

# National Drought Management Authority

## MAKUENI COUNTY



A Vision 2030 Flagship Project



### DECEMBER 2019 EW PHASE

Drought Status: **NORMAL**



Shughuli za kawaida

#### Drought Situation & EW Phase Classification

##### Biophysical Indicators

- Onset of 2019 OND short rains was early, first dekad of October as opposed to third dekad of October on a normal seasonal.
- The rainfall amount received during the month of December was fairly distributed across space and time.
- The vegetation greenness for the county was normal across all the three livelihood zones.
- Quantity and quality of Pasture and browse remained good across all the three livelihood zones attributed to the OND rains.

##### Socio-Economic Indicators

- Cereals and legumes were at the maturity stage. Maize was being harvested while green in the mixed farming livelihood zone while cowpeas was being harvested across all livelihood zones.
- The livestock body condition remained good across all the three livelihood zones attributed to the availability of water and pasture.
- Milk production was within the normal range.

##### Access Indicators

- Milk consumption was within the normal range.
- Surface water sources in both mixed farming and marginal mixed farming livelihood zones was good.
- Terms of trade were favourable at 87.6 an implication that from a sale of one goat one could get 87.6 kg of maize.

##### Utilization Indicators

- The percentage of children at risk of malnutrition decreased slightly though within the normal range.

Livelihood Zone (LZ)	Phase	Trend
Mixed Farming (Coffee/Dairy)	Normal	Stable
Mixed Farming (Food Crop/Livestock)	Normal	Stable
Marginal Mixed Farming	Normal	Stable
County	Normal	Stable
Biophysical Indicators	Value	Normal Ranges
Rainfall (% of Normal)	215	80-120%
VCI-3Month	91.94	35-50
State of Water Sources	5	5
Production indicators	Value	Normal
Crop Condition	Maturity	Harvesting
Livestock Body Condition	4-5	4-5 Normal
Milk Production	1.1	1.7 Litres
Livestock Migration Pattern	No migration	No migration
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (TOT)	87.6	89.8
Milk Consumption	1.0 litres	1.1 litres
Return distance water sources	3 Km	3.7 Km
Cost of water at source (20 litres)	KSh 3-5	KSh 2-5
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	5.4	7.1
Coping Strategy Index (CSI)	8	<10

<ul style="list-style-type: none"> <li>Short rains harvests</li> <li>Short dry spell</li> <li>Reduced milk yields</li> <li>Increased HH Food Stocks</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>A long dry spell</li> <li>Land preparation</li> <li>Increased HH Food Stocks</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 2019 OND short rains onset was early, first dekad of October as opposed to third dekad of October during a normal seasonal.
- The month of December was characterized by above average rainfall amounts that were fairly distributed across space and time. Compared to the (1994-2013) long-term average the month under review was 215 percent above.
- In addition, cessation signs were notable across all the three livelihood zones during the third dekad.

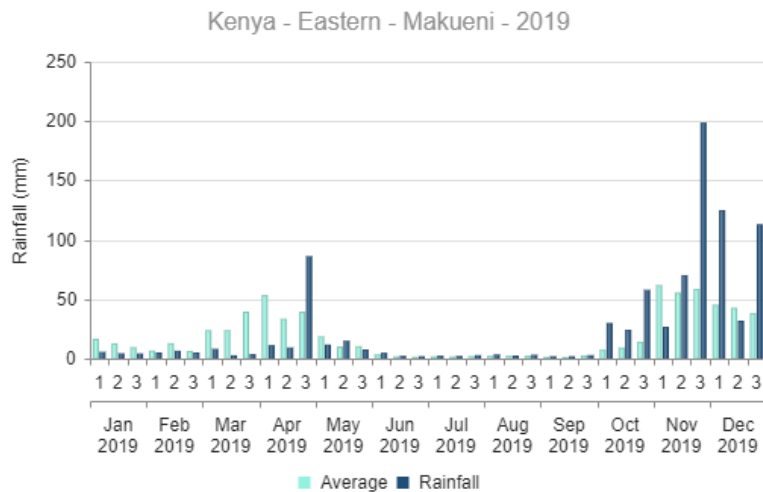


Figure 1: Average rainfall December 2019

# 2. IMPACTS ON VEGETATION AND WATER

## 2.1 VEGETATION CONDITION INDEX

### 2.1.1 The vegetation condition (VCI)

The vegetation greenness remained well above average during the month under review. The county recorded a 3-month average of 91.94, an indication of above average vegetation greenness. Kibwezi East which had the least recorded VCI index a 3 month index of 75.45 which was still above long-term average

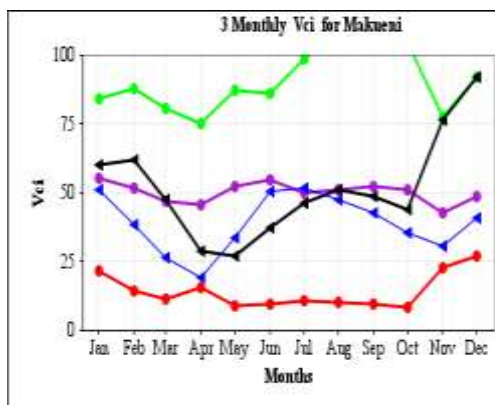


Figure 2.1a: Makueni 3 month VCI Matrix, December 2019.

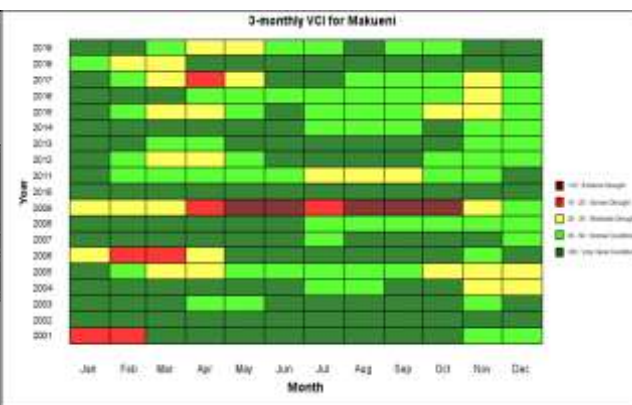


Figure 2.1b: Makueni County 3 month VCI Matrix, December 2019

### 2.1.2 Pasture and Browse

- Pasture and browse condition was good across all the three livelihood zones.
- The good state is attributed to the good performance of the 2019 OND short rains.
- Below is an illustration of the state of pasture and browse condition during the month under review.

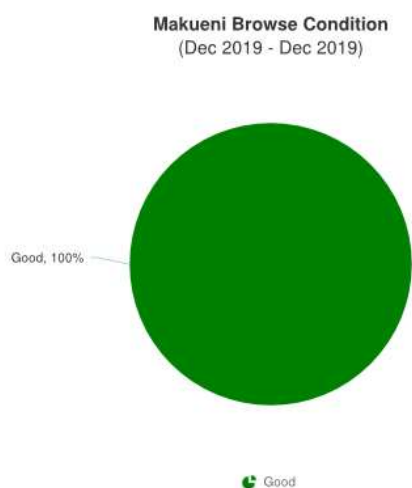


Figure 4: Makueni County Browse Condition, December 2019

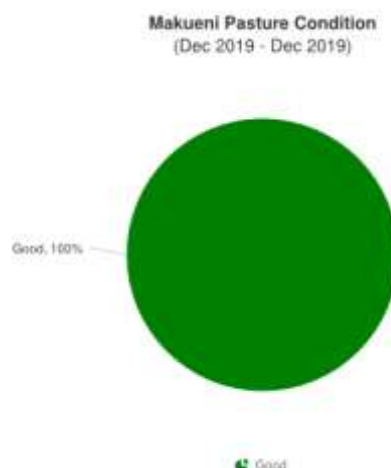


Figure 5: Makueni County Pasture Condition, December 2019

## WATER RESOURCE

### 2.2.1 Sources

- Major water sources for both human and livestock consumption were: Rivers at 50%, Traditional river wells and Pans & Dams each at 18.8% and Shallow wells at 12.5%.
- Majority of the surface water reservoirs in both mixed farming and marginal mixed farming livelihood zone had fully impounded water attributed to the 2019 OND rains.

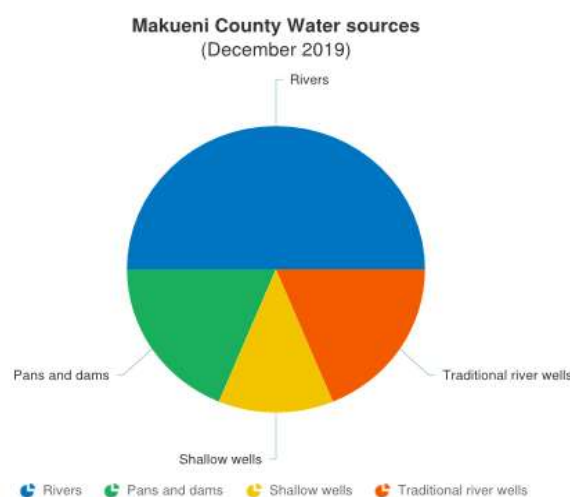


Figure 6: Makueni County Water Sources for December 2019

## 2.2.2 Household access and Utilization of water

### Distances to water sources for household consumption

- The average return distance from the household to water sources decreased to 3km from 4.8 Km.
- The distances are expected to remain low across all the livelihood zones attributed to recharge by the OND rains.
- Roof catchment also contributed positively as a source of water for most households and schools within the county.
- The average water consumption per day in the marginal mixed farming zone ranged from 15 to 20 litres while in the Mixed farming livelihood zone it ranged between 20 to 30 litres.

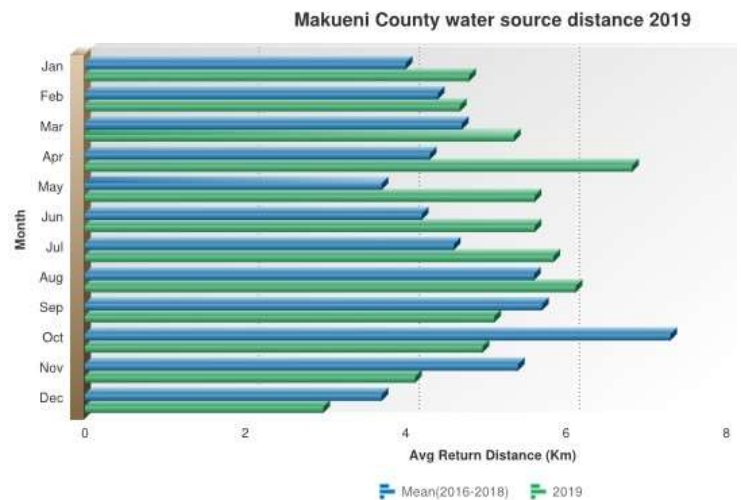


Figure 7: Household Access to Water, December 2019

## 2.2.3 Livestock access to water

- The average return distance from the grazing areas to watering points was 3.1 Km from 3.7 Km recorded last month (a 16.2 percent reduction).
- The decline is attributed to the available water sources as a result of the OND short rains.
- Longer distances were recorded in the Marginal mixed farming livelihood zone.
- The situation is expected to remain stable for the next two months.

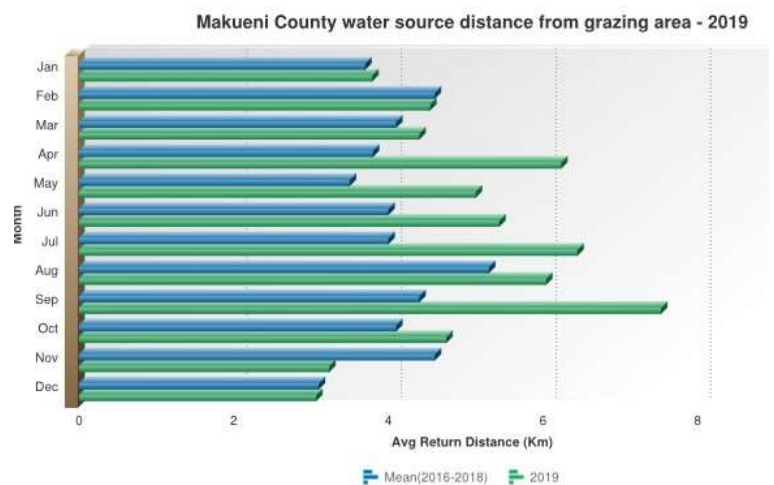


Figure 8: Average grazing Distances, December 2019

## 2.3 Implication of the above indicators to Food Security

The improved forage condition and the decreased distances to water sources has impacted positively on livestock body condition resulting to better market prices, increased milk production and consumption mostly by the under-fives.

## 3.0 PRODUCTION INDICATORS

### 3.1 LIVESTOCK PRODUCTION

#### 3.1.1 Livestock Body Condition

- Body condition for sheep and goats remained good across all the three livelihood zones.
- Body condition for the cattle in the Marginal Mixed farming livelihood zone was at the borderline (fore-ribs not visible but 12<sup>th</sup> and 13<sup>th</sup> rib visible ) a score of 4, while in the Mixed farming livelihood zones the body condition for the cattle was at the optimum (moderate to good smooth appearance, a score of 5)

- This condition is expected to improve more in the next one month with the availability of pasture and water for livestock attributed to the ongoing OND short rains.

### 3.1.2 Livestock Diseases

- No unusual Cases of livestock diseases.

### 3.1.2 Milk Production

- On average Milk production per household per day for the month remained relatively stable as that of last month and this is attributed to the availability of pasture and water for the cattle.
- Compared to the Mixed farming livelihood zone less production was recorded in the marginal mixed farming livelihood zone.
- The stability in Milk production is expected for the next one month, attributed to availability of pasture and water for the livestock.

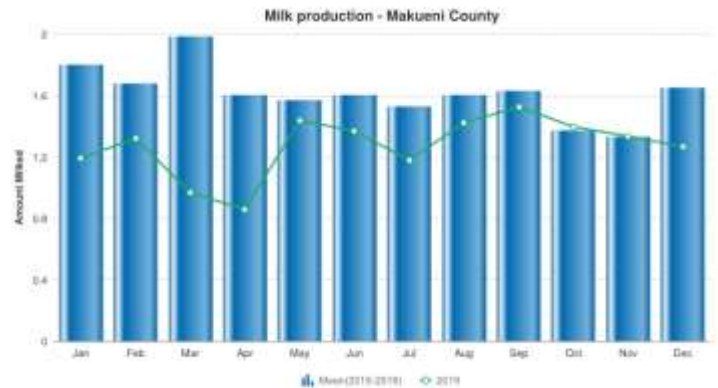


Figure 9: Makeni county milk production, December 2019

## 3.2 RAIN-FED CROP PRODUCTION

### 3.2.1 Stage and Condition of food Crops

- Main crops grown under rain-fed production in the County were; maize, green grams, cowpeas, beans, pigeon peas, millet and Sorghum.
- Crops in both Mixed farming (Coffee, Dairy and Irrigation) and Mixed farming (Food crops and Livestock) livelihood zone had attained the maturity stage. Maize was at the grain filling stage with harvest expected any time while the beans and cowpeas were ready to harvest. A good percentage of the farmers were harvesting the crop.
- In the marginal mixed farming maize had already tasselled and were mainly in the cob formation stage in most areas. Leaching had been experienced in some farms in this zone as a result of the floods.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

- The average price for the cattle was Ksh23,700 an increase from Ksh19,400 recorded last month.
- Compared to the long term average the recorded price was above the long term average by 23 percent.
- The improvement in price is attributed to farmers holding on to their cattle and the improved Cattle body condition due to the availability of pasture and water.

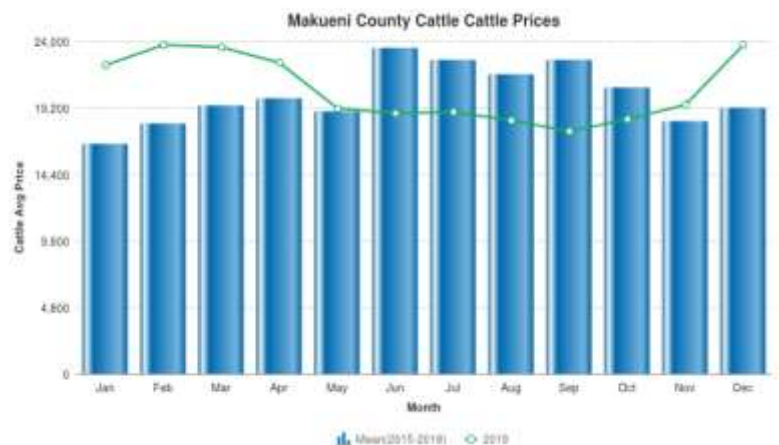


Figure 10: Makeni County Cattle Prices, December 2019

### 4.1.2 Goat Prices

- The average goat price for the month under review increased to Ksh4000 from Ksh3,600 recorded last month.
- Compared to the (2015-2018) long term mean, this month's price was 25 percent above the LTA.
- The good prices are attributed to the prevailing good body condition and the availability of pasture and browse for the shoats.

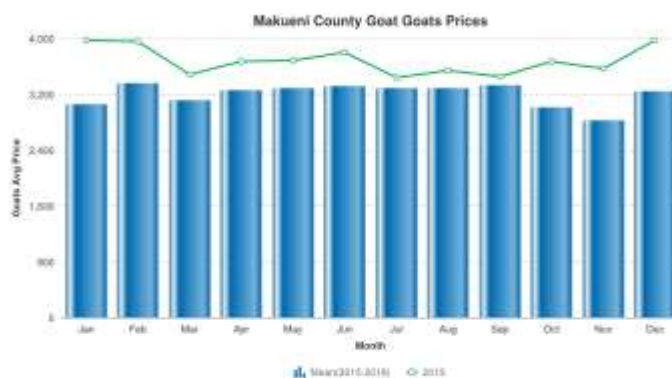


Figure 11: Makueni County Goat Prices, December 2019

## 4.2 CROP PRICES

### 4.2.1 Maize

- The average market price for maize per kilogram remained stable at Ksh45.
- Over the last six months, the trend of maize price remained stable and higher than (2015-2018) long-term average of Ksh37.
- The price of maize is expected to go down in the next one month given that the maize crop has reached the maturity stage.

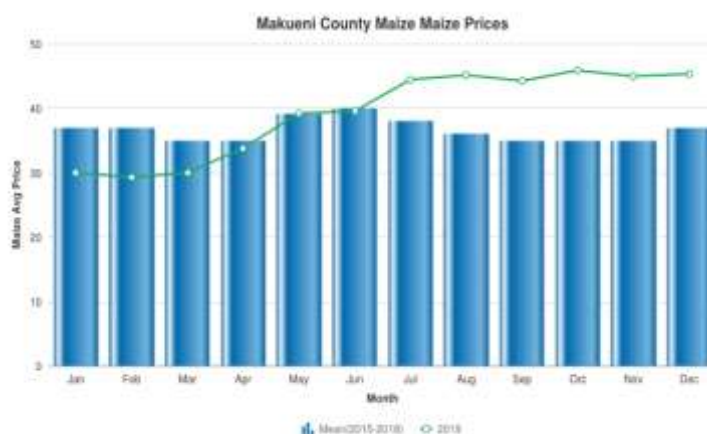


Figure 12: Makueni county Maize Prices, December 2019

### 4.2.2 Beans

- Average beans price remained stable at Ksh105.
- Compared to (2015-2018) long-term average of Ksh84, the price remained relatively high.
- Markets in the Marginal Mixed Farming livelihood zone recorded high prices of around Ksh 120.
- This was as a result of legumes shortage.

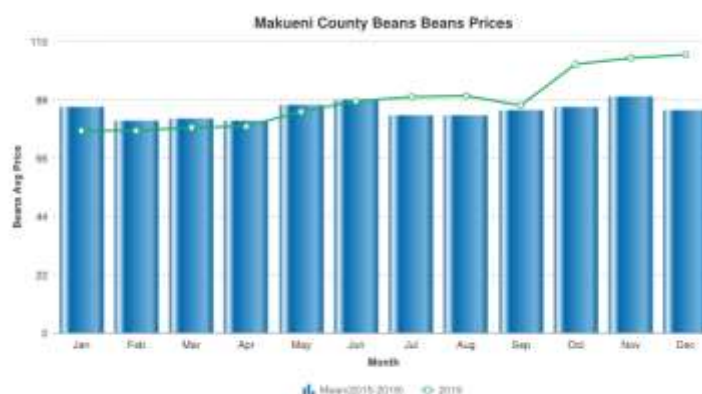


Figure 13: Makueni County Beans prices, December 2019

### 4.3 Livestock Price Ratio/Terms of Trade

- The current terms of trade was 87.6 which was an increase from 79.2 which was recorded last month.
- Compared to the (2015-2018) LTA the current TOT was slightly below.
- This implies that from the sale of one goat, a farmer could purchase 87.6 kg of maize.
- The increase in TOT is attributed to the stability in maize prices and the increase in goat prices due to the improved body condition.
- Compared to the (2015-2018) Long term Average, the current terms of trade (TOT) was slightly below average.

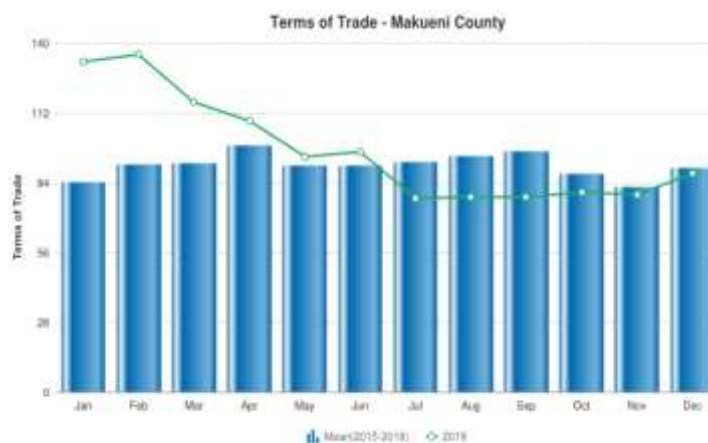


Figure 14: Makeni County Terms of Trade, December 2019

#### 4.3.3. Implications of the above indicators on Food security.

- Food prices are likely to go down given that a high percentage of the crops have matured, this will impact positively on the household food security.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

- The average daily milk consumption per household remained stable at one litre.
- Less milk was consumed in the marginal mixed livelihood zone.
- Compared to the long-term, the current milk consumption was almost similar.

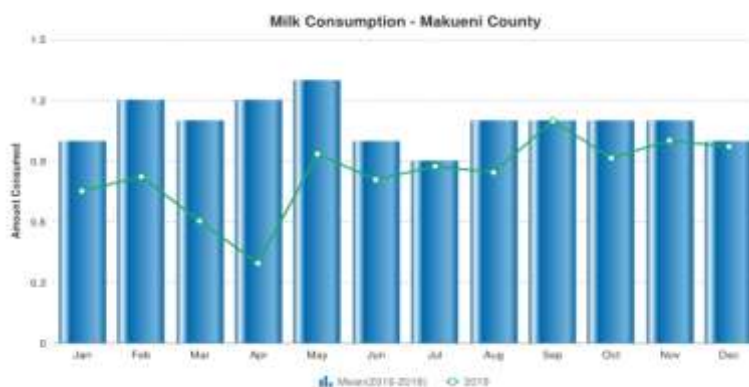


Figure 15: Makeni County milk consumption, December 2019

### 5.2 FOOD CONSUMPTION SCORE

- Food consumption was good across all livelihood zones. This was attributed to the early harvests and the festive season.

Majority of the Mixed farming livelihood zones were food secure. About 12 percent of the marginally mixed farming zone and roughly 51 percent of the mixed farming zones were on the borderline but is improving as the harvests continue.

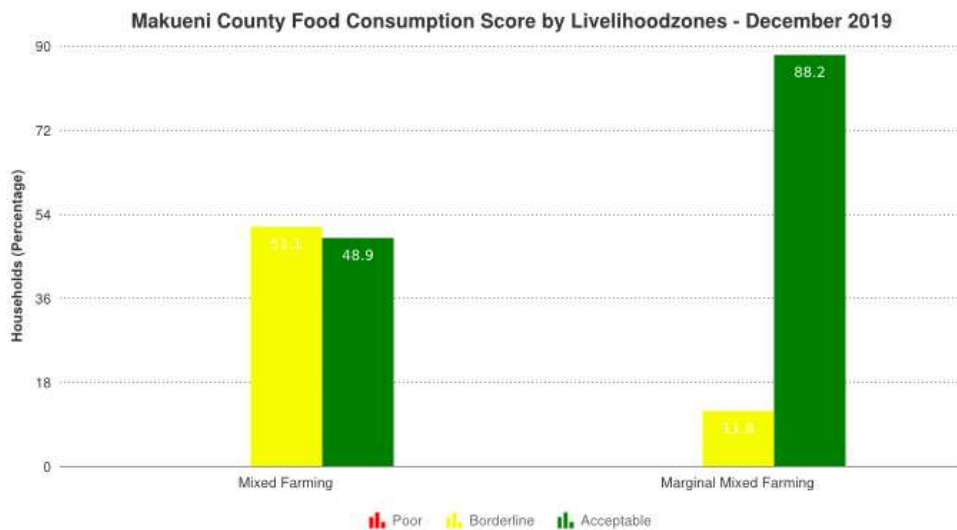


Figure 15: Makueni County Food Consumption Score, December 2019

### 5.3 HEALTH AND NUTRITION STATUS

#### 5.3.1 Nutrition Status

- The proportion of children (under-fives) at risk of malnutrition for the month of December was 5.4 percent a 16.9 percent decrease from 6.5 percent that of last month.
- Compared to the long-term average the current MUAC was within the normal range.
- It's expected that the MUAC will improve more with the availability of milk and mango fruits mostly for the under-fives.

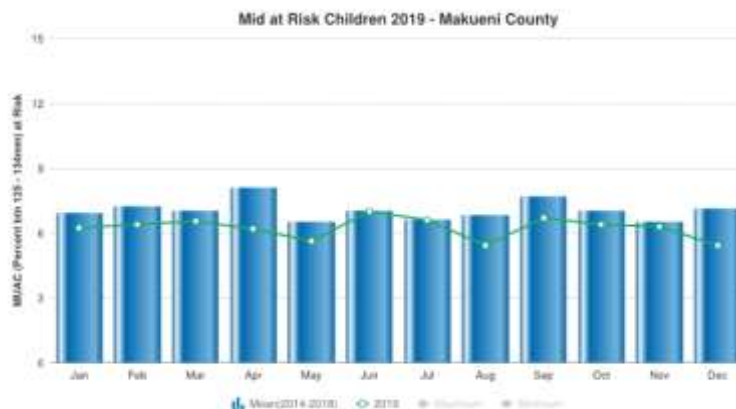


Figure 17: Makueni County, Mid at Risk Children, December 2019



## 5.4 COPING STRATEGIES

- Average mean CSI for the county was 8
- The coping strategy index (CSI) in Mixed farming livelihood zone was 4.4, while in the marginal mixed farming zone it was 11.6
- Household in the marginal mixed farming livelihood zone were still employing both consumption and livelihood based coping mechanism in bid to bridge the food deficit.

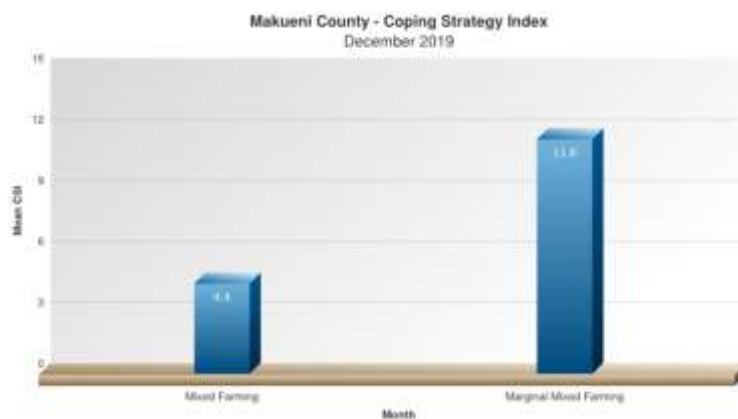


Figure 18: Makueni County Coping Strategy Index, December 2019

## 6.0 CURRENT INTERVENTION MEASURES (ACTION)

### 6.1 NON-FOOD INTERVENTIONS

- Repair of strategic boreholes by NDMA in partnership with the Department of Water with financial support of EU.
- Provision of water treatment chemicals (Aqua-tabs) by NDMA in partnership with department of public health with the financial support from European Union.
- Four campsites have been set up at Kilungu to assist victims of the mudslides with non-food items emergency package (jerry can, bar soap, blankets and kitchen items) donated by KRCS to households and counties donating mattresses and food items.

### 6.2 FOOD AID

- No food aid was received during the month under review.

## 7.0 EMERGING ISSUES

### 7.1 Insecurity/Conflict/Human Displacement/Human-Wildlife conflict/Floods

- Cases of floods were reported across various parts of the county where some drifts and earth roads were washed away.

### 7.2 Migration.

- No migration cases for the month under review.

### 7.3 Food Security Prognosis

A bumper harvest is expected for cereals and legumes. This is expected to improve on the economic power of farmers. However, prices may dip as a result of the bumper harvest expected. Terms of trade are steadily stabilising. Livestock body condition for both large and small stock has improved with the replenished rangelands. This is translated to better market prices. Farmers should dry, dust and store the produce and dispose the same when market prices improve in a few months.

## 8. RECOMMENDATIONS

**Immediate/Short term**

- Training the Farmers on proper post-harvest handling.
- Provision of market linkages by both the county government and development partners.
- Training of farmers on fodder conservation.
- Conduct a flood assessment to ascertain the level of infrastructural damage in the county.
- Engagement of psychosocial support personnel to the devastated family members.