

National Drought Management Authority

MAKUENI COUNTY



A Vision 2030 Flagship Project



NOVEMBER 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.
- Above normal rains were experienced during the month under review.
- The vegetation greenness for the county was normal across all the three livelihood zones.
- Pasture and browse condition was good across all the three livelihood zones attributed to the ongoing rains.

Socio-Economic Indicators

- Over 80 percent of cropland in the mixed farming livelihood had been planted. Maize was about two feet tall and almost at the tasselling stage while cowpeas and beans were at the flowering stage.
- Body condition for the cattle in the Mixed Farming livelihood zone ranged from fair to good while in the MMF zone it was fair. An improving trend was notable in all zones, attributed to the availability of pasture and water for the livestock.
- No unusual cases of livestock diseases though vaccination against rabies was taking place countywide.
- 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 had impounded water at 85 percent and above.
 - Terms of trade were below long term average as a result of high maize prices

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	Improving
County	Normal	Stable
Biophysical Indicators	Value	Normal Ranges
Rainfall (% of Normal)	169	80-120%
VCI-3Month	76.36	35-50
State of Water Sources	5	5
Production indicators	Value	Normal
Crop Condition	Weeding	Weeding
Livestock Body Condition	Fair (3-4)	4-5 Normal
Milk Production	1.3	1.3 Litres
Livestock Migration Pattern	No migration	No migration
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (TOT)	75	82
Milk Consumption	1.0 litres	1.1 litres
Return distance water sources	4.8 Km	5.4 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)	6.5	6.5
Coping Strategy Index (CSI)	8.3	<10

<ul style="list-style-type: none"> Short rains harvests Short dry spell Reduced milk yields Increased HH Food Stocks 	<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

- The 2019 OND short rains onset was early. The rains began on the first dekad of October compared to second-third dekad of October during a normal seasonal. The rains have been consistent to date.
- Both temporal and spatial distribution for the month of November was good across all the three livelihood zones.
- According to CHIRPS data, on average, the County recorded an average of 26 mm against an average of 61.2mm in dekad one, 69.6mm against an average of 54.9 mm in dekad two and 198 mm against an average of 57.9mm in dekad three.

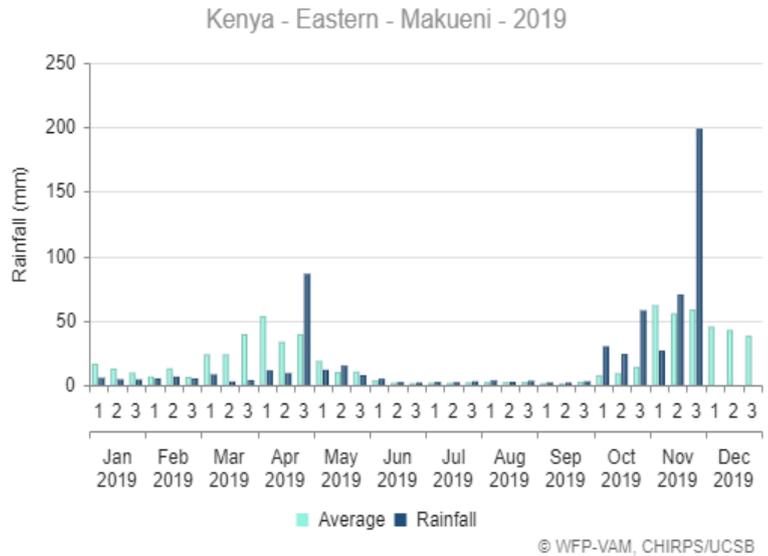


Figure 1: Average rainfall November 2019

- Since rainfall onset, actual rainfall received across all three livelihood zones was as follows:
- Mixed Farming (cotton/livestock/food crops): Nzaui experienced 710.7 mm in 33 wet days, Kisau 646.1mm in 29 wet days, Ukia 412.9 mm in 19 wet days.
- Marginal Mixed livelihood zone: Kalawa received 328.1mm in 35 wet days, Kathonzweni (Kambi ya Mawe)received 553.3 in 24 wet days, while Yinthungu received 132.3 in 18 wet days.
- Mixed Farming (coffee/Dairy/Irrigation): Kaiti received 959mm in 34 wet days, while Mbooni received 1105.9mm in 28 wet days.

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION INDEX

2.1.1 The vegetation condition (VCI)

The county recorded a 3month average VCI of 76.36 mm after 43.16 recorded last month. This is above normal vegetation greenness. Kaiti, Kibwezi East, Kibwezi West, Kilome, Makueni and Mbooni recorded indices of 83.59, 56.64, 75.05, 91.77, 90.63 and 87.16 respectively which were all above the normal vegetation greenness.

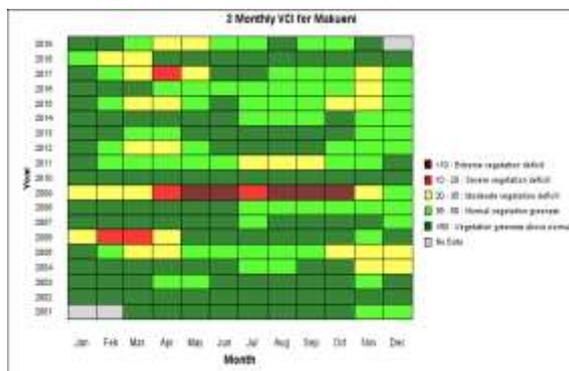


Figure 2.1a: Kibwezi East 3 month VCI Matrix, November 2019.

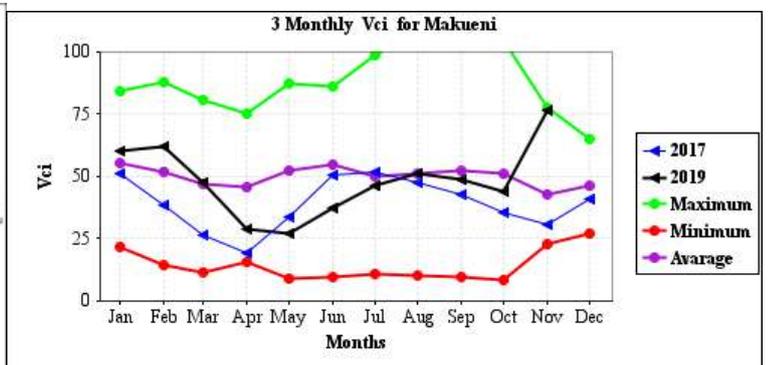


Figure 2.1b: Makueni County 3 month VCI Matrix, November 2019

2.1.2 Pasture and Browse

- State of pasture and browse condition was fair to good with an improving trend across all the three livelihood zones.
- The good trend is attributed to the ongoing OND short rains.
- Figure 4 and 5 below illustrates the state of pasture and browse condition during the first two weeks of the month under review.

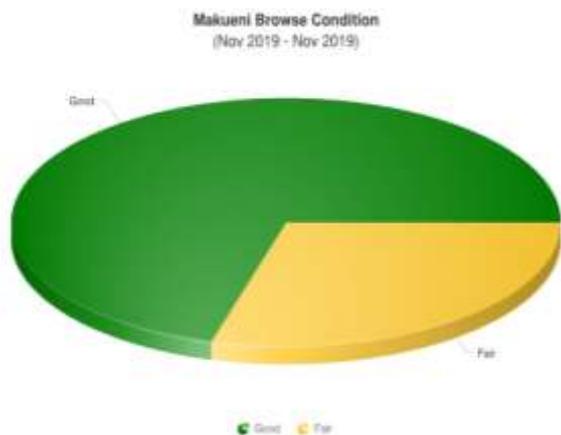


Figure 4: Makueni County Browse Condition, November 2019

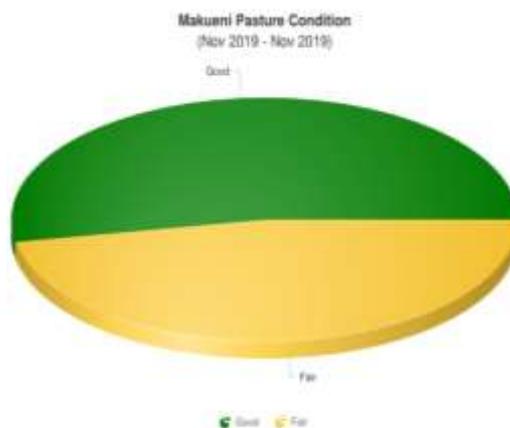


Figure 5: Makueni County Pasture Condition, November 2019

WATER RESOURCE

2.2.1 Sources

- Major water sources for both human and livestock consumption were: Traditional river wells at 35%, Rivers at 30%, Shallow wells at 20% and Pans & Dams at 15%.
- Surface water reservoirs in both the mixed farming and marginal mixed farming livelihood zone had impounded water to 85 percent and above, attributed to the ongoing OND rains.

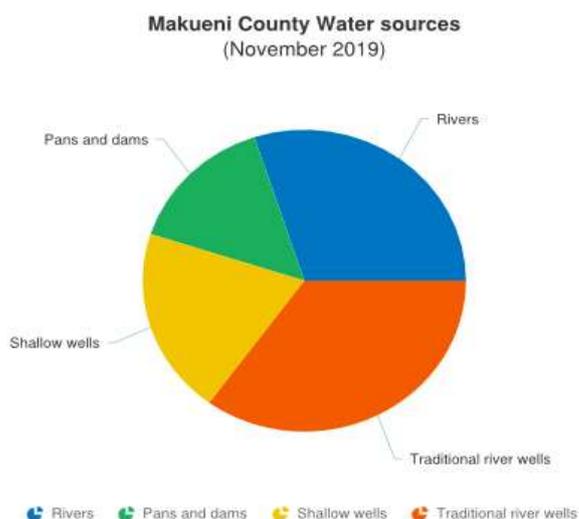


Figure 6: Makueni County Water Sources for November 2019

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 was 4.8 Km against the long-term average of 5.4 Km. The distances are expected to reduce across all the livelihood zones attributed to the ongoing OND rains.
- Roof harvesting structures also contributed positively as a source of water for most households within the county.
- The average water consumption per day in the marginal mixed farming zone ranged from 15-25 litres while in the Mixed farming livelihood zone it ranged between 20 to 30 litres.

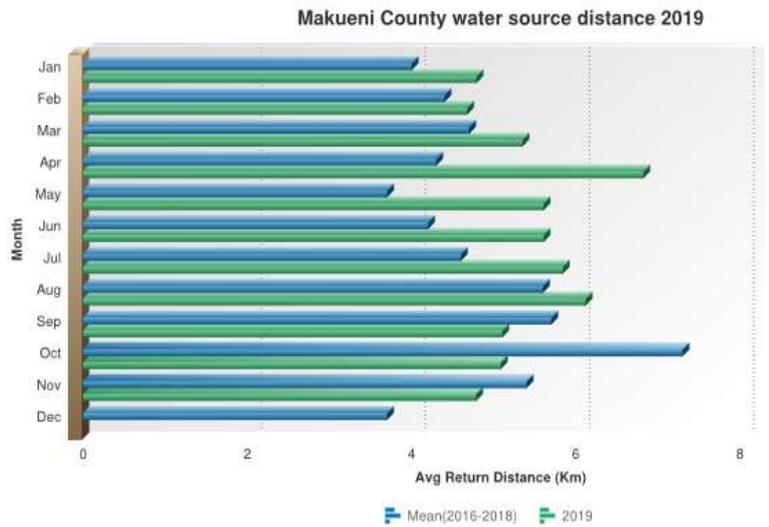


Figure 7: Household Access to Water, November 2019

2.2.3 Livestock access to water

- The average return distance from the grazing areas to watering points was 3.7 Km from 4.9 Km that of last month (a 26 percent reduction). The decline is attributed to the ongoing OND short rains.
- Compared to both mixed farming livelihood zone, longer distances were recorded in the Marginal mixed farming livelihood zone.
- The situation is expected to improve more as the OND rains continue.

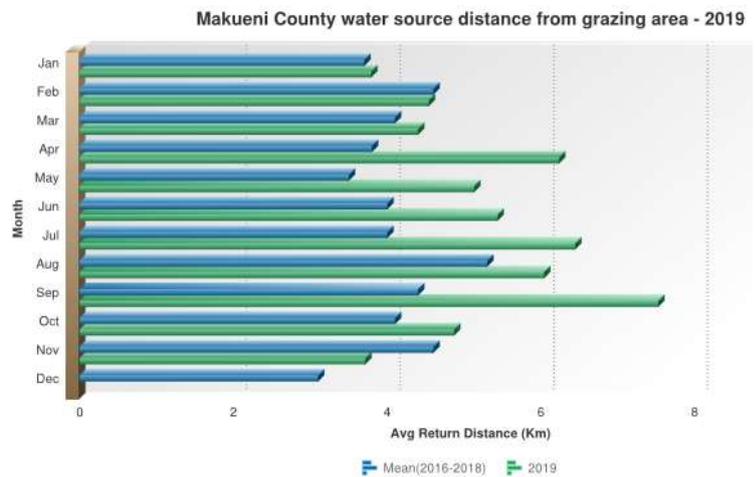


Figure 8: Average grazing Distances, November 2019

2.3 Implication of the above indicators to Food Security

The improved forage condition and the decreased trekking distances to water sources has impacted positively on livestock body condition resulting to better market prices, increased milk production and consumption mostly for 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 12th and 13th 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 was 1.3 litres.
- Compared to last month the production remained relatively stable 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.
- Milk production is expected to improve more in the next one month with the availability of pasture and water for the livestock.

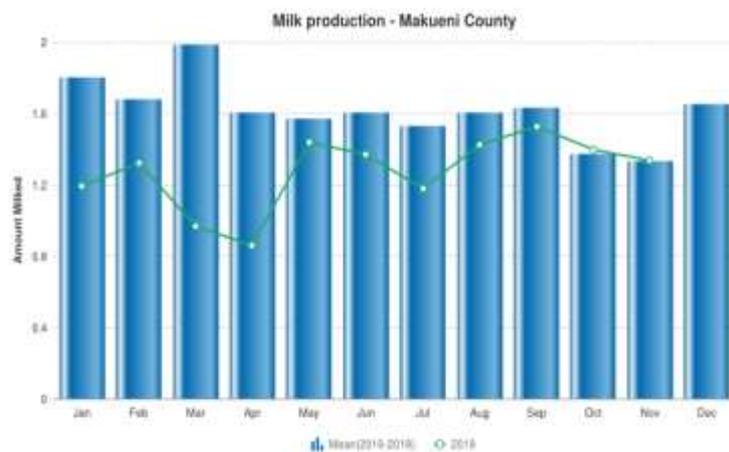


Figure 9: Makueni county milk production, November 2019

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 includes; 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, farmers were busy weeding and others top-dressing the crops, for maize it was almost at tasselling stage while for beans it was at flowering stage.
- In the marginal mixed farming maize had attained a height of 30cm to 50cm.
- Cases of fall army worm infestation had been reported in all the three livelihood zones but the heavy rains had ensured that the worm was contained. Minimum damage had occurred to the crop and the damage is recoverable.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- The average price for the cattle was Ksh18,800, a slight increase from Ksh 18,000 recorded last month.
- Compared to the long term average the recorded price was above the long term average by 11 percent.
- The improvement in price is attributed to farmers holding on to their cattle due to the availability of pasture and water.

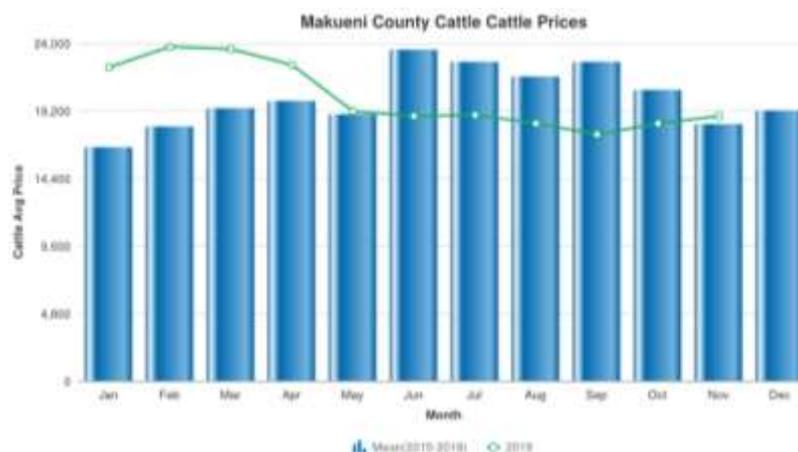


Figure 10: Makueni County Cattle Prices, November 2019

4.1.2 Goat Prices

- The average goat price for the month under review decreased to Ksh3, 400 from Ksh 3,600 recorded last month.
- Compared to the (2015-2018) long term mean, this month's price was 6.5 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, November 2019

4.2 CROP PRICES

4.2.1 Maize

- The average market price for maize per kilogram remained stable at Ksh45.
- Over the last five months, the trend of maize price remained stable and higher than (2015-2018) long-term average of Ksh35 (by 28 percent).
- This is attributed to diminished stocks of maize at household level.



Figure 12: Makueni county Maize Prices, November 2019

4.2.2 Beans

- Average beans price was Ksh105.
- Compared to (2015-2018) long-term average of Ksh88, the price remained relatively high.
- Markets in the Marginal Mixed Farming livelihood zone recorded high prices of around Ksh 100.
- This was as a result of the high demand of the commodity as a seed given that some farmers were re-planting.

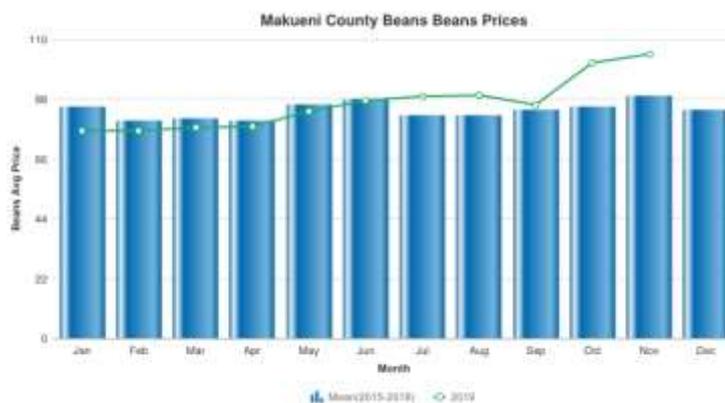


Figure 13: Makueni County Beans prices, November 2019

4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade was 75 a decrease from 79 recorded last month. This was below the (2015-2018) LTA of 82
- The above implies that from the sale of one goat, a farmer could purchase 75 kg of maize.
- The fair TOT is attributed to the high maize prices and the slight decrease in goat prices.
- Compared to the (2015-2018) Long term Average, the current terms of trade (TOT) was below average by 8.5 percent.



Figure 14: Makueni County Terms of Trade, November 2019

4.3.3. Implications of the above indicators on Food security.

- The price of food commodities is likely to remain high until the planted crops mature, this will impact negatively on the household purchasing power.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- The average daily milk consumption per household increased by 100mls to 1.0 litres.
- Compared to the Mixed farming livelihood zone, households in the marginal mixed livelihood zone consumed less milk.
- Compared to the long-term, the current milk consumption was 9 percent lower as illustrated in figure 15.

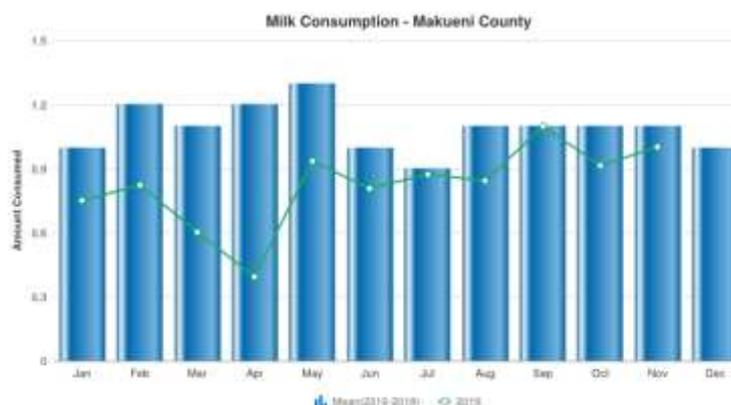


Figure 15: Makueni County milk consumption, November 2019

5.2 FOOD CONSUMPTION SCORE

- In the Mixed Farming livelihood zones, the proportion of household with acceptable food consumption score was 35.7 percent of those sampled and 64.3 percent of the remaining household were at the borderline while in the marginal mixed farming zone 55 percent of the households sampled had an acceptable food consumption score and 45 were at the borderline.

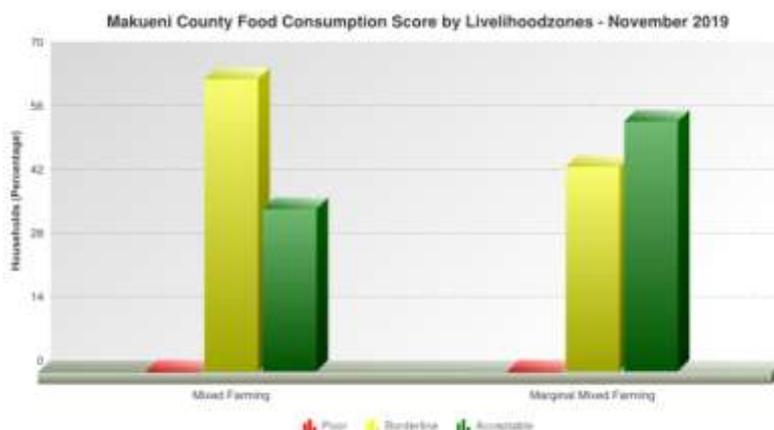


Figure 16: Food Consumption score, November 2019

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 November was 6.5 percent.
- Compared to the long-term average the current MUAC remained relatively stable.
- It's expected that the MUAC will improve more with the availability of milk and mango fruits mostly for the under-fives.

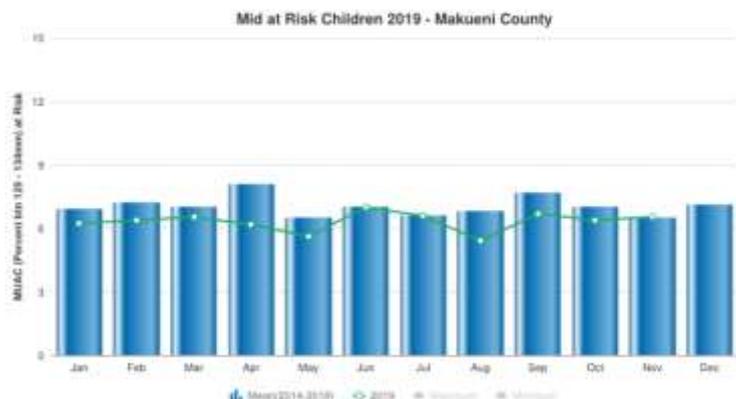


Figure 17: Makueni County, Mid at Risk Children, November 2019

5.4 COPING STRATEGIES

- The coping strategy index (CSI) in Mixed farming livelihood zone was 4.5, while in the marginal mixed farming zone it was 12.1
- Average mean CSI for the county remained stable at 8.3
- Majority of the 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.

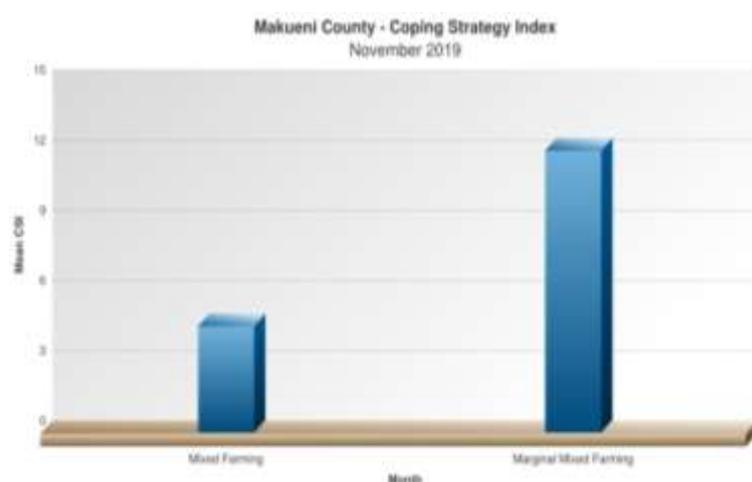


Figure 18: Makueni County Coping Strategy Index, November 2019

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 NON-FOOD INTERVENTIONS

- Cascading and dissemination of Sustainable Food Systems Programme field guide training manual by the County Departments of Devolution, County Administration, Participatory Development, Public service and Youth, Health Services, Gender, Children, Culture & Social services, Agriculture, Livestock and Fisheries Development, Trade, Industry, Marketing, Tourism and Cooperative Development, NDMA and with financial support of World Food Programme
- Livestock vaccination LSD and CCP by NDMA in partnership with the department of livestock with the support of European Union.
- Vaccination against rabies by the county government across the county.
- Training of CHVs and Mass screening of the under-fives in Kalawa, Kilome, Kathonzweni and Kibwezi East and West sub-counties by NDMA in partnership with the department of Health
- Repair of 4 strategic boreholes by NDMA in partnership with the Department of Water with financial support of EU.
- 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. The last consignment was received in August.

7.0 EMERGING ISSUES

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

- Mudslides have have been reported in Kilungu and Mbooni area
- Some dams and earth roads have been washed away

7.2 Migration.

No migration reported for the month under review.

7.3 Food Security Prognosis

The rains have so far been good for crop production, pasture and browse regeneration and recharge of water sources. There was an attack by the fall army worm on crops in the Marginally Mixed farming zone. This was however short lived as the worm was contained by the heavy rains before major damage occurring to the crop. It is thus expected that this season will lead to a harvest that is above seasonal average. Maize and bean prices remained higher than the (2015-2018) long-term averages at Ksh 45 and Ksh 105 respectively. This trend is expected to continue until the harvest in January-February.

8. RECOMMENDATIONS

Immediate/Short term

- Farmers should be trained on proper post-harvest handling.
- Provision of market linkages by both the county government and development partners.
- Farmers should continue tapping the rainwater at household level using rainwater harvesting structures such as guttered system (gutters and tanks) as well as farm ponds for use in their farms for irrigation.
- Training of farmers on how to store pasture (silage) as the season is wet and would not be conducive for bailing.
- Conduct a flood assessment to ascertain the level of infrastructural damage.
- Conduct county-wide community awareness sessions on floods risk exposures and safety. i.e. crossing flooded rivers, moving to higher ground, vacating unsafe shelter, follow up flood alerts. This can be done through the media and public barazas.
- Installation of river and staff gauges
- Engagement of psychosocial support personnel to the devastated family members.
- Capacity building of the response teams/local divers on aqua rescue
- Provision of Aqua rescue equipment