



A Vision 2030 Flagship Project



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

JUNE EW PHASE		Early Warning Phase Classification			
	LIVELIHOOD ZONE	EW PHASE	TRENDS		
	Agro Pastoral	Normal	Worsening		
	Mixed Farming	Normal	Stable		
	Pastoral	Normal	Worsening		
	County	Normal	Stable		
<u>Drought Situation & EW Phase Classification</u>		Biophysical Indicators	Value	Normal ranges	
<u>Biophysical Indicators</u>		Rainfall (% of normal)	91	80-120	
<ul style="list-style-type: none"> Light showers of rains in few pockets of the county was reported during the month. Vegetation greenness and forage condition was above normal. 		VCI-3 month	57.05	35-50	
		Forage Condition	Fair to Good	Fair to Good	
<u>Socio-Economic Indicators (Impact Indicators)</u>		Production indicators	Value	Normal ranges	
<u>Production Indicators</u>		Maize Crop Condition	Fair to Good	Good	
<ul style="list-style-type: none"> Majority of crops are at 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, contagious caprine pleuro pneumonia and Newcastle livestock diseases were reported. Milk production was below normal range. 		Livestock Body Condition	Fair to Good	Good to fair	
		Milk Production (in litres)	3.5	≥ 3.77	
		Livestock Migration Pattern	Normal	Normal	
		Livestock Deaths (from Drought)	No death	No death	
<u>Access Indicators</u>		Access Indicators	Value	Normal ranges	
<ul style="list-style-type: none"> Terms of trade were unfavourable. Milk consumption was below normal range. Water distances were above normal range. Water consumption was below normal. 		Terms of Trade (ToT)	62	≥ 91.85	
		Milk Consumption (in litres)	2.1	≥ 2.3	
		Return Distance to Water Sources (Km)	Household: 3.0 Livestock: 2.8	≤ 2.10 ≤ 2.6	
		Water Consumption	At Household: 11.4	≥ 15	
<u>Utilization Indicators</u>		Utilization indicators	Value	Normal ranges	
<ul style="list-style-type: none"> Malnutrition cases were within normal range. About 99.4 percent of households were in acceptable food consumption category. About 32 percent of the households employed stressed food-based coping mechanisms. About 0.6 percent of households employed stressed livelihood based coping mechanisms. 		Nutrition Status of malnourished children 6-59 months (% MAM+SAM) by Family MUAC	1.9	≤ 2.4	
		Reduced Coping Strategy Index (rCSI)	2.70	≤ 3.8	
		Food Consumption Score (%)	Acceptable	99.4	≥ 80
			Borderline	0.6	≤ 20
			Poor	0	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 June was characterized by fair wetter weather conditions in most parts of the county. Light showers was reported in few pockets of the county.
- According to WFP-VAM, CHIRPS/MODIS data, the county recorded an average of 16.5 and 15.2 milimetres of rainfall in the first and second dekad of June compared to 15.6 and 21.3 milimetres normally respectively. This was 91 percent of normal rainfall recorded in June as shown in figure 1.
- The May Normalized Difference Vegetation Index (NDVI) was 99 percent of normal NDVI values.

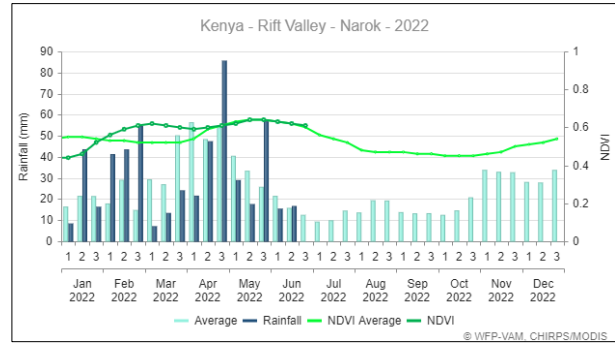


Figure 1: Rainfall and NDVI Distribution

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- Current county vegetation greenness declined by 5 percent and stood at 3 month VCI of 57.05 in June from 60.23 in previous month. This is an indication of above normal condition of vegetation greenness.
- The current vegetation greenness is normal as shown in figure 2.

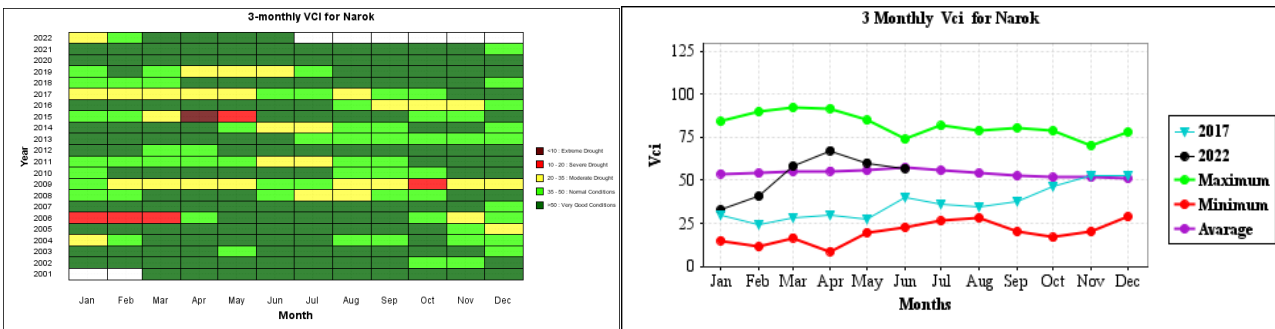


Figure 2: Narok County 3 Month VCI Matrix and Trends

- Emurua Dikirr, Narok East, Narok West, Narok South Narok North and Kilgoris Sub Counties recorded above normal vegetation greenness at a 3 month VCI of 67.4, 58.56, 57.7, 57.02, 56.24 and 54.11 respectively.

2.1.2 Pasture

- The month of June 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 74 percent of pasture was fair in both quality and quantity in May compared to 84 percent in previous month. The remaining 26 percent of pasture was good.
- Pasture condition was worse than year 2020 and 2021 attributed to 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.

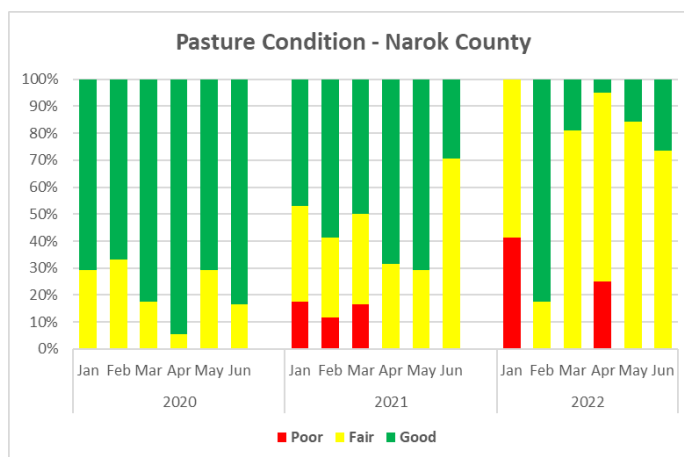


Figure 3: Narok County Pasture Condition

2.1.3 Browse

- During the month of June browse ranged from fair to good in both quality and quantity, this was an improvement from previous month (figure 4).
- About 37 percent of browse was regarded as good compared to 26 percent in previous month. The remaining 63 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.

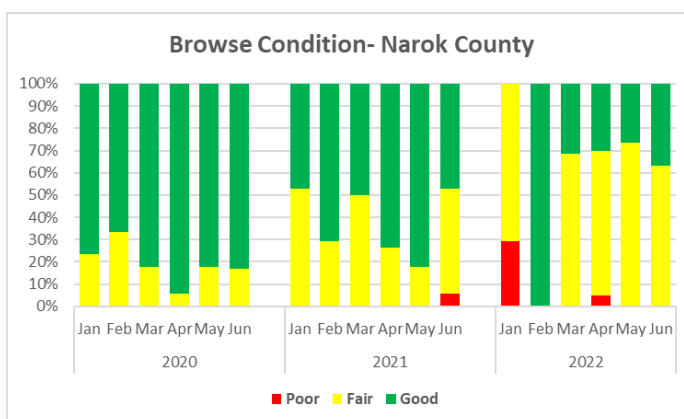


Figure 4: Narok County Browse Condition

2.2 WATER RESOURCE

2.2.1 Sources

- The major water sources for both human and livestock consumption during the month of June were pans and dams, rivers, shallow wells and others (mainly from storage tanks) as shown in figure 5.
- Pans and dams were relied by 25 percent of the households while rivers, shallow wells and others were each relied by 18, 11 and eight percent of the households respectively.
- This situation is not normal at this time of the year.
- 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, breach embankments and underground seepage which has reduced to 50-60 percent.
- The available open water sources are likely to last 3-4 months normally.

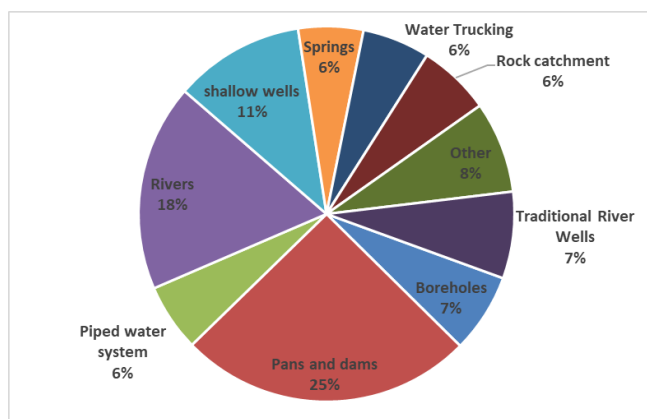


Figure 5: Major Water Sources in Kitui County

2.2.2 Household Access and Utilization

- The average return distances from the households to water sources increased by 43 percent to stand at 3.0 km in June from 2.1 in previous month. The increase distance is attributed to reduction in water capacities in open water facilities.
- Households in Pastoral livelihood zone trekked an average of 6.4km compared two km in Agro Pastoral livelihood zone. Mixed Farming trekked the least with about 0.8km.
- The current water distance is 46 percent higher than the long-term mean as shown in figure 6.
- Water consumption per person per day reduced to 11.4 litres in June from 12 litres in previous month. Moreover, most households are not treating water before consumption.

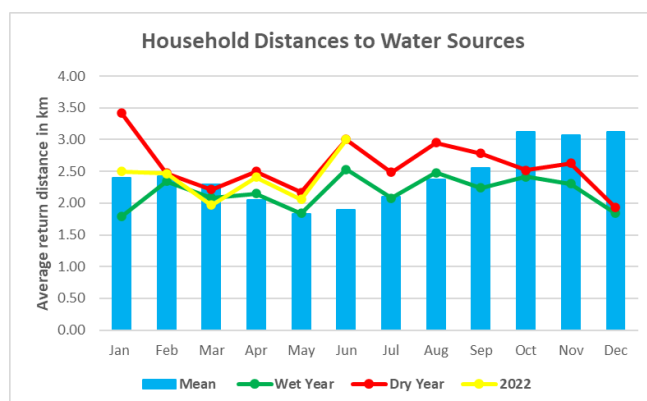


Figure 6: Household Access to Water

2.2.3 Livestock Access

- The average return distances from livestock grazing areas to watering points decreased to 2.8km in June from 2.9km in previous month.
- Livestock in Pastoral livelihood zones trekked a distance of 5.7km compared to 2.0km 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 7.1 percent higher than the long-term mean as shown in figure 7.

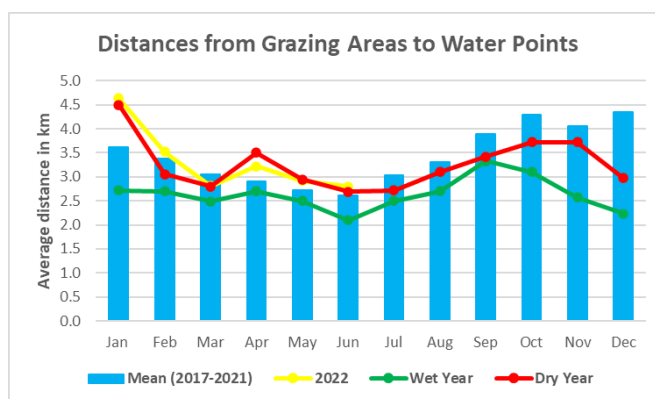


Figure 7: Distances from Grazing Areas to Water Points

2.3 Implication of the Above Indicators to Food Security

- Livestock productivity is likely to improve following regeneration of pasture and browse conditions. However, the worsening water state would affect negatively access to pasture and browse.

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.
- Generally, 48 percent of cattle had good smooth appearance body condition in May compared to 21 percent in previous month.
- The remaining 52 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.

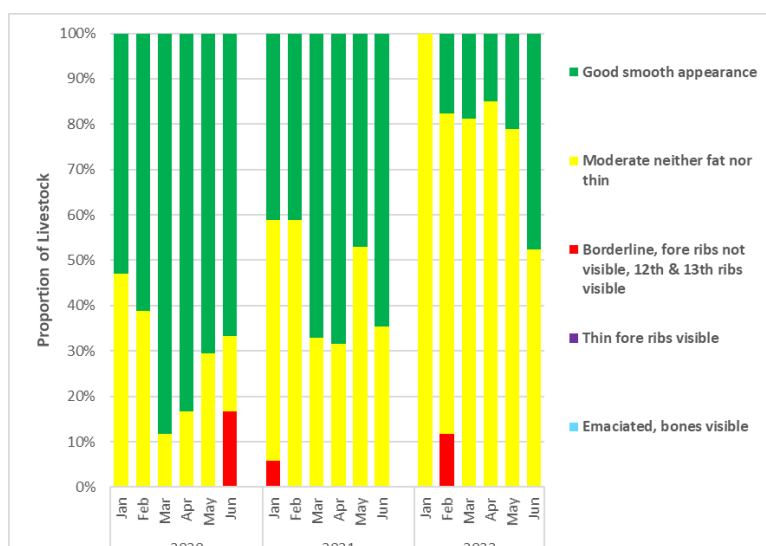


Figure 8: Cattle Body Condition

3.1.2 Livestock Diseases

- Suspected cases of foot and mouth disease (FMD) in cattle were reported in Siana, Nkareta, Mosiro and Naroosura wards of Narok West, Narok North, Narok East and Narok South Sub Counties respectively. Moreover, suspected contagious caprine pleuro pneumonia (CCPP) in goats and Newcastle disease in poultry were report in Naroosura ward of Narok South Sub County.

3.1.3 Milk Production

- The mean milk production per household in a day increased by 2.9 percent to 3.5 litres in May from 3.4 litres in previous month, owed to 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 6.1 and 5.6 litres respectively compared to 2.8 litres in Pastoral livelihood zone.
- The current milk production is seven percent lower than the long-term mean as shown in figure 9.

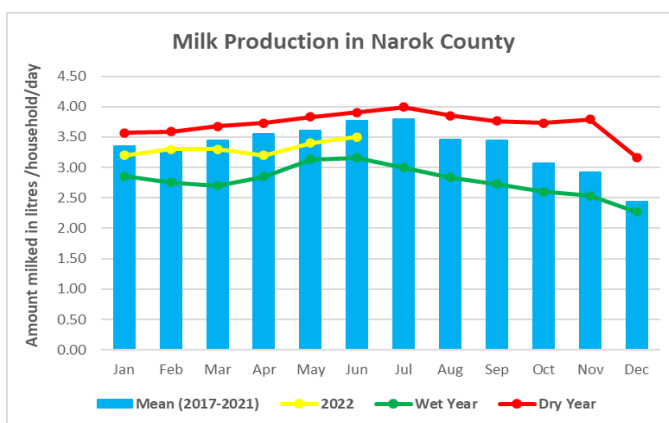


Figure 9: Milk Production

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) are at grain 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 in Narok West, Mosiro ward in Narok East and Nkareta ward in Narok North which has led to fairer crops condition
- 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 increased by 19 percent and stood at Ksh.22,556 in June from Ksh.18,996 in previous month.
- Cattle prices were higher in Pastoral livelihood zone at Ksh.26,667 compared to Ksh.20,500 in Agro Pastoral and Mixed Farming livelihood zones.
- The current market price of cattle is three percent higher than the long-term mean and eight percent lower than year 2021 as shown in figure 10. This is due to improved livestock forage.

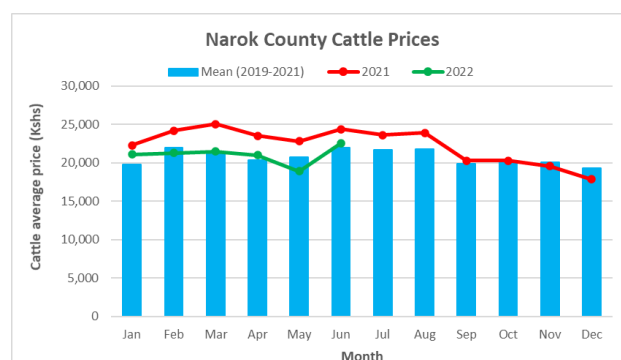


Figure 10: Cattle Prices

4.1.2 Small Ruminants Prices (Goat Price)

- The average market price of a goat increased marginally by two percent and stood at Ksh.4,674 in June from Ksh.4,581 in previous month.
- Mixed Farming livelihood zone recorded a higher price of Ksh.5,666 compared to Ksh.4,000 in Agro Pastoral livelihood zone.
- The current market price of a goat is seven percent higher than the long-term mean and four percent lower than year 2021 as shown in figure 11 and this is due to increased demand of the commodity in the market and improved body condition.

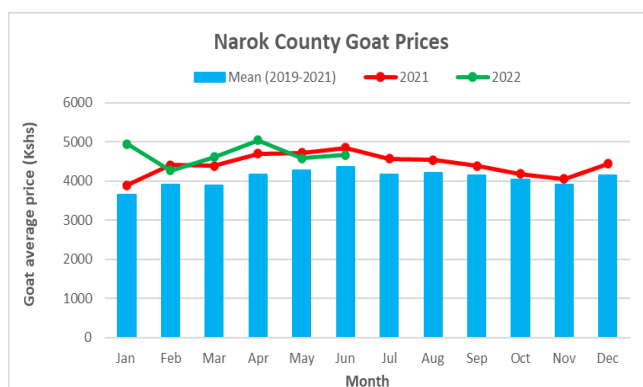


Figure 11: Goat Prices

4.2 CROP PRICES

4.2.1 Maize

- The average market price of maize per kilogram rose by 16 percent and stood at Ksh.75 in June from Ksh.64 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 56 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.

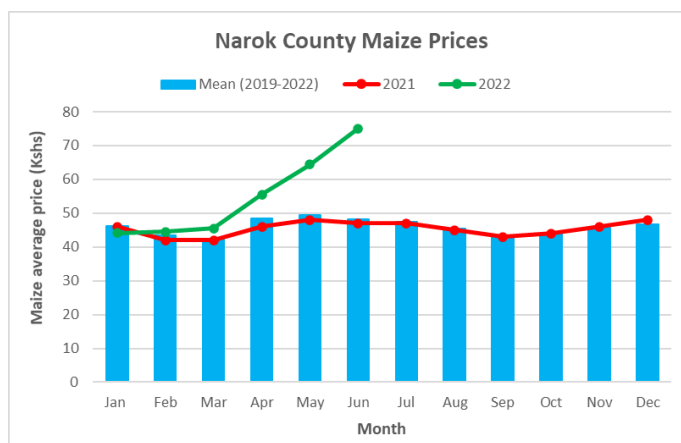


Figure 12: Maize Prices

4.2.2 Beans

- The average market price of beans per kilogram increased by 18 percent and stood at Ksh.114 in June from Ksh.97 in previous month. This was mainly attributed to reduced harvests of beans and increased cost of living during the month under review.
- Beans price was higher in Mixed Farming livelihood zone at Ksh.127 compared to Ksh.100 in Aro Pastoral livelihood zone.
- The current beans price is 14 percent higher than the long-term mean as shown in figure 13.

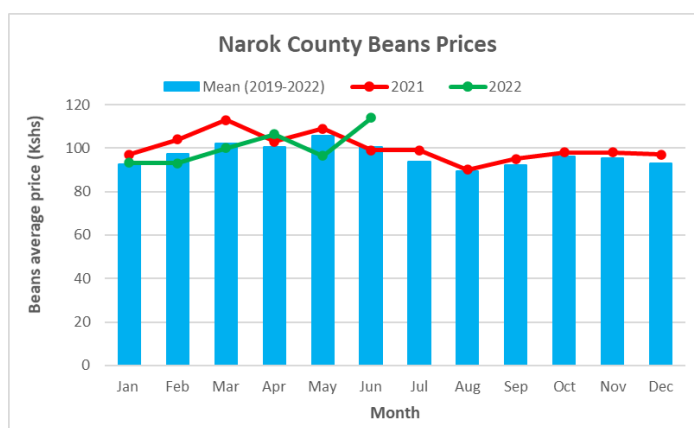


Figure 13: Beans Prices

4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade declined by 12 percent and stood at 62 in June from 71 in previous month. This implies that, households were able to purchase 62 kilograms of maize from exchange of a goat in June compared to 71 kilograms in previous month.
- Terms of trade was higher in Mixed Farming livelihood zone at 76 compared to 53 in Agro Pastoral livelihood zone.
- The current terms of trade is 32 percent lower than the long-term mean as shown in figure 14.

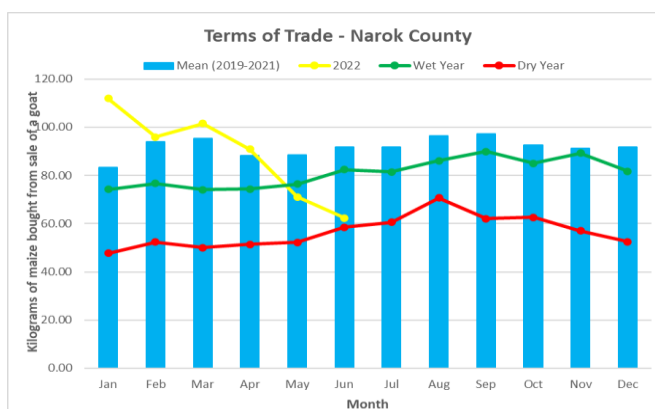


Figure 14: Terms of Trade

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 five percent and stood at 2.1 litres in June from 2.2 litres recorded in previous month.
- There was no major variation across the livelihood zones.
- The current milk consumption is nine and 23 percent lower than the long-term average and wetter year respectively. In addition, milk consumption was below drier year by nine percent as shown in figure 15.

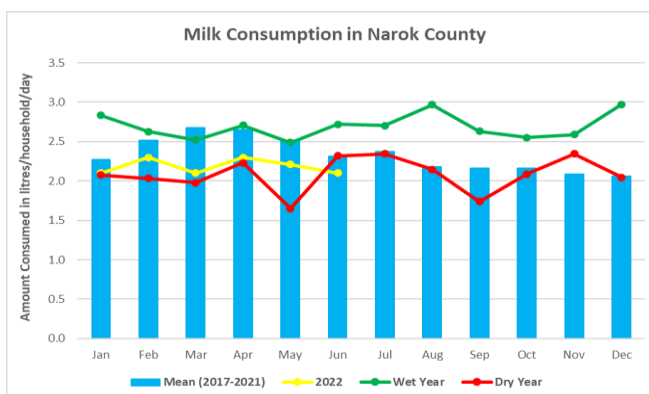


Figure 15: Milk Consumption

5.2 FOOD CONSUMPTION SCORE

- The proportion of households in acceptable food consumption group increased to 99.4 percent in June from 96.1 percent in previous month. The remaining 0.6 percent of households were in borderline 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 98.9 percent in Pastoral livelihood zone.
- Households in Narok East Sub County had 0.4 percent in borderline food consumption categories.

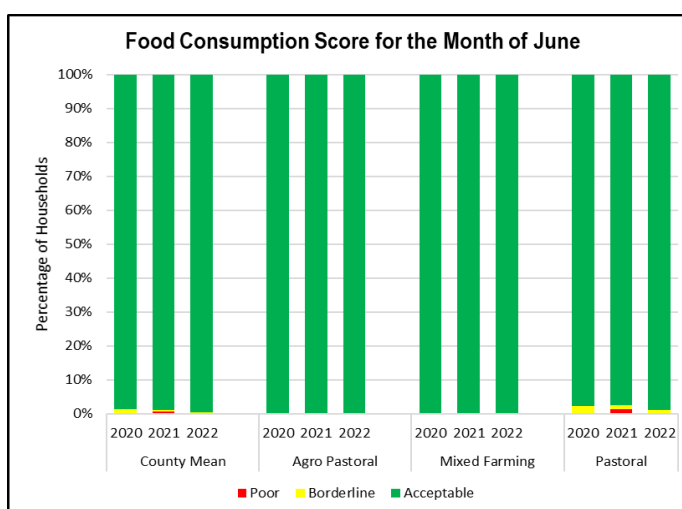


Figure 16: Food Consumption Score (FCS)

- Households with acceptable food consumption score were higher in June 2022 at 99.4 percent compared to 98.9 and 97.2 percent in similar period in year 2021 and 2020 respectively as shown in figure 16. This was due to improved food dietary diversity.
- On average, households consumed cereals, sugars and milk six days per week; cereals, oils and vegetables five days per week; pulses three days per week; meat, eggs or fish, and fruits once a 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	5	3	5	1	6	5	6	1
Agro Pastoral	7	4	7	1	6	7	7	1
Mixed Farming	7	4	6	1	4	6	6	1
Pastoral	4	2	3	0	7	4	5	1

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The proportion of children 6 -59 months who were malnourished increased to 1.9 percent in June from 1.4 percent in previous month. This was attributed to decreased dietary diversity owed to high food prices and increased under-fives diseases.
- The Pastoral livelihood zone recorded the highest proportion of children who were who were severely and moderately malnourished at 2.3 percent of child being malnourished. There was proportion reduced in Pastoral livelihood zone from 3.3 percent in previous month.
- The current level of children who are malnourished is below normal as shown in figure17.

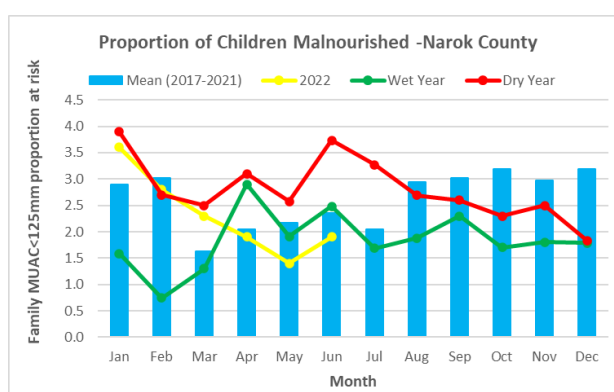


Figure 17: Children at Risk of Malnutrition

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 8.4, 1.11 and 0.16 percent in June compared to at 7.9, 0.78 and 0.16 percent in previous month respectively.

5.4 COPING STRATEGIES

- The mean of reduced coping strategy index (rCSI) remained stable at 2.70 in June when compared to 2.71 in 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 30 percent lower than the long-term mean as shown in figure 18.

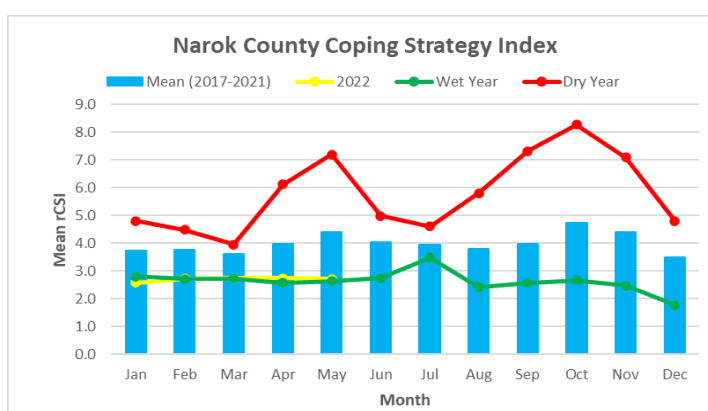


Figure 18: Reduced Coping Strategy Index (rCSI)

- Households employing stressed food-based coping mechanisms decreased to 32.0 percent in June compared to 33.9 percent in previous month.
- In Pastoral livelihood zone, 63.7 percent of households employed stressed food-based coping mechanisms compared to zero percent in Mixed Farming and Agro Pastoral livelihood zones.
- Households employing stressed livelihood coping mechanisms to cope with lack of food or money to buy food stood at 0.6 percent.
- Households employed food based coping mechanisms more frequently in June 2022 compared to similar period in 2021. However, food based copying mechanisms was better than similar period in year 2020 as shown in figure 19.

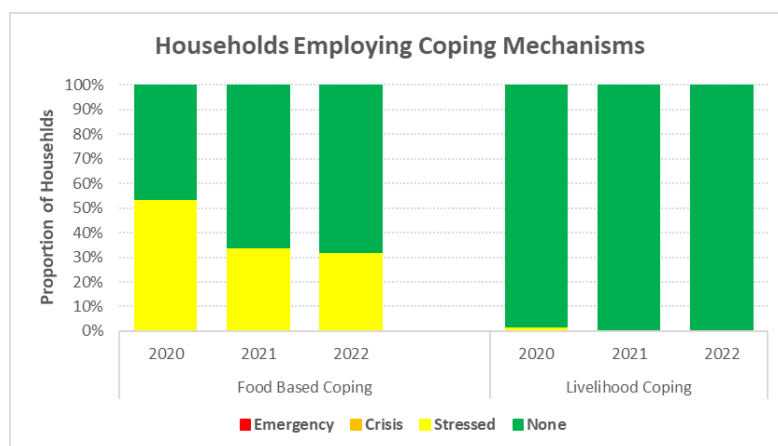


Figure 19: Households Employing Coping Mechanisms

6.0 CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

SECTOR	INTERVENTION	TARGET BENEFICIARIES	COST (Ksh.) in Million	ACTOR/ ORGANIZATION
Cross cutting	Continues Gro Weather Updates and Advisories	All the livelihood zones	0.3	Kenya Meteorological Department

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 towards 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 and high food prices.

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