in the agro-pastoral zone and fair in the mixed livelihood zone. In the lower grazing areas of Njaruine and Kamweline the pasture conditions are completely depleted.
- The pasture condition is below normal for this time of the year across the livelihood zones.
- This is attributed to poor performance of the 2022 long rain season coupled with delayed onset and early cessation and previous failed season.
- The available pasture is estimated to last for a month in the rainfed and mixed livelihood zones and less than a month in agro-pastoral areas of Igembe North and Igembe Central.

### 2.1.3 Browse

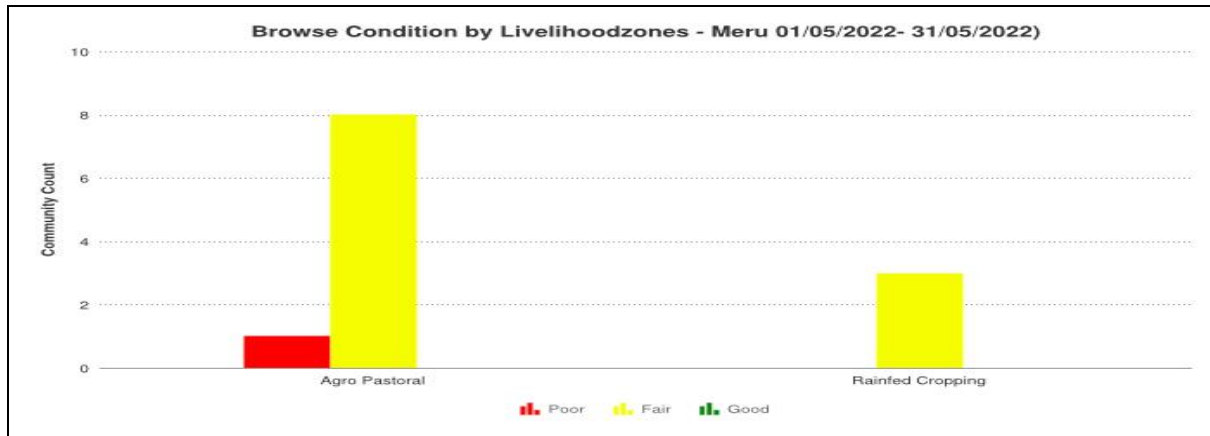


Figure 4: Browse condition in Meru County

- The browse condition was fair across the livelihood zones except in parts of Igembe North in Kamweline and Kinisa where the condition was poor.
- The browse condition is below normal for this time of the year across the livelihood zones except in the rainfed livelihood zone where the condition is normal.
- The browse condition is expected to last for up to a month in the rainfed zone of Tigania East and less than a month in the mixed and Agropastoral livelihood zones.

## 2.2 WATER RESOURCE

### 2.2.1 Sources

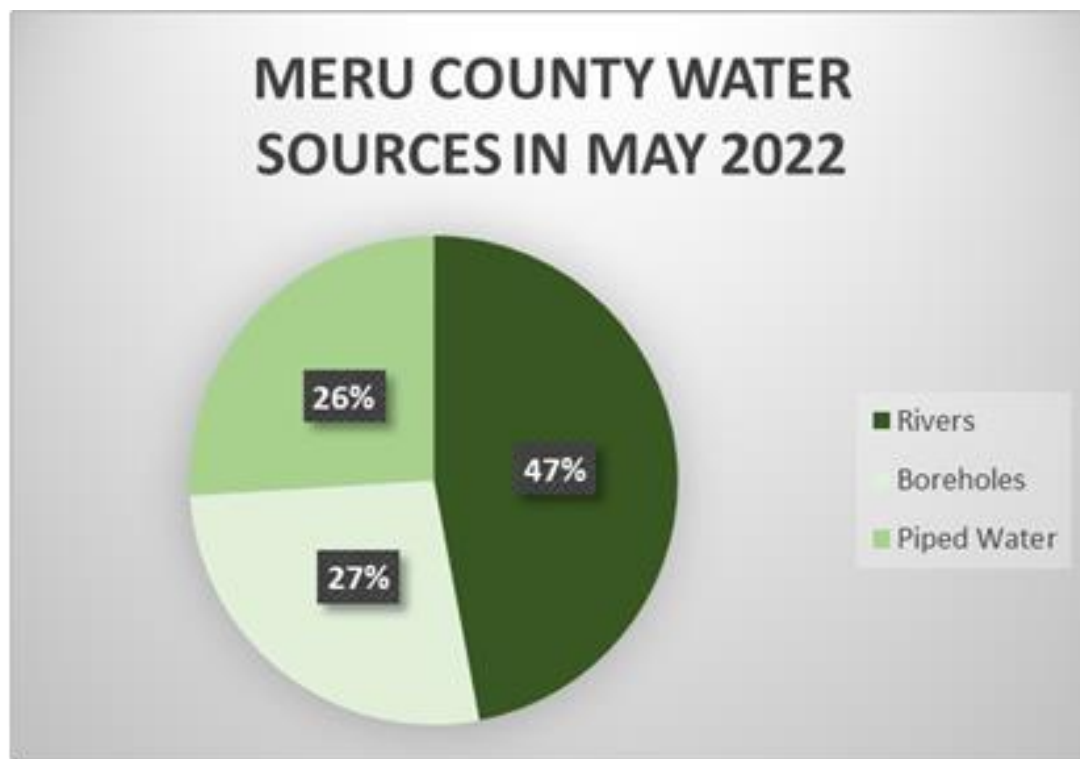


Figure 5: Water sources for Meru County

- From figure 5 shown above, the three main sources of water within the period under review were; rivers, boreholes and piped water.
- Parts of Igembe North such as Kachiuru, Ndoleli and Mutuati rely on water trucking and water vendors.

### 2.2.2 Household Access to Water

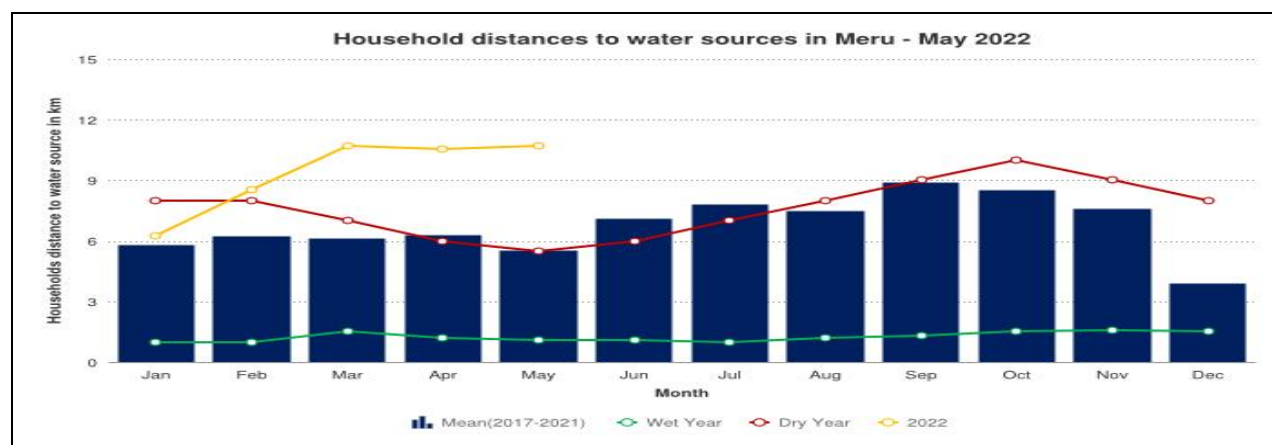


Figure 6: Household average distances to water sources

- From the figure (6) shown above, the average return distances to household water sources remained high at 10.7 km in May compared to 10.6 km in April
- The increase in distances to water sources are attributed to drying up of water sources especially in the agro-pastoral livelihood zone.
- The current household water distance remained above the Long-Term Average (5.5 km) by 95 percent.
- The average cost of 20 litre jerry can at water kiosks was at Ksh 2.5- 5.00 across livelihood zones except in parts of Igembe North where households cost of a 20 litre jerrican is at Ksh 20. In a few areas such as Kachiuru in Igembe North, a 20 litre jerry goes for Khs. 20
- Treatment of drinking water is done by boiling and use of filtration with only 32.5 percent of the sampled households treating drinking water.

### 2.2.3 Livestock Trekking Distance to Water Sources from Grazing Area

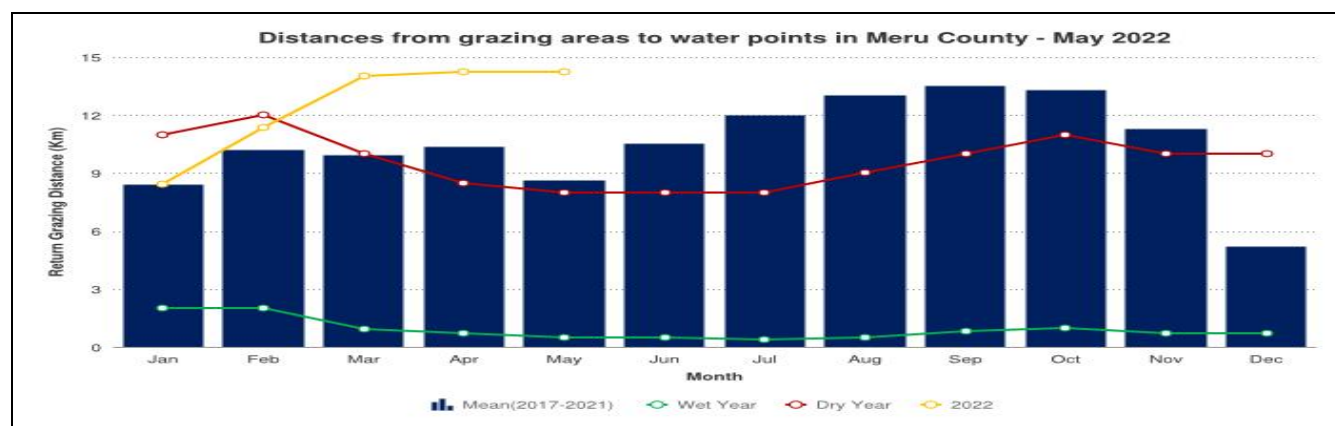


Figure 7: Livestock average return distances to water sources

- From (Figure 7) shown above, the average return from grazing areas to water points remained stably high at 14.2 km in May compared to 14.2 km in April.
- The increase in livestock trekking distances to water points is due to depletion of pasture and drying of water sources.
- In the rain fed livelihood zone of Tigania East, the watering frequency for both small stock and cattle was on a daily basis. In the agro-pastoral livelihood zone and mixed zone of Tigania West the frequency was 2-3 days per week
- The current household water distance remained above the LTA (8.6 km) by 65 percent.

### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

##### 3.1.1 Livestock Body Condition

- The body condition of small stock and cattle was fair to good in the rainfed livelihood zone and fair in the mixed livelihood zone. The body condition in Igembe Central and Igembe north is fair. The condition is expected to deteriorate with the continued depletion of forage due to the poor performance of the 2022 long rain season coupled with the previous failed seasons.

##### 3.1.2 Livestock Diseases and Mortality

- No cases of livestock diseases were reported in the month in the sentinel sites.
- However, according to the department of Livestock cases of Contagious Caprine Pleuro Pneumonia (CCPP) were reported in Karama and Muthara wards in Tigania East in small stock. In cattle cases of Foot and Mouth Disease Mulla and outbreak of anthrax was reported in Karama ward which led to death of approximately 20 cattle and hospitalization of about 10 people.

##### 3.1.4 Milk Production

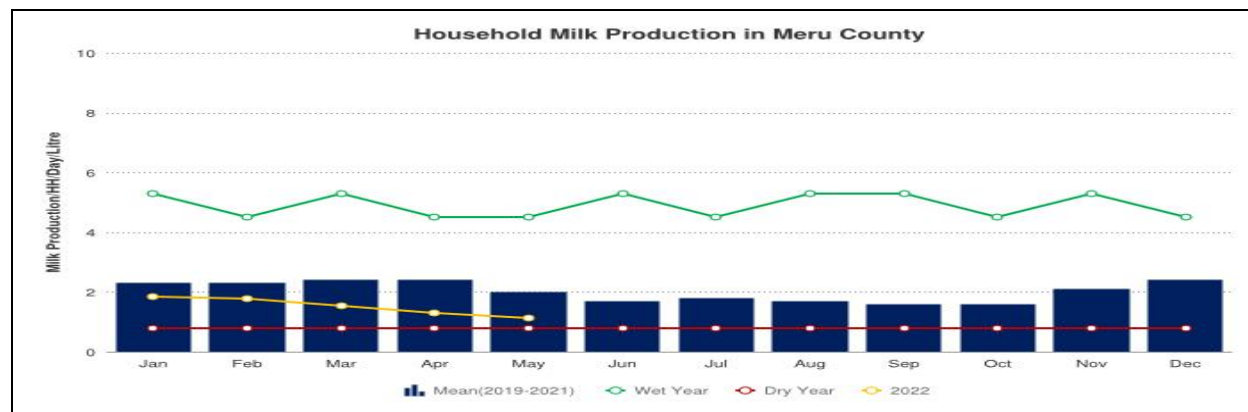


Figure 8: Household milk production in Meru North

- From the figure 8 above, the average milk production per household per day decreased to 1.1 litres per day in May compared to 1.3 litres in the previous month of April 2022.
- This is attributed to the deteriorating body condition of livestock across the zones due to the depletion of natural resources (water and forage).
- The current milk production is below the LTA for this time of the year.
- Average milk price per litre at household level ranged at Ksh 80-100 in the mixed and agro-pastoral zones.

### 3.2 RAIN-FED CROP PRODUCTION

#### 3.2.1 Stage and Condition of food Crops

- Crops are podding and grain filling for legumes and tussling for cereals in the mixed livelihood zone with the condition being poor across the zones with some already terminating in the farms. The agro-pastoral zone recorded total crop failure. This is attributed to poor performance of the 2022 long rain season coupled with late onset and early cessation and failure of the previous seasons.
- In the rainfed zone crops are at grain filling, with crops in fair condition.

### 4.0 MARKET PERFORMANCE

#### 4.1 LIVESTOCK MARKETING

##### 4.1.1 Cattle Prices

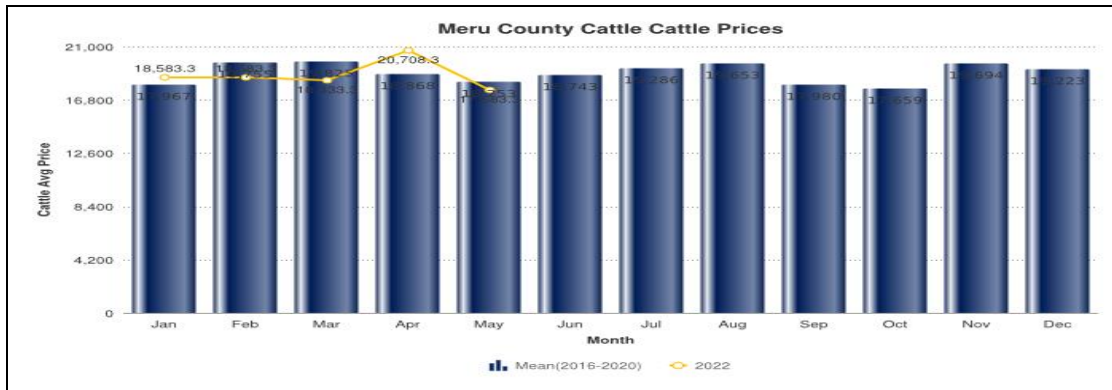


Figure 9: Average Market prices for cattle in Meru County

- From the figure (9) shown above, the average market price of three-year-old cattle for the month under review decreased to Ksh 17,583 in May 2022 compared to Ksh 20,708 in April 2022. The highest price recorded for the month for cattle was at Ksh 20,000 in Mikinduri in Tigania East and lowest price recorded was Ksh 15,000 in Mutuati market in Igembe North
- The decrease in cattle prices is attributed to poor body condition.
- Overall, the current prices are below long-term average in comparison to a similar period during a normal year.

## 4.1.2 Goat Price

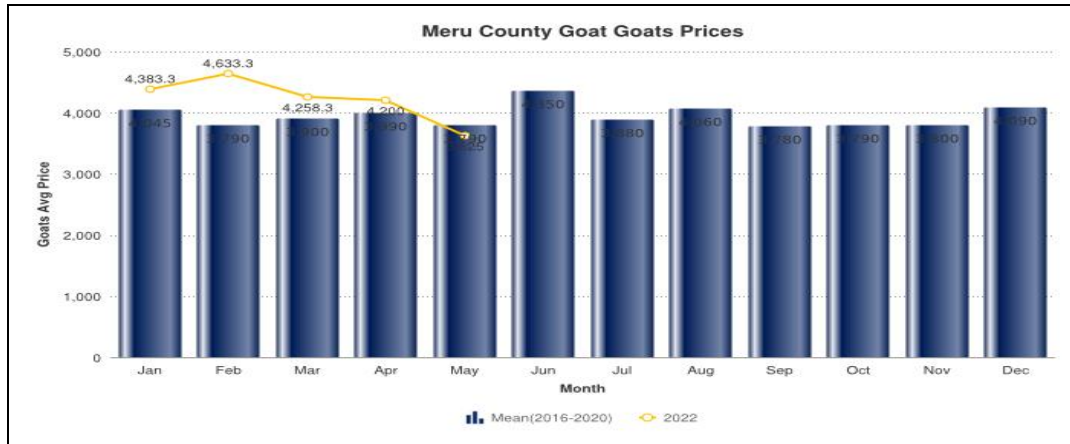


Figure 10: Average Market prices for goat in Meru County

- The average market price of a two-year goat for the month under review decreased to Ksh 3,625 in May compared to Ksh 4,200 in April 2022 as illustrated in the above figure (10). The current price within long-term average in comparison to a similar period during a normal year.
- The decrease in average market prices for goats might be attributed to high supply of goats and the general poor market performance with decrease household purchasing power.
- The highest goat prices were recorded in Mutuati in Igembe North at Ksh 4000 and lowest price was Ksh.3200 in Mulika

## 4.2 CROP PRICES

### 4.2.1 Maize

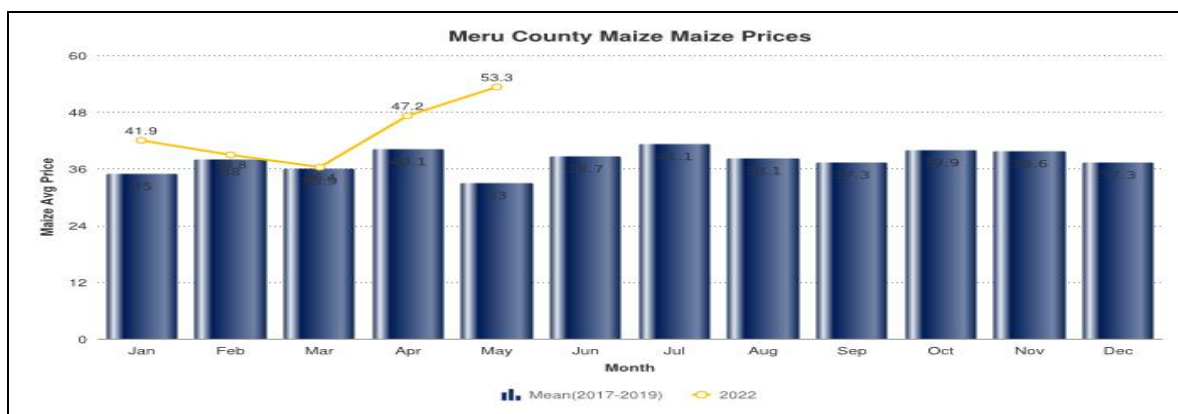


Figure 11: Average market prices for maize in Meru County

- The average market price of a kilogram of maize increased to Ksh 53 in May 2022 when compared to Ksh 47 in April 2022.
- The Increase in price is due to increase in demand due to depletion of household stock from the short rains harvest.



- The current market price is above the long-term average in comparison to a similar period during a normal year.
- The highest maize price was recorded in Kangeta Market in Igembe Central at Ksh 60 and Ngundune recording the lowest price at Ksh 50.

#### 4.2.2 Beans Prices

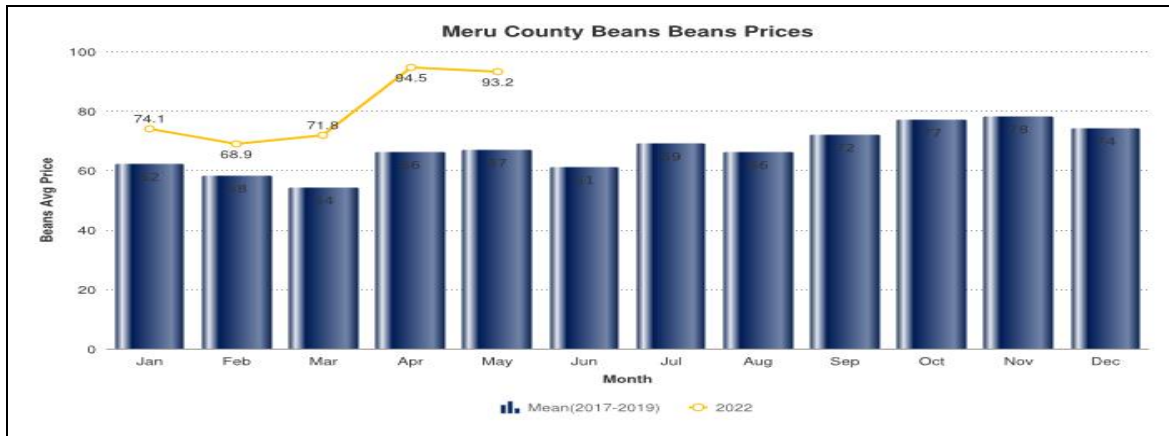


Figure 12: Average market prices for beans in Meru County

- From the figure (12) shown above, the average market price remained stable at Ksh 93 in May compared to Ksh 95 in the previous month of April 2022.
- This price is significantly above the long-term average in comparison to a similar period during a normal year.
- The high prices are attributed to low market supply due poor crop performance in the previous three rain seasons and high demand for beans.
- The highest market price per kilogram was recorded in Kangeta Market in Igembe central at Ksh 100 and the lowest Mikinduri in Tigania West at Ksh 80.

#### INCOME

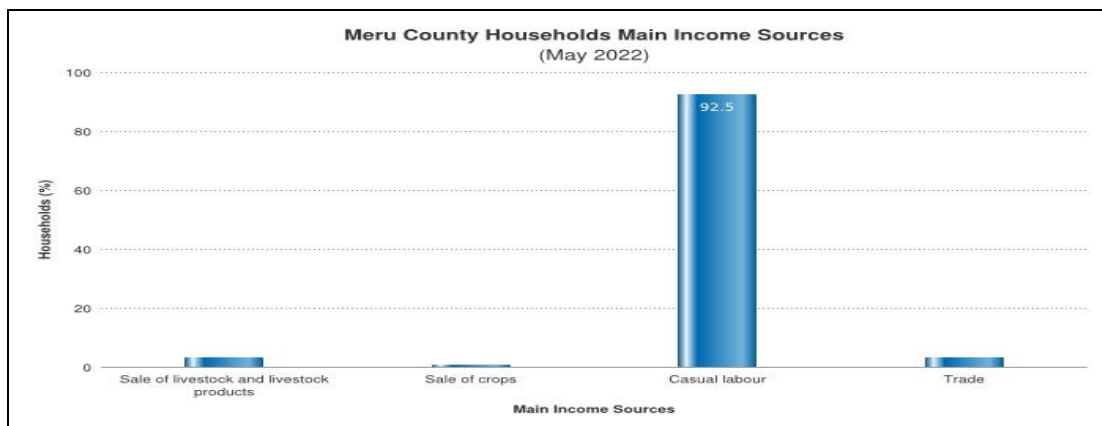


Figure 13: Sources of household income in Meru North

- The households' main source of income was casual labour accounting for 92.5 percent of household source of income, trade at 3.3 and sale of livestock at 3.3 percent and sale of crops at 0.8 percent.
- Households also use sale of 'Miraa', firewood and charcoal as alternative sources of income.

## 4.2 TERMS OF TRADE

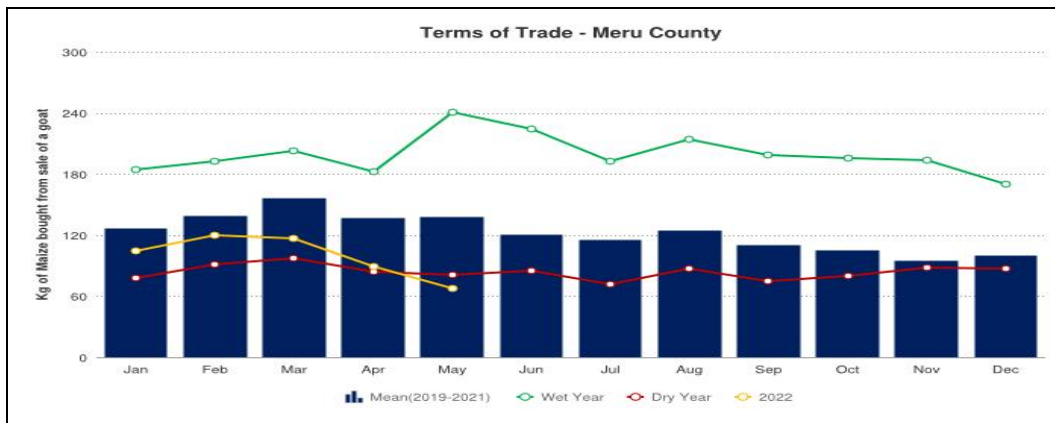


Figure 14: Terms of trade in Meru North

- In May 2022, the terms of trade (TOT) reduced to 68 kilogram of maize purchased from sale of medium sized goat as compared to 80 kilogram purchased from sale of a medium size goat in the previous month of April 2022.
- The decrease is due to the decrease in the price of goat as the price of maize significantly increased.
- The lowest TOT was observed in Tigania West where a sale of medium-size goat fetches 68 kilogram of maize while the highest was in Igembe North where a sale of a medium size goat fetches 80 kilogram of maize.
- The current TOTs are below the LTA as compared to a similar period during a normal year.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

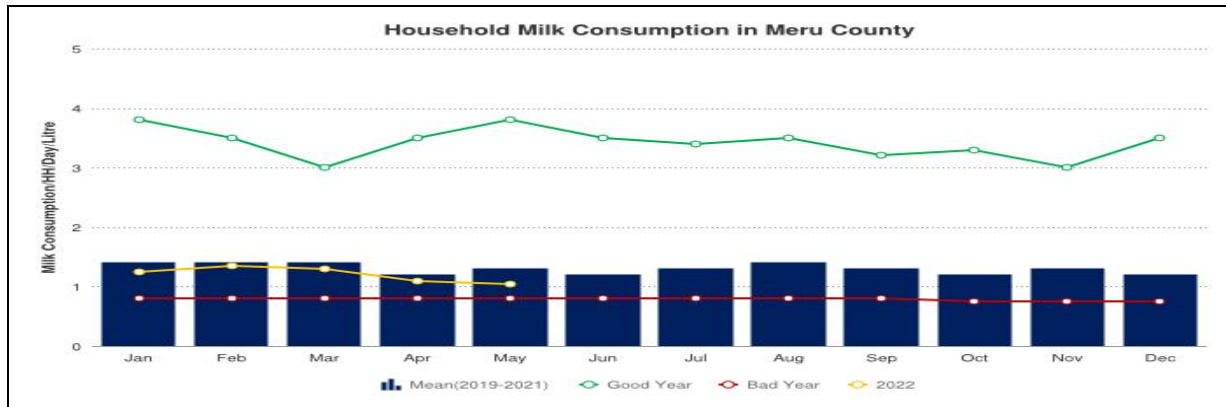


Figure 15: Average household milk consumption (l/hh/day)

- Milk consumption per household per day reduced to one/household/day litre in May compared to 1.1 litres/household/day in April 2022.
- The current milk consumption per household per day is within the long-term average as compared to a similar period during a normal year.
- The slight decrease is attributed to the worsening body condition of livestock across the zones driven by poor pasture and browse condition.

### 5.2 FOOD CONSUMPTION SCORE

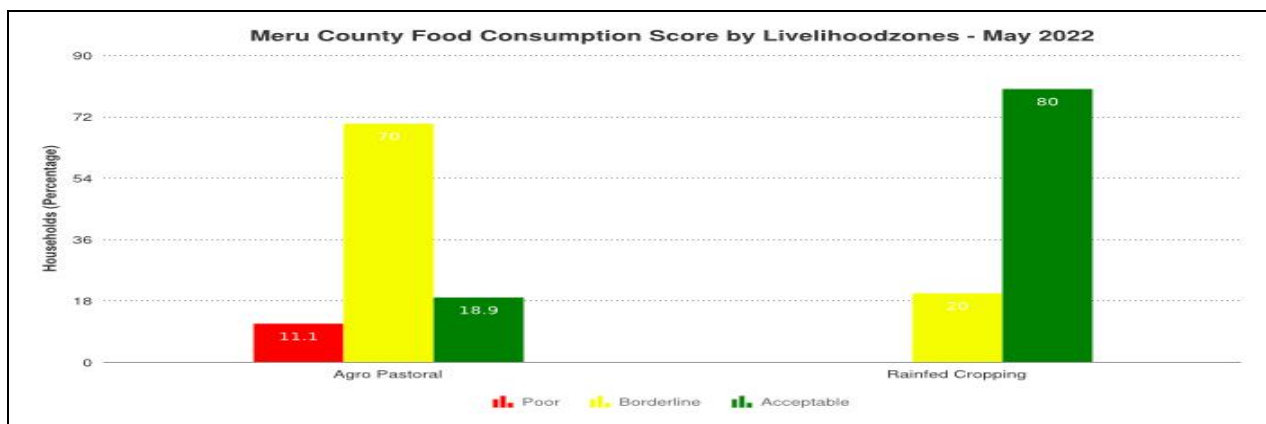


Figure 16: Household food consumption score

- Food consumption gaps across the county worsen in May as compared to the previous month of April. This is due depletion of food stocks at household level occasioned by crop failure and poor livestock productivity which hindered diversified diet. Households with acceptable food consumption in May declined by 18.83 percent to stand at 34.17 percent compared 53 percent in April. Those in the borderline food consumption increased to 57.5 percent in May compared to 36 percent from the previous month of

April 2022. Households at the poor food consumption decreased slightly to 8.3 percent compared to 11 percent in April 2022.

- There was minimal consumption of meat and milk across the livelihood zones with fruits and vegetables been consumed once or twice.
- This is due to the poor performance of the season and poor household purchasing power

### 5.3 HEALTH AND NUTRITION STATUS

#### 5.3.1 Nutrition Status of Children

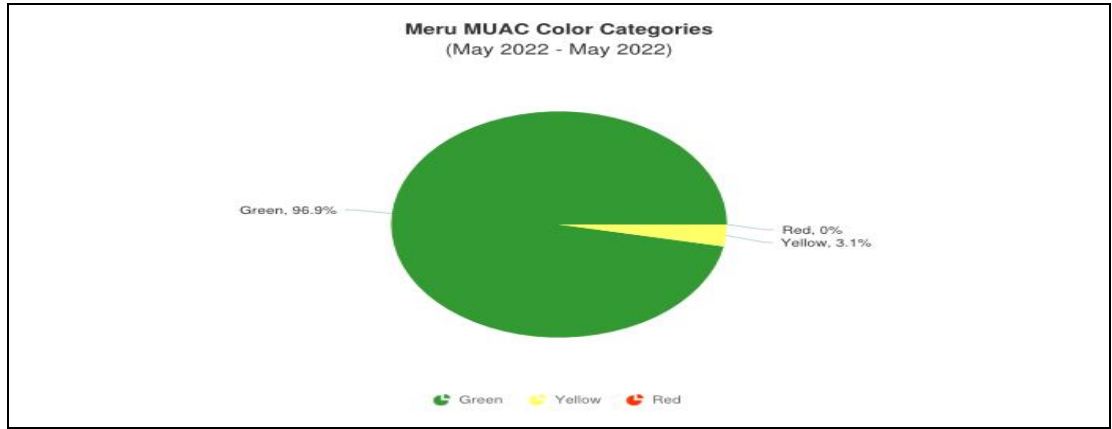


Figure 17: Children under five at risk of malnutrition in Meru County

- Over 96.9 percent of the children under five years screened for malnutrition using the family MUAC tape were at the green band indicating that they were properly nourished. 3.1 percent of the children under five years were moderately malnourished.
- High cases of malnutrition are being reported in Igembe Central outside of the sentinel sites
- According to the MOH cases of malnutrition have reduced compared to the previous month across the county.

### 5.4 Coping Strategy Index

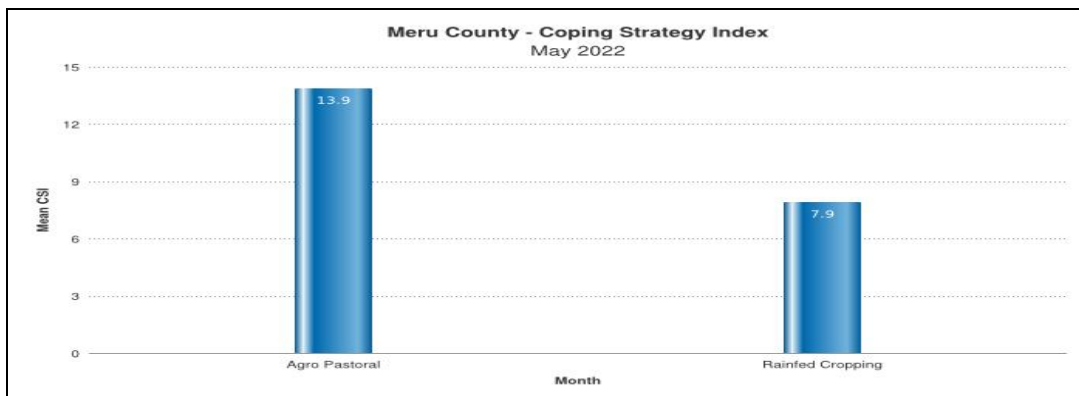


Figure 18: Household coping in Meru North

- Reduced consumption-based coping strategy index (rCSI) for the month under review remained stable at 10.9 compared to 10 in April.

- The coping strategy index is below LTA when compared to a similar period during a normal year.
- The agro pastoral livelihood zone recorded CSI of 13.9 while the rain fed livelihood zone recorded a coping strategy index of 7.9
- Households mainly resulted to reducing the quality and quantity of food consumed by adults as a coping strategy.

### 6.1 Migration and security

- Presence of livestock from neighbouring counties are still recorded in the county with cases of insecurity still reported. However, the situation has improved due to deployment of security forces and employment community policing approach in conflict resolution.
- Migration of camels into the county through Igembe central was reported in the month.
- A case of livestock theft was recorded in Igembe North with the herders getting away herds of cattle and goats.

### 6.2 FOOD SECURITY PROGNOSIS

- Households expect below average crop productivity occasioned by the poor performance, late onset and early cessation of the 2022 long rains season.
- Livestock production and productivity is expected to deteriorate due to depletion of forage and water resources.
- Pasture and browse condition are expected to last for less than a month with continued depletion and no regeneration from the long rains season.
- Terms of trade will likely sustain the purchasing power for the households for the next 1-2 months.
- Resource based conflict is projected to increase aggravated competition of scarcity forage and water resources.

### 6.3 ON-GOING INTERVENTIONS

Intervention	Implementer	Beneficiaries
<ul style="list-style-type: none"> <li>• Routine livestock diseases surveillance</li> </ul>	<ul style="list-style-type: none"> <li>• County Department of Livestock Production and Veterinary Services</li> </ul>	Livestock farmers from both sub counties
<ul style="list-style-type: none"> <li>• Routine Disease Surveillance</li> <li>• Routine screening management of malnutrition at health facility level</li> <li>• Routine Vitamin A and Zinc Supplementation and deworming at health facility level</li> </ul>	<ul style="list-style-type: none"> <li>• County Department of Health Services</li> <li>• National Government</li> <li>• UNICEF</li> <li>• Nutrition Interventions</li> </ul>	Mothers and children who visited health facilities in both sub counties  Households and health facilities in targeted community areas
<ul style="list-style-type: none"> <li>• Repair, servicing and drilling of boreholes</li> </ul>	<ul style="list-style-type: none"> <li>• County department of water and NDMA</li> </ul>	Community

<ul style="list-style-type: none"> <li>• Pushing back of camel and livestock from neighboring communities to avoid conflict</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of interior</li> </ul>	Farmers and herders
<ul style="list-style-type: none"> <li>• Trucking of water to health facilities and communities</li> </ul>	<ul style="list-style-type: none"> <li>• County department of water, Tana water and NDMA</li> </ul>	Schools and community
<ul style="list-style-type: none"> <li>• Training of farmers on soil and water conservation</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Agriculture</li> </ul>	Farmers
<ul style="list-style-type: none"> <li>• Provision of subsidized input through e-voucher system</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Agriculture</li> <li>• National government</li> </ul>	Farmers
<ul style="list-style-type: none"> <li>• Enhancement of 100 percent transition in school</li> </ul>	<ul style="list-style-type: none"> <li>• Local administration</li> <li>• MOE</li> </ul>	School going children

## 7. SECTOR RECOMMENDATIONS

Sector	Recommended Intervention
<b>Agriculture</b>	<ul style="list-style-type: none"> <li>• Sensitization on improved farming methods</li> <li>• Capacity building on pest and diseases (Fall army worm and Locust)</li> <li>• Capacity building on post-harvest practices</li> <li>• Promotion of kitchen gardening</li> </ul>
<b>Livestock</b>	<ul style="list-style-type: none"> <li>• Disease surveillance and promotion of good and husbandry practices and silage making</li> <li>• Ring vaccination of cattle against anthrax in Tigania East where cases of Anthrax were reported.</li> <li>• Livestock feed supplementation and minerals</li> <li>• Livestock offtake</li> </ul>
<b>Water and sanitation</b>	<ul style="list-style-type: none"> <li>• Drilling and equipping of more boreholes</li> <li>• Desilting of earth dams.</li> </ul>
<b>Health and nutrition</b>	<ul style="list-style-type: none"> <li>• Provision of commodities for management of various types of malnutrition at health facilities.</li> <li>• Upscaling Malnutrition screening at community level</li> <li>• Vitamin A outreaches through ECDs and community</li> </ul>