

National Drought Management Authority

MAKUENI COUNTY

DROUGHT EARLY WARNING BULLETIN FOR OCTOBER 2019



A Vision 2030 Flagship Project



OCTOBER 2019 EW PHASE

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The 2019 OND short rains onset was early, first dekad of October as opposed to third dekad on a normal seasonal.
- The vegetation greenness for the county was normal with exemption of a few pockets in the Marginal mixed farming livelihood zone.
- Pasture and browse regeneration was evident across all livelihood zones with the exemption of a few pockets which had received light showers.

Socio-Economic Indicators

- Late planting was ongoing in the MF zone. Up-to 70 percent of cropland in the mixed farming livelihood had been planted and germination witnessed.
- Some unconfirmed cases of livestock deaths in Masongaleni
- Body condition for the cattle in Mixed Farming livelihood zone was fair while in the MMF zone it ranged from poor to fair
- No unusual Cases of livestock diseases though vaccination against Lumpy Skin Disease and Contagious Caprine Pleuro-Pneumonia (CCPP) was ongoing in the Marginal mixed farming livelihood zone.
- Milk production was within the normal range.

Access Indicators

- Milk consumption was within the normal range.
- Most surface water sources in the MF zone had impounded water (above 80 percent) while in the MMF it was around 30 percent.

Utilization Indicators

- The percentage of children at risk of malnutrition has increased from the last month and is slightly above LTA

Livelihood Zone (LZ)	Phase	Trend
Mixed Farming (Coffee/Dairy)	Normal	Stable
Mixed Farming (Food Crop/Livestock)	Alert	Improving
Marginal Mixed Farming	Alert	Improving
County	Alert	Improving
Biophysical Indicators	Value	Normal Ranges
Rainfall (% of Normal)	213	80-120%
VCI-3Month	43.76	35-50
State of Water Sources	4	5
Production indicators	Value	Normal
Crop Condition	Germination	Preparation
Livestock Body Condition	Fair (3-4)	4-5 Normal
Milk Production	1.5	1.4 Litres
Livestock Migration Pattern	Intra-migration	Intra-migration
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (TOT)	80	96.6
Milk Consumption	1.1 litres	1.1 litres
Return distance water sources	5.4 Km	7.3 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)	8.7	7.7
Coping Strategy Index (CSI)	8	<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, first dekad of October (1st to 3rd October) as opposed to third dekad of October during a normal seasonal.
- Fairly good rains were realized to date across all the three livelihood zones in the last two weeks with the exemption of Kwa-kavisi, Mbuvo in Makueni sub-county; Ndunguni, Nguu, Tutini, Emali in Kibwezi west and parts of Masongaleni in Kibwezi East Sub-County.
- Temporal distribution was fair while the spatial distribution was uneven across all the three livelihood zone.
- From the WFP-VAM CHIRPS Data, the County recorded 29.3mm against an LTA of(1994-2013) of 6.7mm in dekad one, 23.4mm against an average of 8.6mm in dekad two and 57.2mm against LTA of 13.5mm

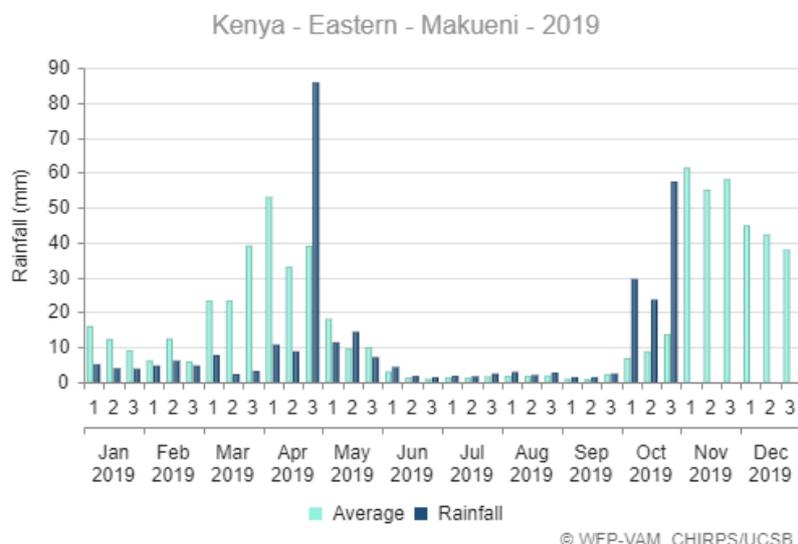


Figure 1: Average rainfall October 2019

Data from the rain gauge stations indicated the following distribution as per livelihood zone.

Mixed Farming (Coffee/Dairy) LZ: Nthangu 352.6mm in 16 days, Mbooni 891.9 mm in 21 days.

Mixed Farming (Cotton/Livestock/Food Crop) LZ: Nzaui 418.7 mm in 19 days, Kisau 187.3 mm in 13 days, Ukia 331.5 mm in 14 days.

Marginal Mixed Farming Zone: Kalawa 169.4 mm in 22 days, Yinthungu 83.7 mm in 13 days, Makindu 130.2 mm in 16 days, Kambi ya Mawe 210.7 mm in 16 days.

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION INDEX

2.1.1 The vegetation condition (VCI)



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



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

The County average 3 month Vegetation Condition Index recorded was 43.76, an indication of Normal vegetation greenness, this was as a result of the rains received during the month under review. It is however worth noting that Kibwezi East recorded a 1 month average VCI of 26.8, an indication of moderate vegetation deficit. The rest of the sub-counties recorded 1 month indices of 41.86, 50.36, 44.92 and 52.03 for Kibwezi West, Kilome, Makueni and Mbooni sub-counties.

2.1.2 Pasture and Browse

- State of pasture and browse condition was on a downward trend for the first two weeks of the month of October however, the situation has improved more due to the regeneration that has been witnessed across all livelihood zones with the exemption of a few pockets attributed to the ongoing OND short rains.
- Minimal regeneration occurred in Ndunguni, Nguu, Tutini and Emali in Kibwezi West; Kwa-Kavisi, Maweli towards Athiani and Mbuvo in Makueni Sub-county and parts of Utini and Ulilinsi in Masongaleni in Kibwezi East sub-county.
- Figure 4 and 5 below exemplifies the state of pasture and browse condition during the first two weeks.

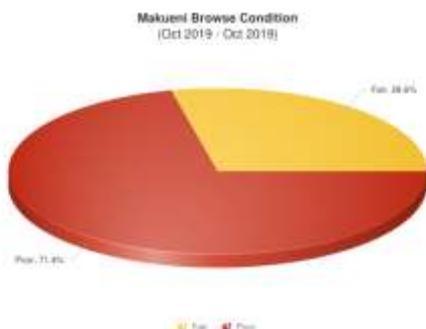


Figure 4: Makueni County Browse Condition, October 2019

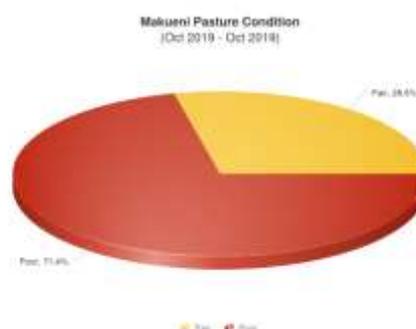


Figure 5: Makueni County Pasture Condition, October 2019

WATER RESOURCE

2.2.1 Sources

- Major water sources for both human and livestock consumption were: Rivers at 28.1%, Shallow wells at 25%, boreholes 18.8% and traditional river wells at 15.6%.
- Most surface water reservoirs in the mixed farming livelihood zone had impounded water to around 80 percent and above while in the marginal mixed farming livelihood zone they had not impounded much water with levels reaching around 30 percent.

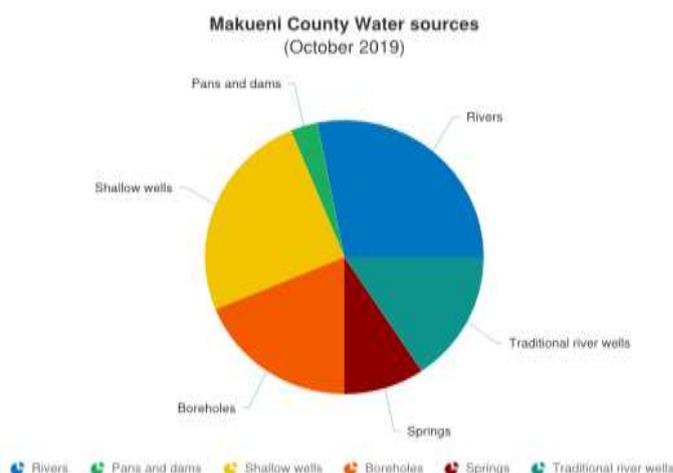


Figure 6: Makueni County Water Sources for October 2019

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 during the first two weeks was 5.4Km against the long-term average of 7 Km. The distances are expected to reduce more across all the livelihood zones attributed to the ongoing OND rains.
- Compared to the mixed farming livelihood zone, longer distances were experienced in the marginal mixed farming livelihood zone where the rainfall amounts were less and distribution un-even.
- The average water consumption per day in the marginal mixed farming zone ranged from 10-20 litres while in the Mixed farming livelihood zone it ranged between 15 to 25 litres.

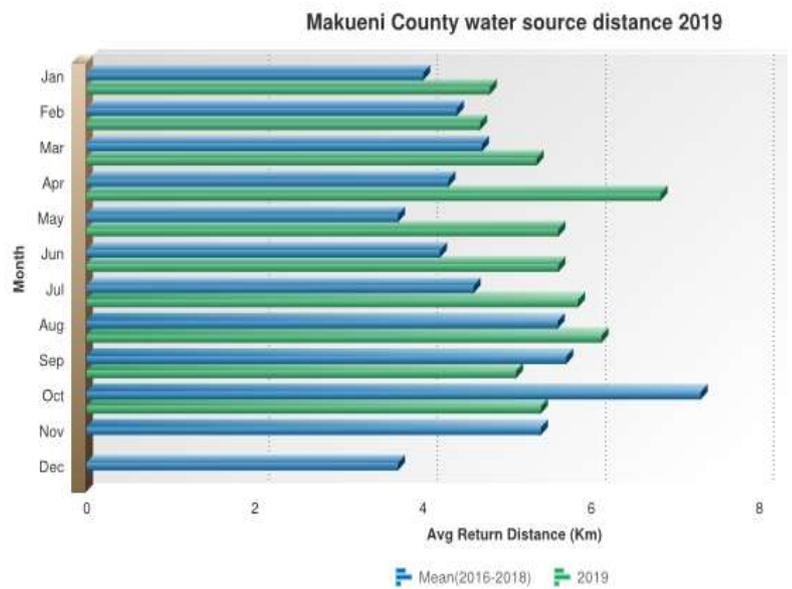


Figure 7: Household Access to Water, October 2019

2.2.3 Livestock access to water

- The average return distance from the grazing areas to watering points reduced by 29 percent to stand at 5.3Km during the month of October. The decline is attributed to the ongoing OND short rains.
- However, longer distances were recorded in the Marginal mixed farming livelihood zone where the rains were unevenly distributed.
- The situation is expected to improve further in the next two weeks as the OND rains continue.

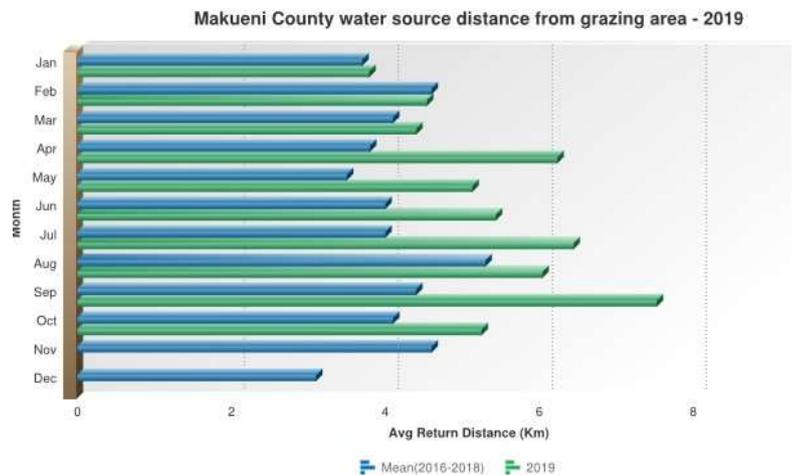


Figure 8: Average grazing Distances, October 2019

2.3 Implication of the above indicators to Food Security

The improving forage condition and the decreased trekking distances to water sources is likely to impact positively on livestock body condition resulting to better market prices and increased milk production.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Body condition for Shoats was good across all the three livelihood zones.
- Body condition for the cattle in the Marginal Mixed farming livelihood zone had a score of three(thin fore ribs visible) while in the Mixed farming livelihood zones over 70 percent of cattle had a score of 4 and could be categorized at the borderline (fore-ribs not visible but 12th and 13th rib visible).
- This condition is expected to improve in the next two to three weeks with the availability of pasture and water for livestock attributed to the ongoing OND short rains.

3.1.2 Livestock Diseases

- There were no unusual Cases of livestock diseases.

3.1.2 Milk Production

- The average daily Milk production per household for the month was 1.5 litres which remained relatively stable from the previous month.
- During the month, there were livestock feeds which helped in stabilizing the milk production in at household prices.
- Compared to the Mixed farming livelihood zone less production was recorded in the marginal mixed farming livelihood zone attributed.
- Milk production is expected to improve in the next one to two weeks with the availability of pasture and water for the livestock.

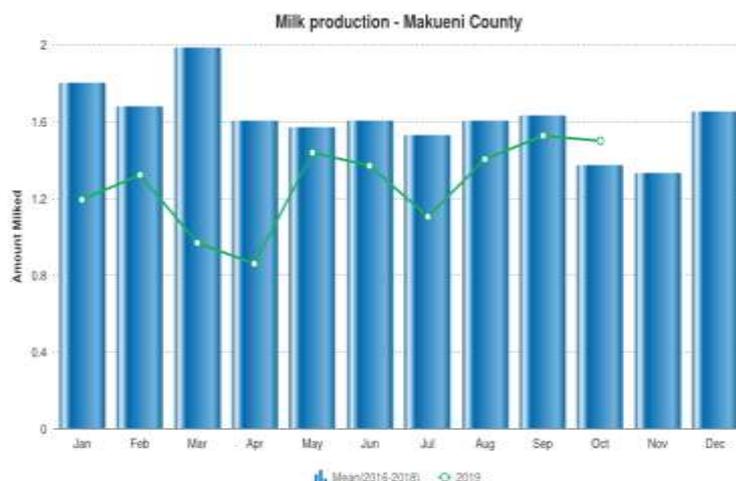


Figure 9: Makueni county milk production, October 2019

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.
- The early planted crops in the Mixed farming Zone (Coffee, Dairy and Irrigation) had already germinated and attained a height of 20cm-30cm (mostly for maize). Up to 70% of cropland in the mixed farming zone (Food crops and Livestock) had been planted and germination witnessed.
- In the marginal mixed farming late planting was ongoing and minimal germination of less than 20-30 percent had been witnessed.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- The average market price for a 3 year old bull was KSh18,125
- Compared to the (2015-2018) long term average of Ksh 20,650 the recorded price was below by 12.2 percent.
- Lower prices were recorded in the Marginal mixed farming livelihood than in the Mixed farming livelihood zone.
- The improvement in price is anticipated in the next three to four weeks given that pasture and water will be available, hence farmers will not be willing to sell their livestock.

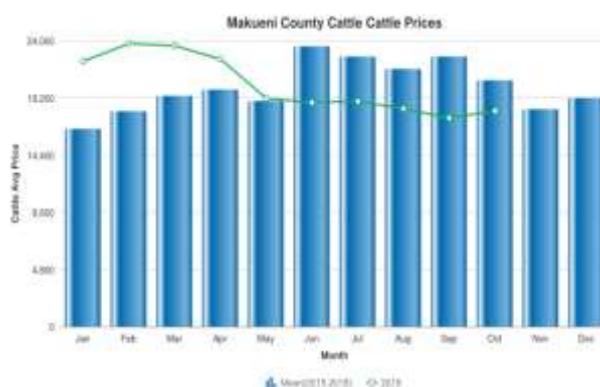


Figure 10: Makueni County Cattle Prices, October 2019

4.1.2 Goat Prices

- The average goat price for the month under review remained stable at Ksh3, 500.
- Compared to the (2015-2018) long term mean, this month's price was 16 percent above the LTA.
- The stability in goat price is attributed to the prevailing good body condition for the shoats.
- Lower prices were recorded in the Marginal mixed livelihood zone.

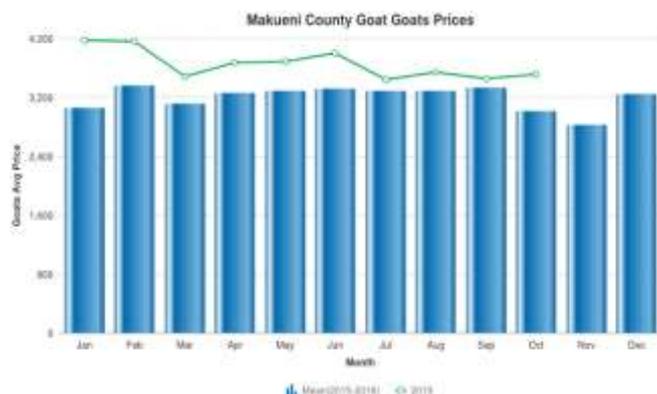


Figure 11: Makueni County Goat Prices, October 2019

4.2 CROP PRICES

4.2.1 Maize

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



Figure 12: Makueni county Maize Prices, October 2019

4.2.2 Beans

- Average beans price was Ksh100.
- Compared to (2015-2018) long-term average of Ksh85, the price remained relatively high.
- Markets in the Marginal Mixed Farming livelihood zone recorded high prices of between KSh100 and KSh 120.
- This was as a result of the high demand of the commodity for sowing given that it was the planting season.

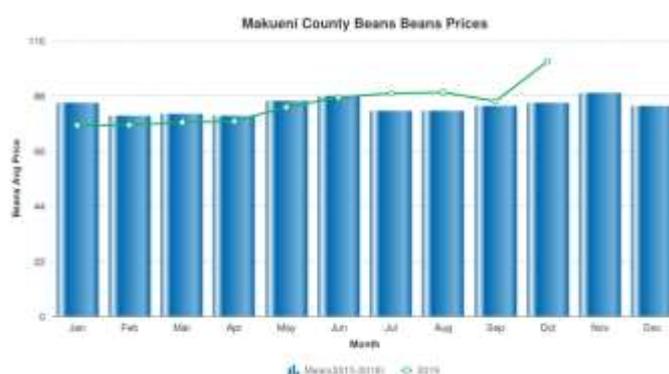


Figure 13: Makueni County Beans prices, October 2019

4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade remained stable at 77.9 yet below (2015-2018) long term average of 87.2.
- The above implies that from the sale of one goat, a farmer could purchase 78 kg of maize.
- The stability in TOT for the last two months is attributed to the high maize prices and the stability in goat prices.
- Compared to the (2015-2018) Long term Average, the current terms of trade (TOT) was below average by 10 percent.

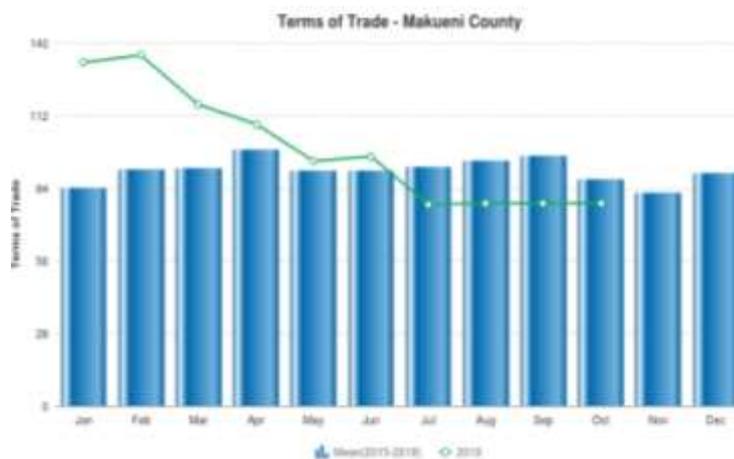


Figure 14: Makueni County Terms of Trade, October 2019

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 was remained stable at 1.1litres
- Compared to the Mixed farming LZ, Households in the marginal mixed LZ consumed less milk.
- The current milk consumption is 10 percent lower than the long term mean as illustrated in figure 15.

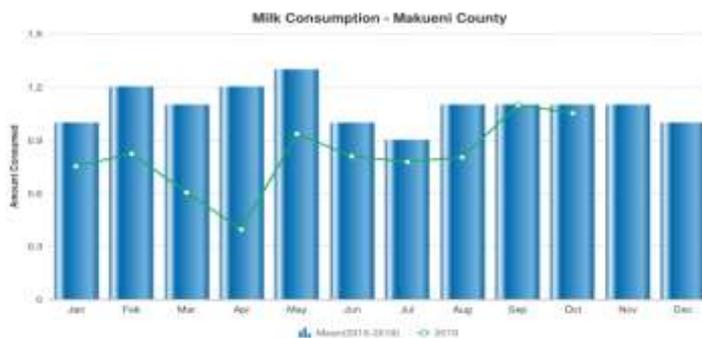


Figure 15: Makueni County milk consumption, October 2019

5.2 FOOD CONSUMPTION SCORE

- In the Mixed Farming Zone 47.1 percent were on the borderline, 52.9 percent were on the acceptable
- In the Marginal Mixed livelihood zone, from the houses sampled, 3.9 percent had a poor food consumption score, 57.9 percent were on the borderline while 38.2 had an acceptable food consumption score.
- The decrease in food consumption is attributed to the diminishing food stocks and the household purchasing power.

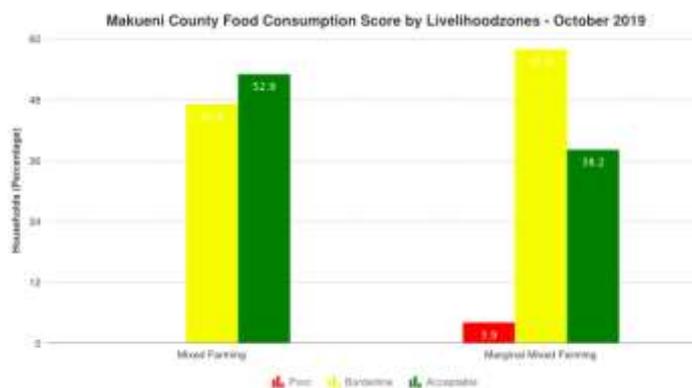


Figure 16: Food Consumption score, October 2019

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The percentage of children at risk of malnutrition from those sampled was 8.7 percent, up from 6.7 percent last month. This was attributed to the rise in the number of children at risk around Yinthungu area.
 - From the mass screening carried out, Kibwezi East sub-county reported 35 cases of Moderate Acute Malnutrition (MAM) and 8 cases of Severe Acute Malnutrition (SAM) out of 2,062 cases sampled.
 - Kalawa recorded 42 cases of MAM and 4 cases of SAM from the children sampled. 68 were at risk of malnutrition.
 - Makueni sub-county recorded 232 cases of MAM and 92 cases of SAM
- The percentage of children at risk of malnutrition from those sampled was 8.7 percent, up from 6.7 percent last month. This was attributed to the rise in the number of children at risk around Yinthungu area. The area has reported low rainfall amounts.

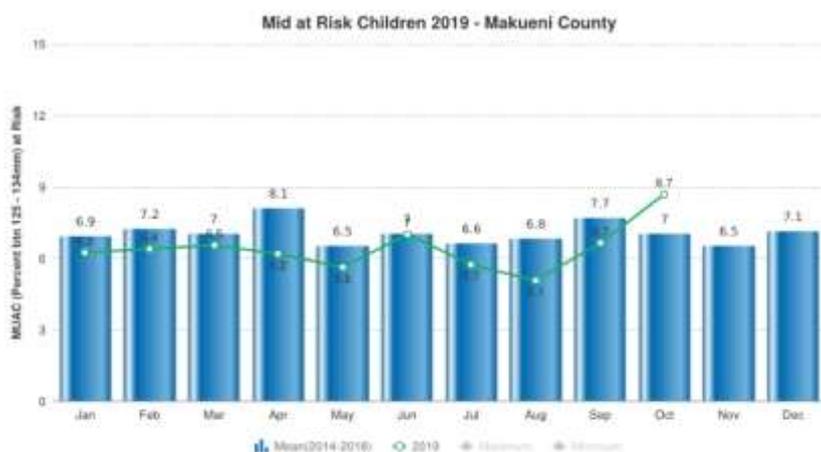


Figure 17: Makueni County, Mid at Risk Children, October 2019

5.4 COPING STRATEGIES

- The coping strategy index (CSI) in Mixed farming livelihood zone was 5.2, while in the marginal mixed farming zone it was 13.8
- Average mean CSI for the county was 8 which was an increase from 9.5 that of last month.
- Majority of the household in the marginal mixed livelihood zone were employing both consumption-based and livelihood-based coping mechanism such as selling more of the non-productive animals than usual in bid to bridge the food deficit.

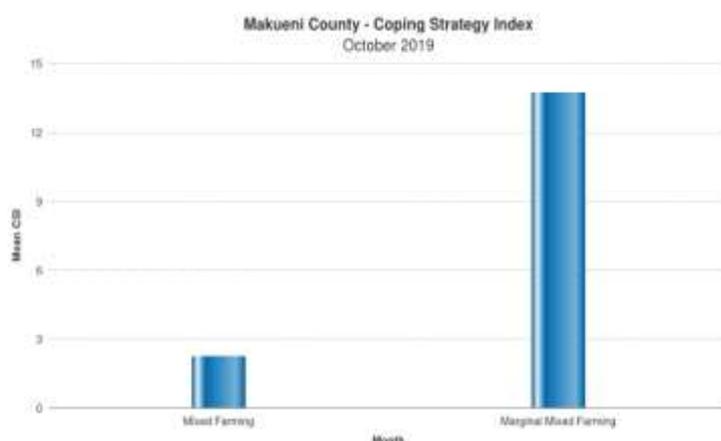


Figure 18: Makueni County Coping Strategy Index, October 2019

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 NON-FOOD INTERVENTIONS

- Provision of livestock feeds to 3,000 beneficiaries in Kalawa, Kathonzwi and Kibwezi East and West sub-counties by NDMA in partnership with the department of Livestock. This was an EU funded initiative.
- Livestock vaccination LSD and CCPP by NDMA in partnership with the department of livestock and financed by the European Union.
- Sensitization meetings and Barazas by NDMA, Kenya wildlife service and County security intelligence committee on human-wildlife and human-human conflict in Mukaa, Kibwezi east and west sub-counties.
- Training of CHVs and Mass screening of the under-fives in Kalawa, Kilome, Kathonzwi and Kibwezi East and West sub-counties by NDMA in partnership with the department of Health with funding from European Union
- Schools both primary and secondary were provided with sanitary towels for female students sitting for their exams by Safaricom Mpesa foundation.

6.2 FOOD AID

- No food aid was received for the month under review

7.0 EMERGING ISSUES

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

- From the recently held sensitization barazas from Human Wildlife Conflict, it emerged that cases of human-wildlife conflict were prevalent in the areas bordering the national park leading to human injuries and predation.

7.2 Migration.

- No notable migration was reported within the county.

7.3 Food Security Prognosis

- The short rains are expected to continue given the outlook by Kenya Meteorological Department (Cessation in the Third dekad of December). This is likely to impact positively on the crops in the two mixed farming zones. The situation is however likely to be poor for the late planted crops mainly in the marginal mixed farming Livelihood zone. Minimal or no harvest is foreseen in the latter leading to stressed food security in that part of the County (Marginal mixed farming livelihood zone).
- The current good rains are expected to impact positively on pasture and browse in the mixed farming livelihood zone and this is likely to improve more hence an improvement in animal body condition, milk production and better market prices.

8. RECOMMENDATIONS

Immediate/Short term

- There is a likelihood of an outbreak of Rift Valley Fever (RVF) and hence disease surveillance should be enhanced as result of the enhanced rainfall.
- Intensify livestock disease surveillance as well as the control measures.
- Promote water harvesting and conservation measures such as acquisition of storage facilities coupled with home-based water treatment.

