



# National Drought Management Authority

## MAKUENI COUNTY

### EARLY WARNING DROUGHT BULLETIN JUNE 2020

#### JUNE 2020 EW PHASE

Drought Status: **NORMAL**



Shughuli za kawaida

#### Drought Situation & EW Phase Classification

##### Biophysical Indicators

- Generally the month of June was cold and dry.
- The vegetation greenness condition for the County was normal.
- Quantity and quality of pasture & browse ranged from fair to good across all the two Mixed farming livelihood zones. However, the Marginal Mixed farming zone exhibited earlier than usual pasture decline.
- Availability of water was normal for this period though with a declining trend. Some surface water sources dried earlier than normal in the Marginal Mixed farming zone

##### Socio-Economic Indicators

- Livestock body condition remained good across all the three livelihood zones.
- Crop condition was fair in the Mixed farming zone while in the marginal mixed farming zone, it was poor due to moisture stress.
- Pigeon peas was at the maturity stage and was being harvested while green.
- Milk production for the month was normal.

##### Access Indicators

- Both livestock and open air markets for food stuffs remained closed as a measure to control the spread of COVID-19.
- Milk consumption was slightly below normal.
- Terms of trade remained favourable at 103

##### Utilization Indicators

- Majority of the Households employed consumption based coping mechanisms less frequently to cope with lack of food or money to buy food.

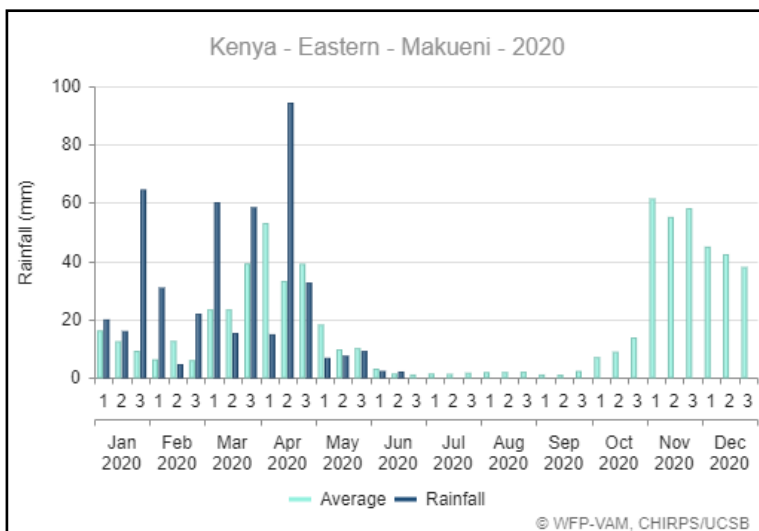
Livelihood Zone (LZ)	Phase	Trend
Mixed Farming (Coffee/Dairy)	Normal	Stable
Mixed Farming (Food Crop/Livestock)	Normal	Worsening
Marginal Mixed Farming	Alert	Worsening
County	Normal	Worsening
Biophysical Indicators	Value	Normal Ranges
Rainfall (% of Normal)	81	80-120%
VCI-3Month	81.63	35-50
State of Water Sources	4	5
Production indicators	Value	Normal
Crop Condition	Maturity	Maturity
Livestock Body Condition	Normal	Good- Normal
Milk Production	1.4	1.4 Litres
Livestock Migration Pattern	No migration	No migration
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (TOT)	103	106
Milk Consumption	1.0	1.3 litres
Return distance water sources	4.6 Km	4.8 Km
Cost of water at source (20 litres)	KSh 2-5	KSh 2-5
Utilization indicators	Value	Normal
Coping Strategy Index (CSI)	4.1	<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

- Cessation of 2020 MAM rains was early, third dekad of April. Generally, the MAM season performed poorly both in space and time. Compared to a similar time last year the current season performed below poorly- below normal.
- During the month of June the County recorded 2 mm of rainfall in dekad one, 1.8 mm in dekad two and 0 mm in dekad three against an average of 2.8mm, 1.1mm and 0.8 mm respectively. (Source WFP/VAM, CHIRP Data)



**Figure 1: Average rainfall June 2020**

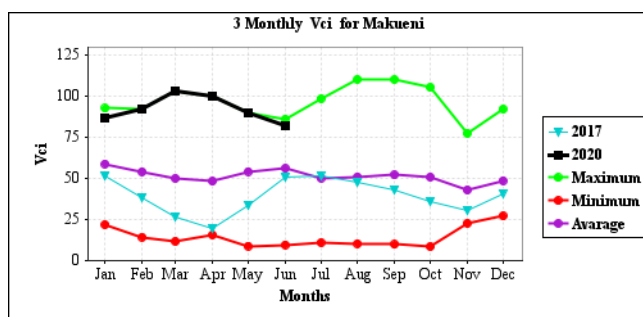
# 2. IMPACTS ON VEGETATION AND WATER

## 2.1 VEGETATION CONDITION INDEX

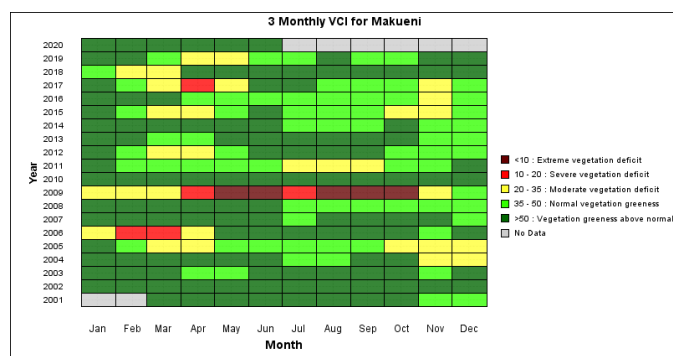
### 2.1.1 The vegetation condition (VCI)

The vegetation condition had started deteriorating especially in the Marginal Mixed livelihood zone as a result of increased temperatures experienced in the last one month coupled with the early cessation of rains.

Vegetation was above normal as shown by the average 3 month VCI index of 81.63 Kibwezi East, Kibwezi West, Makueni and Kilome sub-counties recorded indices of 77.38, 77.57, 85.61 and 78.77 respectively. Mbooni and Kaiti recorded a 3 month average VCI of 94.39 and 86.36 respectively. Kibwezi East and Kibwezi West experienced 1 month VCI indices of 67.29 and 68.5 respectively. All sub-counties had above average VCI indices. This is well illustrated in figures 2(a) and 2(b).



**Figure 2(a): VCI graph for Makueni County, June 2020**



**Figure 3(b): VCI matrix for Makueni County, June 2020**

### 2.1.2 Pasture and Browse

- Pasture and browse condition ranged from good to fair in both the mixed farming zones and had started declining earlier than normal in the marginal mixed farming livelihood zone. The decline in trend is attributed to the poor regeneration of livestock feeds due to the poor rains performance over the MAM season and the prevailing heat effect in the marginal mixed farming livelihood zone.
- The available pasture is expected to last for the next 1-2 months compared to 2-3 during a normal season.
- Below is an illustration of the state of pasture and browse condition during the month of June.

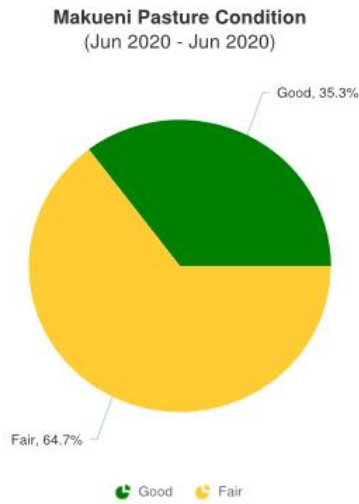


Figure 3: Makueni County Pasture Condition, June 2020

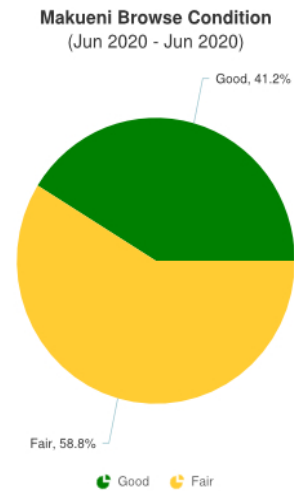


Figure 4: Makueni County Browse Condition, June 2020

## WATER RESOURCE

### 2.2.1 Sources

- The main water sources for both human and livestock consumption were: Rivers at 38.1%, Traditional river-wells at 28.6%, Shallow wells 14.3%, Pan & Dams at 9.5% Boreholes and springs 4.8% as illustrated alongside in figure 5.
- Surface water reservoirs like dams in both mixed farming had a recharge level of around 50 percent while it was lower in the marginal mixed farming livelihood zone.
- Waiting time at the resource was between 5-10 minutes which was dependant on the number of 20 litre Jerricans one had.
- In Kilome sub-county and major urban centers piped schemes remained as the main source of water for domestic use.

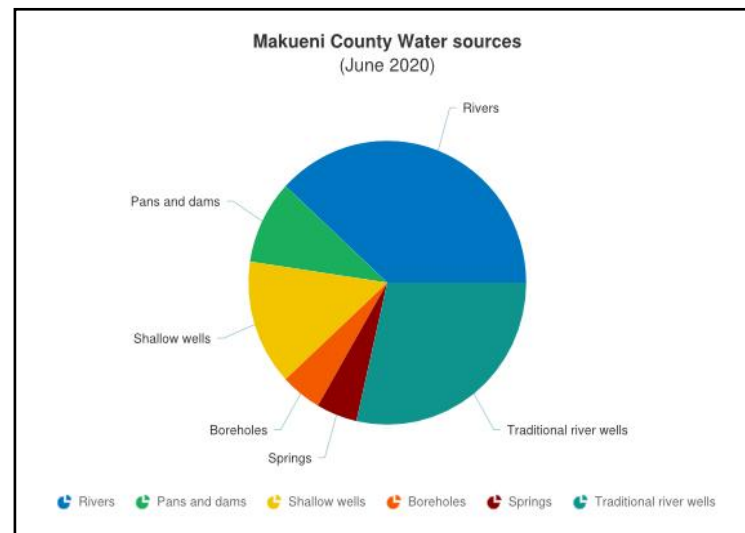


Figure 4: Makueni County Water Sources for June 2020

### 2.2.2 Household access and Utilization of water

#### Distances to water sources (household consumption)

- The average return distance from the household to water sources increased from 4.0 km to an average of 4.6Km.
- Compared to the long term average, the current distances were relatively normal.
- The distances are expected to increase across all the livelihood zones due to the declining water levels and change to alternative water sources.
- The average water consumption per person per day in the marginal mixed farming zone was between 20 to 30 litres while in the Mixed farming livelihood zones it was more than 30 litres.

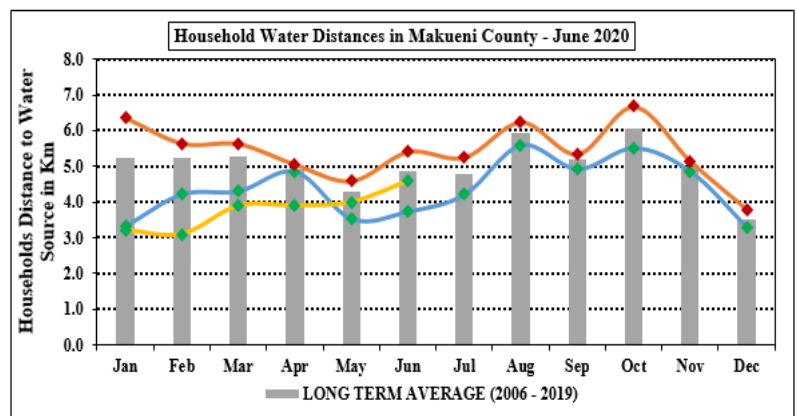


Figure 6: Household Access to Water, June 2020

### 2.2.3 Livestock access to water

- The average return distance from the grazing areas to watering points increased slightly from 4.3km to 4.5Km.
- Compared to the 2006-2019 long-term mean the current distances were normal.
- The increase in distance is attributed to the change to alternate water sources since most seasonal rivers in both mixed farming and marginal mixed livelihood zone had dried up.
- Given the current trend, the distances are expected to increase more in the next one month.

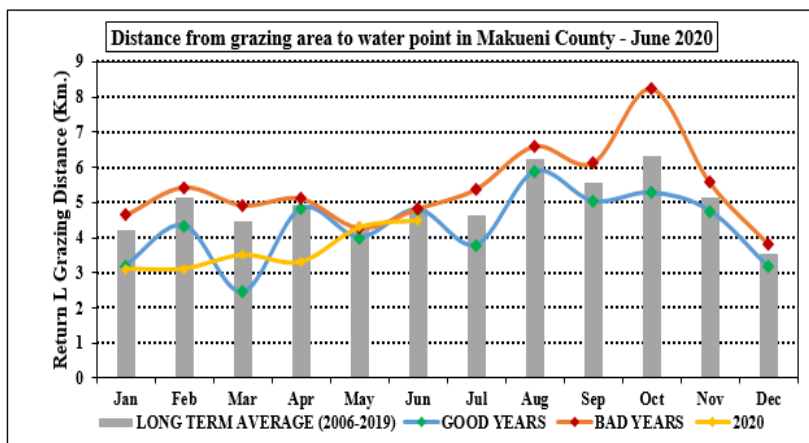


Figure 7 Livestock access to Water, June 2020

### 2.3 Implication of the above indicators to Food Security

- The improved forage condition and availability of water in the mixed farming livelihood has impacted positively on livestock production in terms of livestock production hence improved household purchasing power.
- The situation in the marginal mixed farming livelihood is likely to be different in the next one month as the condition of pasture and browse continues to worsen (due to the failed regeneration) and the distances in search for alternate water sources (due to poor recharge of water storage structures) continue to increase.

## 3.0 PRODUCTION INDICATORS

### 3.1 LIVESTOCK PRODUCTION

#### 3.1.1 Livestock Body Condition

- The livestock body condition remained good across all the three livelihood zones.
- Around 70 percent of the cattle had a good smooth appearance body condition (a score of 5-6) attributed to the available pasture and water.
- The current condition is normal at this time of the year but it's expected to decline in the next one to two months with the declining pastures and water for livestock mostly in the marginal mixed farming livelihood zone.

#### 3.1.2 Livestock Diseases sporadic

- No major cases of livestock diseases apart from few sporadic cases of lumpy skin disease (LSD) in the marginal mixed farming livelihood zone.

### 3.1.2 Milk Production

- The average Milk production per household per day for the month of June reduced from 1.9 litres to an average of 1.4 litres.
- Compared to the long-term average the current production was same but lower than the good year.
- The decrease in production is attributed to the decline in availability of pasture and water for the livestock.

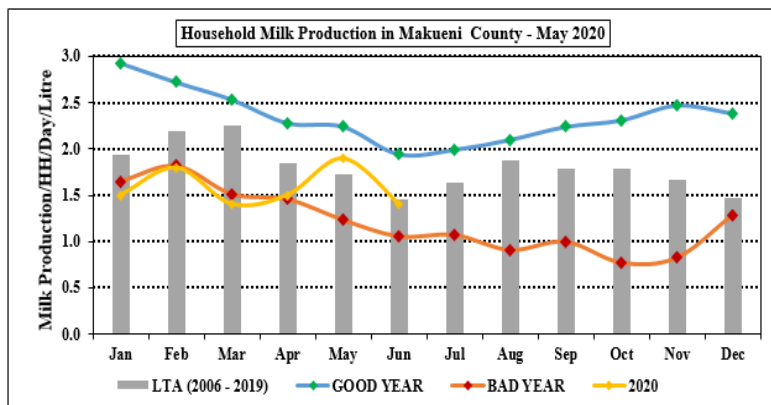


Figure 8: Makueni county milk production, June 2020

### 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 are; maize, green grams, cowpeas, beans, pigeon peas, millet and Sorghum.
- Majority of the households failed to plant their short season crops due to the poor rain distribution and the shading effect of perennial crops like pigeon peas (planted during 2019 OND season)
- Around 50 percent of crops planted (maize and cowpeas) in both Mixed farming (Coffee, Dairy and Irrigation) and Mixed farming (Food crops and Livestock) livelihood zone were at the maturity stages.
- Pigeon peas were at the maturity stage and a good percentage was being harvested across all the three livelihood zones.

### 4.0 MARKET PERFORMANCE

- Markets for both livestock and food stuffs remained closed across all the three livelihood zone as a mitigation measure by the government to control the spread of Covid-19. The closure of livestock markets as a result of Foot and Mouth disease had been lifted by the department of livestock.

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

- The average farm gate price for the cattle was KSh 22,000
- Compared to a similar time during a wet year the recorded farm gate price was normal.
- The fair price is attributed to the closure of major livestock markets across the county for the last four months.
- The closure is a result of the mitigations put in place by the government to contain the spread of Covid-19.

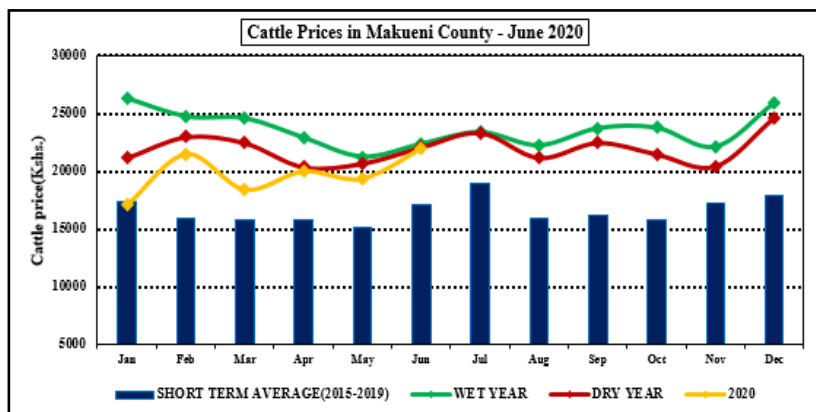


Figure 5: Makueni County Cattle Prices, June 2020

### 4.1.2 Goat Prices

- The average farm gate price for the goat remained stable at KSh 3,250
- Compared to both the good, bad season and the long-term average, this month's price remained relatively low attributed to the closure of major livestock markets since mid-February.
- The fair farm gate prices is attributed to the prevailing good body condition and the availability of pasture and browse for the goats.

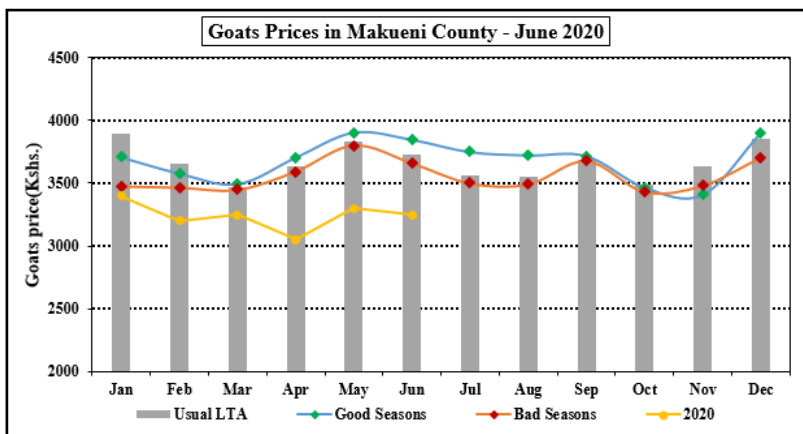


Figure 10: Makueni County Goats Prices, June 2020

## 4.2 CROP PRICES

### 4.2.1 Maize

- The price of maize (at the cereals shops) per kilogram remained stable at KSh35 during the month of June.
- Compared to a similar time during the wet season the price was relatively stable at KSh 35.
- This is attributed to the bumper harvest of the crop (from the previous OND season) and imports which has infiltrated into the local market.
- Nevertheless, the price is on increase trend since most farmers were hoarding the produce in anticipation that the market price will go up.

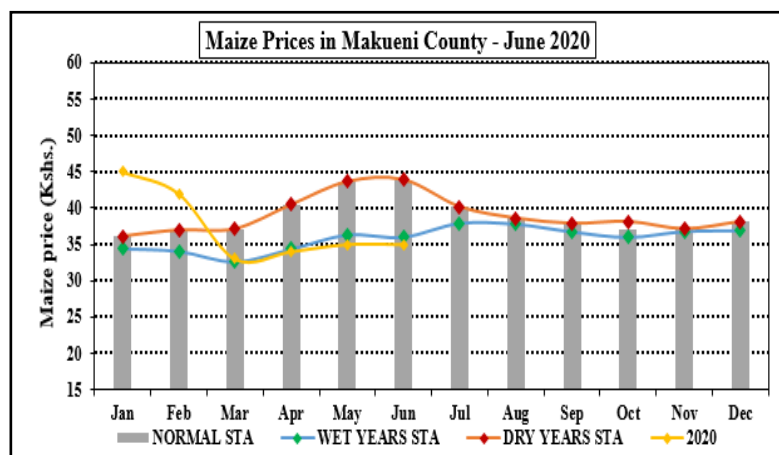


Figure 6: Makueni County Maize Prices, June 2020

### 4.2.2 Beans

- The average price for beans at the cereals shop decreased by 3 percent to an average of KSh 93.
- Compared to the short-term average of KSh 90, the current price was above normal by 3 percent.
- The increase in price is attributed to the decline in supply of the commodity into the local markets.
- Consumption of beans remained high at household level given that all school going children were at home due to Covid-19 outbreak hence parents did not see the need of disposing the produce into the market.
- High prices were recorded in cereal shops within the Marginal Mixed Farming zone where poor harvest of the produce was witnessed.

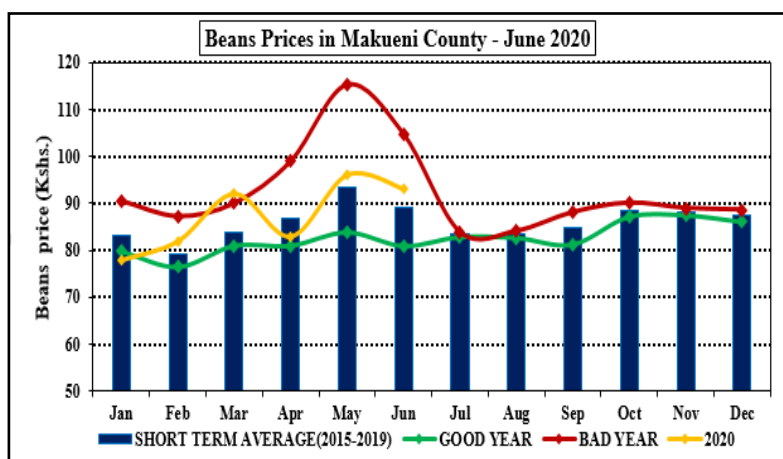


Figure 7: Makueni County Beans prices, June 2020



### 4.3 Livestock Price Ratio/Terms of Trade

- The current terms of trade reduced to an average of 103. This month's TOT was based on the prevailing farm gate prices against the maize price at the cereals shop.
- Compared to the (2015-2019) short term average, the current TOT was above average. This implied that from the sale of one goat, a farmer could purchase 103 kg of maize.
- The high TOT over the last three months is attributed to the stability in both goats and maize prices.
- Given the current situation the Terms of trade and household purchasing power is expected to reduce more in the next one month as the maize price increases.

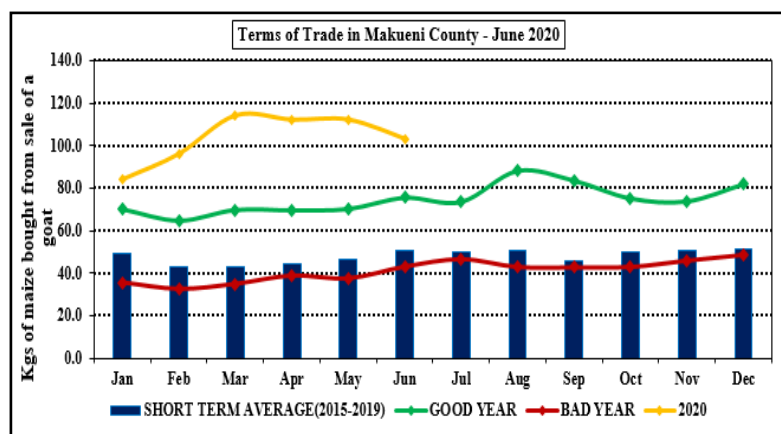


Figure 8: Makueni County Terms of Trade, June 2020

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

- Livestock markets are likely to remain closed. This will impact negatively on the market prices. Crops prices are likely to increase following the hoarding of maize and beans by the farmers.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

- The average daily milk consumption per household was 1.0 litres
- Compared to the (2017-2019) Short Term Average the current milk consumption was below normal.
- The decrease in consumption is attributed to the high cost of the product and its affordability for most households majorly in the marginal mixed farming livelihood zone.

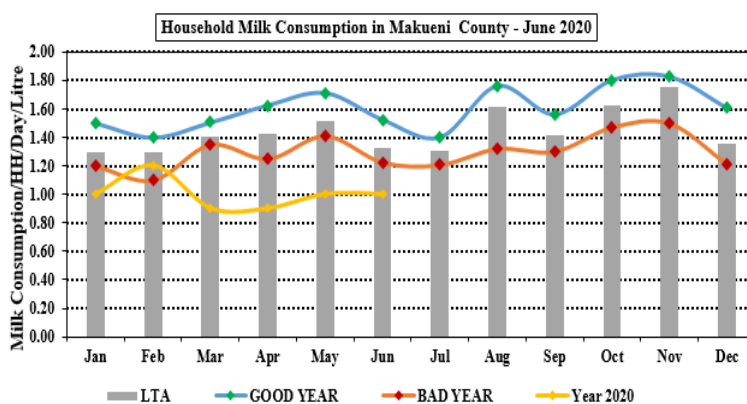


Figure 9: Makueni County milk consumption, June 2020

## 5.2 FOOD CONSUMPTION SCORE

- In the mixed farming livelihood zone 76.1 percent had an acceptable food consumption score while 23.9 were at the borderline. In the marginal mixed farming livelihood zone 75 had an acceptable Food Consumption score while 23.7 were at the borderline.
- The good food consumption is attributed to the improvement in dietary diversity and food availability at the household level.
- Most households were consuming at least three meals a day comprising of diverse food groups.

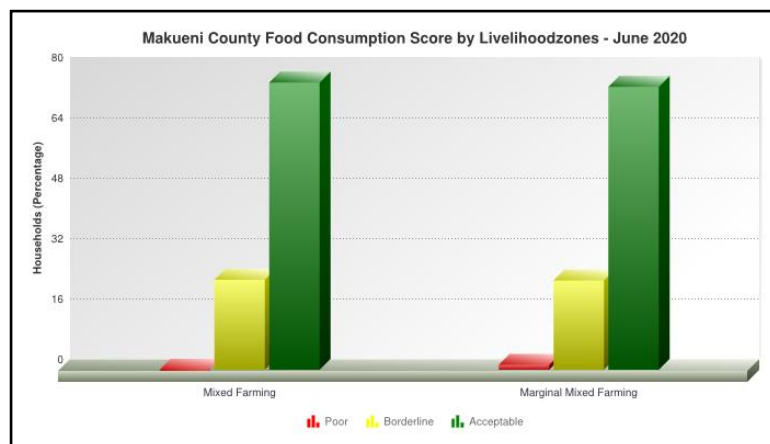


Figure 10: Makueni County FCS, June 2020

## 5.3 HEALTH AND NUTRITION STATUS

### 5.3.1 Nutrition Status

- Muac data for the month of June was not collected due to the outlined Covid-19 pandemic management protocols by government and WHO on social distancing.
- From observation by the Mothers and care givers and previous trends, the proportion of children (under-fives) at risk of malnutrition for the month was observed to be within the range. (less than 10 percent.)
- The improvement in MUAC trend is attributed to the availability of citrus fruits, pigeon peas and increased milk consumption mostly for the under-fives.

## 5.4 COPING STRATEGIES

- Average mean CSI for the county was 6.4 compared to 8.9 recorded in May.
- The coping strategy index (CSI) in the marginal mixed farming zone was 11 while in the Mixed farming livelihood zone it was 1.8
- This implies that majority of the households were employing less coping strategies to cope with lack of food or money to buy food.

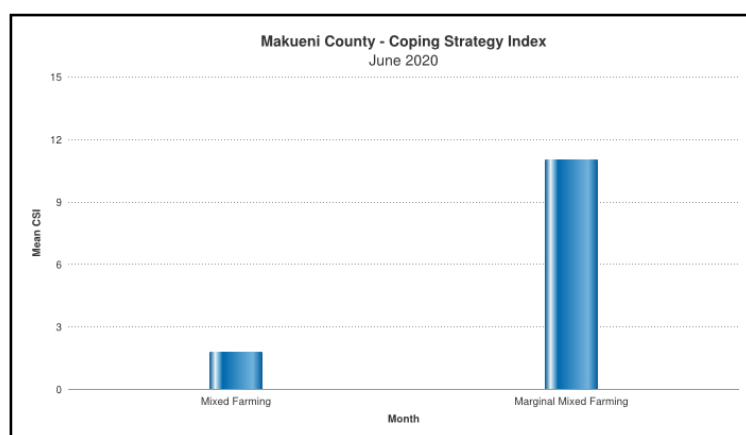


Figure 11: Makueni County Coping Strategy Index, June 2020

## 6.0 CURRENT INTERVENTION MEASURES (ACTION)

### 6.1 NON-FOOD INTERVENTIONS

- Inputs subsidy (seeds, fertilizer, hermetic bags, pesticides) by KCEP-CRAL
- Capacity building of farmers on climate smart agriculture and post-harvest management by DOALF and partners



- Promotion of drought tolerant crop production by DOALF and partners such as ASDSP, KCEP-CRAL, AVCD, KCDMS, NCPB and NARIGP.

## **6.2 FOOD AID**

- Food aid for the month under review from the department of special programs were as follows: Rice 500 (50kg) bags, cooking oil 20 cartons (24× 0.5litres) and 10 bales (25kg) of fortified Food for five sub-counties.

## **6.3 COVID-19 INTERVENTIONS**

- Donation of face masks and liquid Soap.  
4,000 face surgical masks, 6000 washable masks and 50 pieces of 20 litres of Liquid soap by Amos Ngumbi Foundation.
- 400 reflector jackets donated by VSO.
- Tanks donation by KMTC to Mukuyuni Market.

## **7.0 EMERGING ISSUES**

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

- Enforcement of the daily curfew from 9.00 p.m. to 4 a.m. as a precautionary measure for COVID-19
- Inter communal conflict between the Maasai and the Kamba's in Mikululo-Makindu over ownership of land (Grazing land) in Kibwezi West Sub-county.

### **7.2 Migration.**

- There were no reported cases of livestock migration.

### **7.3 Food Security Prognosis**

- The gains from the enhanced short rains 2019 are fast being eroded by the poor performance of the already failed March, April and May long rain season. Most households failed to plant their short season crops due to the poor rains and the shading effect of perennial crops - pigeon peas planted in the Oct-Nov-Dec rain season which had occupied most of the crop land. The ended season also resulted in poor recharge of water storage structures and regeneration of livestock feed. This new development has started to increase the vulnerability of communities. The situation has been exacerbated by the threat recently presented by the outbreak of the Covid-19 disease which has heavily impacted the low income rural households.
- While the situation is still normal in most parts of the county at this time with a declining trend, a prognosis of the situation gives a very conservative estimate of 18% of the county population of 987,653 people (majorly from in Kathonzweni, Makindu, Nzaui and Kibwezi sub-counties) to be at risk of food shortage and therefore requiring food assistance by end of August 2020. This translates to about 177,000 people.

## **8. RECOMMENDATIONS**

### **Immediate/Short term contingency measures**

- Arrangement to support the affected population with means to acquire food either through a cash transfer programme or distribution of food commodities.
- Efforts to contain the Covid-19 outbreak so as to open up the livestock markets for communities to trade in livestock.
- Plans to absorb the expected harvests from the pigeon peas into the markets at fairly good prices.
- Repair of strategic boreholes especially in the marginal mixed farming livelihood zone which is prone to drought.

- Ensuring proper functioning of markets for major food commodities in the rural areas by containing the Covid-19 spread.