Drought Situation & EW Phase Classification

Biophysical Indicators
• Since the timely onset of MAM rains on 2nd to 3rd week of March, rains have been evenly distributed both in terms of space and time.
• The rains received in the County were above normal.
• The vegetation greenness condition was above normal.
• Quantity and quality of pasture and browse remained good across all the three livelihood zones.

Socio-Economic Indicators
• Livestock body condition was good across all the three livelihood zones.
• Crop condition was good across the county though some areas reported water logging.
• Milk production was within the normal range.

Access Indicators
• Livestock markets remained closed due to the FMD and LSD outbreak.
• Open air markets for food stuffs remained closed as a measure to control the spread of COVID-19. Wholesale and retail outlets are however, operational.
• Milk consumption was normal.
• Compared to the long term average the Terms of trade were favourable

Utilization Indicators
• Majority of the Households employed consumption based coping mechanisms less frequently.
1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- Onset of the MAM long rains was timely, 2\textsuperscript{nd} to 3\textsuperscript{rd} week of April as predicted in the forecast.
  - The amount of rain received has been good and evenly distributed in both space and time.
- The County recorded 14.6 mm in dekad one, 94.1 mm in dekad two and 32.3 mm in dekad three against an average of 52.8 mm, 32.9 mm and 38.8 mm respectively during a normal season (1994-2013 LTA) as illustrated in figure 1 alongside.

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION INDEX

2.1.1 The vegetation condition (VCI)

- The average three month VCI for the County was 99.4, an indication of above normal vegetation greenness across all the Sub-Counties attributed to the good MAM rains being experienced. The effects of the previous OND season and offseason rains in January and February also contributed.
- Kaiti, Kibwezi East, Kibwezi West, Kilome, Makueni and Mbooni sub-counties each recorded average 3 month VCI indices of 103.38, 95.86, 99.87, 105.12, 98.23 and 102.59.

[Figure 2.1a: Makueni 3 month VCI Matrix, April 2020.]

[Figure 2.1b: Makueni County 3 month VCI Graph, April 2020.]

2.1.2 Pasture and Browse

- Pasture and browse condition was good across all the three livelihood zones with an improving trend. Invasive weed cover on the grazing lands in the Marginally Mixed Livelihood zone was evident though the acreage was minimal.
- The available pasture is expected to last for the next 4-5 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 April.
WATER RESOURCE

2.2.1 Sources
- The main water sources for both human and livestock consumption were: Traditional river-wells at 30.4%, Rivers at 21.7%, Shallow wells 26.1%, Pan & Dams 13% and Boreholes at 8.7% as illustrated in figure 6 alongside.
- Surface water reservoirs in both mixed farming and marginal mixed farming livelihood zone had a recharge level of more than 80 percent and are expected to recharge to their optimum in the next one month attributed to the ongoing MAM long rains.
- Waiting time at the resource had really improved to less than 10 minutes.
- In Kilome sub-county, piped schemes (NOLTURES) were the main water source for domestic use.

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 was stable at 3.9 km which was below normal by 33 percent.
- The distances are expected to remain low across all the livelihood zones attributed to the ongoing MAM long rains.
- The average water consumption per person per day in the marginal mixed farming zone was 20 to 30 litres while in the Mixed farming livelihood zones it was 40 litres.

2.2.3 Livestock access to water
- The average return distance from the grazing areas to watering points remained relatively stable at 3.8km
- Compared to the 2017-2019 long-term mean the current distances were below normal by 24%
• The stability in distances for the last three months is attributed to the available water sources as a result of ongoing MAM rains.
• The situation is expected to remain stable for the next three months given the current good situation.

![Figure 8: Average grazing Distances, April 2020](image)

2.3 Implication of the above indicators to Food Security
• The improved forage condition and availability of water has impacted positively on livestock production in terms of livestock production hence improved household purchasing power.

3.0 PRODUCTION INDICATORS
3.1 LIVESTOCK PRODUCTION
3.1.1 Livestock Body Condition
• Livestock body condition was good across all the three livelihood zones.
• On average 90 percent of the cattle had moderate to good smooth appearance body condition (a score of 4-5) attributed to the favourable conditions due to the ongoing MAM rains.
• The current condition is normal at this time of the year and is expected to remain the same for the next 3-4 months with the availability of pasture and water for livestock.

3.1.2 Livestock Diseases
• No reported cases of livestock disease in the Mixed farming livelihood zone.
• The quarantine notice issued in mid-February by the County Government of Makueni restricting movement of livestock (suspension of markets) and their products was still in effect.

3.1.2 Milk Production
• The average Milk production per household per day for the month of April was 1.1 litres.
• The current average daily milk production per household is lower than the long-term average by and 30 percent as illustrated alongside.

![Figure 9: Makueni county milk production, April 2020](image)

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.
• Crops in both Mixed farming (Coffee, Dairy and Irrigation) and Mixed farming (Food crops and Livestock) livelihood zone had been planted and germination witnessed maize was at the Knee high stage while cowpeas and beans were at the flowering stage. Pigeon peas was at flowering/pod formation stage in most areas.
• Cases of fall Army worm and stunted growth due to water logging were reported in areas of Uvuu in Mbooni Sub-County.
• In the marginal mixed farming livelihood zone where there was replanting of crops, germination had been realized and were performing fairly well.
• A good percentage of pigeon peas were at the pods formation stage and a few at the maturity stage across all the three livelihood zones.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

• The average market price for the cattle remained stable at Ksh20,000.
• Compared to the 2016-2019 long term average, the recorded price was normal.
• The decrease in price is attributed to the closure of major livestock markets.

![Figure 10: Makueni County Cattle Prices, April 2020](image)

4.1.2 Goat Prices

• The average market price for the goat remained relatively stable at an average of Ksh3, 750.
• Compared to the (2015-2019) long term mean, this month’s price was 6.7 percent above the LTA.
• The fair prices are attributed to the prevailing good body condition and the availability of pasture and browse for the shoats. The decline in price over the last two months can be attributed to the closure of livestock markets.

![Figure 11: Makueni County Goat Prices, April 2020](image)

4.2 CROP PRICES

4.2.1 Maize

• The average market price for maize per kilogram remained stable at Ksh33.
• The current maize market price is 6 percent lower than (2016-2019) long-term average of Ksh35.
• This is attributed to the harvested maize crop (from previous season) which has infiltrated into the local market.

![Figure 12: Makueni County Maize Prices, April 2020](image)
4.2.2 Beans

- The average market price for beans decreased by 5.9 percent to an average of KSh85.
- Compared to (2016-2019) long-term average of Ksh78, the current price was above normal by 8.2 percent.
- The high price of the commodity over the last two months is attributed to the high demand of it as a seed given that it was the planting season.
- Markets in Masongaleni (Marginal Mixed Farming) and Kikima in the Mixed farming Coffee/Dairy recorded high prices of up to KSh100.

Figure 13: Makueni County Beans prices, April 2020

4.3 Livestock Price Ratio/Terms of Trade

- The current terms of trade remained relatively stable at 115.4.
- Compared to the (2016-2019) short term average, the current TOT was slightly above by 8 percent.
- This implies that from the sale of one goat, a farmer could purchase 115.4 kg of maize.
- The improved TOT is attributed to the improvement in goats’ body condition and household stocks.
- Terms of trade and household purchasing power is expected to remain stable given the current prevailing conditions.

Figure 14: Makueni County Terms of Trade, April 2020

4.3.3. Implications of the above indicators on Food security.

- Livestock prices are likely to remain high due the current favourable conditions for livestock rearing while that of crops is likely to remain stable following the infiltration of maize into the local markets.
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 normal.
- Compared to the good year the current milk consumption was below the normal range.

Figure 15: Makueni County milk consumption, April 2020

5.2 FOOD CONSUMPTION SCORE
- The proportion of households in acceptable Food Consumption category was 80 percent while 20 were at the borderline Food Consumption category.
- This 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 16: Makueni County FCS, April 2020

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 April was 6.9 percent.
- Compared to the 2015-2019 average of 7.7 percent, the current MUAC was below average by 11 percent.
- The good MUAC trend over the last four months is attributed to the availability of citrus fruits and increased milk consumption mostly for the under-fives.

Figure 17: Makueni County Mid at Risk Children, April 2020
5.4 COPING STRATEGIES
- Average mean CSI for the county was 3.3
- The coping strategy index (CSI) in the marginal mixed farming zone was 5.6 while in the Mixed farming livelihood zone it was 1.
- This implies that households were employing less coping strategies to cope with lack of food or money to buy food.

6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 NON-FOOD INTERVENTIONS
- Inputs subsidy (seeds, fertilizer, hermetic bags, pesticides) by KCEP-CRAL
- Capacity building 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, NARIGP

6.2 FOOD AID
- Donation of food stuff worth KSh200,000 for 250 households in Kilome sub-county (Sultan Hamud area) by Kasikeu MCA.

6.3 Non Food Items
- The National government through Interior and Co-ordination issued 9,000 facemasks to help in alleviating COVID-19
- The women rep donated 68 water tanks with stands, 150 *500ml hand sanitizers, 300 hand wash soap, 500 face masks and 200 Aprons.
- KESSHA donated 120*100litre capacity water tanks and 1,000 face masks.
- Makueni Union of journalist donated 17*20 litres water tanks and 250 face masks.
- Kaiti MP donated 20,000 facemasks and 40*60 litres water tanks.
- MP Kilome donated 5,000 face masks.

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement/Human-Wildlife conflict/Floods
- Extension of the Presidential directive of a daily curfew order from 7 p.m. to 5 a.m. as a precautionary measure for COVID-19
- No abnormal incidences of insecurity, human displacement or conflict over resources during the period under review.

7.2 Migration.
- No migration of livestock was reported in any of the three livelihood zones, neither is it expected in the next three months given the prevailing favourable conditions for the livestock.

7.3 Food Security Prognosis
• Water sources (both surface and underground) are expected to remain well recharged for the next six months. Maize prices have been on a decline since January and have now stabilized. This is attributed to supply from local production. Local crop production is expected to flourish and this as a result may have a positive impact on the local food security situation. Livestock body condition is expected to remain good due to the current rains that continue to regenerate pasture and ensure the availability of quality forage and water. Although livestock markets are not operational as a result of the LSD and FMD outbreaks reported over two months ago, abattoirs and butcheries continue to operate, with meat retailing at normal market prices.
• Enhanced soil moisture condition is likely to be experienced across all the livelihood zones hence improved crop productivity in the county and this will impact positively on the household food security situation.
• Human movement has been limited due to COVID-19 outbreak and curfew hours. This has affected operation of normal open-air market days. It is not certain when normal operations are likely to resume. This will affect household disposable income since farmers will not be able to trade. However, some of the commodities have been made available at wholesale and retail level.
• Access to markets for cereals and non-food items is expected to remain unhampered and operational in the cereals shop which is advantageous for the consumption at household level.

8. RECOMMENDATIONS

Immediate/Short term

Agriculture
• Construction of Water harvesting structures e.g. farm ponds (lined), insitu technologies, Conservation Agriculture.
• Promoting, production and utilization of drought tolerant crop varieties.
• Pests and diseases management interventions in vegetables
• Capacity building on Viable Value Chains, postharvest handling and market linkages
• Establishment of a Strategic Grain Reserves for the County

Livestock
• Vaccination against LSD, FMD, CCPP, NCD, PPR and RVF
• Pasture and fodder conservation (mechanized and manual)
• Livestock upgrading (AI, shoats and chicken)

Water
• Rehabilitation of existing Earth Dams including desilting and protection of spillways from erosion
• Shift focus from small projects to mega projects with significant impacts
• Construction of more weirs to protect spring
• Rehabilitation of non-operational boreholes
• Rehabilitation of sand dams/sumps installations destroyed by the rains