

National Drought Management Authority
NAROK COUNTY
DROUGHT EARLY WARNING BULLETIN FOR MAY 2019



A Vision 2030 Flagship Project



MAY EW PHASE

Drought Situation & EW Phase Classification

Biophysical Indicators

Rainfall

- Rainfall performance was poor both in terms of amount received and distribution compared to long term means.

Vegetation condition:

- The county is experiencing moderate vegetation deficit as depicted by the vegetation condition index (VCI)

Socio Economic Indicators (Impact Indicators)

Production indicators:

- Most crops are in fair to poor condition due to poor rainfall performance.
- Livestock body condition is fair to good in all livelihood zones.
- Milk production is stable but below the normal range compared to the long-term average.

Access indicators:

- Terms of trade have declined in the county thus affecting the Pastoralist's purchasing power.
- Milk consumption ranged from fair to good in all the livelihood zones.
- Water access for both human and livestock consumption is fair in all the livelihood zones,
- Distances to water sources are normal.

Utilization Indicators:

- Cases of malnutrition are rising but still within the normal range as indicated by percent of mid upper arm circumference (MUAC).
- Most households were within acceptable food consumption scores and employed normal coping strategies in accessing food.

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
AGRO PASTORAL	ALERT	WORSENING
MIXED FARMING)	NORMAL	STABLE
PASTORAL	ALERT	WORSENING
COUNTY	ALERT	WORSENING
Biophysical Indicators	Value	Normal Range/Value
VCI-3Month	31.55	>35
Forage condition	Fair	Good
Production indicators	Value	Normal
Crop Condition (Maize)	Fair-poor	Normal
Livestock Body Condition	Fair-Good	Good
Milk Production in litres	2.4	>5
Livestock Migration Pattern	Normal	Normal
Livestock deaths (Drought related))	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	70.6	>100
Milk Consumption in litres	1.7	>4
Return distance to water sources in km	3.8	<5
Cost of water at source in Kshs (20 litres)	2-5	<5
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of	8.2	<10

<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 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- The county experienced onset of the long rains season in the third decad of the month of April. This is a delayed onset compared to normal seasons. The onset was expected to have taken place by mid of March.
- In the month under review, the county has experienced poor precipitation mostly in mixed farming livelihood zone. Both spatial and temporal distribution was very poor in the county.
- In pastoral areas the rains ceased by early May while in other parts of the county, cessation was reported by mid-May.

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

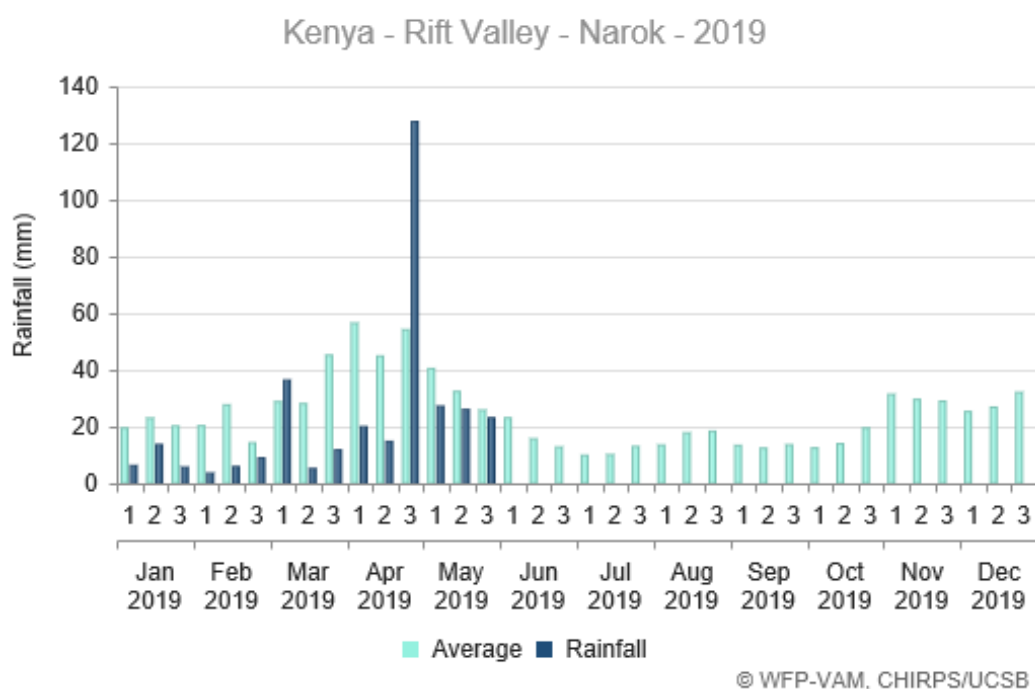


Figure 1: Rainfall performance-Narok County

- The above satellite image (Figure 1) highlights the general performance of the rains in the county for the month of May, 2019 in comparison with the long-term averages.
- Rainfall performance in the month of May was generally below normal in terms of amount received as well as distribution compared to the long term seasonal range.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION



Figure 2: VCI: Narok County

The vegetation greenness as depicted by the vegetation condition index (VCI) shows moderate vegetation deficit across the county (Figure 2) in respect to historical minimum and maximum VCI values. The deteriorating greenness is due to depressed rainfall season for the last three months.

Four of the six sub counties i.e. Narok North, Narok South, Narok West and Narok East have moderate vegetation deficit with Narok East having the least VCI value of 22 as show in Figure 3.

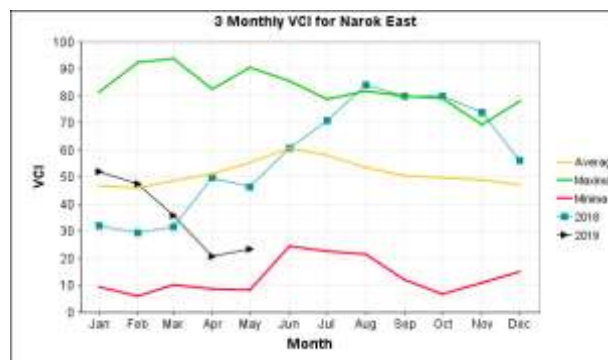


Figure 3: VCI: Narok East Sub County

2.1.1 Field observations

2.1.1.1 Pasture

- The pasture quantity and quality in mixed farming and agro-pastoral livelihood zones remained fair. In the pastoral livelihood zone, pasture conditions ranged from fair to poor. Deteriorating pasture conditions is being witnessed in Mosiro ward in Narok East sub county, Koyiaki ward in Narok West Sub County and Naroosura ward in Narok south sub county. However, pasture regeneration was experienced in the county following the onset of the rains in the last week of April and the first dekad of May.
- The available pasture is likely to last for two to three months in mixed farming and agro-pastoral livelihood zones and less than two months in the pastoral livelihood zone.
- The current pasture situation is below the normal range.

2.1.1.2 Browse

- The quality and quantity of browse in all the livelihood zones ranged from fair to good same as last months. The available browse is expected to last for four months in mixed farming livelihood zone while in pastoral livelihood zone, it is likely to last for two months. The current browse situation is within the normal range.

2.2 Water resources

2.2.1 Sources

- The main sources of water for livestock and human consumption in the county were rivers, pans/dams, boreholes, traditional river wells and shallow wells as shown by Figure 4.
- The quantity and quality of water ranged from fair-good in the mixed farming and agro-pastoral livelihood zones with the pastoral livelihood zone having fair quality. Pans and dams were the most used sources.
- The current water sources are expected to last for three months in mixed farming and agro-pastoral livelihood zones. In pastoral livelihood zone, the water is likely to last for two months. Most water sources are 30% to 50% recharged owing to the rains received in April.
- The current situation is below the normal range at this time of the year.

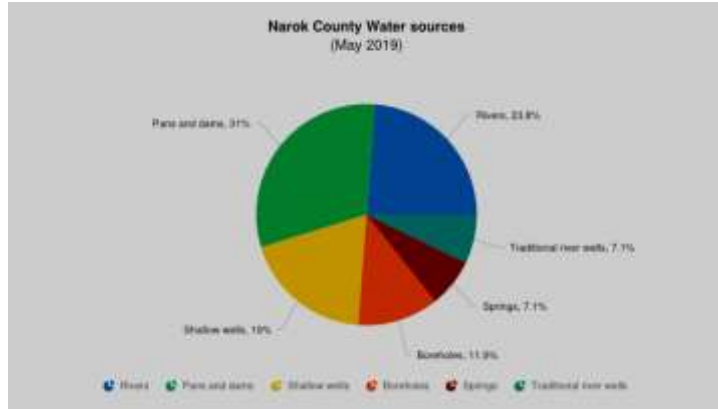


Figure 4: Water sources

2.2.2 Household access and Utilization

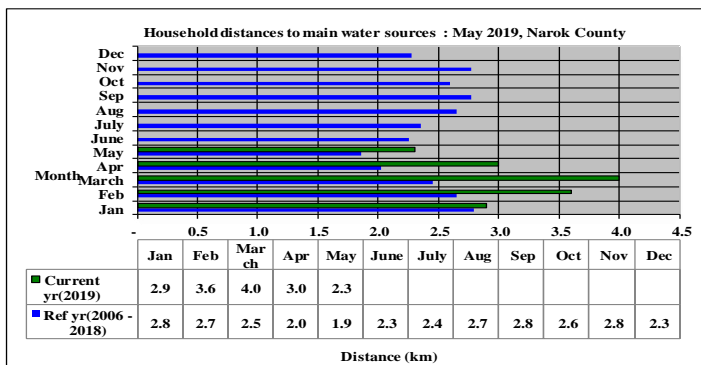


Figure 5: Water access by households compared to the long term means as shown by Figure 5.

The average distance to watering points for households reduced by twenty three percent compared to the previous month.

Pastoral livelihood zone recorded the longest average distance at four kilometres while the shortest average distance was recorded in mixed farming livelihood zone at half a kilometre.

The current trekking distances to water

points was above the normal range

2.2.3 Livestock access

The average distance to main water sources from grazing areas decreased by seven percent compared to the previous month. Pastoral livelihood zone recorded the longest distance of five km while the shortest

distance was recorded in the mixed farming

livelihood zone at 1.1 km. The current average trekking distance is slightly above the normal range at this time of the year as shown in Figure 6.

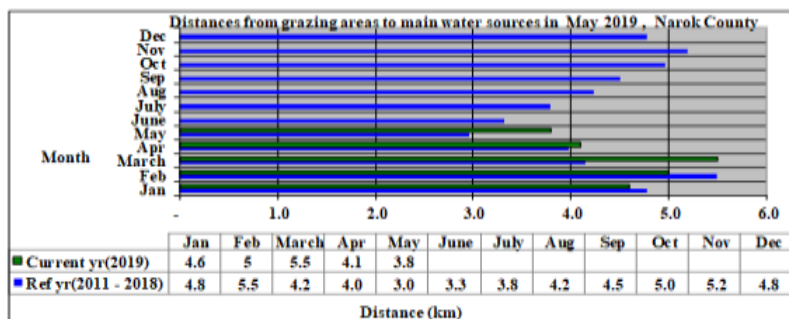


Figure 6: Water access by livestock

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The cattle body condition ranged from fair to good across all the livelihood zones. The body condition for sheep and goats remained good across all the livelihood zones. Owing to poor performance of the long rains season, the body condition is likely to deteriorate in the coming months.
- The current livestock body condition is below normal at this time of the year.

3.1.2 Livestock Diseases

- The county encountered suspected cases of foot & mouth diseases which is on the increase particularly in Narok East, Narok West and Narok South Sub Counties. Other cases being reported include lumpy skin disease, blue tongue disease, CCPP and CBPP diseases.

3.1.3 Milk Production

- The average milk produced per household per day increased slightly compared to the previous month as shown by Figure 7.
- Milk production is 0.5- 2 litres in the pastoral areas, 1- 4 litres in agro-pastoral areas and 1-5 litres in the mixed farming zone.
- Stability in milk production is due to slight improvement in pasture regeneration and reduced distances to water points.
- The current milk production levels are below the normal range.

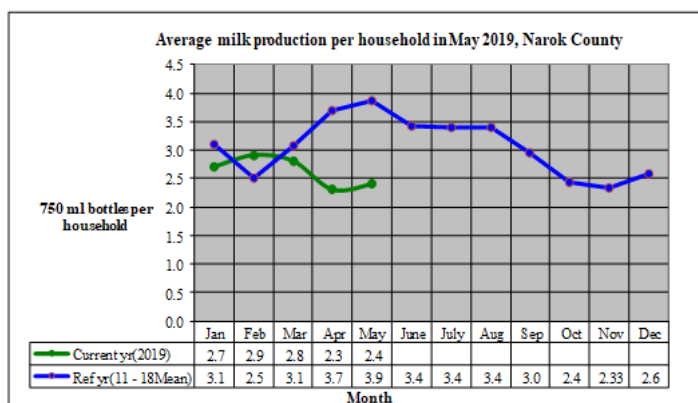


Figure 7: Milk production

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

- The crops planted in the County include beans, sorghum, maize, wheat and potatoes in Narok North, Kilgoris and Emurua Dikirr sub-counties.
- Most of the crops are in poor conditions due to water stress experienced due to delayed onset of rains. The affected crops include maize, beans and wheat.
- In Transmara East and Transmara West Sub Counties, the maize crop is still being attacked by fall army worms and Maize Lethal Necrosis **Diseas**.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

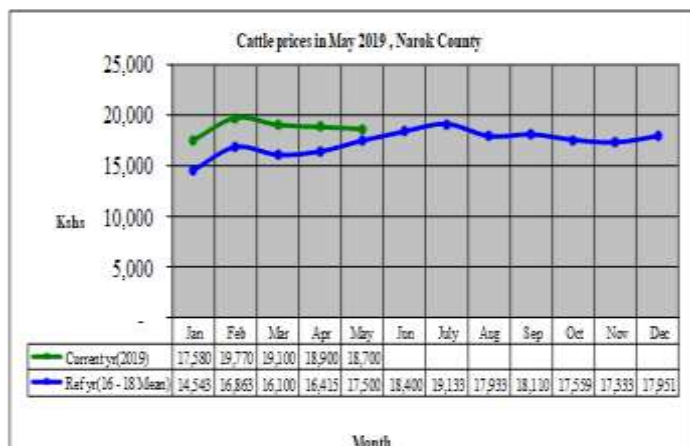


Figure 8: Cattle prices

The average price for the medium sized cattle reduced slightly compared to last month.

The highest prices were recorded in the mixed farming livelihood zone at Kshs 25,000 per head while the lowest price was in the pastoral livelihood zone at an average price of Kshs 15,000 per head.

The current cattle prices are above the normal range compared to long term means at this time of the year as shown by Figure 8.

4.1.2 Goat Prices

- The average goat prices increased by six percent compared to the previous month. The increase in price is attributed to improved body condition as a result of forage regeneration.
- The highest price was recorded in the mixed farming livelihood zone at Kshs 4000 per head while the lowest price was recorded in the pastoral livelihood zone at Kshs 3,000 per head.
- The average goat price was above the normal range at this time of the year as shown by Figure 9.

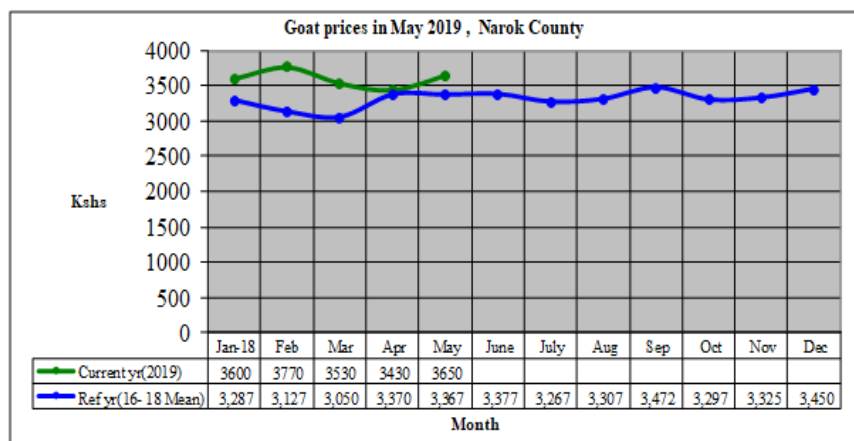


Figure 9: Goat prices

4.2 CROP PRICES

4.2.1 Maize

- The average price of maize per kilogram increased by sixteen percent compared to the previous month. The highest prices were recorded in pastoral livelihood zone at Kshs 61 per kg while the lowest was recorded in the agro-pastoral livelihood zone at an average price of Kshs 40 per kg.
- The increasing prices are attributed to diminishing

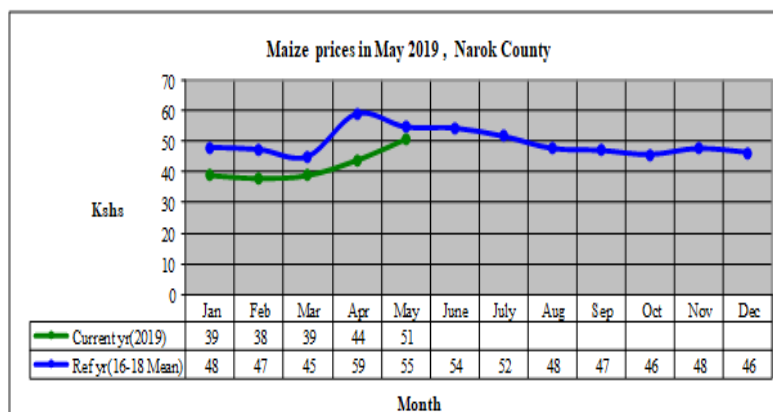


Figure 10: Maize prices

stocks at household level coupled with high uptake by traders from farmers and local stockist. The overall price is below the normal range as shown by Figure 10.

4.2.2 Beans

- The average price of beans increased by six percent compared to the previous month. The highest price was recorded in the mixed farming livelihood zone at Kshs. 125/kg compared to the pastoral livelihood zone which recorded a lower price of Kshs.93 per kg. The increase is due to reduced stocks at household

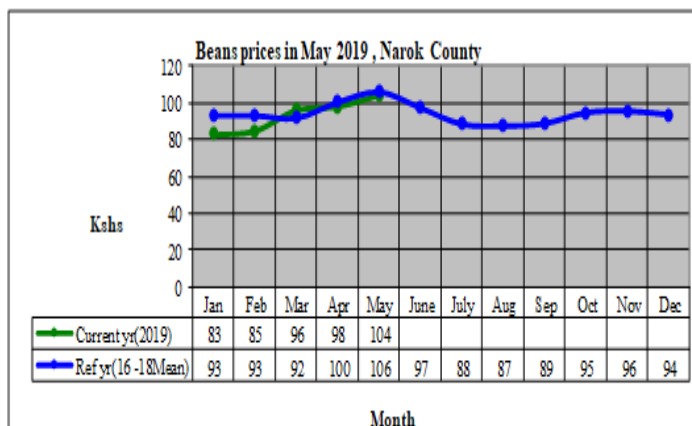


Figure 11: Beans prices

- The current price is above the normal range at this time of the year as shown by Figure 11.

4.3 Livestock Price Ratio/Terms of Trade

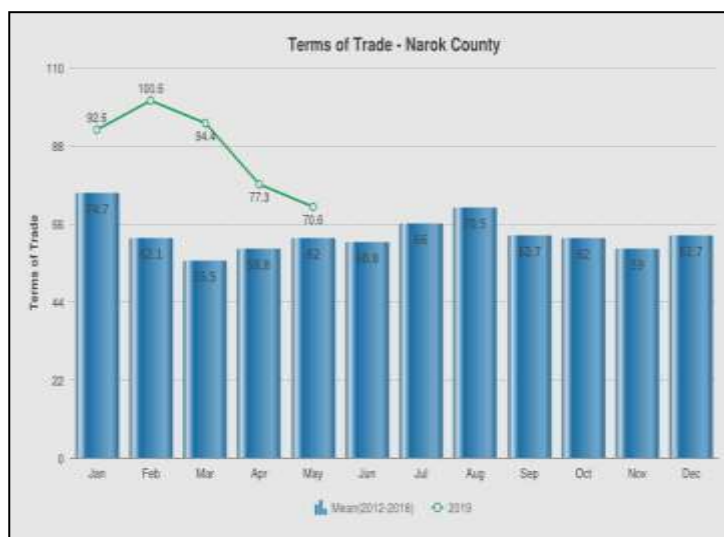


Figure 12: Terms of trade

The current cereal/meat price ratio is above the normal range at this time of the year as shown in Figure 12.

The Terms of Trade (ToTs) based on the Cereal/Meat price ratio decreased by seven percent compared to last month. The decrease in ToTs is due to relatively higher increase in cereal prices compared to livestock prices.

This implies that a sale of one goat fetched 70.6 kgs of cereals compared to 77.3 kgs last month. The ToTs were less favourable in the pastoral and mixed farming livelihood zones compared to agro-pastoral livelihood zone.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

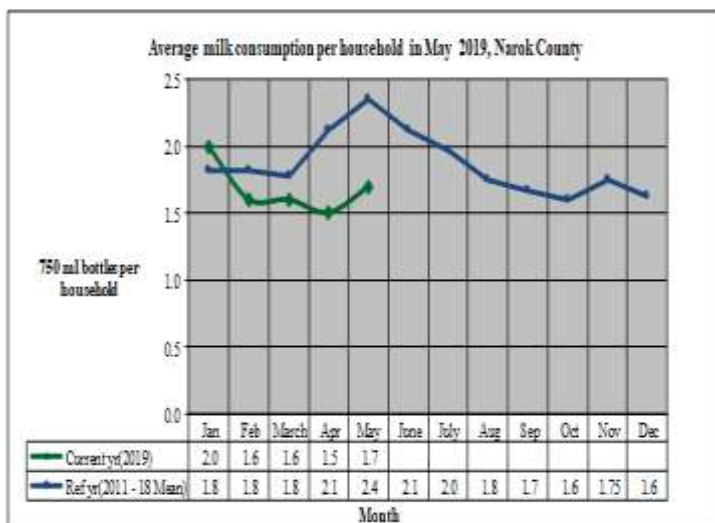


Figure 13: Milk consumption

Average household milk consumption per day has increased slightly compared to the previous month. There were inter-livelihood variations in milk consumption with mixed farming zone having the highest consumption rate at 3 litres, followed by agro-pastoral zone at 1.5 litres. The pastoral livelihood zone had the least consumption rate at 0.5 litre. The current milk consumption rate is below normal range at this time of the year as shown by Figure 13.

5.2 FOOD CONSUMPTION SCORE

- Approximately 79%, 19% and 2% of the households fell within the acceptable, borderline and poor food consumption score categories respectively in the month under review.
- The poor food consumption score implies households are not consuming balanced diet and rarely consuming food rich in protein and energy giving food. Borderline implies that households are consuming staples and vegetables every day accompanied by oil and pulses a few times in a week. The acceptable implies that households are consuming staples, protein (milk and meat) and vegetables every day and frequently accompanied by pulses.

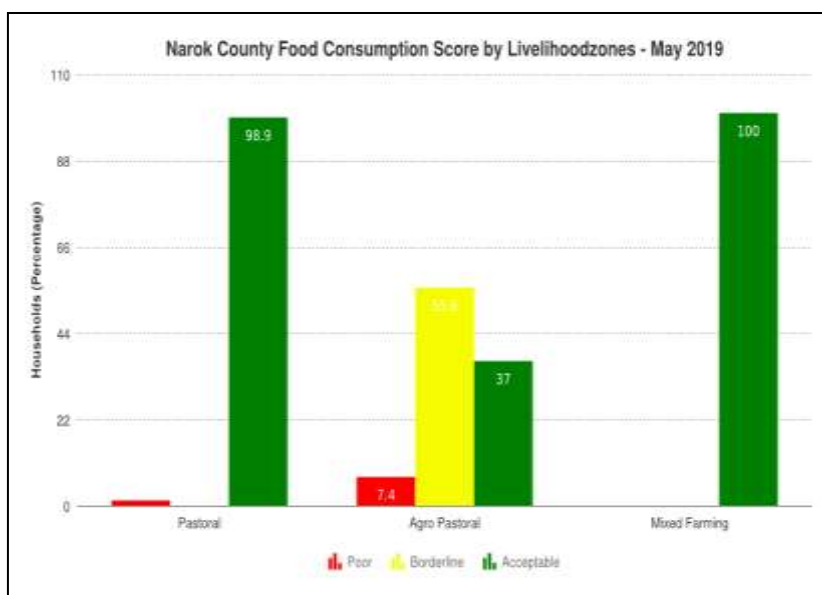


Figure 14: Food consumption score

- There was variation across the livelihood zones as shown in Figure 14 whereby most households in mixed and pastoral livelihood zones had acceptable food consumption scores. About 55.6% of the households in the agro-pastoral livelihood zone are having borderline food consumption score.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status



Figure 15: Children at risk of malnutrition

The percentage of children less than five years of age who are at risk of malnutrition as indicated by the Mid-Upper Arm Circumference (MUAC) has increased by 30 percent compared to the previous month. Mosiro ward and Ntuka ward in the pastoral livelihood zones recorded the highest number of children at risk of malnutrition at an average of nine percent compared to areas in the mixed farming livelihood zone which recorded children under risk of malnutrition at 0.7%.

The current rate of malnutrition is almost within the normal range though increasing compared to the long-term average as shown by Figure 15.

5.3.2 Health

A few cases of diarrhoea and fever in Mosiro ward and Naroosora ward in the pastoral livelihood zone were recorded during the month under review.

5.4 COPING STRATEGIES

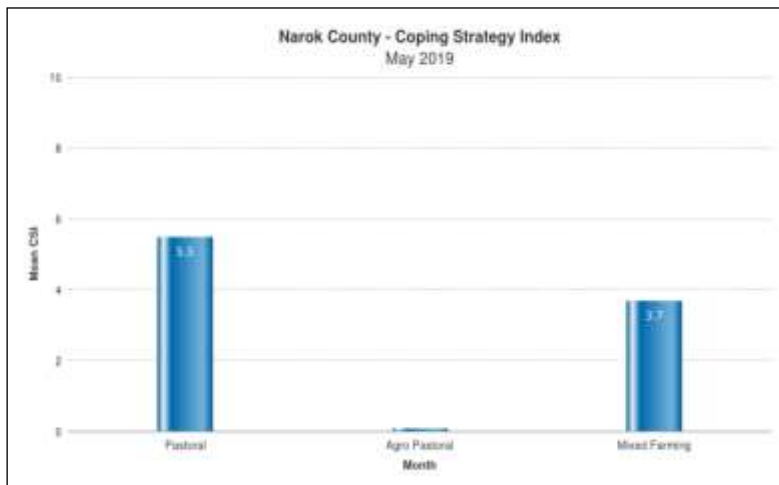


Figure 16: Coping strategies

Households employed normal coping strategies in accessing food across all the livelihood zones as shown by Figure 16. The pastoral and mixed farming livelihood zones had higher CSI compared to agro-pastoral livelihood zone. The coping strategies are normal at this time of the year.

6.0 CURRENT INTERVENTION MEASURES (ACTIONS)

6.1 NON-FOOD INTERVENTIONS

- The fertilizer subsidy program is ongoing. The program is being implemented jointly by the National and County governments.
- The County government is implementing the National Agricultural and Rural Inclusive Growth project (NARIGP). The project is funded by the World Bank covering 20 wards in the county and aims at increasing agricultural productivity and profitability of targeted beneficiaries.
- Construction of 4 water projects (Sogoo, Pinyiny, Olopikidongoe and Entasekera) in four Wards of Soggoo, Lolgorian, Loita and Mosiro at a cost of Kshs 176m. The projects are being funded by Water Services Trust Fund.

6.2 FOOD AID

- The Ministry of Interior and Coordination through the office of the County Commissioner has received some relief food items which include maize, beans and cooking oil. Each Sub county received 300 bags of maize (50kg), 150 bags of beans (50kg) and 30 cartons of cooking oil. The items were distributed to beneficiaries.

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- No major conflict issues that are related to drought were observed during the month under review.

7.2 Migration

- The county is experiencing a normal migration of a few large stock in Mosiro and Narroosura ward to upper part of Mau in Narok North sub-county and Loita ward in search of pasture and water.

7.3 FOOD SECURITY PROGNOSIS

- The delayed onset of the season, early cessation coupled with poorly distributed rains have rendered the season to be very poor. This is likely to affect food security adversely.
- Planting was delayed by over one month and less acreage was prepared. The performance of the long rains season crop is therefore going to be affected and consequently compromising production. This implies that the county is likely to experience a poor harvest.
- Even though the livestock sector had registered some positives following the onset of the season albeit lately, the gains are likely to be eroded away following the early cessation and poor distribution of the rains. The amount of rains received were not sufficient enough to sustain full recovery of the vegetation. This therefore implies that livestock productivity is likely to decline in the coming months.
- Purchasing power mostly for pastoral communities is likely to continue being eroded as cereal prices are likely to continue rising due to declining stocks in the county.
- Recharge of most water sources was below normal. Water scarcity is likely to be experienced in the coming months especially in pastoral areas.
- The county is likely to start experiencing some hot spots for malnutrition as the trend is rising particularly in pastoral areas.

8.0 RECOMMENDATIONS

- Emergency drought response plans to be prepared and put in place by all Actors in anticipation of a worsening situation. This should include stockpiling of essential supplies across the critical sectors. Rapid response teams should be activated and put on standby for quick deployment when need arises.
- Malnutrition cases are on an upward trend thus there is a need for nutrition working group to closely monitor the situation in the known hot spot areas.
- Desilting of pans and dams to improve water hygiene and sanitation standards in order to minimise chances of outbreak of water borne diseases and to prolong water retention.
- Establishment of preparedness activities especially in water and livestock sectors will boost the resilience level of the vulnerable communities to cope better in future against the effects of drought.
- Livestock disease surveillance should be enhanced across the county.