



National Drought Management Authority



MAKUENI COUNTY

DROUGHT EARLY WARNING BULLETIN FOR FEBRUARY 2021

FEBRUARY 2021 EW PHASE



Drought Situation & EW Phase Classification

Biophysical Indicators

- Off season rains were experienced during the month.
- Pasture and browse condition ranged from good to fair with the exception of a few pockets in Kilome where it was poor.
- Water availability was fair across all the three livelihood zones.

Socio-Economic Indicators

- Crops in both the mixed farming Coffee/Dairy/Irrigation and food crop/livestock livelihood zones were mainly at the harvesting stage, majorly for the maize whereas in the marginal mixed farming livelihood zone minimal harvesting was ongoing, majorly for the green grams and cowpeas.
- Invasion by desert locusts was reported in the mixed farming livelihood zones.
- Livestock body condition for all species ranged from good to fair across all the three livelihood zones. Milk production for the month was above normal.

Access Indicators

- Terms of trade were 9.7 percent above normal.
- Milk consumption was 27.9 percent below the (2017-2019) Long Term Average
- Return water distances were above average by 26 percent

Utilization Indicators

- Households employed minimal consumption based coping strategies to deal with lack of food or money to buy food.

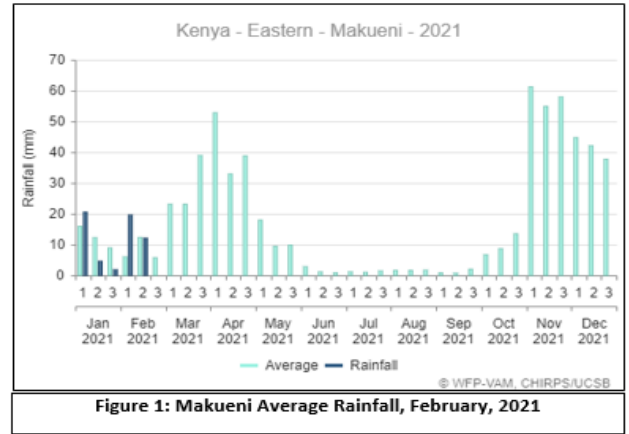
Livelihood Zone (LZ)	Phase	Trend
Mixed Farming (Coffee/Dairy/Irrigation)	Normal	stable
Mixed Farming (Food Crop/Livestock)	Normal	Worsening
Marginal Mixed Farming	Normal	Worsening
County	Normal	Worsening
Biophysical Indicators	Value	Normal Ranges
Rainfall (% of Normal)	85	80-120
VCI- 3 Month	67.78	35-50
State of Water Sources	4	5
Production indicators	Value	Normal
Crop Condition	Harvesting	Harvesting
Livestock Body Condition	Good to Fair	Good- Normal
Milk Production	2.1 Litres	1.6 Litres
Livestock Migration Pattern	No migration	No migration
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (TOT)	110.5	100.7
Milk Consumption	0.8 litres	1.11 litres
Return distance water sources	5.3 Km	4.2 Km
Cost of water at source (20 litres)	KSh 2-5	KSh 2-5
Utilization indicators	Value	Normal
Coping Strategy Index (CSI)	4.83	<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

- During the month of February some off-season rains were realized in some parts of the county.
- On average, the county recorded 19.6mm and 6mm against a 20 year (1993-2013) average of 12.1mm and 12.3mm respectively in dekad one and two and no rainfall in dekad 3 against a long-term average of 5.7 mm.
- According to Kenya meteorological department, the expected rainfall for the March - April - May (MAM) season is likely to be near to below normal.

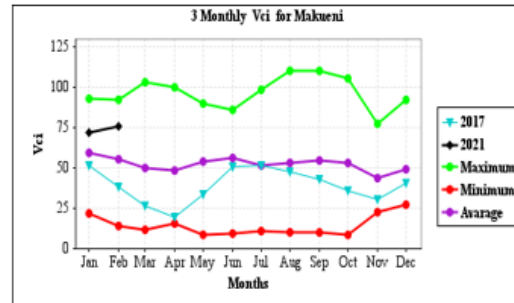
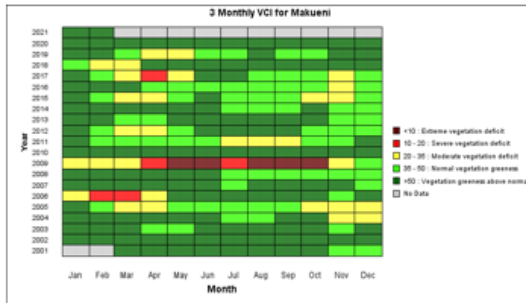


2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION INDEX

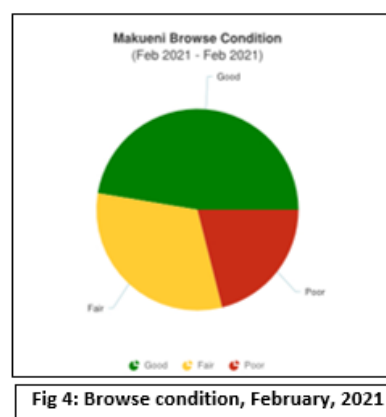
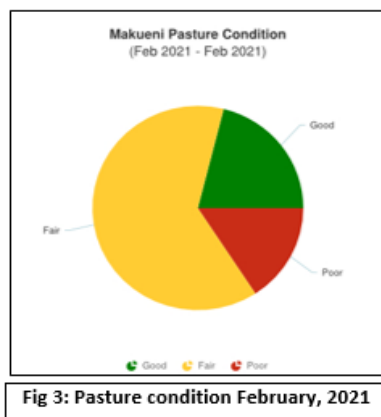
2.1.1 The vegetation condition (VCI)

The vegetation condition remained above average as indicated by the 3 month average VCI of 67.74. This was as a result of the off- season rains received during the month of January and February.



2.1.2 Pasture and Browse

- 21.1 percent of the available pasture was deemed to be good, 63.2 fair while the remaining 15.8 percent was fair while for browse 47.4 percent of the available browse was perceived to be good, 31.6 percent fair and the remaining 21.1 percent poor.
- Pasture and browse condition ranged from good to fair with the exemption of Kitise/Kithuki ward, parts of Kathonzweni ward (Kwa kavisi, Kavingoni), parts of Mavindini ward (Yekanga, Iiani, Ivinganzia), parts of Mbooni Sub-county (Kalawa and Kako/Waia wards) and parts of Kilome i.e. Kiima Kiu-Kalanzoni ward.
- The deterioration in pasture and browse condition is attributed to the heat effect that was being experienced during month.
- The current situation is expected to last until the onset of the MAM rains season.
- Maize stovers and other crop residues enhanced the forage availability for most livestock keepers.



WATER RESOURCE

2.2.1 Sources

- The main sources of water for both human and livestock consumption during the month were: Rivers at 38.5%, shallow wells at 26.9%, Traditional river wells at 23.1%, boreholes at 4.8% and Pan & dams at 3.8% as illustrated alongside.
- The current water levels for open water reservoirs like dams were below 60 percent attributed to poor recharge during the OND season and high usage/consumption by both households and livestock at this source.
- Other main water sources in Kilome Sub-county and urban centers were piped water schemes.

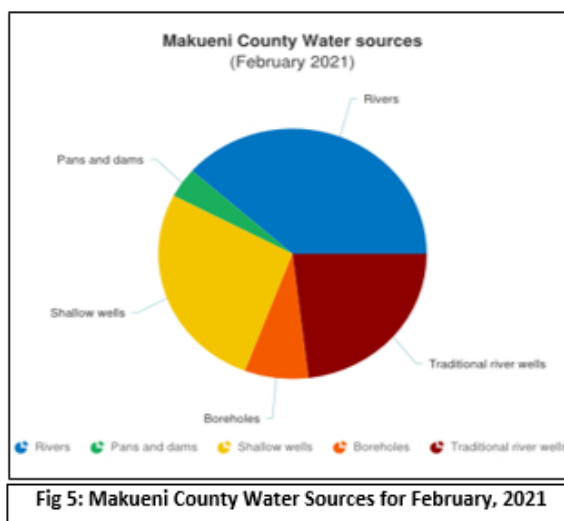


Fig 5: Makueni County Water Sources for February, 2021

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 4.5 Km to an average of 5.3 Km, a 17.8% increase.
- Compared to both the good year and the long-term average the current distances were above by 25.6 percent and 26.8 percent respectively.
- The increase in distances was attributed to the change to alternate water sources since most of the seasonal rivers had dried up.
- The distances are expected to remain high until onset of the MAM long rains season.
- The average price of water per 20 litre Jerri can at the source/water Kiosks retailed from 2-5 Shillings.

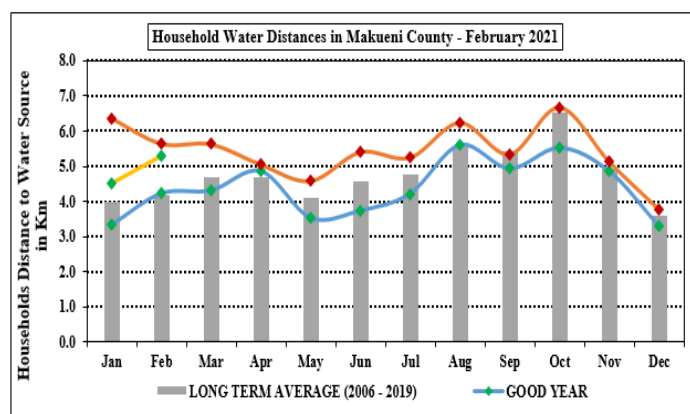


Fig 6: Makueni Household Access to Water, February, 2021

2.2.3 Livestock access to water

- The average return distance from the grazing areas to watering points increased from 4.3 Km to an average of 5 Km, a 16.3% increase.
- Compared to the long-term mean the current distances were above by 17.4%.
- The increase in distance was attributed to the decline in volumes hence change to alternative water sources.
- It's anticipated that the distances will increase more until onset of MAM rain season.

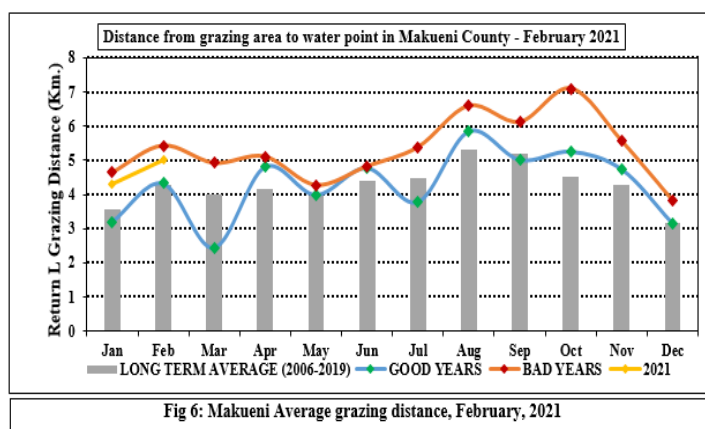


Fig 6: Makueni Average grazing distance, February, 2021

2.3 Implication of the above indicators to Food Security

- Water availability and access to forage in some areas majorly in the mixed farming livelihood zone is likely to get worse in the coming months as the nearby water sources continue to dry up hence affecting the household food security situation negatively.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition ranged from good to fair for all species across all the three livelihood zones.
- On average, 52.6 percent had a good smooth appearance while 47.4% were moderate neither fat nor thin.
- The current prevailing good to fair body condition is as a result of the available pastures, water, browse and fodder.
- It is anticipated that the livestock body condition will remain good until the MAM rains season across all the three livelihood zones with exemptions of a few pockets; parts of Kilome (Kiima Kiu-Kalanzoni Ward) and parts of Makueni sub-county Kitise/Kithuki ward, parts of Kathonzweni ward (Kwa kavisi, Kavingoni), parts of Mavindini ward (Yekanga, Iiani, Ivinganzia) and parts of Mbooni Sub-county (Kalawa)

3.1.2 Livestock Diseases

- No major outbreak of livestock disease was reported for the cattle, goats and sheep.

3.1.2 Milk Production

- The average Milk production per household per day remained relatively stable at 2.1 litres
- The stability in milk production for the two months is attributed to the available pasture and water.
- Compared to the long-term average the current production was above normal by 28.1%.

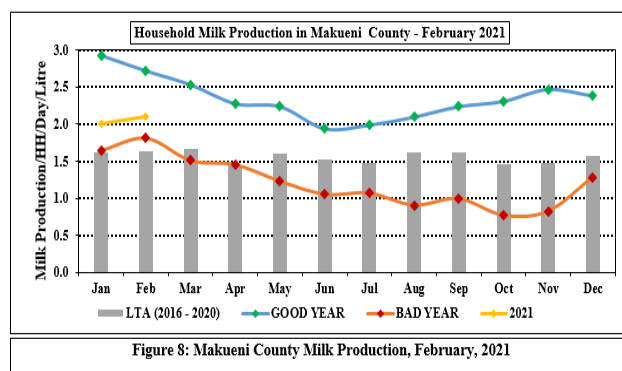


Figure 8: Makueni County Milk Production, February, 2021

3.1.3 Implication of the above indicators on Food security

- The current good to fair body conditions should sustain high levels of productivity in terms of meat and milk. This will in turn command good prices hence affecting the food security situation positively at household level.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

- The major crops grown in the County were; maize, sorghum, millet, green grams, cowpeas, pigeon peas and beans.
- In the Mixed farming (Coffee, Dairy and Irrigation) and Mixed farming (Food crops and Livestock) maize was still at the harvesting stage.
- In the marginal mixed farming livelihood zone harvesting of maize and green grams was still ongoing in some farms (where the crops performed well).
- There was a reduction in yield for the green grams due to the Quelea quelea bird invasion majorly in marginal mixed farming livelihood zone.
- In addition to the rain fed, farmers along the main rivers (Athi, Kikuo and Kaiti) and streams had horticultural crops that were at various stages of development.

3.2.2 Implication of the above indicators on Food security

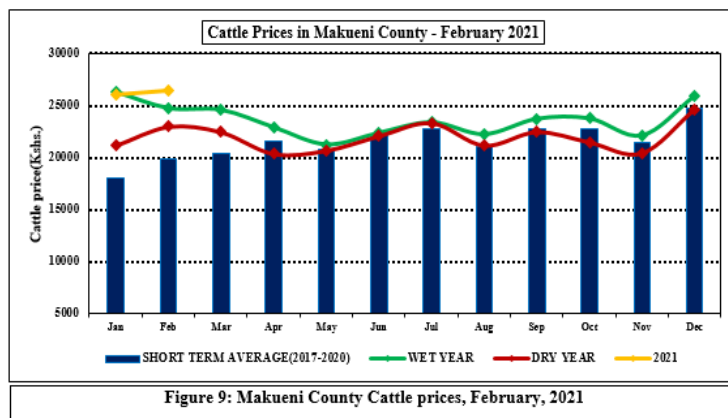
- Crop production performed dismally with exemption of a few pockets in the mixed farming livelihood zone (Kaiti Sub-County) this is expected to have a negative impact on the local food security situation.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

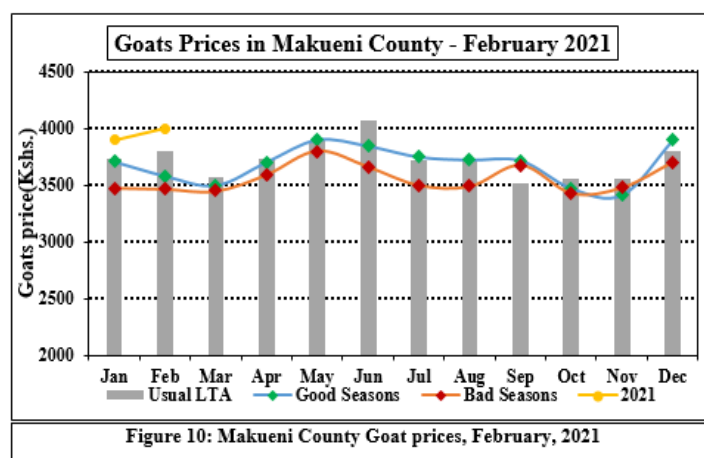
4.1.1 Cattle Prices

- The price for a 2 year old cattle increased from KSh 26,000 to an average of KSh 26,500.
- The 1.9% increase in price was attributed to prevailing good body condition for the livestock.
- Compared to the short term average, the current market price was above normal by 33.7%



4.1.2 Goat Prices

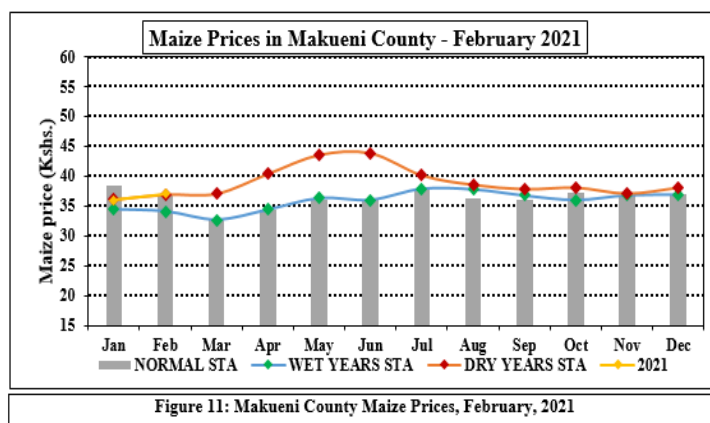
- The average market price for a medium sized goat increased from KSh 3,900 to an average of KSh 4000.
- The fair prices are attributed to the prevailing good body.
- Compared to both the good season and the long-term average, this month's price was above normal by 11.7% and 5.3% respectively.



4.2 CROP PRICES

4.2.1 Maize

- Maize price remained relatively stable at an average of KSh 37 per kilogram which is normal at this time of the year.
- Compared to a similar time during the wet season, the current price was slightly above by 8.8%
- There was no major price variance across the livelihood zones.
- The stability in price is attributed to the available stock majorly from the local harvests.



4.2.2 Beans

- The average price for beans at the cereals shop remained relatively stable at KSh100.
- Compared to both the short-term average and the good months, the current price was above normal by 25% and 31.6% respectively.
- The high price is attributed to the decline in supply of the commodity into the local markets and the low harvests.
- High prices were recorded in the Marginal Mixed Farming zone where stocks had declined.

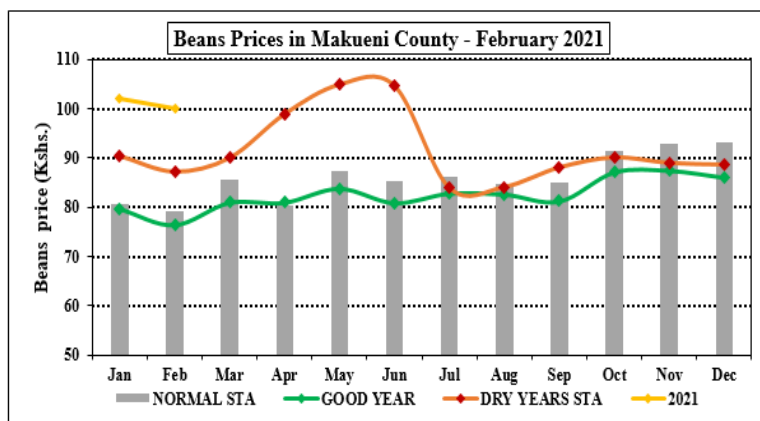


Figure 12: Makueni County Beans Prices, February, 2021

4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade (goat for maize) increased by 3.8% i.e. from 106 to 110 an implication that from the sale of one goat, a household would be able to purchase 110 kg of maize.
- Compared to both the good year and the short term average, the current TOT was above by 5.2% and 10% respectively.

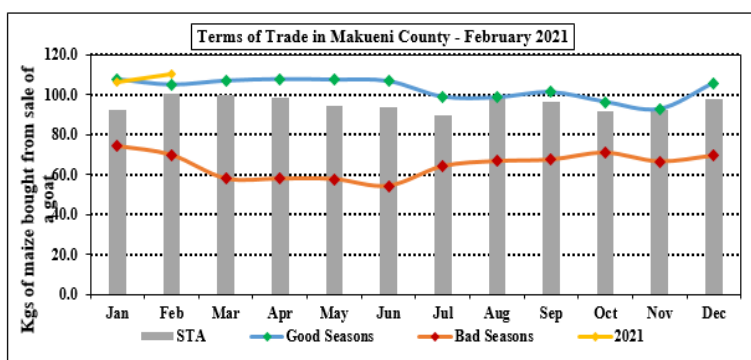


Figure 13: Makueni County Terms of Trade, February, 2021

4.3.3. Implications of the above indicators on Food security.

- Household purchasing power is expected to remain stable following the availability of food commodities in the markets.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- The average daily milk consumption per household remained relatively stable at 0.8 litres
- Compared to both the long-term average and the good year, the current milk consumption was below normal by 27.9% and 42.9% respectively.
- The decline in milk consumption at the household level is attributed to the collection of the Milk by the dairies.

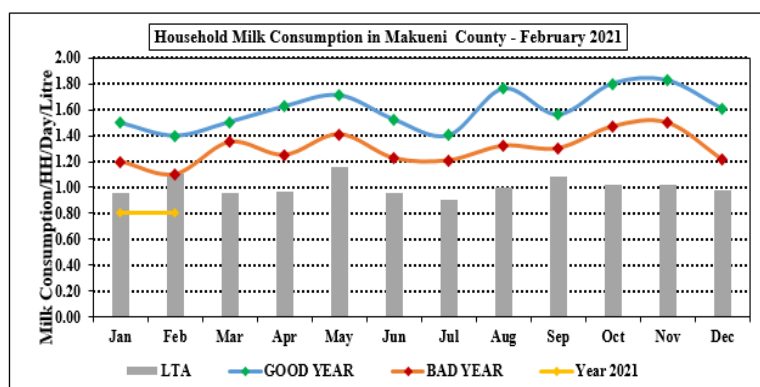


Figure 8: Makueni County Milk Consumption, February, 2021

5.2 FOOD CONSUMPTION SCORE

- The proportion of households in the mixed farming livelihood zone who had an acceptable Food Consumption score increased from 68.3% in January to 78.3% in February while for the borderline it decreased from 31.7% to 21.7%
- In the marginal mixed farming livelihood zone there was a decrease from 91.3% to 84.4% for the acceptable Food Consumption score category while for the borderline food consumption score there was an increase from 8.8% that of last month to 15.6% .
- The acceptable food consumption is attributed to the improved dietary diversity and food availability at the household level following the recent harvests.

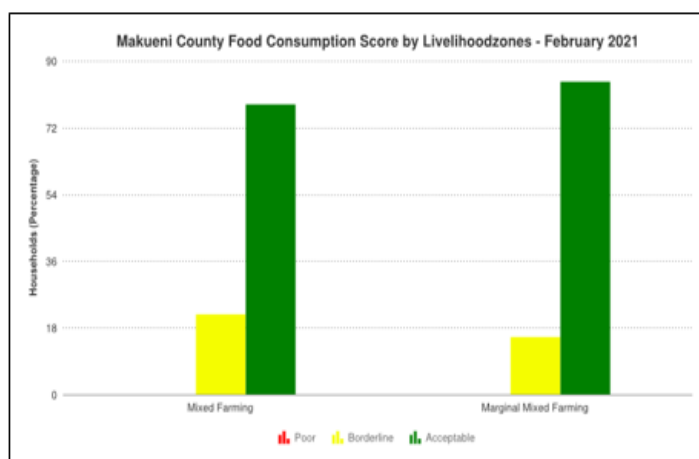


Figure 15: Makueni County FCS, February, 2021

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The proportion of children at risk of malnutrition was 3.4% a slight increase from 2.1% that of last month.
- The children who were at risk of malnutrition were counselled and referred for follow-up for Growth Promotion and Monitoring (GPM).
- The improvement in MUAC trend is attributed to the constant milk consumption and availability of mangoes and citrus fruits mostly for the under-fives.

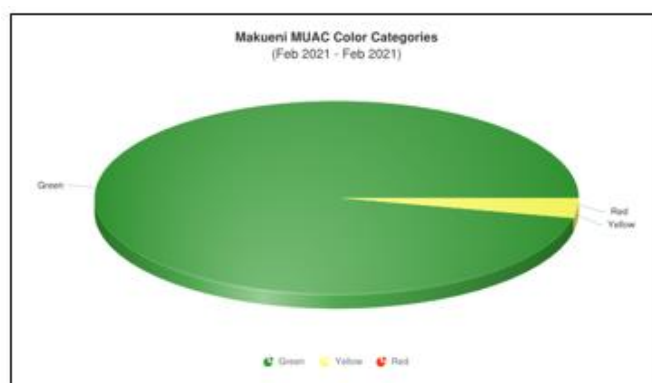


Figure 16: Makueni County Muac Chart, February, 2021

5.4 COPING STRATEGIES

- Average mean CSI for the county decreased from 7.9 to an average of 4.8
- The reduced coping strategies index (rCSI) in the marginal mixed farming zone was 6.6 while in the Mixed farming livelihood zone it was 3.5
- This implied that majority of the households were employing none or minimal coping strategies to deal with lack of food or money to buy food.

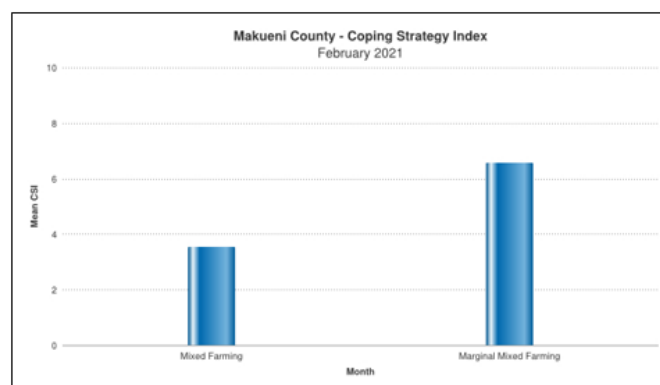


Figure 17: Makueni County Coping Strategy Index, February 2021

5.5 OTHER EVENTS

- Invasion by desert locusts was reported in both the mixed farming Coffee/Dairy and Food crop/Livestock where they destroyed crops and pastures (minimal damage). In the marginal mixed farming livelihood zone, there was invasion by the *Quelea quelea* birds.

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 NON-FOOD INTERVENTIONS

- Auxiliary works at Ngomeni earth dam by NDMA through the support of European Union.
- Provision of storage bags (Hematic) to beneficiary farmers by the department of Agriculture under the KCEP-CRAL program.
- National hygiene programme/Kazi Mtaani as part of the strategies to alleviate the adverse effects of Covid-19 was still ongoing. The program aimed at utilizing labour intensive resources at the informal settlements across the county.
- Capacity building of farmers on climate smart agriculture and post-harvest management by DoALF and line partners.
- Construction of Earth dams by National Irrigation Board (NIB)
- Pasture conservation in Makueni, Kilome, Kibwezi East and West.
- Improvement of indigenous chicken in Kibwezi East, Kibwezi West, Makueni and Mbooni.
- PVCA trainings for community and technical sectors in Kathonzweni, Makindu and Mavindini ward under KCEP-CRAL (NRM/CA) programme.
- Procurement of services for works in Kikumbulyu South and Masongaleni wards under KCEP/CRAL (NRM/CA) programme.

6.2 FOOD AID

- There was no food aid allocation for the month under review.

7.0 EMERGING ISSUES

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

- Enforcement of the daily curfew from 10.00 p.m. to 4 a.m. as a precautionary measure for COVID-19

7.2 Migration.

- There were no reported cases of livestock migration for the period under review.

7.3 Food Security Prognosis

- According to Kenya meteorological department, the expected rainfall for the March - April - May (MAM) season is likely to be near to below normal. Crop production for season will likely be below average, Pasture is likely to regenerate adequately due to its low water needs. This will translate to continuous milk production for the under-fives. Availability of citrus fruits in the diet of the under-fives will ensure that they are well nourished and protected against illness. Water sources especially in the Marginal Mixed farming livelihood zone may fail to recharge entirely. Households are likely to remain food secure due for the next two to three months as a result of the recent harvests and the good livestock body condition which will ensure that households have some disposable income. However, from the months of April through August, the effects of the below average March April May (MAM) season are likely to be slowly felt as households employ more consumption-based coping mechanisms.
- In the event of a second wave of the COVID-19 pandemic, the government is likely to impose more stringent measures which will constrain income generating activities thus, lead to loss of income and livelihoods.

8. RECOMMENDATIONS

Immediate/Short term contingency measures

- County government should enhance market linkages so as to absorb the harvests from the pigeon peas into the markets at fairly good prices.
- Ensuring proper functioning of markets for major food commodities in the rural areas.
- Intensify livestock disease control measures
- Promotion of livestock feed storage and management practices
- Continuous community sensitization on COVID-19 preventive measures.

Medium and long term

National Government, County Government and Development partners to collaborate on:

Water Sector;

- Construction of more weirs for spring protection.
- Rehabilitation of un-operational boreholes; Athi Mavindini water project, Matinga earth dam in Kathonzweni and Manooni dam distribution.

Agriculture Sector;

- Construction of Water harvesting structures e.g. farm ponds (lined), Insitu technologies and CA
- Production and utilization of drought tolerant crop varieties.
- Establish a Strategic Grain Reserve for the County

Livestock Sector;

- Renovate 9 stockyards and provide Covid-19 hygiene facilities.
- Vaccination against LSD, FMD, CCPP and NCD
- Pasture and fodder conservation (mechanized and manual)

Health and Sanitation Sector;

- Sensitize CHVS and ECDES teachers on VAS and growth monitoring.
- Sensitize health providers and CHVs on IFAS.
- Conduct mass screening in hard to reach areas.