

**National Drought Management Authority  
NAROK COUNTY  
DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2021**



A vision 2030 flagship Project



**JANUARY EW PHASE**

**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

**Rainfall:**

- Off season showers were received during the month under review.
- The amounts received were unevenly distributed in both time and space across all the livelihood zones.

**Vegetation condition:**

- The county vegetation condition was above normal across all the livelihood zones during the month under review. Pasture and browse condition were fair to good across all the livelihood zones.

**Socio Economic Indicators (Impact Indicators)**

**Production indicators:**

- Land preparation and harvesting were the main activities ongoing during the month under review.
- Livestock body condition ranged from fair to good across all the livelihood zones.
- Milk production ranged from fair to good and within the normal range compared to the long-term average.

**Access indicators:**

- Terms of trade was favorable across all the livelihood zones.
- Household milk consumption was above the normal threshold.
- Household and livestock water access was above the long term average (LTA) across all the livelihood zones.

**Utilization Indicators:**

- There was a decrease in the number of children who were 'at risk' as measured by 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	NORMAL	STABLE
MIXED FARMING)	NORMAL	STABLE
PASTORAL	NORMAL	STABLE
COUNTY	NORMAL	STABLE
Biophysical Indicators	Value	Normal Range/Value
VCI-3Month	65.43	>35
Forage condition	Fair-good	Good
Production indicators	Value	Normal
Crop Condition (Maize)	Fair-good	Normal
Livestock Body Condition	Fair-good	Good
Milk Production in litres	3.5	>2
Livestock Migration Pattern	No migration	Normal
Livestock deaths (Drought related))	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	85.3	>64.7
Milk Consumption in litres	1.7	>1
Return distance to water sources in km	4.1	<5
Cost of water at source in Kshs (20 litres)	0-5	<5
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	2.3%	<10

<ul style="list-style-type: none"> <li>▪ Short rains harvests</li> <li>▪ Short dry spell</li> <li>▪ Reduced milk yields</li> <li>▪ Increased HH Food Stocks</li> <li>▪ Land preparation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Planting/Weeding</li> <li>▪ Long rains</li> <li>▪ High Calving Rate</li> <li>▪ Milk Yields Increase</li> </ul>	<ul style="list-style-type: none"> <li>▪ Long rains harvests</li> <li>▪ A long dry spell</li> <li>▪ Land preparation</li> <li>▪ Increased HH Food Stocks</li> <li>▪ Kidding (Sept)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Short rains</li> <li>▪ Planting/weeding</li> </ul>								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

## 1.0 CLIMATIC CONDITIONS

### 1.1 RAINFALL PERFORMANCE

- Off season showers were recorded during the month of January. Amounts received were unevenly distributed in time and space across the county.
- The mixed farming and agro-pastoral livelihood zones areas of Ilkerin ward in Trans Mara East, Trans-Mara West and Mau Ward in Narok North sub counties received more rains than the pastoral areas of Mosiro, Suswa and Naroosura wards which recorded below normal rainfall amounts during the month under review.

### 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

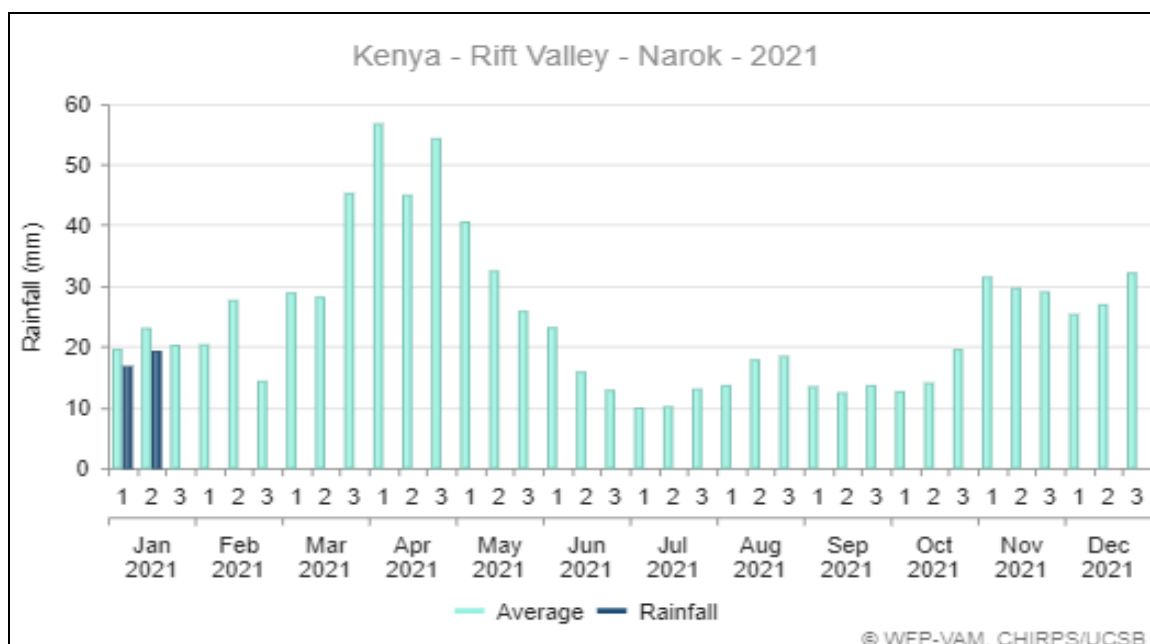


Figure 1 Rainfall Estimates (RFE) trends for Narok County (Source WFP-VAM, CHIRPS/UCSB)

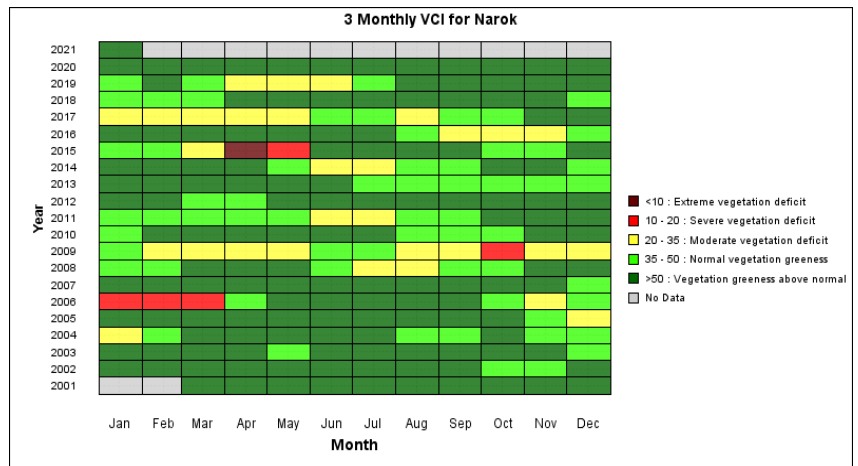
- From the figure 1 shown above, dekad rainfall for estimate (RFE) amounts for the first and second dekad were below normal rainfall amounts.
- From figure 1 above, the county recorded 16.6 and 19.1 millimetres of rainfall for the first and second dekad of January as compared to a long term averages of 19.42 and 22.9 millimetres respectively.
- The rainfall recorded was 15.56 percent below the normal.

## 2.0 IMPACTS ON VEGETATION AND WATER

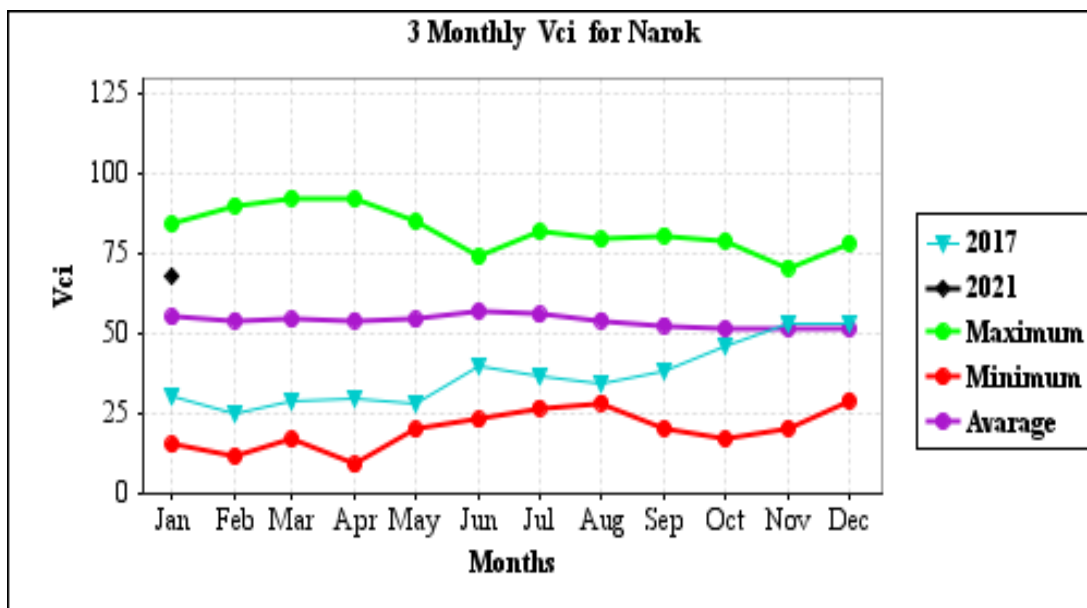
### 2.1 VEGETATION CONDITION

The vegetation conditions in January, as measured by the satellite-derived Normalized Difference Vegetation Index (NDVI), indicates above normal greenness across all the livelihood zones (Figure 3). The highest VCI was recorded in Emurua Dikir at 86.36 percent while the lowest was recorded in Narok East and Narok South at 47.14 and 55.64 percent, respectively.

The above normal vegetation condition is attributed to the off seasons rains recorded in the month coupled with the cumulative precipitation experienced during the short rains season. However, the situation is likely to deteriorate in some parts of the pastoral livelihood zones, particularly in Mosiro and Ntuka. The county vegetation greenness is normal compared to long term average but lower the maximum recorded value as shown in figure 3



**Figure 2: Vegetation Condition Index across the County**



**Figure 3: Narok County 3 Months VCI trends**

## 2.1.1 Field observations

### 2.1.1.1 Pasture

- The quantity and quality of pasture in the mixed farming zone and agro-pastoral livelihood zone ranged from fair to good with pastoral livelihoods recording fair to poor conditions during the month under review.
- In the pastoral areas of Naroosura, Mosiro, Suswa and Koyaki wards pasture is likely to deteriorate more due to below average short rains received in the areas.
- The available pasture is likely to last for 2 months in mixed farming and agro-pastoral livelihood zones and less than a month in the pastoral livelihood zone.
- The current pasture situation is within the normal range.

### 2.1.1.2 Browse

- The quantity and quality of browse in the mixed farming zone remained good with pastoral and agro-pastoral livelihoods recording fair to good conditions.
- The available browse is expected to last for two months in mixed farming livelihood zone while in pastoral livelihood zone, it is likely to last for 1-2 months.
- The current browse situation is within the normal range.

## 2.2 Water resources

### 2.2.1 Sources of Waters

- The main sources of water for livestock and human consumption in the county were rivers, pans/dams, boreholes, traditional river wells and shallow wells (Figure 4.)

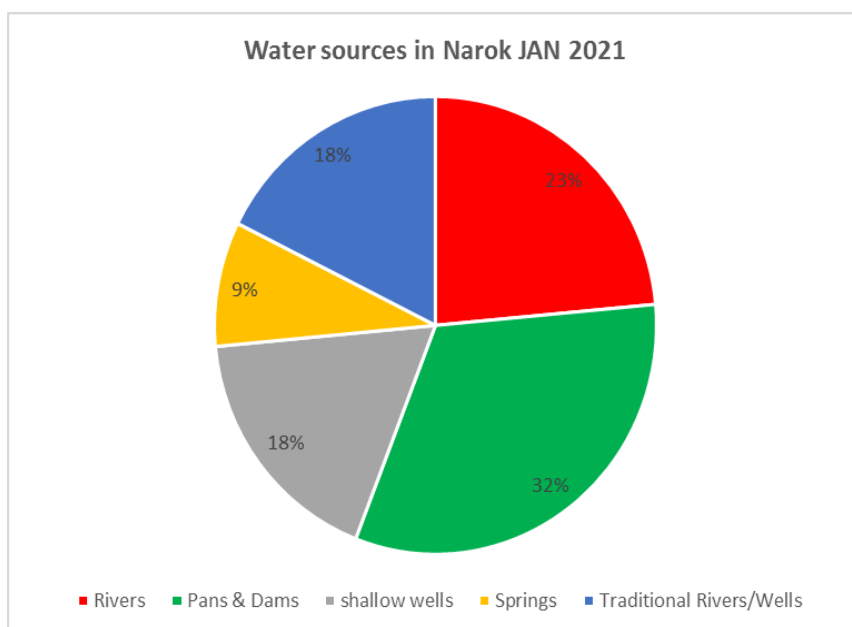


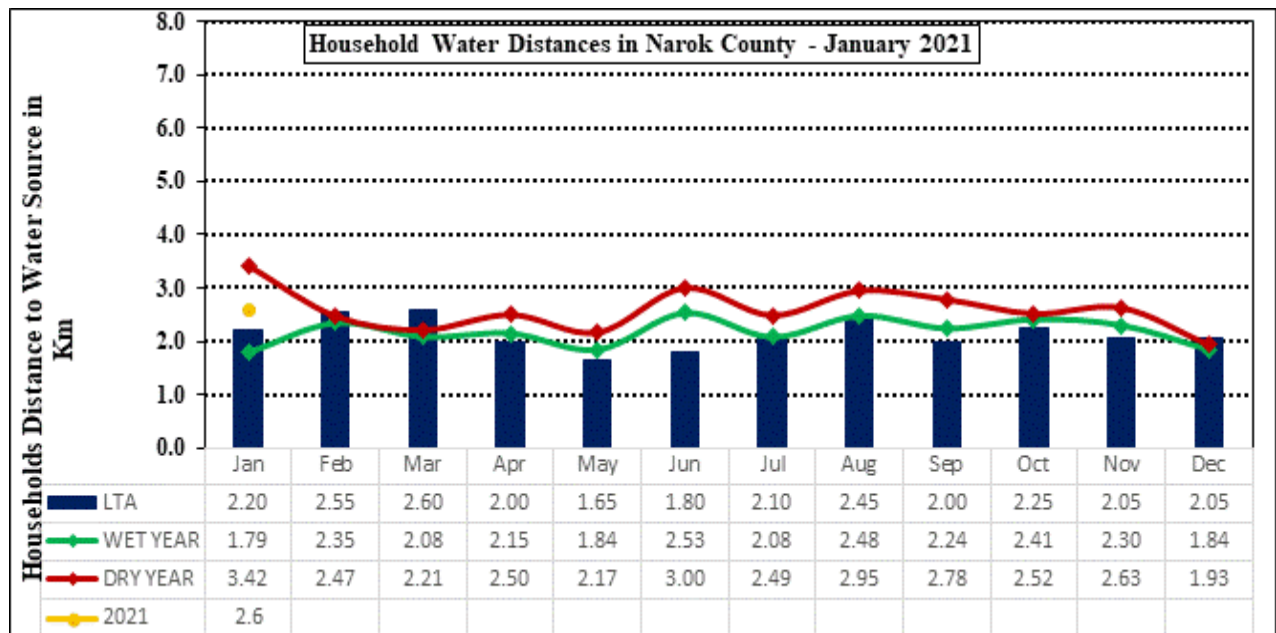
Figure 4: Sources of Water in Narok County Jan 2021

- The quantity and quality of water ranged from fair to good in the mixed farming and agro-pastoral livelihood zones with the pastoral livelihood zone ranging from poor to fair quality this is because of siltation of open water sources and poor sanitation. Pans and dams were the most used sources in the pastoral and agro-pastoral livelihood zones.

- The current water sources were expected to last for about three months in mixed farming and agro-pastoral livelihood zones. In pastoral livelihood zone, the water is likely to last for less than two months.

The current water situation is above the normal range at this time of the year.

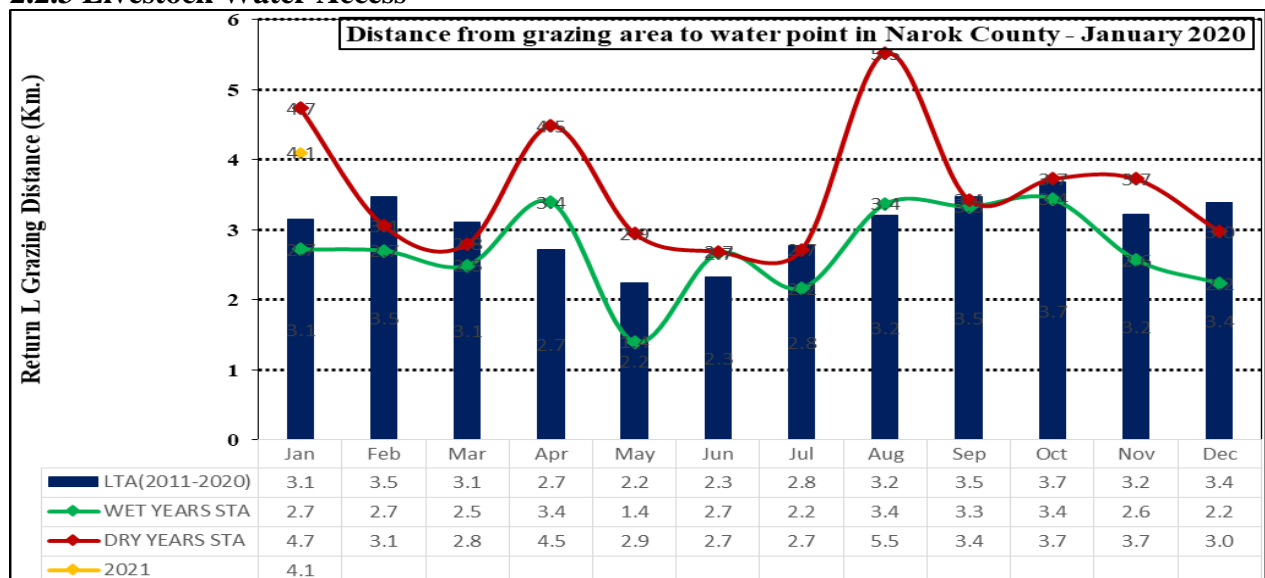
### 2.2.2 Household access and Utilization



**Figure 5: Household Water Distances in Km as compared to LTA**

- The average distance to watering points for households remained at 2.6 kilometres (km) as compared to the previous month.
- Pastoral livelihood zone recorded the longest average distance at 3.5 km while the shortest average distance was recorded in the mixed farming livelihood zone at 0.8 km.
- The current trekking distances to water points are above normal compared to the long-term averages as shown by Figure 5.

### 2.2.3 Livestock Water Access



**Figure 6: Current Livestock trekking distances as compared to LTA**

- The average distance to main water sources from grazing areas increased to 4.1km from 3.4 km as compared to the previous month. The increase in the trekking distances is attributed to below average short rains particularly in the Pastoral livelihood zone.
- The pastoral livelihood zone recorded the longest distance of 4.5 kilometres while the shortest distance was recorded in the mixed farming livelihood zone at 1km.
- The current average trekking distance is above the normal range at this time of the year as shown in Figure 6.

### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

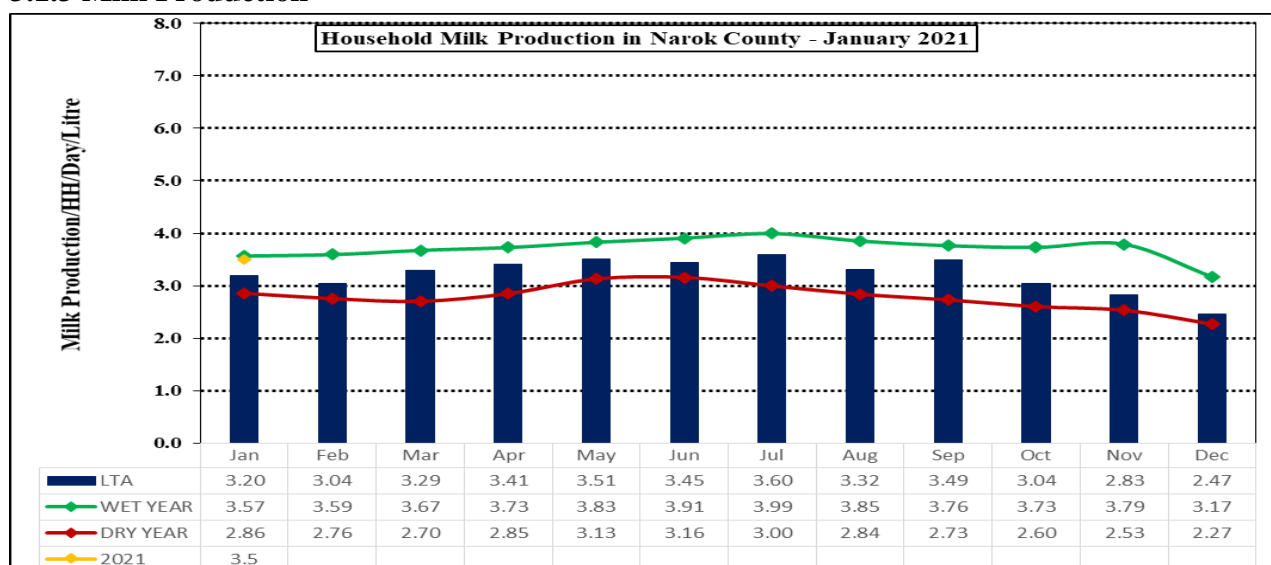
##### 3.1.1 Livestock Body Condition

- The body condition for cattle, sheep and goats ranged from fair to good across all the livelihood zones. This is attributed to availability of forage .However, the body condition for cattle in the pastoral livelihood zones are on a deteriorating trend owing to reduced forage and increased distances to water sources.
- The current livestock body condition is within the normal range at this time of the year.

##### 3.1.2 Livestock Diseases

- Suspected cases of bluetongue disease in sheep, contagious caprine pleuro-pneumonia (CCPP) in goats and contagious bovine pleuro-pneumonia (CBPP) in cattle were reported in Trans Mara West, Trans Mara East, Narok East and Narok South sub counties.
- Treatment and vaccinations measures were done upon request by farmers and own arrangements with animal practitioners.

##### 3.1.3 Milk Production



**Figure 7: Milk Production**

- From figure 7 above, the average milk produced per household per day increased to 3.5 from 2.5 litres as compared to the previous month.
- Milk production is 2.3 litres/day/household in the pastoral areas, 2 litres/day/household in mixed farming zone and 3.4 litres/day/household in the agro-pastoral livelihood zone livelihood zone.

- The current milk production is above the normal range.

## **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.
- The crops were at grain filling and milking stage in regions of Ilkerin and Mogondo wards in Trans Mara East Sub County and Mau and Melili wards in Narok North Sub County.
- Additionally, harvesting and weeding for the season was on going across the livelihood zones and this is normal at this time of the year.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

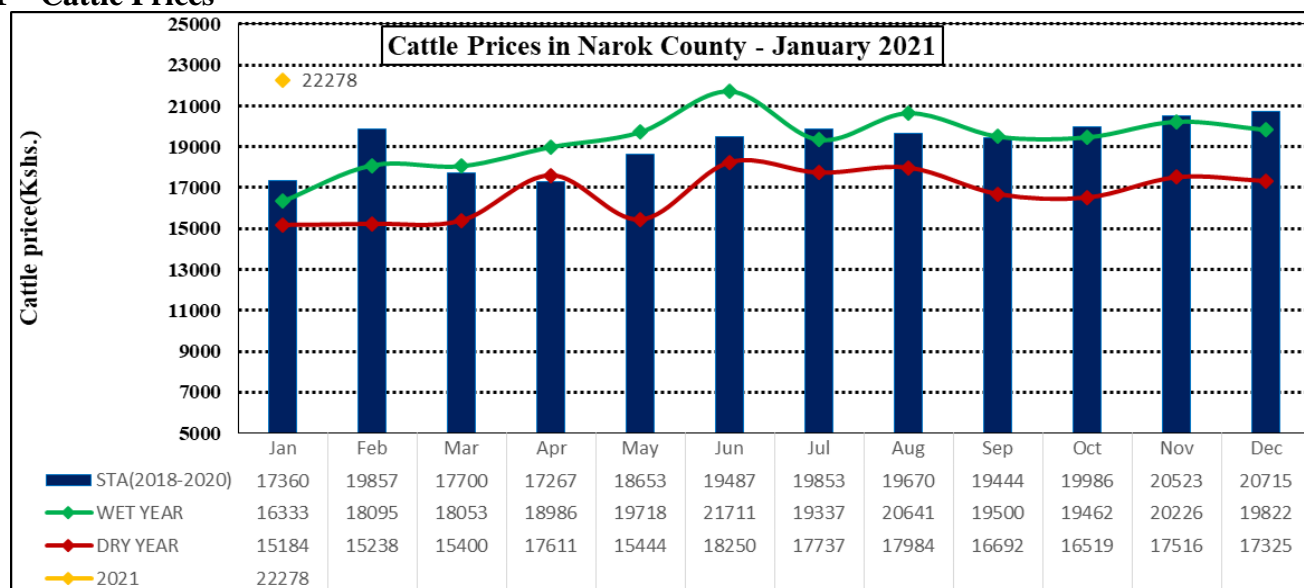


Figure 8 Cattle prices

- From the figure 7 shown above, the average price for a medium-sized cattle in January reduced to Kshs 22,278 from Kshs 22,763 as compared to the previous month.
- The current price is 2 percent lower than in the previous month. Those in the pastoral zone fetched more prices at Kshs 27,250 per head while the lowest price was in the agro-pastoral livelihood zone at an average price of Kshs 16,000 per head.
- The current cattle price is above normal compared to short-term average as shown by (Figure 8).

#### 4.1.2 Goat Prices

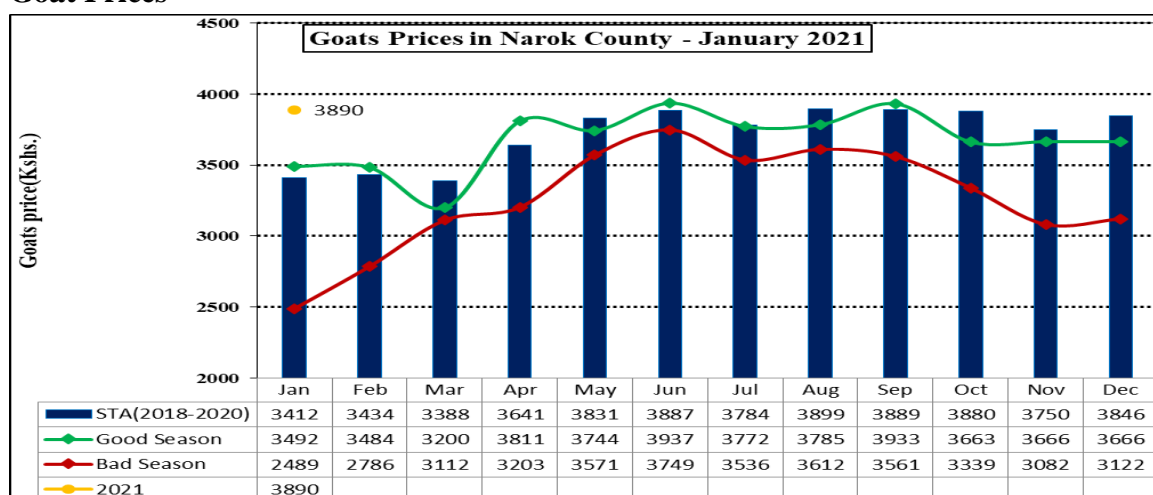


Figure 9: Goat prices

- The average for a medium sized goat was Kshs 3,890 which depicts a 7 percent decrease percent compared to the previous month.
- The highest price was posted in the mixed farming and agro-pastoral livelihood zones at Kshs 4,590 per head while the lowest price was recorded in the pastoral livelihood zone at Kshs 3,330 per head.



- The average goat price was above the normal range at this time of the year as shown in figure 9

## 4.1 CROP PRICES

### 4.2.1 Maize Prices

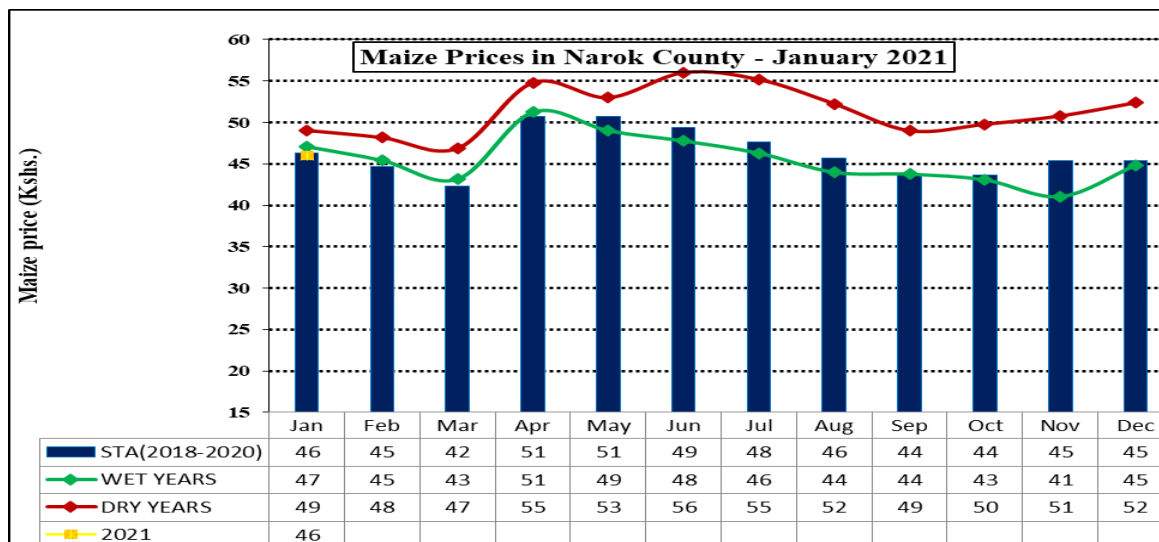


Figure 10: Maize prices

- The average price of maize per kilogram was Kshs 46, a reduction by 2 percent compared to the previous month.
- The highest price was recorded in the pastoral livelihood zone at Kshs. 54/Kg while the lowest price was recorded in the mixed farming zone at Kshs. 38/Kg.
- The current price is within the normal average as shown by Figure 10.

### 4.2.2 Beans

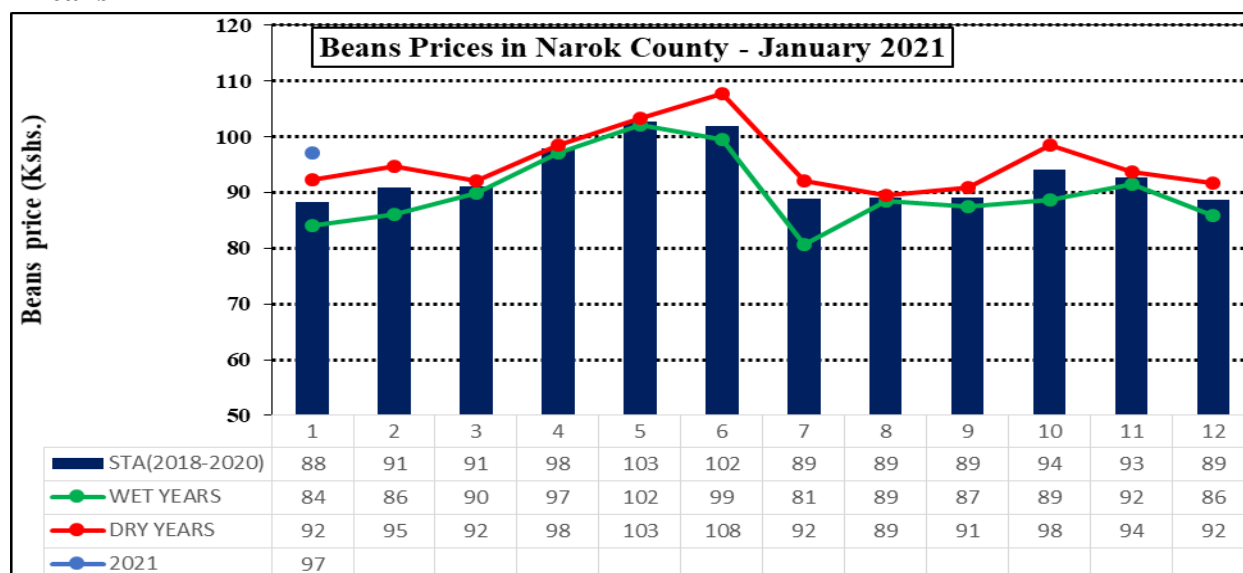
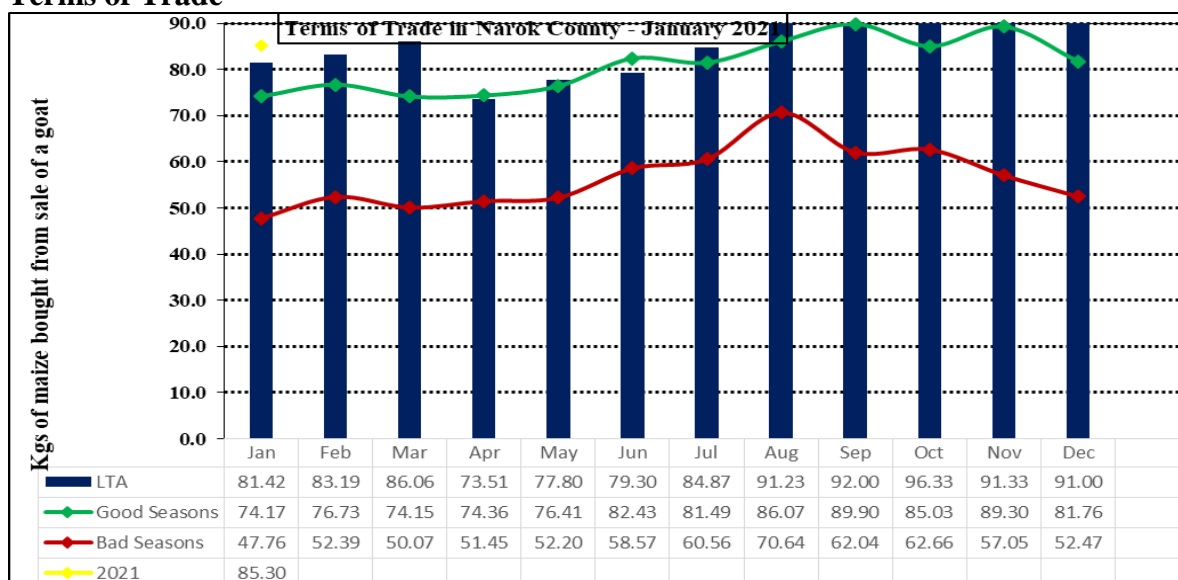


Figure 11 Bean prices

- The average price of beans reduced to Ksh.97/kg from Ksh.107/kg compared to the previous month. The highest price was recorded in the agro-pastoral livelihood zone at Kshs. 100/kg while the lowest was recorded in the mixed farming livelihood zone at Kshs.92.
- The current price is above the normal range at this time of the year as shown by Figure 11.

### 4.3 Terms of Trade

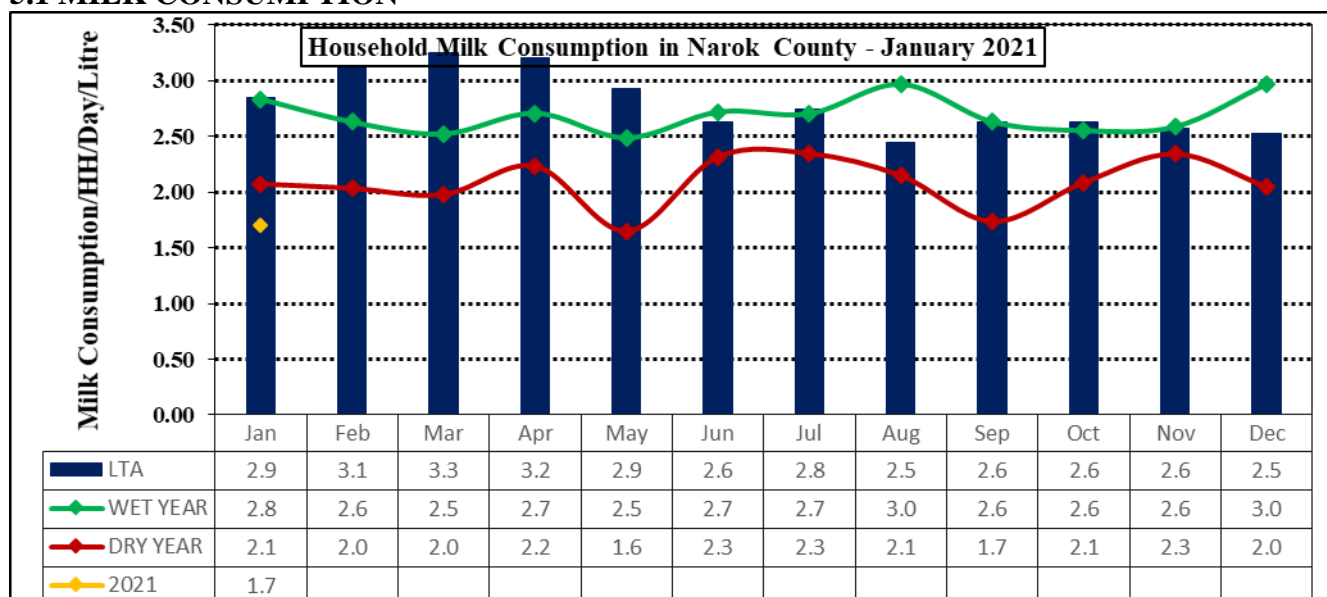


**Figure 12: ToTs compared with LTA**

- The Terms of Trade (ToTs) based on the cereal/meat prices insignificantly increased to 85.3 compared to the previous month ToT of 84
- This implies that a sale of a medium-sized goat fetched 85 kgs of cereals. The ToTs were less favourable in the agro-pastoral and mixed farming livelihood zones compared to pastoral livelihood zone.
- The slight increase in ToTs is attributed to reduction in goat prices as well as maize prices
- The current cereal/goat price ratio is above normal range as shown in Figure 12.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

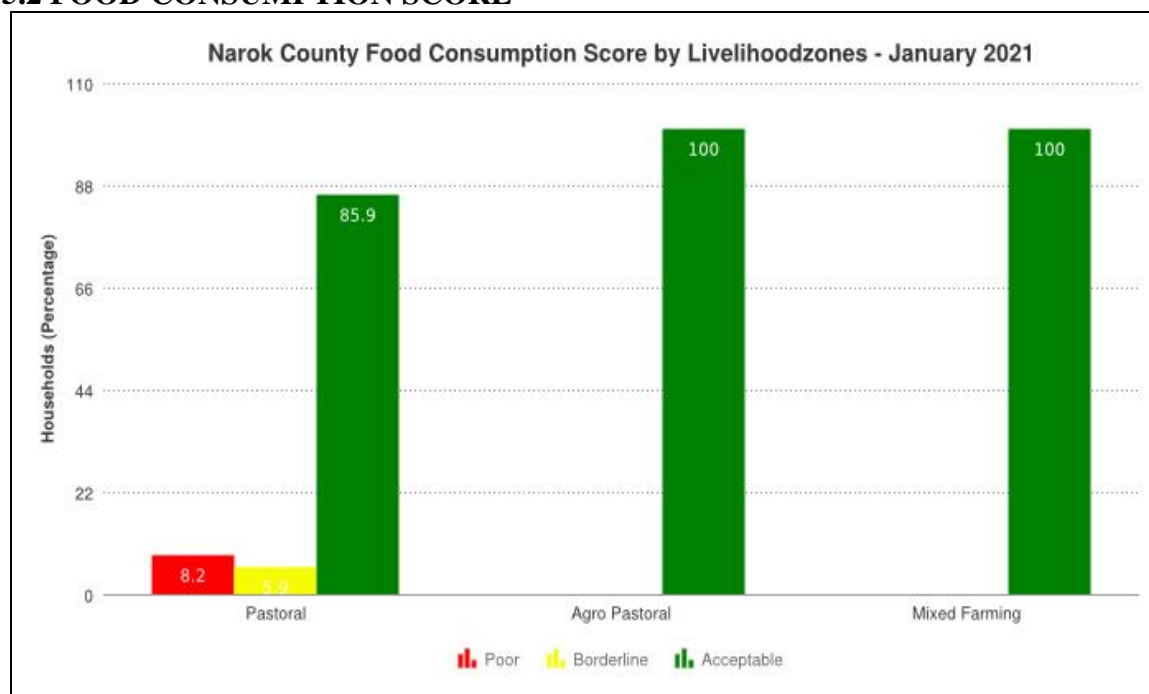
### 5.1 MILK CONSUMPTION



**Figure 12: Milk consumption**

- The current average household milk consumption remained at 1.7 litres/household per day as compared to the previous month. There were inter-livelihood variations in milk consumption with agro-pastoral livelihood zone having the highest consumption rate at 1.9 litres followed by mixed farming at 1.8 litres and pastoral livelihood zones having the least at consumption rate at 1.7 litres. The current milk consumption rate is below normal range at this time of the year as shown by Figure 12. 0

### 5.2 FOOD CONSUMPTION SCORE



**Figure 13: Food consumption score**

- Food consumption patterns across the livelihood zones were stable with majority of households remaining in acceptable band. The largest proportion of about 95.3 percent of the households

had acceptable food consumption score. This implies that majority of households were able to take diverse food groups more frequently thus able to meet their essential food needs.

- In pastoral livelihood zone, 85.9 percent had acceptable, 5.9 percent within borderline consumption and 8.2 percent had poor consumption. In the agro-pastoral and mixed farming zone, 100 percent of the respondents had acceptable food consumption score (Fig 13).

### 5.3 HEALTH AND NUTRITION STATUS

#### 5.3.1 Nutrition Status

- Six hundred and fifty eight children below the age of five years were sampled for family MUAC measurement.
- The proportion of children under the age of five years who were ‘at risk’ of malnutrition reduced to 2.3 percent from 3.3 percent in previous month (Fig 14). Mosiro, Naroosura and Koyiaki wards in the pastoral livelihood zone had 2.3 percent of children with moderate malnutrition cases attributed to high cereal prices due to poor accessibility to market, fever condition owing to chilly weather conditions and diarrhoea due to poor sanitation in the pastoral livelihood zone.

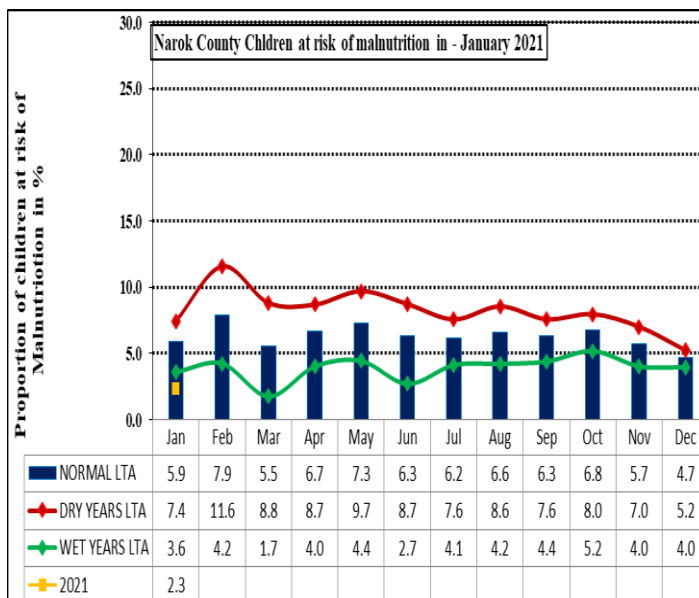


Figure 14: Proportion of Children ‘at risk’ of malnutrition

- The current rate of malnutrition is below the normal range compared to the long-term average as shown by Figure 14.

#### 5.3.2 Health

- A few cases of fever were reported across the livelihood zones during the month under review due to climate change and poor sanitation.

### 5.3 COPING STRATEGIES

- The CSI for the County in January was at 1.8. Households employed normal coping strategies in accessing food across all the livelihood zones as shown by Figure 15. The pastoral livelihood zone had higher CSI at 5.4 compared to Agro-pastoral and mixed farming zone which did not employ any coping strategy.
- The coping strategies are below the normal at this time of the year.

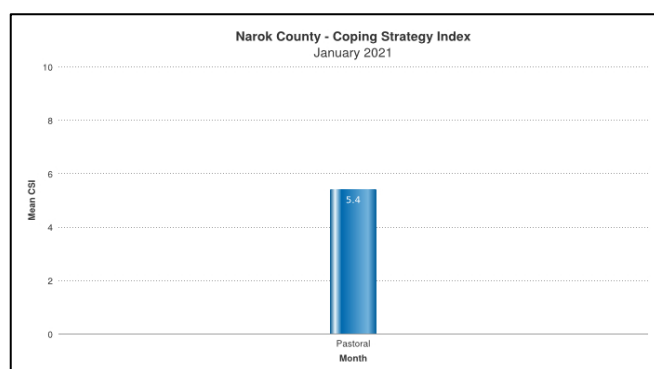


Figure 15: Coping strategies

## **6.0 CURRENT INTERVENTION MEASURES (ACTIONS)**

### **6.1 NON-FOOD INTERVENTIONS**

- The 2020 short rains Food Security assessment (SRA) was conducted by the Technical Working Group (TWG) with support from the NDMA, WHH and the Kenya Red-Cross.
- Regular Covid-19 surveillance and sensitization by Ministry of Health and KRCS.

### **6.2 FOOD AID**

- No food aid

## **7.0 EMERGING ISSUES**

### **7.1 Insecurity/Conflict/Human Displacement/Floods.**

- No major emerging issues related to drought were reported during the month under review.

### **7.2 FOOD SECURITY PROGNOSIS**

- According to the Kenya Meteorological Department, off season showers are likely to occur over several places in the county in the first week and second week of February 2021. Hence accessibility and availability of water is likely to remain stable in the next one month across all the livelihood zones except the pastoral livelihood zone where the performance of the short rains was below normal.
- The ongoing maize harvests in some parts of the county is expected to maintain average to below-average maize prices through February in the Mixed Farming and agro-pastoral livelihood zone and will increase household food stock.
- The livestock body condition and productivity is expected to remain stable for the next one month due to availability of forage and water. Hence milk consumption at household level is likely to remain stable in the next one months.
- Malnutrition rates are expected to remain below long term average due to favorable terms of trade leading to availability of diversified diets coupled with reported increased health seeking behaviors among the pastoralist and improved hygiene at the household level.

## **8.0 RECOMMENDATIONS**

- E-voucher fertilizer subsidy in Lolgorian and Angata Barikoi wards in Trans Mara West targeting 5000 beneficiaries.
- Maize seed subsidy in Kilgoris ward in Trans Mara ward.
- Pasture establishment, conservation and construction of strategic feed reserves across the county
- Enhanced disease surveillance and control, vector control and treatments
- Provision of plastic water tanks to institutions in response to COVID-2019
- Scale up High Impact Nutrition Interventions (HINI) across the county