



A Vision 2030 Flagship Project



National Drought Management Authority NAROK COUNTY DROUGHT EARLY WARNING BULLETIN FOR MAY 2022.

| MAY EW PHASE | Early Warning Phase Classification | | | |
|---|--|-----------------|----------------------|----------------------|
| | LIVELIHOOD ZONE | EW PHASE | TRENDS | |
| | Agro Pastoral | Normal | Stable | |
| | Mixed Farming | Normal | Stable | |
| | Pastoral | Normal | Worsening | |
| | County | Normal | Stable | |
| <p>Drought Situation & EW Phase Classification</p> <p><u>Biophysical Indicators</u></p> <ul style="list-style-type: none"> The onset of long rains 2022 had a delayed onset in the second week of March. Vegetation greenness and forage condition was above normal. <p><u>Socio-Economic Indicators (Impact Indicators)</u></p> <p><u>Production Indicators</u></p> <ul style="list-style-type: none"> Majority of crops were in grain filling/podding stage with fair to good condition. Livestock body condition was fair to good. Livestock in-migration was reported and this is normal at this time of the year. Suspected cases of foot and mouth disease in cattle were reported in Siana ward. Milk production was below normal range. <p><u>Access Indicators</u></p> <ul style="list-style-type: none"> Terms of trade were unfavourable. Milk consumption was below normal range. Water distances were within normal range. Water consumption was below normal. <p><u>Utilization Indicators</u></p> <ul style="list-style-type: none"> Malnutrition cases were within normal range. About 96.1 percent of households were in acceptable food consumption category. | Biophysical Indicators | Value | Normal ranges | |
| | Rainfall (% of normal) | 103 | 80-120 | |
| | VCI-3 month | 60.23 | 35-50 | |
| | Forage Condition | Fair to Good | Fair to Good | |
| | Production indicators | | Value | Normal ranges |
| | Maize Crop Condition | Fair to Good | Good | |
| | Livestock Body Condition | Fair to Good | Good to fair | |
| | Milk Production (in litres) | 3.4 | ≥ 3.61 | |
| | Livestock Migration Pattern | Normal | Normal | |
| | Livestock Deaths (from Drought) | No death | No death | |
| | Access Indicators | | Value | Normal ranges |
| | Terms of Trade (ToT) | 62 | ≥ 88.40 | |
| | Milk Consumption (in litres) | 2.2 | ≥ 2.5 | |
| | Return Distance to Water Sources (Km) | 2.1 | ≤ 1.83 | |
| | Water Consumption | Household | 2.9 | ≤ 2.7 |
| | | Livestock | 12 | ≥ 15 |
| | Utilization indicators | | Value | Normal ranges |
| | Nutrition Status of malnourished children 6-59 months (% MAM+SAM) by Family MUAC | | 1.4 | ≤ 2.4 |
| | Reduced Coping Strategy Index (rCSI) | | 2.71 | ≤ 7.0 |
| | Food Consumption Score (%) | Acceptable | 96.1 | ≥ 80 |
| | | Borderline | 3.3 | ≤ 20 |
| | | Poor | 0.6 | 0 |

| | | | | | | | | | | | |
|--|---|---|---|-----|-----|-----|-----|------|-----|-----|-----|
| <ul style="list-style-type: none"> Short rains harvests Short dry spell Reduced milk yields Increased HH Food Stocks Land preparation | <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 | | | | | | | | |
| Dry Season | Long Rains | Dry Cool Season | Short Rains Season | | | | | | | | |
| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec |

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- The month of May was characterized by fair wetter weather conditions in most parts of the county.
- The March-April-May(MAM) long rains had false delayed in 2nd week of March compared to normal 2nd or 3rd week of February.
- According to WFP-VAM, CHIRPS/MODIS data, the county recorded an average of 28.8 and 17.4 milimetres of rainfall in the first and second dekad of April compared to 40.3 and 32.2 milimetres normally respectively. This was 103 percent of normal rainfall recorded in May as shown in figure 1.
- The Ceasation of the MAM long rains was early contrary to the forecast.
- The May Normalized Difference Vegetation Index (NDVI) was 88 percent of normal NDVI values.

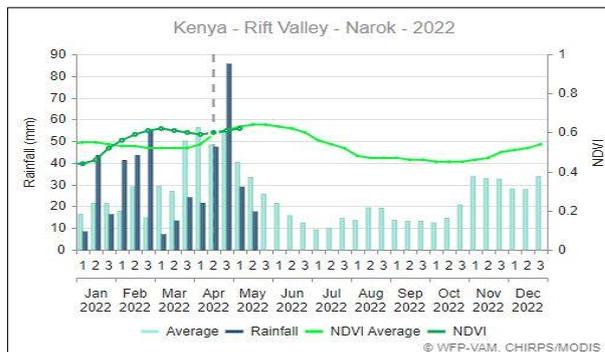


Figure 1: Rainfall and NDVI Distribution

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Based on Kenya Meteorological Department, depressed rainfall was received over several parts of the county during the month.
- Temporal distribution was poor while spatial distribution was uneven across the livelihood zones.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- Current county vegetation greenness declined by 10 percent and stood at 3 month VCI of 60.23 in May from 67.25 in previous month. This is an indication of above normal condition of vegetation greenness.
- The current vegetation greenness is slightly above the long term average as shown in figure 2.

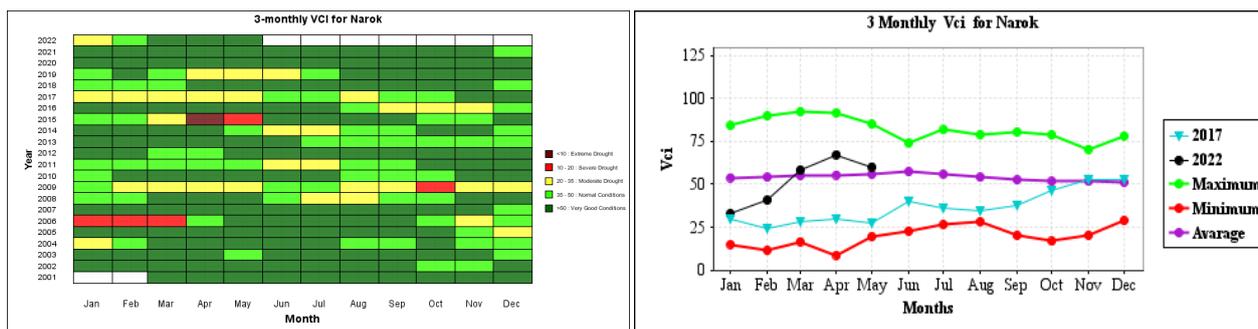


Figure 2: Narok County 3 Month VCI Matrix and Trends

- Narok North, Narok East and Narok sub counties recorded above normal vegetation greenness at a 3 month VCI of 50.72, 57.47 and 61.3 compared to 61.53, 64.32 and 67.34 in Kilgoris, Narok South and Emurua Dikirr sub counties respectively.

2.1.2 Pasture

- During the month of May pasture condition improved compared to previous month due to wetter condition experienced in previous month.
- Pasture was mainly fair to good across the livelihood zones with an improving trend as shown in figure 3.
- About 84 percent of pasture was fair in both quality and quantity in May compared to 70 percent in previous month. The remaining 16 percent of pasture was good.
- Pasture condition was worse than year 2020 and 2021 attributed to African army worm invasion, wildlife competing need, livestock disease and near to below normal rains during the month under review
- The available pasture is likely to last for 2-3 months compared to 3-4 months normally.

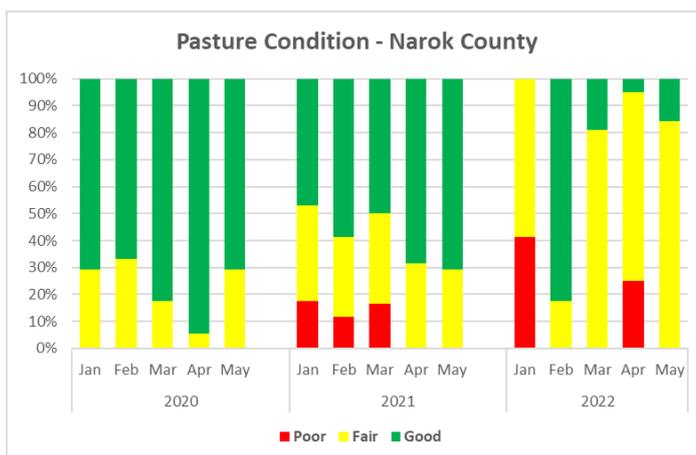


Figure 3: Narok County Pasture Condition

2.1.3 Browse

- In May 2022, browse ranged from good to fair in both quality and quantity (figure 4).
- About 26 percent of browse was regarded as good compared to 30 percent in previous month. The remaining 74 percent of browse was regarded as fair.
- Browse condition was worse than similar period in year 2020 and 2021.
- The available browse is likely to last for 2-3 months compared to 3-4 months normally.

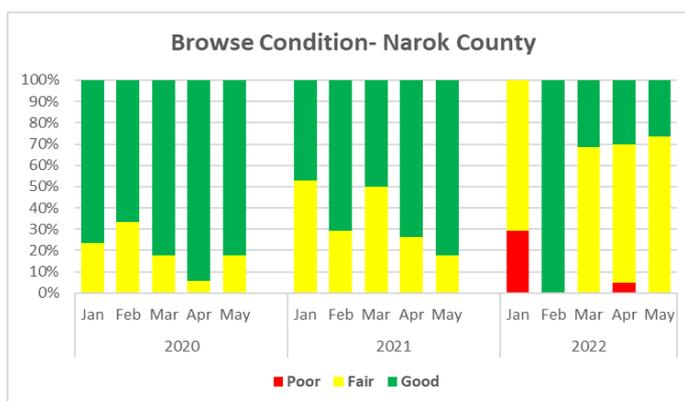


Figure 4: Narok County Browse Condition

2.2 WATER RESOURCE

2.2.1 Sources

- The major water sources for both human and livestock consumption in the month of May were pans and dams, rivers, shallow wells and piped water as shown in figure 5.
- Pans and dams were relied by 31 percent of the households while rivers, shallow wells and piped water were each relied by 22, 15 and nine percent of the households respectively.
- This situation is not normal at this time of the year.

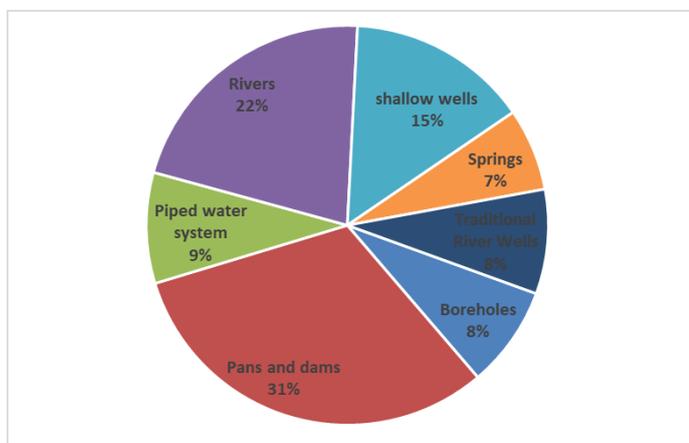


Figure 5: Major Water Sources in Kitui County

- The onset of the 2022 long rains recharged open water sources more than 70 percent of their capacity. However, maximum recharge has been affected by the high siltation and breach embankments.
- The available open water sources are likely to last 3-4 months normally.

2.2.2 Household Access and Utilization

- The average return distances from the households to water sources decreased to 2.1km in May from 2.4 in previous month. The reduced distance is attributed to rains received in April and May.
- Households in Pastoral livelihood zone trekked an average of 3.4km compared two km in Agro Pastoral livelihood zone. Mixed Farming trekked the least with about 0.8km.
- The current water distance is 13 percent higher than the long-term mean as shown in figure 6.

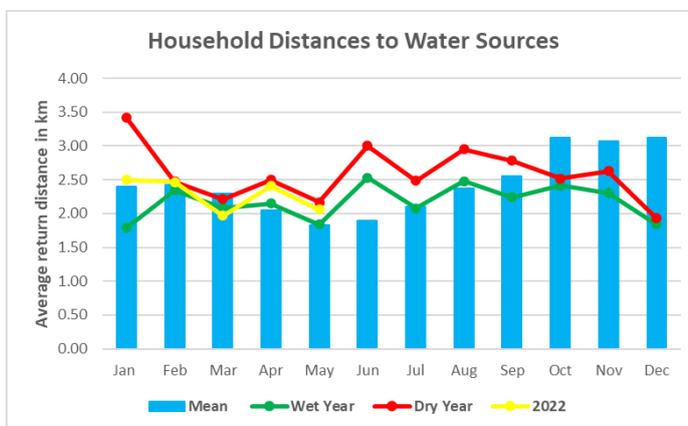


Figure 6: Household Access to Water

- Water consumption per person per day remained stable at 12 litres in May from 11.5 litres in previous month. Moreover, most households are not treating water before consumption.

2.2.3 Livestock Access

- The average return distances from livestock grazing areas to watering points decrease to 2.9km in May from 3.2km in previous month.
- Livestock in Pastoral livelihood zones trekked a distance of 5.7km compared to 2.3km in Agro Pastoral livelihood zone.
- Livestock watering frequency was daily across the livelihood zones.
- The current average distance from livestock grazing areas to watering points is 7.4 percent higher than the long-term mean as shown in figure 7.

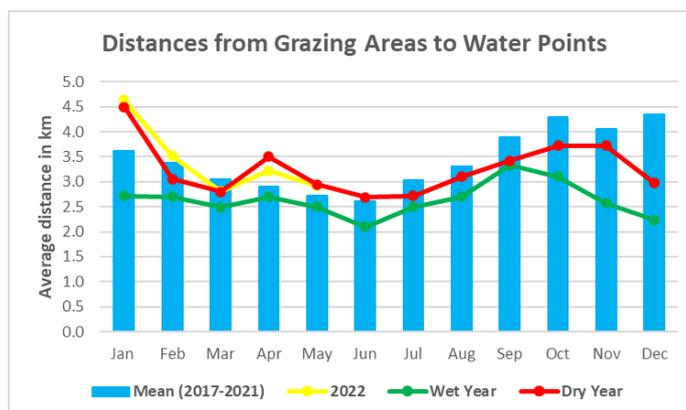


Figure 7: Distances from Grazing Areas to Water Points

2.3 Implication of the Above Indicators to Food Security

- Livestock productivity is likely to improve following regeneration of pasture and water conditions.

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 the livelihood zones depicting an improving trend. The improvement was attributed to improved forage and water availability and accessibility.
- Generally, 21 percent of cattle had good smooth appearance body condition in May compared to 15 percent in previous month.
- The remaining 79 percent of cattle had moderate (neither fat nor thin) and body condition respectively as shown in figure 8.
- The current livestock body condition is worse to that of years 2020 and 2021.

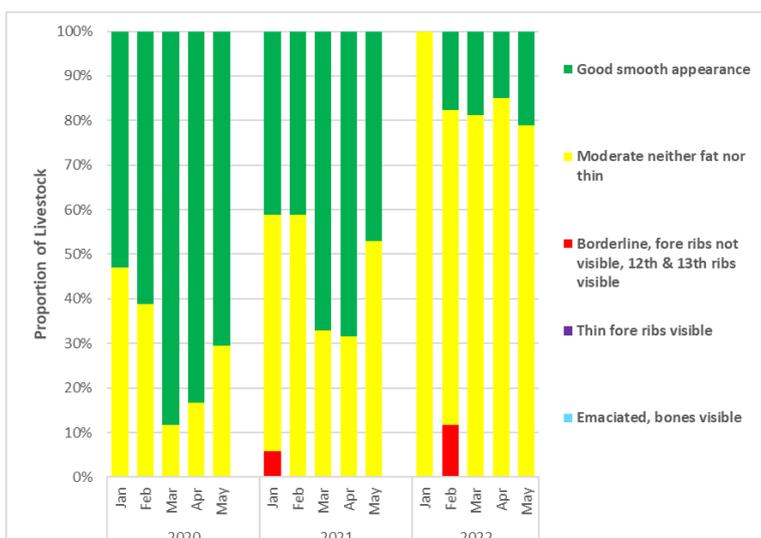


Figure 8: Cattle Body Condition

3.1.2 Livestock Diseases

- Suspected cases of foot and mouth disease (FMD) in cattle were reported in Siana ward; Narok West Sub County.

3.1.3 Milk Production

- The mean milk production per household in a day increased by 6.2 percent to 3.4 litres in May from 3.2 litres in previous month, owed to water availability and improved forage condition in the Mixed farming and agro-pastoral livelihood zones.
- Milk production was higher in Agro Pastoral and Mixed Farming livelihood zones at 5.7 and 5.6 litres respectively compared to 2.9 litres in Pastoral livelihood zone.
- The current milk production is six percent lower than the long-term mean as shown in figure 9.

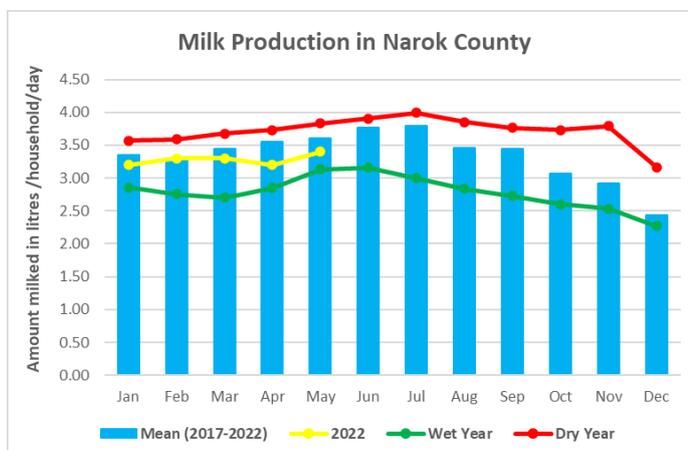


Figure 9: Milk Production

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- The major crops planted in Agro Pastoral livelihood zone were maize, beans and maize while maize, beans, Irish potatoes and wheat were major crops planted in Mixed Farming livelihood zone.
- Area planted is lower than the long-term average due to cost of inputs and delayed long rains.
- Majority of crops (maize and beans) filling and podding stages and are in good to fair condition. However, African army worm has been a major threat which affected crops in lower side of Mulot Ward, Narok West Sub County has led to fairer crops condition

- Farmers who planted on time, 40 percent of them are harvesting and are likely to harvest the rest of the crops if the condition remains favourable.
- In addition to rain-fed cropping, farmers in irrigation schemes (Mosiro and Naroosura), along seasonal rivers and private owned farms with boreholes are growing tomatoes, onions, maize and cabbages.

3.3 Implication of the Above Indicators to Food Security

- Improved livestock productivity is likely to affect positively on household purchasing power and access to diversified foods.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- The average market price for cattle remained decreased by ten percent and stood at Ksh.18,996 in May from Ksh.21,000 in previous month.
- Cattle prices were higher in Mixed Farming livelihood zone at Ksh.21,333 compared to Ksh.16,000 in Agro Pastoral livelihood zone.
- The current market price of cattle is eight percent lower than the long-term mean and year 2021 as shown in figure 10. This is due to livestock diseases and preference to cereals.

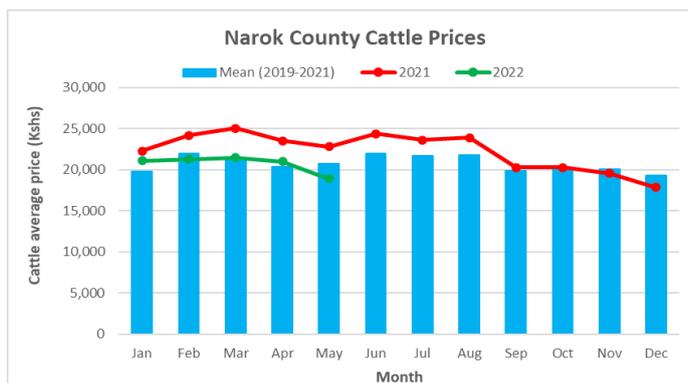


Figure 10: Cattle Prices

4.1.2 Small Ruminants Prices (Goat Price)

- The average market price of a goat increased marginally by three percent and stood at Ksh.4,007 in May from Ksh.3,910 in previous month.
- Agro Pastoral and Mixed Farming livelihood zone recorded a higher price of Ksh.5,000 compared to Ksh.3,744 in Pastoral livelihood zone.
- The current market price of a goat is six percent lower than the long-term mean and year 2021 as shown in figure 11 and this is due to increased demand of the commodity in the market and improved body condition.



Figure 11: Goat Prices

4.2 CROP PRICES

4.2.1 Maize

- The average market price of maize per kilogram rose by 16 percent and stood at Ksh.64 in May from Ksh.56 in previous month.
- Maize prices ranged at 65-75 shillings across the livelihood zones attributed increased cost of production and transport to markets.
- The current market price of maize is 31 percent higher than the long-term mean as shown in figure 12. This is mainly due to reliance on the markets by pastoralist for the commodity.

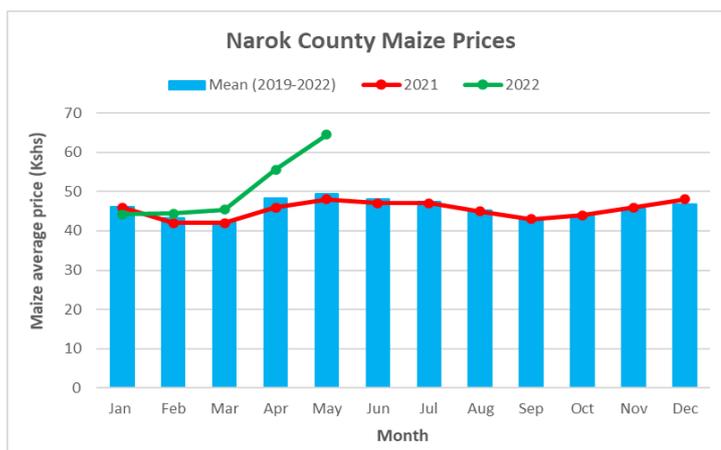


Figure 12: Maize Prices

4.2.2 Beans

- The average market price of beans per kilogram decreased by nine percent and stood at Ksh.97 in May from Ksh.106 in previous month. This was mainly attributed to harvests of beans during the month under review.
- Beans price was higher in Pastoral livelihood zone at Ksh.107 compared to Ksh.83 in Mixed Farming livelihood zone.
- The current beans price is nine percent lower than the long-term mean as shown in figure 13.

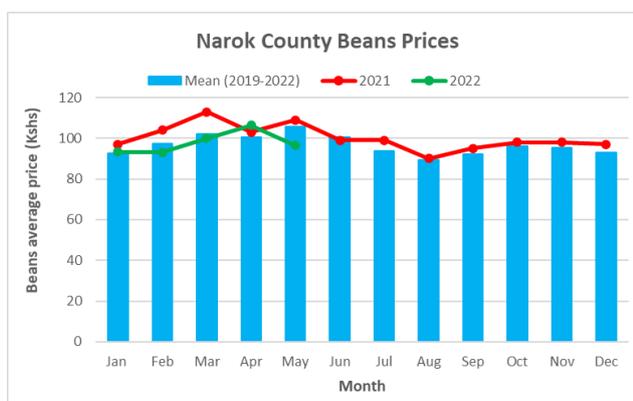


Figure 13: Beans Prices

4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade declined by 12 percent and stood at 62 in May from 70 in previous month. This implies that, households were able to purchase 62 kilograms of maize from exchange of a goat in May compared to 70 kilograms in previous month.
- Terms of trade was higher in Mixed Farming livelihood zone at 83 compared to 55 in Pastoral livelihood zone.
- The current terms of trade is 30 percent lower than the long-term mean as shown in figure 14.

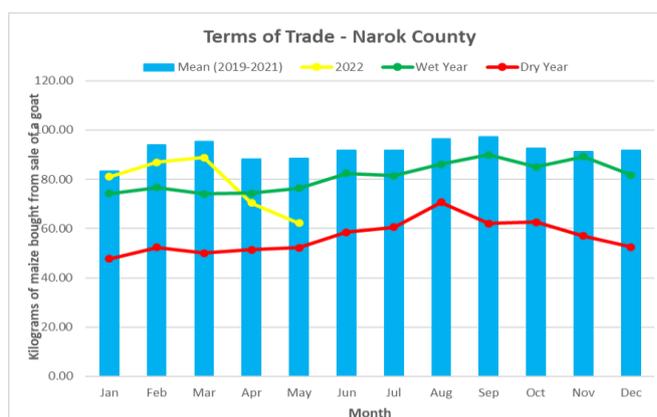


Figure 14: Terms of Trade

4.4 Implication of the Above Indicators to Food Security

- Household purchasing power is likely to deteriorate further following high staple food prices, which will impact negatively on food consumption patterns and nutrition status.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- The average daily milk consumption per household decreased by four percent and stood at 2.2 litres in May from 2.3 litres recorded in previous month.
- There was no major variation across the livelihood zones.
- The current milk consumption is 12 and 11 percent lower than the long-term average and wetter year respectively. However, milk consumption was above drier year by 34 percent as shown in figure 15.

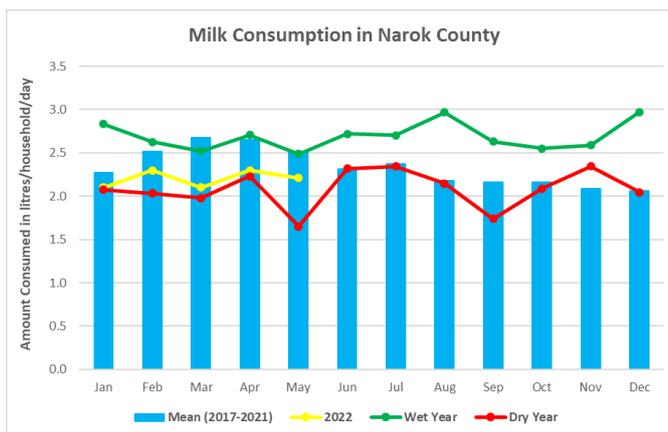


Figure 15: Milk Consumption

5.2 FOOD CONSUMPTION SCORE

- The proportion of households in acceptable food consumption group increased to 96.1 percent in May from 93.3 percent in previous month. The remaining 3.3 and 0.6 percent of households were in borderline and poor food consumption category respectively.
- Mixed Farming and Agro Pastoral livelihood zones had the highest number of households in acceptable food consumption category at 100 percent compared to 92.2 percent in Pastoral livelihood zone.

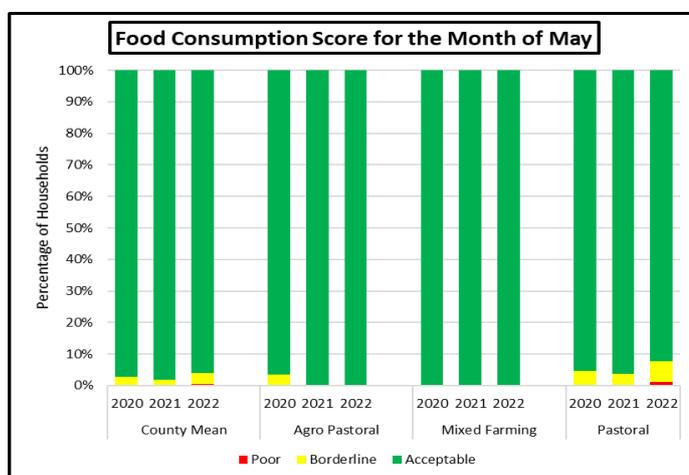


Figure 16: Food Consumption Score (FCS)

- Households in Narok East Sub County had 4.3 and 20 percent in poor and borderline food consumption categories respectively.
- Households with acceptable food consumption score were lower in May 2022 at 96.1 percent compared to 98.2 and 97.2 percent in similar period in year 2021 and 2020 respectively as shown in figure 16. This was due to reduced household purchasing power and increased of food prices.
- On average, households consumed cereals, sugars and milk six days per week; oils five days per week; vegetables four days per week; pulses three days per week; meat, eggs or fish, and fruits twice per week as shown in table 1.

Table 1: Meals Eaten Per Day in the Last One-Week Recall Period

| | Cereals | Pulses | Vegetables | Meat, Eggs or Fish | Milk | Oil | Sugars | Fruits |
|---------------|---------|--------|------------|--------------------|------|-----|--------|--------|
| County | 6 | 3 | 4 | 2 | 6 | 5 | 6 | 2 |
| Agro Pastoral | 7 | 3 | 7 | 2 | 6 | 7 | 7 | 2 |
| Mixed Farming | 7 | 4 | 6 | 2 | 5 | 6 | 6 | 2 |
| Pastoral | 4 | 2 | 2 | 2 | 7 | 4 | 5 | 2 |

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The proportion of children 6 -59 months who were malnourished reduced to 1.4 percent in May from 1.9 percent in previous month. This was attributed to acceptable food consumption score; ongoing crop harvests and fairer milk consumption.
- The Pastoral livelihood zone recorded the highest proportion of children who were severely and moderately malnourished at 3.3 percent of child being malnourished. There was proportion increase in Pastoral livelihood zone from 2.9 percent in previous month.
- The current level of children who are malnourished is below normal as shown in figure17.

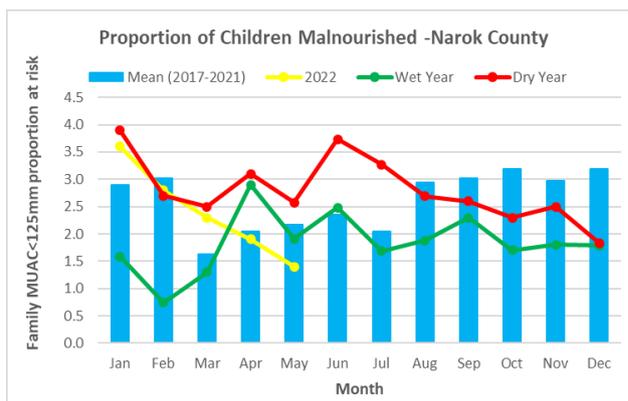


Figure 17: Children at Risk of Malnutrition

5.3.2 Health

- The proportion of children suspected to have fever with chills like malaria, diarrhoea and fever with breathing difficulties cases stood at 7.9, 0.78 and 0.16 percent in May compared to 8.9, 0.6 and zero percent in previous month respectively.

5.4 COPING STRATEGIES

- The mean of reduced coping strategy index (rCSI) remained stable at 2.71 in May when compared to the previous month.
- Households in Pastoral livelihood zone had a high rCSI of 5.3 compared to 0.2 in Agro Pastoral livelihood zone.
- Reliance on less preferred or less expensive food, reduced portion size of meals, reduced quantity of food for children to eat, reduced number of meals eaten per day were the most frequent coping mechanisms adopted across the livelihood zones.
- The current rCSI is 38 percent lower than the long-term mean as shown in figure 18.

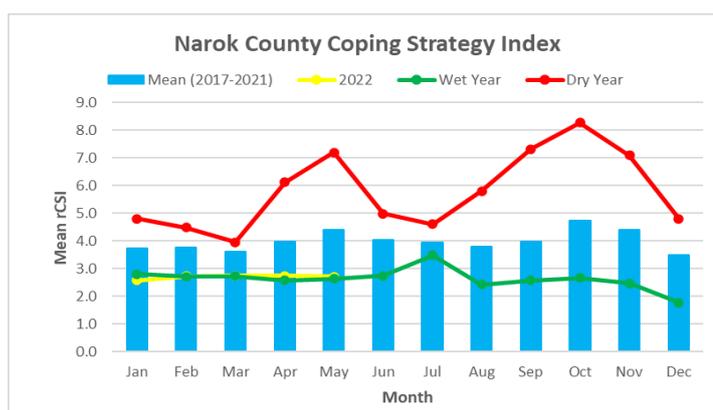


Figure 18: Reduced Coping Strategy Index (rCSI)

6.0 CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

| SECTOR | INTERVENTION | TARGET BENEFICIARIES | COST (Ksh.) in Million | ACTOR/ ORGANIZATION |
|---------------|--|--------------------------|------------------------|--|
| Cross cutting | Development of agro-weather advisories Through PSP | All the livelihood zones | 0.3 | Kenya Meteorological Department, NDMA and partners |

6.2 FOOD INTERVENTIONS

- Therapeutic integrated management of acute malnutrition for the under-fives, pregnant and lactating mothers [supplementary feeding program (SFP)], outpatient therapeutic program (OTP) and stabilization centres by Ministry of Health supported by several partners.

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- No abnormal, human displacement due to drought were reported in the county.

7.2 Migration

- Migration of herders with their livestock in search of water and pasture toward buffer zones and result into human wildlife conflicts.

7.3 FOOD SECURITY PROGNOSIS

- Based on Kenya Meteorological Department Weather Outlook for June-July-August 2022 season issued on 27th May 2022, Occasional showers and thunderstorms are expected to continue throughout the season. The expected total rainfall amounts are likely to be slightly higher than the long-term average amounts (slightly wetter than usual) for the season. The distribution both in time and space is expected to be fairly good. Both crop and livestock productivity are likely to stabilize leading to improved food consumption patterns and dietary diversity at household level.
- The cultivated area for crops is likely to be near and above average due to anticipated slightly higher than the long-term average amounts of rains (slightly wetter than usual) for the season income from crop sales might improve the terms of trade. However, the terms of trade improvement are expected to be short-lived owed to current high food prices.
- The prices of staple food commodities are likely to remain higher than the long-term average until the next harvest season in July 2022.
- Household food consumption patterns and nutrition status are likely to worsen following declining terms of trade, high food prices and reduced livestock productivity.

8.0 RECOMMENDATIONS

Immediate/Short term

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

| SECTOR | INTERVENTION | TARGET AREA | ESTIMATED COST (Ksh.) in Million |
|----------------------|--|---|---|
| Agriculture | Soil Conservation and Post-harvest Management | Parts Narok South, Narok North, and Narok East each 3 wards Narok West (2 Wards) Transmara West (4 wards) | 1.5 |
| Livestock | Intensive disease control for endemic notifiable diseases | County wide | 1.5 |
| | Promote pasture conservation and management practices | County wide | 0.5 |
| | Rehabilitation of strategic grazing areas | County wide | 0.5 |
| Water | Promotion of water harvesting and storage practices | County wide | 10 |
| Health and Nutrition | Promoting home-based water treatment and conservation measures | County wide | 0.5 |
| | Household visits, sensitization/community dialogues and outreaches to create awareness on COVID-19 preventive measures | County wide | 1.8 |
| Coordination | Awareness creation and induction of stakeholders involved on National Drought Emergency Fund (NDEF) structures | County and Sub County level actors | 1.9 |
| Cross cutting | Dissemination of agro-weather advisories for June-July-August 2022 Forecast | County wide | 0.5 |