

# National Drought Management Authority

MERU COUNTY

DROUGHT EARLY WARNING BULLETIN FOR SEPTEMBER 2020



A Vision 2030 Flagship Project



## SEPTEMBER 2020 EW PHASE



### Drought Situation & EW Phase Classification

#### Biophysical Indicators

**Rainfall:** In the month under review, the County generally remained dry.

**Vegetation condition:** Above normal greenness condition was recorded across all livelihood zones. Pasture and browse condition was fair to poor across all the livelihood zones.

#### Socio Economic Indicators (Impact Indicators)

**Production Indicators:** land clearance and preparation for the short rain season was ongoing. Livestock body condition was good to fair for all species. There were no Cases of livestock diseases.

**Access Indicators:** Average return distance to water sources for both households and livestock remained stable; but with increasing trend. Terms of Trade remained favorable. Milk consumption per HH per day remained stable.

**Utilization Indicators:** Nutritional status of children below the age of five years deteriorated but was within the long term average. Household food consumption score declined but fell within acceptable band while coping strategies employed by households were stressed in all the livelihood zones.

### Early Warning Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Normal	Deteriorating
Agro - Pastoral	Normal	Deteriorating
Rain Fed Cropping	Normal	Deteriorating
<b>County</b>	<b>Normal</b>	Deteriorating
Biophysical Indicators	Value	Normal Range/ Value
Rainfall (% of Normal)	136	80 - 120
VCI-3Month	82.38	35 - 50
Production indicators	Value	Normal
Maize Crop Condition	No crops	No crops
Livestock Body Condition for cattle	Good to fair	Fair
Milk Production per HH/ day	1.6	1-2Litres
Livestock Migration Pattern	Normal	Normal
Access Indicators	Value	Normal
Terms of Trade (ToT)	144.6	72.8
Milk Consumption per HH/ day	1.3	1.6 Litres
Return HHs distance to water sources	7.2	8 Km
Water source return distance from grazing areas	10.5	21.5 Km
Cost of water (20 litres)	2.50	Kshs 3.00 - 5.00
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	93%, Y= 7%	
Copying strategy Index( CSI)	10.8	<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>
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Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
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# 1. CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

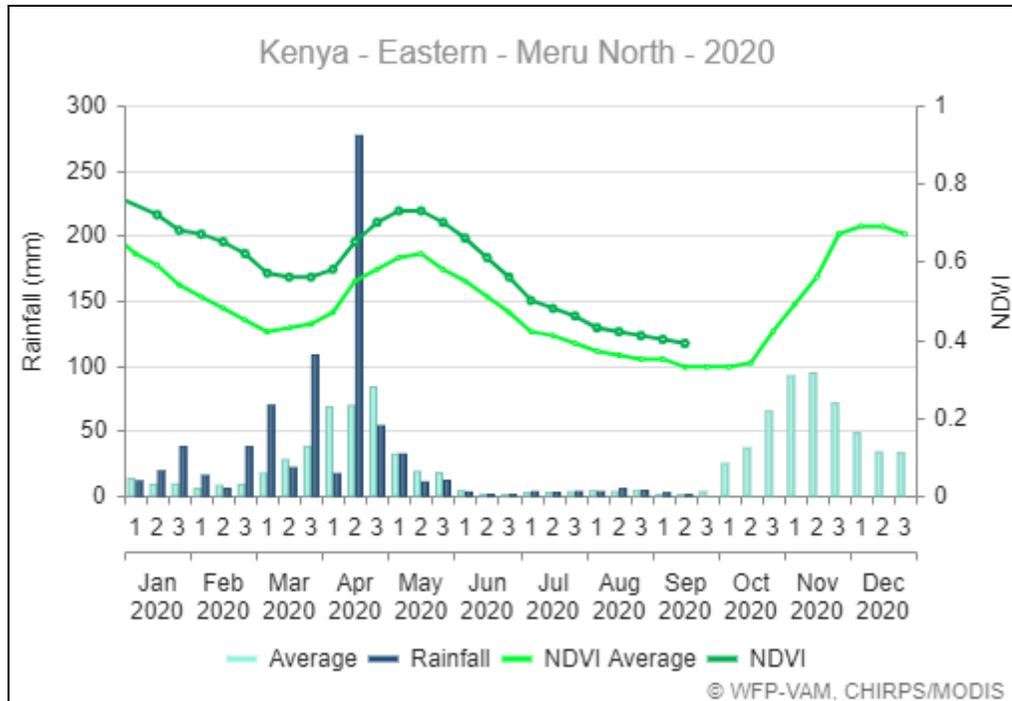


Figure 1: Rainfall estimates in Meru North

- From the figure 1 shown above, dekadal rainfall for estimate (RFE) amounts for the first dekad was above normal and second dekad it was normal when compared to their respective long-term averages. The County received an average of 13.15 mm of rainfall in the Month of September compared to normal average amount of 9.6 mm for the same period.
- Normalized Difference Vegetation Index (NDVI) for the first and second dekads were above normal when compared to their respective long term dekadal NDVI values.

## 2. IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

#### 2.1.1 Vegetation Condition Index (VCI)

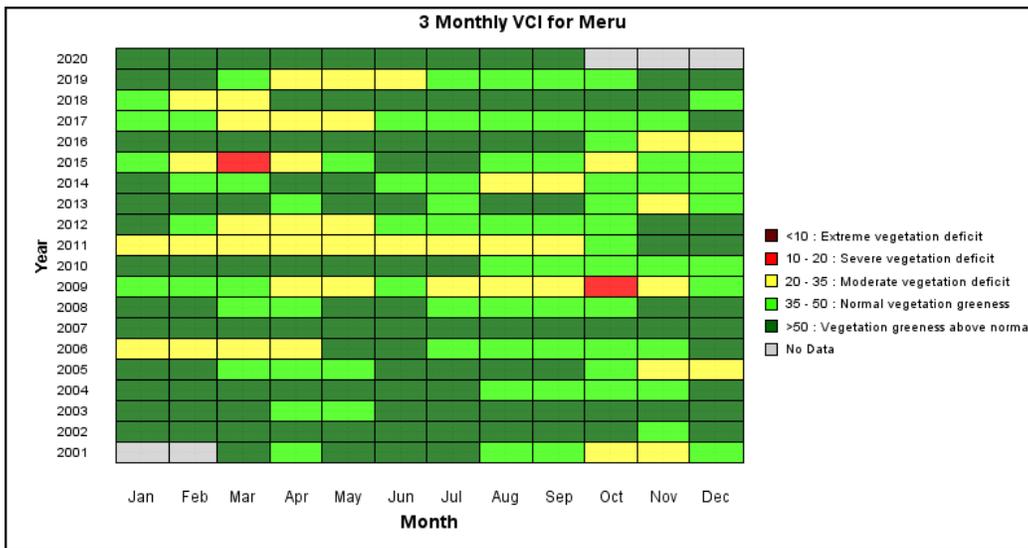


Figure 2: Three-monthly VCI for Meru County [Source: MODIS Data]

- From the figure {2} shown above, the County vegetation condition in the month under review is within vegetation greenness above normal as depicted by a vegetation condition index (VCI).
- All Sub Counties depicted vegetation greenness above normal.
- The combined 3-month Vegetation Condition Index (VCI) remained stable at 82.38 compared to previous month which was at 80.75
- The 3-monthly vegetation condition index for Meru Igembe Central was at 95.13 Igembe North at 78.09, Tingania East at 79.35 while that of Tingania West was at 85.32

### 2.1.2 Pasture Condition

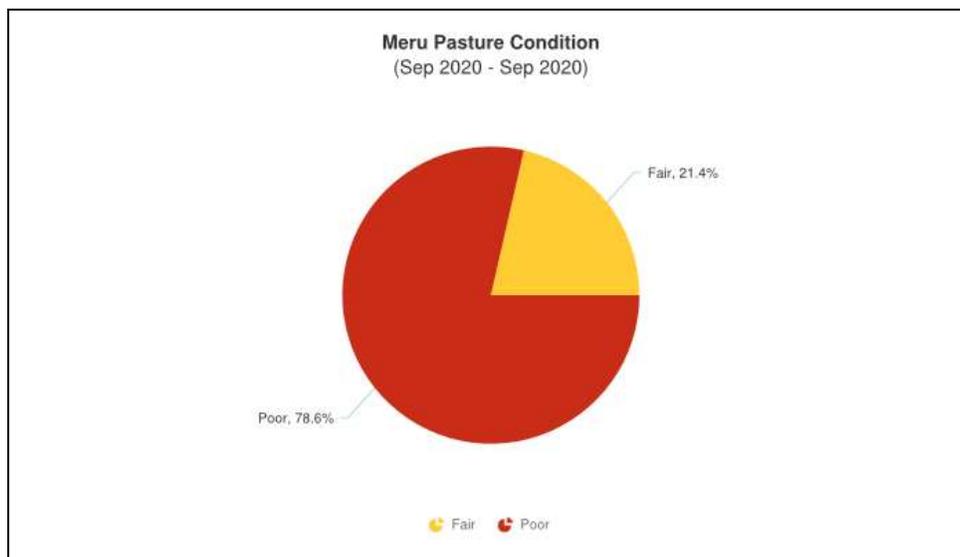


Figure 3: Pasture condition in Meru County

- The pasture condition deteriorated to fair to poor across all the livelihood zones. This is attributed to reduced regeneration and pressure from large stock.
- The pasture condition is normal at this time of the year.

### 2.1.3 Browse

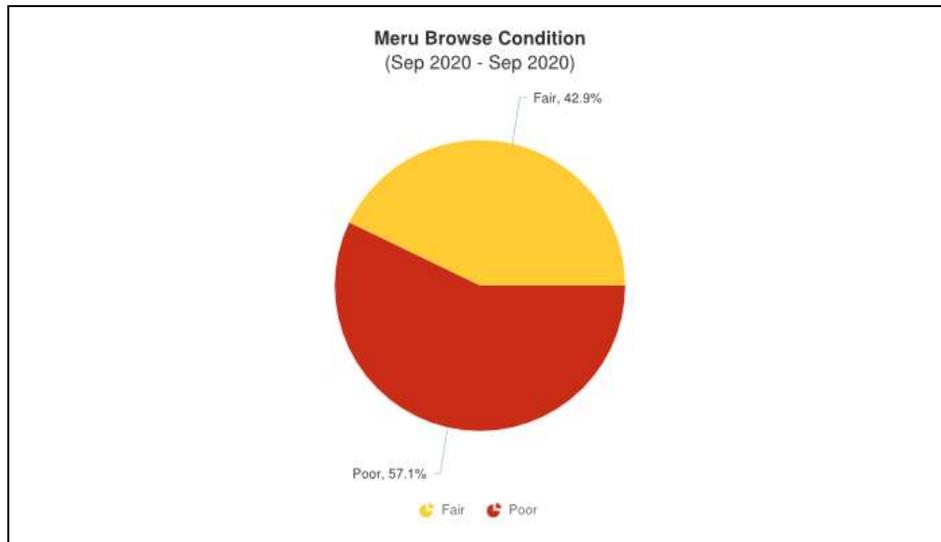


Figure 4: Browse condition in Meru County

- The browse condition was fair to poor across all the livelihood zones. However in the Agro pastoral livelihood zones the condition is poor. This is attributed to reduced regeneration and pressure from both large and small stock due to depletion of pasture.
- Browse is expected to last for one month in all the livelihood zones.
- The browse condition is normal at this time of the year.

## 2.2 WATER RESOURCE

### 2.2.1 Sources

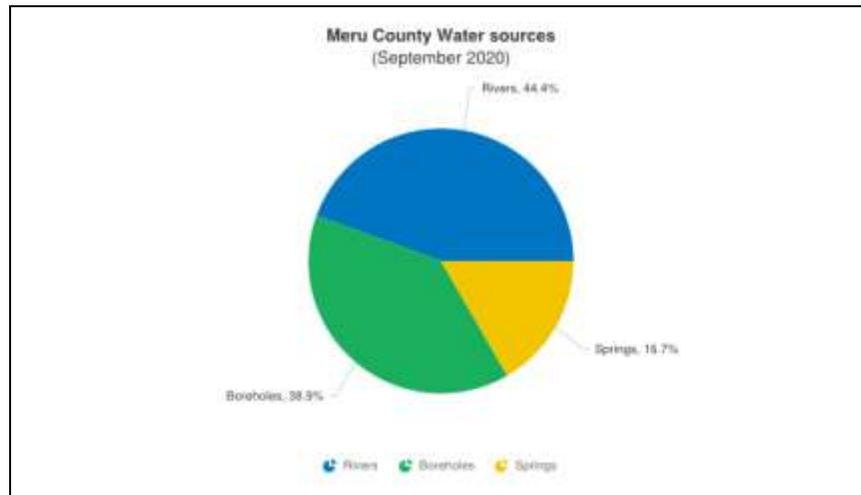


Figure 5: Water sources for Meru County

- From figure 5 shown above, the three main sources of water within the period under review were; rivers, boreholes and springs. Other sources included; pans & dams and shallow wells which was also relied upon as a major water source during the review period.

- The quality of water in boreholes was good while that of rivers and other surface sources was poor due to ground rain water run-off.

### 2.2.2 Household Access to Water

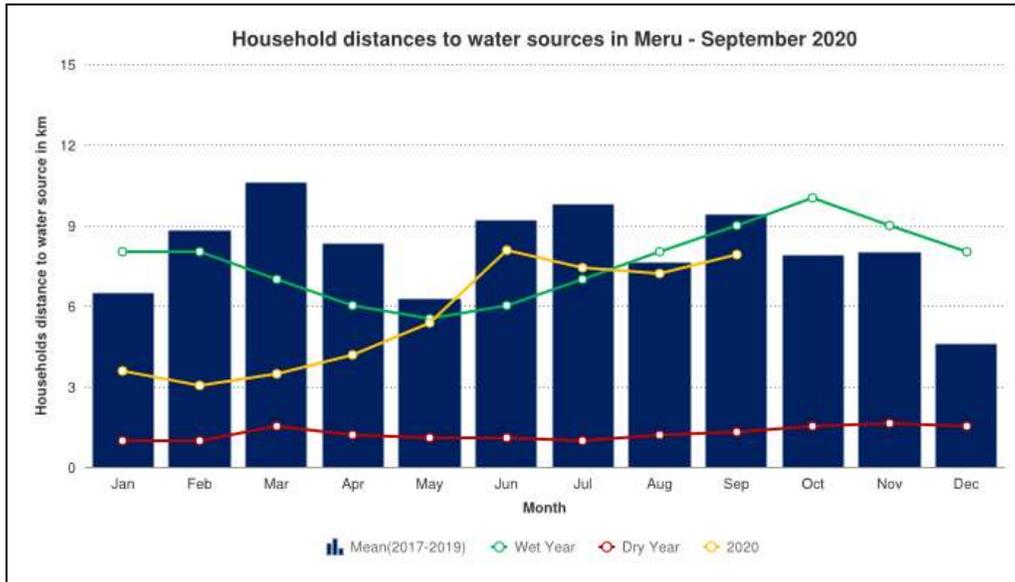


Figure 6: Household average distances to water sources

- From the figure {6} shown above, the average return distances to household water sources remained stable at 7.9 kms compared to previous month 7.2 kms.
- When compared to similar periods, the current household water distance of 7.9 km is 12 percent shorter than the long term average.
- The current average water consumption in all the livelihood zone is 15-20 litres per person per day which is normal.
- The average cost of 20 litre jerry can at water kiosks was ranging between Kshs 2.50 to Kshs 5.00 which is normal at this time of the year
- Based on key informant and households interviews, 45 percent of households treat water.

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

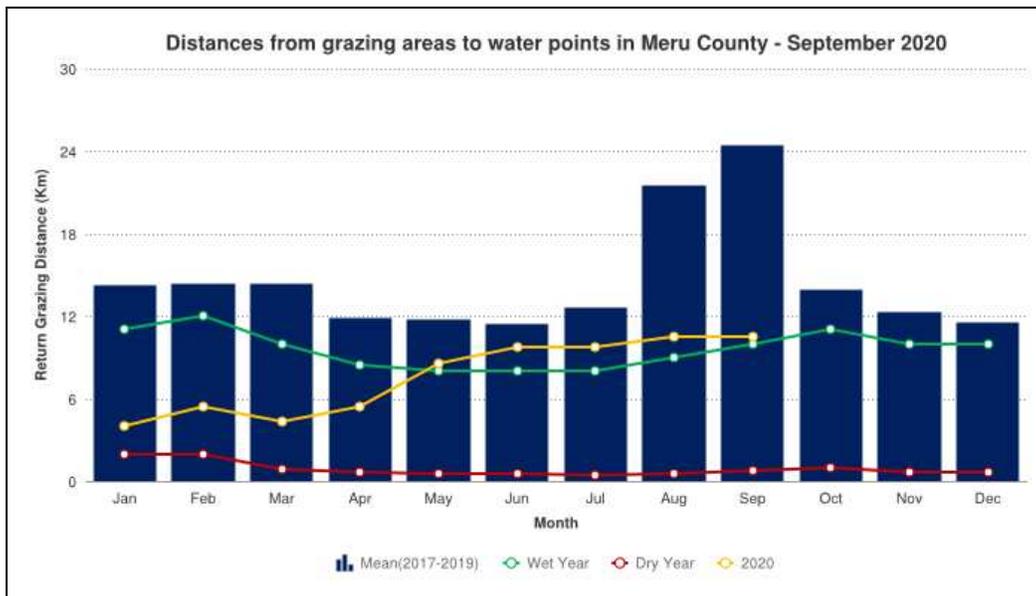


Figure 7: Livestock average return distances to water sources

- From (Figure 7) shown above, the average return distance to water source from grazing areas remained stable at 10.5 km when compared to the preceding month's distance of 10.5 km.
- The watering frequency for livestock was on daily basis in the rain-fed and mixed farming livelihood zones while in the Agro pastoral livelihood zones the watering intervals for cattle and small stock is 1-2 days and 2-3 days which is normal at this time of the year.
- The current average return distance to water sources was normal compared to long term average at this time of the year.

### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

##### 3.1.1 Livestock Body Condition

- The body condition of cattle and small stock was good to fair across the livelihood zones. This is normal when compared to similar periods.
- With the progression of the long dry spell, the livestock body condition is expected to deteriorate but still be within the good-fair condition range and above normal in all the livelihood zones.

##### 3.1.2 Livestock Diseases

- There were no reported cases of Livestock diseases.
- Routine surveillance measures by the County government continued in the month under review.

### 3.1.3 Milk Production

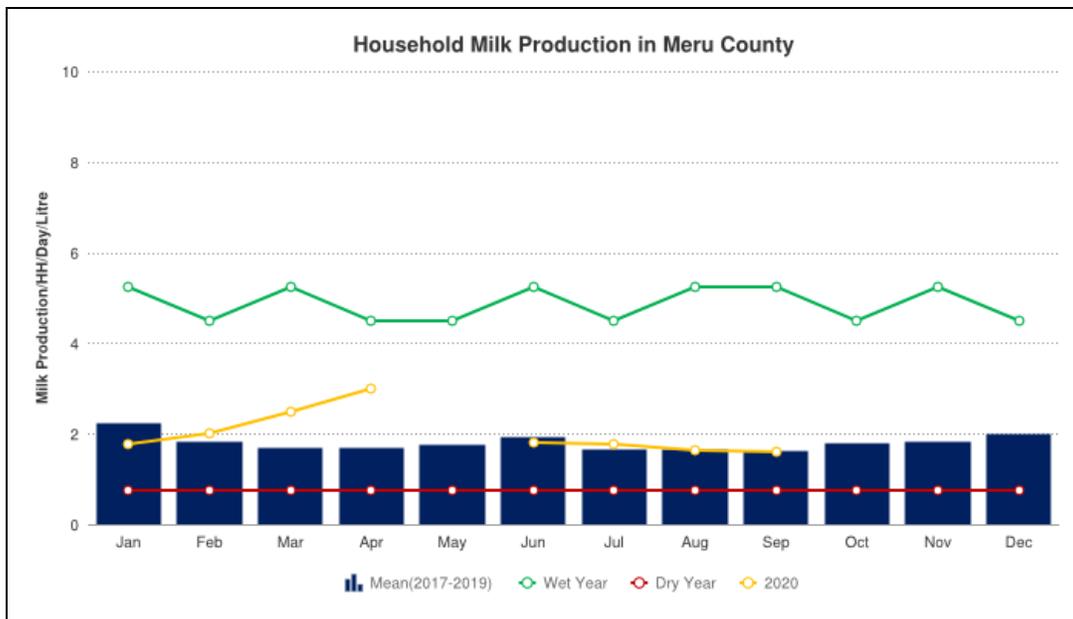


Figure 8: Household milk production in Meru North

- From the figure {8} shown above, the average daily milk production per household per day remained stable at 1.6 litres compared to the previous month at 1.6 litres.
- Milk production was high in Mikinduri Ward where cattle practice zero grazing and are of good breed.
- Current milk production of 1.6 litres is normal when compared to the long term average milk production of 1.6 litres
- Average milk price per litre at household level was at Ksh 60.00 which was normal at this time of the year.

## 3.2 RAIN-FED CROP PRODUCTION

### 3.2.1 Stage and Condition of food Crops

- There were no crops at the farms
- Farmers are clearing and preparing farms for the short rain season.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

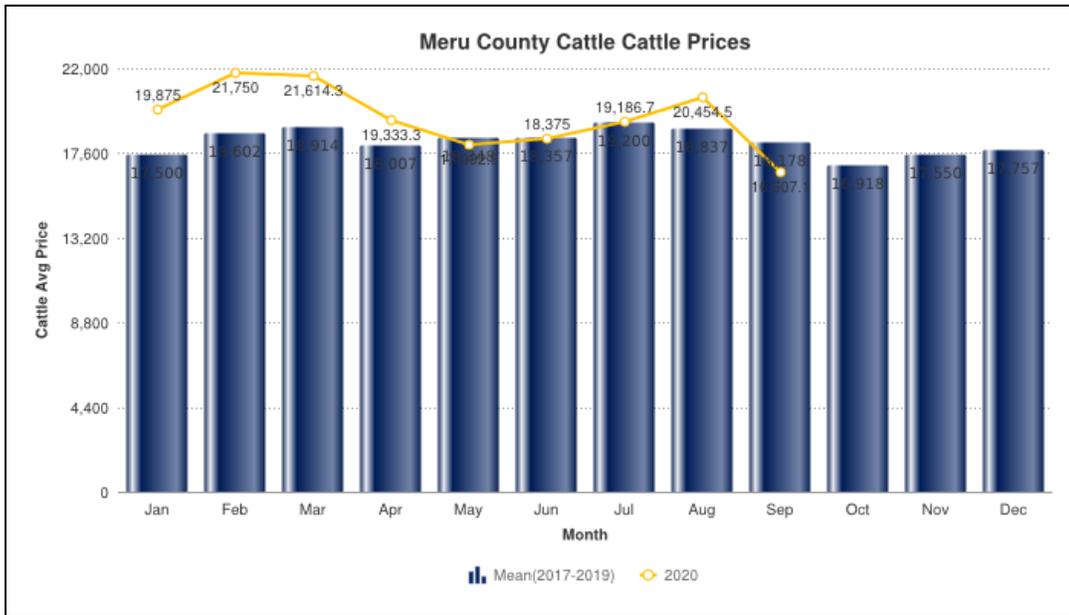


Figure 9: Average Market prices for cattle in Meru County

- From the figure (9) shown above, the average market price of three-year-old cattle for the month under review decreased to Kshs. 16,600 when compared to the preceding month of August price of Kshs. 20,450.
- The decrease in prices is attributed increased traded volumes of cattle due to influx of cattle at the market from the neighbouring counties.
- When compared to similar periods, current cattle price of Kshs. 16,600 is slightly below the long term price of Kshs. 17,550.

#### 4.1.2 Goat Prices

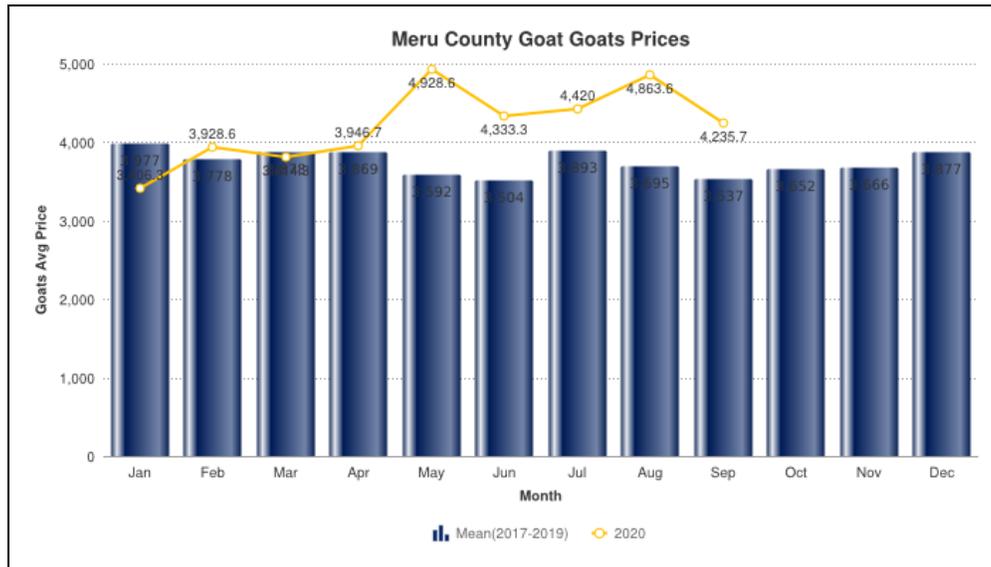


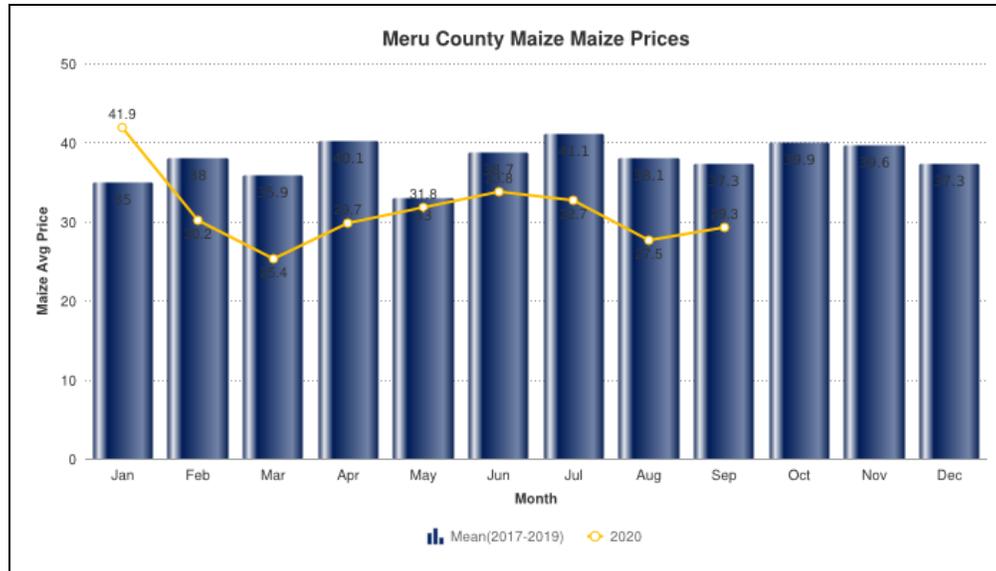
Figure 10: Average market prices for goats in Meru County

- The average market price of a two-year goat slightly decreased to Kshs. 4,235 when compared to the preceding month of August price of Kshs. 4,860 as illustrated in the above figure (10).

- When compared to the long term average price of Ksh. 4,235, current goat price is above normal by 19.7 percent.
- Above normal goat price was attributed to good body condition and high demand and low supply across the livelihood zones.

## 4.2 CROP PRICES

### 4.2.1 Maize



*Figure 11: Average market prices for maize in Meru County*

- From the figure 11 shown above, the average market price of a kilo of maize remained stable at Kshs.29.3/kg in the month under review across the livelihood zones when compared to the previous month's maize price of Kshs.27.5/kg.
- The stability is attributed to held households' stocks from the long rains harvests.
- The average market price was 21 percent lower compared to the long term average at this time of the year.

### 4.2.2 Beans Prices

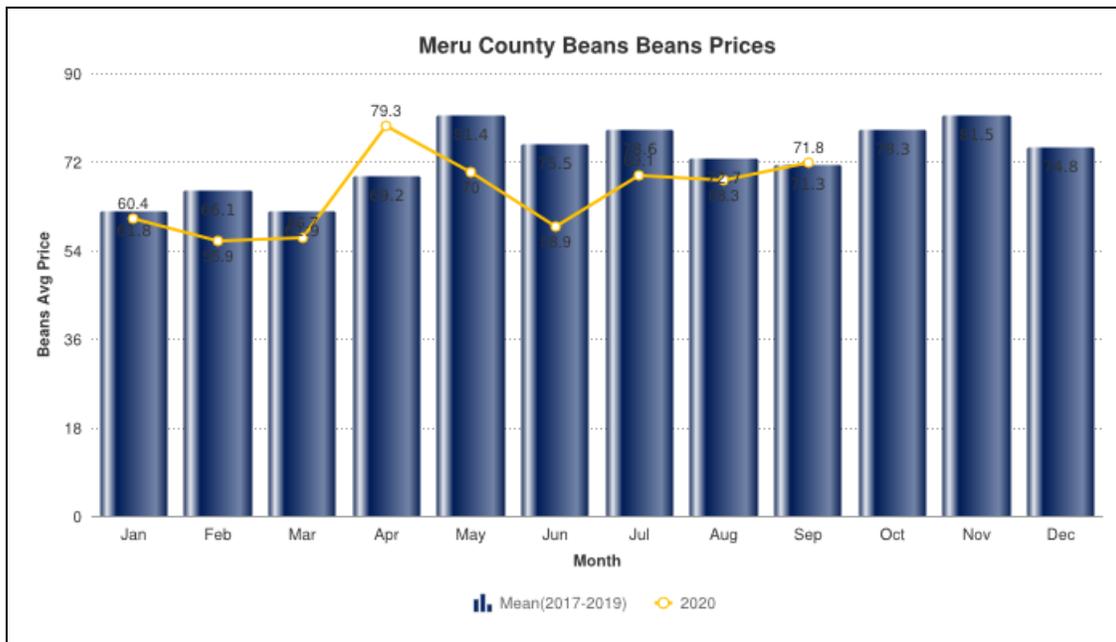


Figure 12: Average market prices for beans in Meru County

- From the figure {12} shown above, the average market price of a kilo of beans remained stable at Kshs 71.8 compared to previous month price of Kshs 69.
- The stability is attributed to high supply of the commodity at the retail market.
- The current average beans price is within the long term average price of Kshs. 71.3/kg.

#### 4.2 INCOME

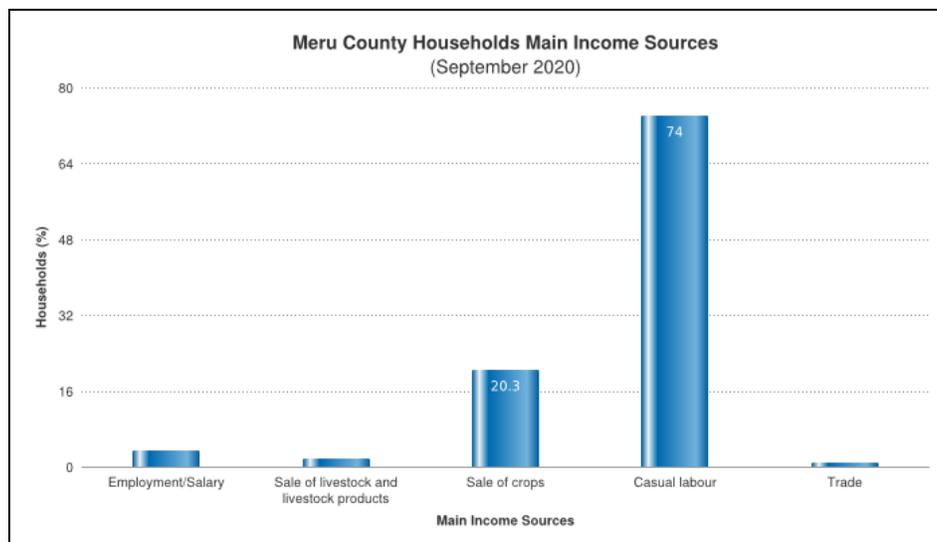


Figure 13: Sources of household income in Meru North

- Households main source of income were; casual labour, sale of crops, trade, sale of livestock and livestock products and employment/salary.
- Households also depend on sale of 'Miraa' which is considered as a major cash crop.

#### 4.4 TERMS OF TRADE

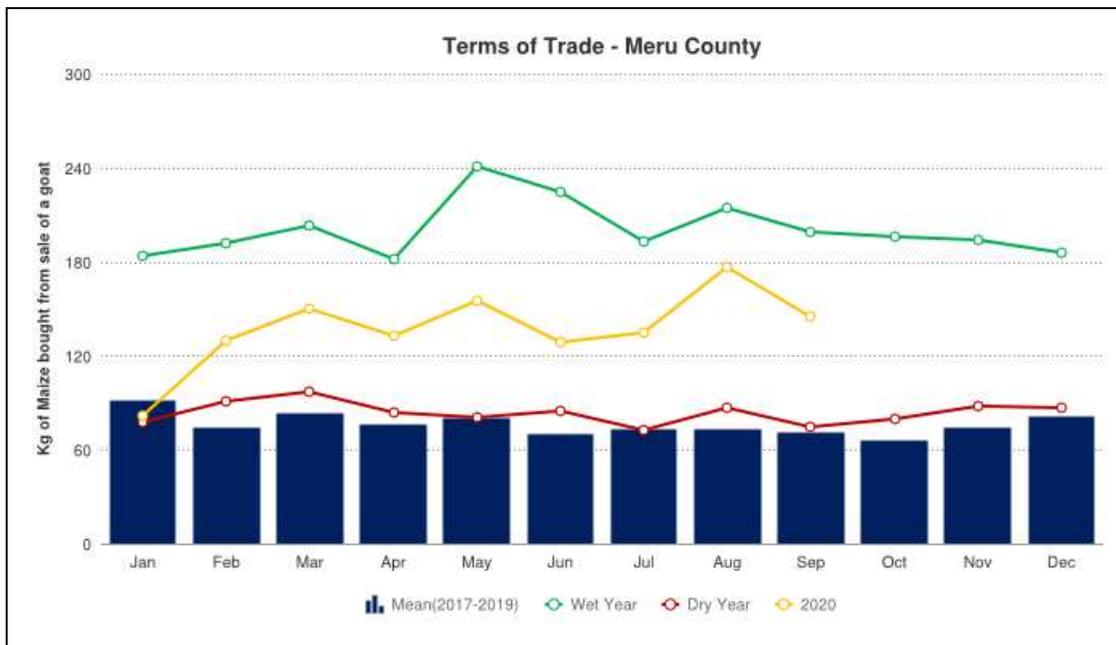


Figure 14: Terms of trade in Meru North

- The Terms of trade decreased to 144.6 kilograms of maize realised from a sale of goat compared to 176.6 kilograms recorded previous month as illustrated in the above figure 14.
- The current terms of trade is 105 percent above the long term average terms of trade of 70.4 kilograms.
- Though the terms of trade is above normal, a gradual declining trend has been noted due to disruptions of the livestock market attributed to COVID-19 pandemic and also declining price for the goat as the maize price remained stable.

### 5. FOOD CONSUMPTION AND NUTRITION STATUS

#### 5.1 MILK CONSUMPTION

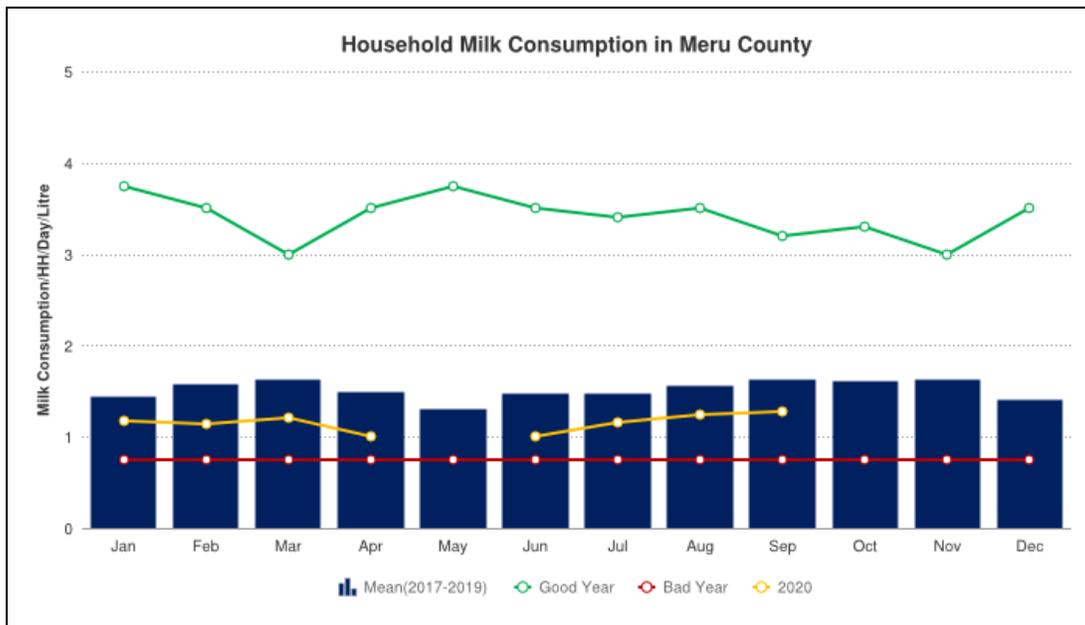


Figure 15: Average household milk consumption (l/hh/day)

- Milk consumption per household per day remained stable at 1.3 litres compared to previous month at 1.2 litres.
- When compared to the long-term average, current milk consumption is below normal by 19 percent.

## 5.2 FOOD CONSUMPTION SCORE

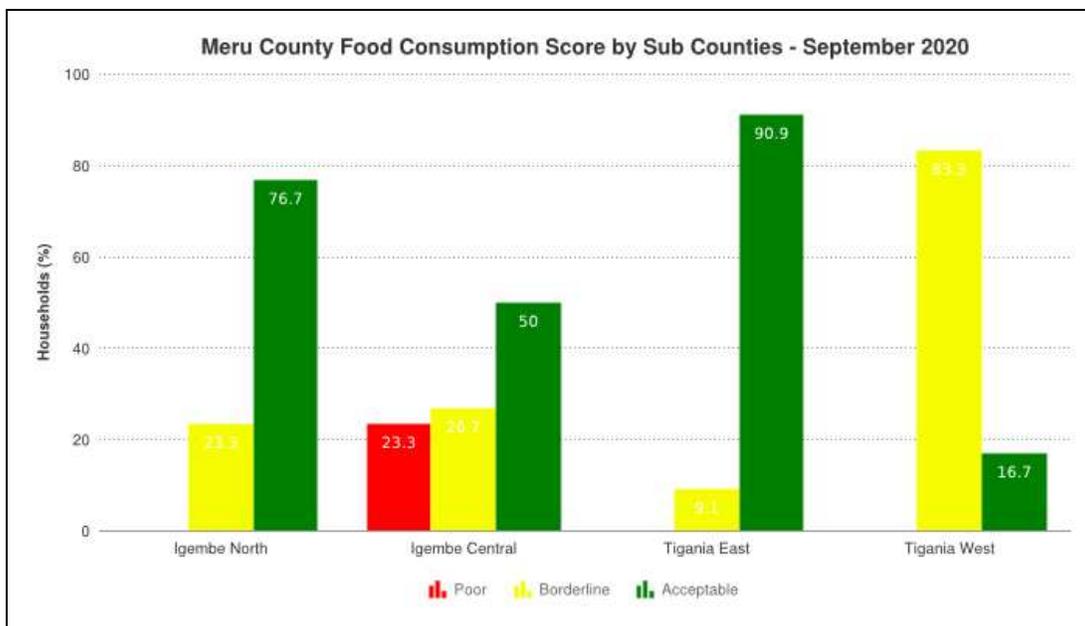


Figure 16: Household food consumption score

- Out of 120 households sampled from the sub counties, majority of the households averagely 58 percent were in the acceptable food consumption score category indicating that they were consuming an acceptable diet in terms of meal frequency, dietary diversity, nutritional value and amount. The rest of the households, 35 percent,

were under borderline consumption score category, while seven percent households under poor food consumption score.

- The households on average consumed; grains and pulses for six to seven days, vegetables for an average of five days and fruits for four days. The households consumed milk for an average of two days while meat consumption was minimal.

### 5.3 HEALTH AND NUTRITION STATUS

#### 5.3.1 Nutrition Status of Children

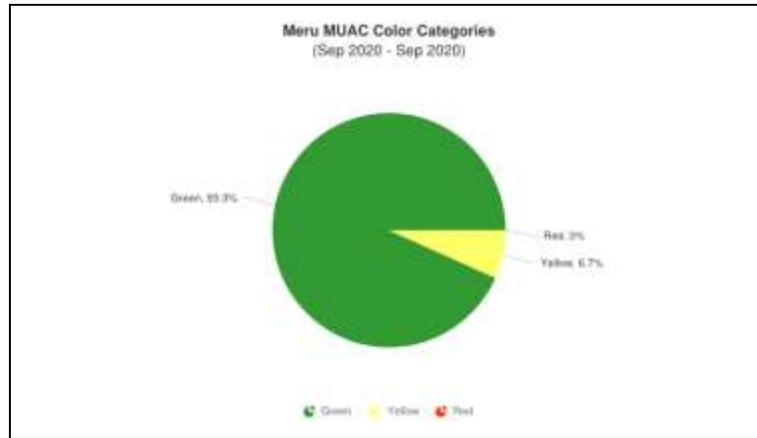


Figure 17: Children under five at risk of malnutrition in Meru County

- Out of the sampled children at risk of malnutrition 93% were at green 7% at yellow. Caregivers with children at yellow were advised on improved nutrition and were asked to monitor the growth and the health of the children. Referrals were also made to health centres for food supplementation for the under-fives with health deteriorating cases.
- The households in Kangeta in Igembe Central Sub-County recorded high proportion of children at risk of malnutrition. This is attributed to poor eating habits.
- The proportion of the sampled children at risk of malnutrition declined compared to the previous month.
- The decline is attributed to held households' stocks and milk consumption at household level.

### 5.4 Coping Strategy Index

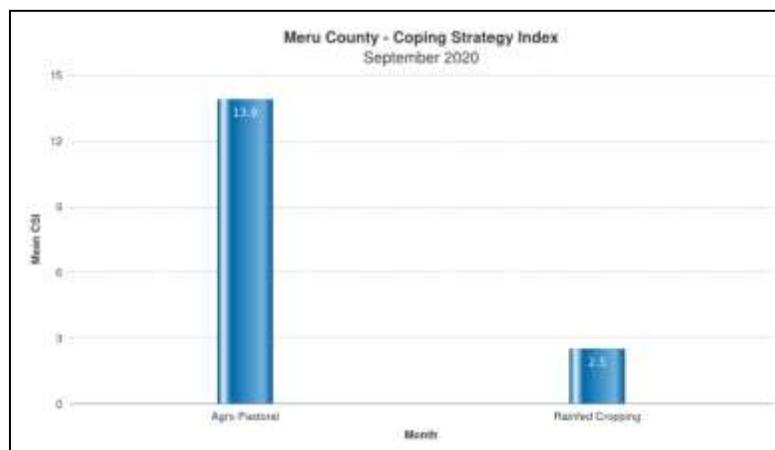


Figure 18: Household coping in Meru North

- Reduced consumption based coping strategy index (rCSI) for the month under review is 10.8 which was an increase from 8.7 recorded previous month.
- Agro pastoral livelihood zone recorded a higher coping strategy index of 13.9 while Rained livelihood zone recorded a coping strategy index 2.6.
- Notable reduced consumption based coping strategies employed by the households were reduction in frequency of food consumption, reduced portion size of meals and reliance on less preferred food in all the livelihood zones.
- The coping strategy index was normal at this time of the year.

### **6.1 Insecurity/ Conflict/ Human Displacement**

- There were no insecurity and conflicts reported under the review month

### **6.2 FOOD SECURITY PROGNOSIS**

- Household food security is expected to remain stable for the next one to two months due to held household food stocks from the long rains harvests.
- Above normal vegetation greenness was attributed to cumulative effect of the good performance of the long rains that was well distributed in all the livelihood zones. With the progression of the long dry spell, the 3-months vegetation condition index will gradually deteriorate in the next one month and likely shift to the normal vegetation greenness band.
- Pasture and browse condition is expected to deteriorate further in the next three months occasioned by the dry season.
- Livestock production and productivity is expected to decline in the next three months due to deteriorating pasture conditions and increased distances to water sources.
- Food commodity prices are expected to increase occasioned by diminishing household food stocks.
- The terms of trade are also expected to remain favourable.
- The proportion of children at risk of malnutrition is likely to increase due to diminishing household stocks and poor feeding practices

### 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 disease surveillance on outbreak of Corona virus (COVID- 19).</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> </ul>	<p>Mothers and children who visited health facilities in both sub counties</p> <p>Households and health facilities in targeted community areas</p>
<ul style="list-style-type: none"> <li>Surveillance of the locusts</li> </ul>	<ul style="list-style-type: none"> <li>County department of Agriculture department</li> </ul>	Farmers

## 7. SECTOR RECOMMENDATIONS

Sector	Recommended Activities	Proposed Implementers	Expected Outcome/Impact
<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>Development of irrigation schemes</li> </ul>	<p>County government</p> <p>Other Stakeholders</p>	Reduced post-harvest losses due to poor storage
<b>LIVESTOCK</b>	<ul style="list-style-type: none"> <li>Disease surveillance and promotion of good and husbandry practices and silage making</li> <li>Strategic vaccination of animals</li> </ul>	<p>County government</p> <p>Other Stakeholders</p>	<p>Increased productivity</p> <p>Diversification of income</p> <p>Reduced outbreak of diseases</p>

<b>WATER AND SANITATION</b>	<ul style="list-style-type: none"> <li>• Drilling and equipping of more boreholes</li> <li>• Construction of new big dams and pans.</li> </ul>	County government, Other Stakeholders	Improved potable water accessibility and consumption
<b>HEALTH AND NUTRITION</b>	<ul style="list-style-type: none"> <li>• Provision of Personal Protective Equipment (PPE) at the hospital and at community level to curb spread of corona virus</li> <li>• Sensitization on COVID-19</li> <li>• Provision of commodities for management of various types of malnutrition at health facilities.</li> <li>• Sensitization on use and provision of water treatment chemicals to households.</li> </ul>	County department of health  NDMA  Development partners	Management of malnutrition amongst under five children  Reduced cases of water borne diseases