

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



A Vision 2030 Flagship Project



**DECEMBER EW PHASE**

**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

**Rainfall**

- The county experienced off season rains during the first two decads of the month mostly in mixed farming livelihood zone..

**Vegetation condition:**

- The vegetation greenness as depicted by the vegetation condition index (VCI) is normal across the county.

**Socio Economic Indicators (Impact Indicators)**

**Production indicators:**

- Most crops which were planted early experienced moisture stress that led to poor yield in the county.
- Livestock body condition ranged from fair to good in the pastoral livelihood zone. In mixed farming and agro pastoral livelihood zones, the body condition is generally good.
- Milk production is stable and is within the normal range compared to the long term average.

**Access indicators:**

- Terms of trade remained stable in the county especially for pastoralists.
- Milk consumption ranged from fair to good in all the livelihood zones.
- Water access for both human and livestock consumption was generally good in the county.
- Distances to water sources were within the normal range.

**Utilization Indicators:**

- Cases of malnutrition are stable and below the normal range as indicated by percent of mid upper arm circumference (MUAC).
- Most households had 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
<b>COUNTY</b>	<b>NORMAL</b>	<b>STABLE</b>
Biophysical Indicators	Value	Normal Range/Value
VCI-3Month	48.93	>35
Forage condition	Fair-Good	Good
Production indicators	Value	Normal
Crop Condition (Maize)	Fair	Normal
Livestock Body Condition	Good	Good
Milk Production in litres	2.7	>5
Livestock Migration Pattern	Normal	Normal
Livestock deaths (Drought related)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	93.6	>100
Milk Consumption in litres	2	>4
Return distance to water sources in km	4.6	<5
Cost of water at source in Kshs (20 litres)	2-5	<5
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	5.4	<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. CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

- Most parts of the county witnessed rainfall onset for the short rains season from the first decad of December 2018 depicting a late onset. The rains ceased towards the end of the second decad of December.
- For the month under review, some parts of the county received out of season showers mostly within the second decad. The rains were mostly confined within the mixed farming livelihood zone. The county remained relatively dry during the third decad of the month.

## 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

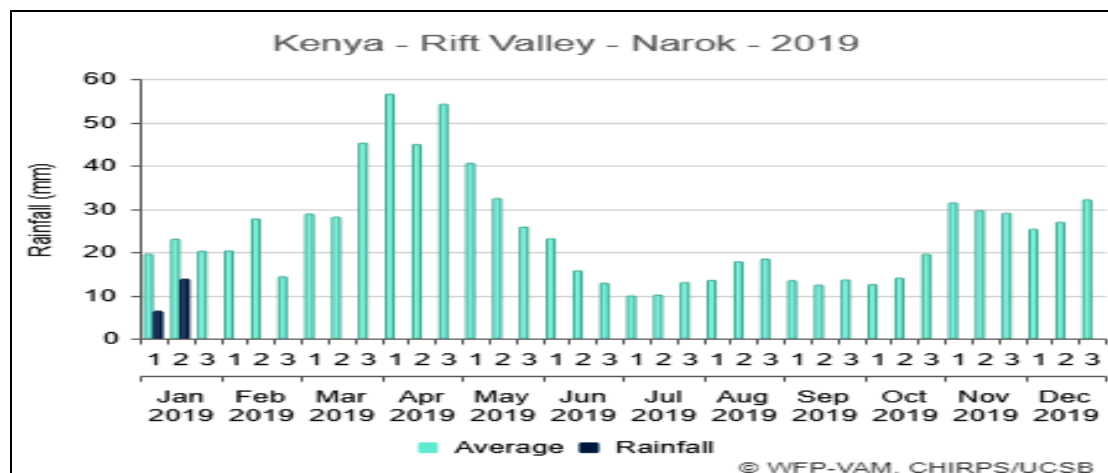


Figure 1: Rainfall performance-Narok County.

- The above satellite image (Figure 1) highlights the general performance of the rains in the county for the month of January, 2019 in comparison with the long term averages. Rainfall performance ranged from fair to good during the month under review with the rainfall picking its momentum in the second decad of the month as shown in Figure 1.
- The current rainfall performance is below the expected seasonal range.

## 2.0 IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

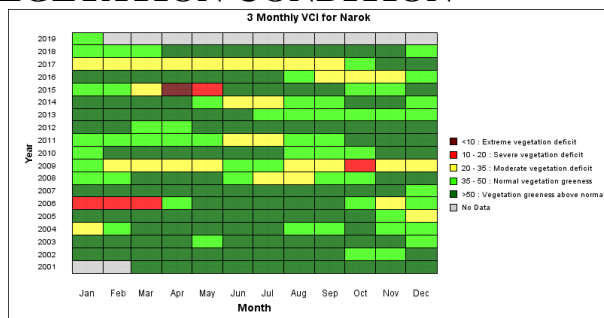


Figure 2: Vegetation condition index

The vegetation greenness as depicted by the vegetation condition index (VCI) shows normal vegetation greenness across the county (Figure 2). This is due to cumulative effects of both the long rains and short rains seasons which have stabilised forage conditions.

#### 2.1.1 Field observations

##### 2.1.1.1 Pasture

- The pasture quantity and quality in mixed farming and agro-pastoral livelihood zones was good. In the pastoral livelihood zone, pasture conditions were generally fair. The delayed onset of the short rains season had affected pasture conditions in Mosiro ward in Narok East sub county, Koyiaki ward in Narok West Sub County and Naroosura ward in Narok south sub county. During the month of December 2018, the county received enhanced rainfall which led to pastures regeneration in all the livelihood zones.
- The available pasture is likely to last for more than two months in mixed farming and agro-pastoral livelihood zones and one month 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. The available browse is expected to last for three months in mixed farming livelihood zone while in pastoral livelihood zone, it is likely to last for one and half 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 3.
- The quantity and quality of water was good in the mixed farming and agro-pastoral livelihood zones with rivers, pans and dams being the most used.
- In pastoral livelihood zone,

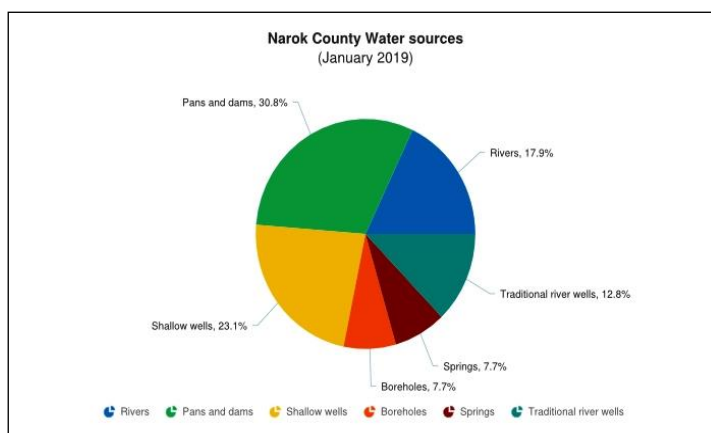


Figure 3: Water sources

water quality remained stable owing to recharge of pans and dams during the month of December 2018 and January 2019.

- 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.
- The status of main sources of water is within the normal range at this time of the year.

### 2.2.2 Household access and Utilization

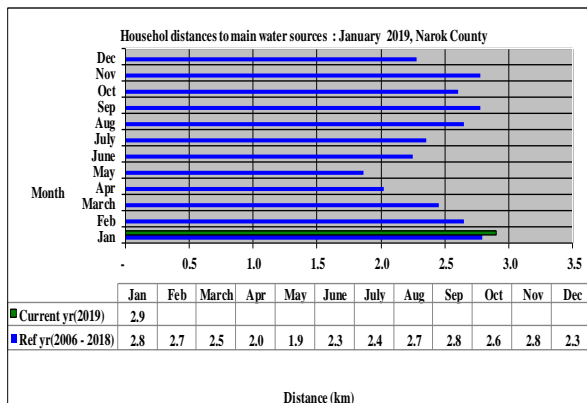


Figure 4: Water access by households

### 2.2.3 Livestock access

The average distance to main water sources from grazing areas increased by thirteen 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 2 km. The current average trekking distance is below the normal range at this time of the year as shown in Figure 5.

The average distance to watering points for households increased by twelve percent compared to the previous month.

Pastoral livelihood zone recorded the longest average distance remaining at six kilometres compared to last month while the shortest average distance was recorded in mixed farming livelihood zone at 0.8 km.

The current trekking distances to water points was within the normal range compared to the long term means as shown by Figure 4.

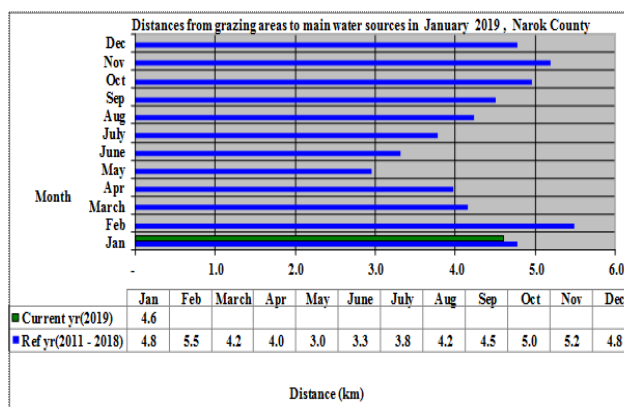


Figure 5: Water access by livestock

### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

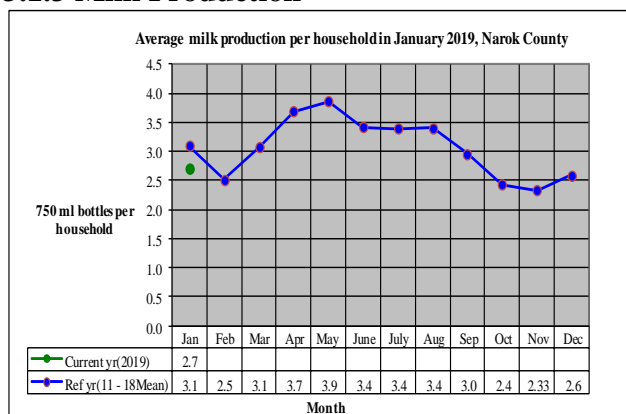
##### 3.1.1 Livestock Body Condition

- The cattle body condition in the county ranged from fair to good. The body condition for sheep and goats remained good across all the livelihood zones.
- The improved body condition was attributed to forage availability coupled with enhanced water access due to onset of the short rains season last month.
- The current livestock body condition is normal at this time of the year.

##### 3.1.2 Livestock Diseases

- The county encountered minimal cases of PPR and foot & mouth diseases which are on the increase particularly in Narok West and Narok South Sub County. 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 by four percent compared to the previous month. The increase in milk production was attributed to pasture and water availability due to enhanced rains recorded in the county for the last two months. The current milk production is within the normal range as shown by Figure 6.

Figure 6: 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 crops in the farms wilted due to moisture stress and most of them failed due to delayed onset of the short rains season. The areas affected include Transmara East, Narok South and parts of Kilgoris sub-counties.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

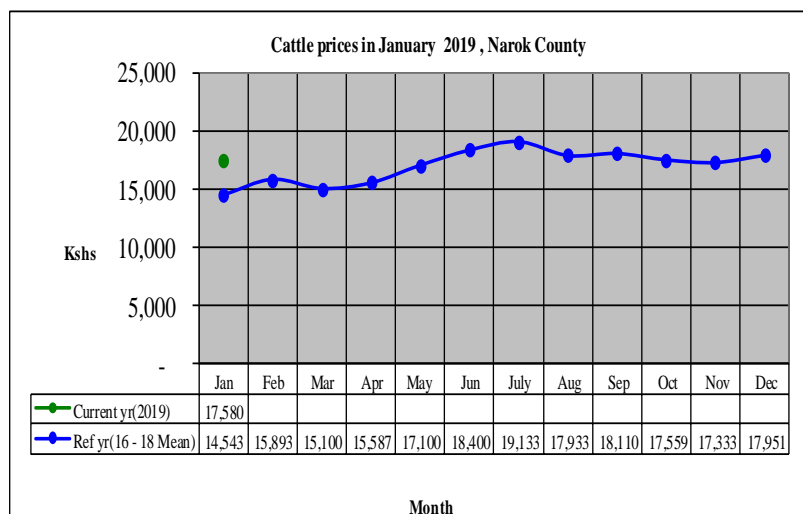


Figure 7: Cattle prices

The average price for the medium sized cattle reduced by six percent compared to last month.

The highest prices were recorded in the mixed farming livelihood zone at Kshs 19,330 per head while the lowest price was in the agro-pastoral livelihood zone at an average price of Kshs 15,000 per head. The stability in price is due to improved body condition as a result of water and forage availability.

The current cattle prices are above the normal range compared to long term means at this time of the year as shown by Figure 7.

#### 4.1.2 Goat Prices

- The average goat prices decreased by nine percent compared to the previous month. The increase in price is attributed to good body condition in small stocks and availability of browse in the mixed farming and agro-pastoral livelihood zones. The highest price was recorded in the mixed farming livelihood zone at Kshs 4,500 per head while the lowest price was recorded in the pastoral livelihood zone at Kshs 3,100 per head.
- The average goat price was above the normal range at this time of the year as shown by Figure 8.

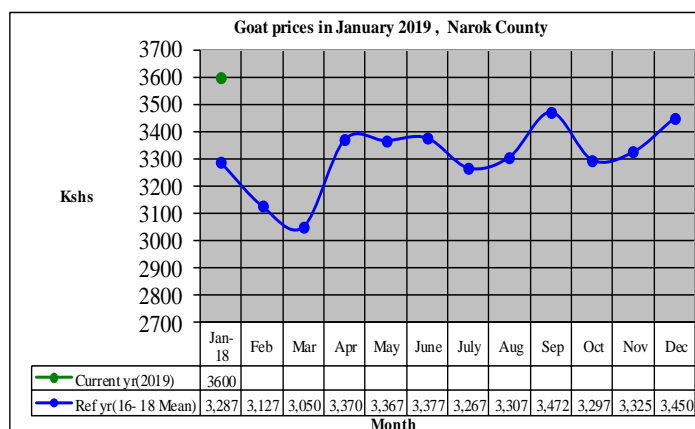


Figure 8: Goat prices

## 4.2 CROP PRICES

### 4.2.1 Maize

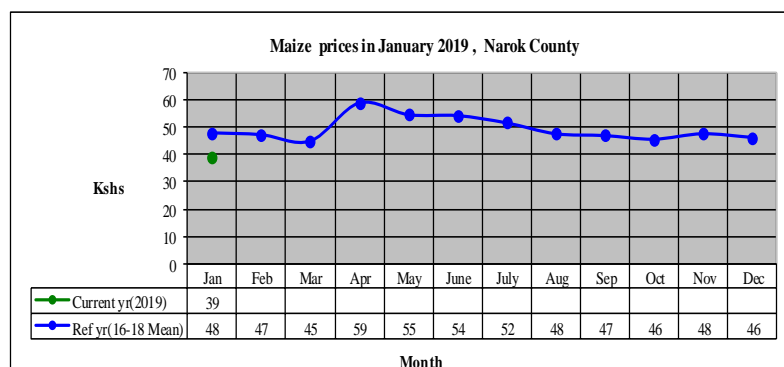


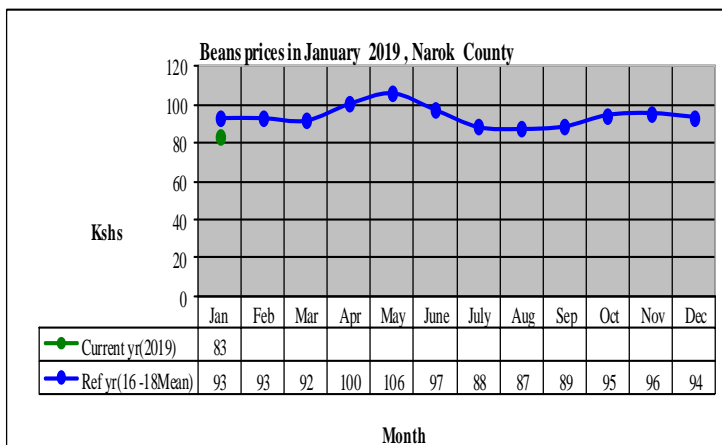
Figure 9: Maize prices

The average price of maize per kilogram remained the same compared to the previous month. The highest prices were recorded in pastoral livelihood zone at Kshs 52 per kg while the lowest was recorded in the agro-pastoral

livelihood zone at an average price of Kshs 27 per kg. The overall price is below the normal range as shown by Figure 9.

#### 4.2.2 Beans

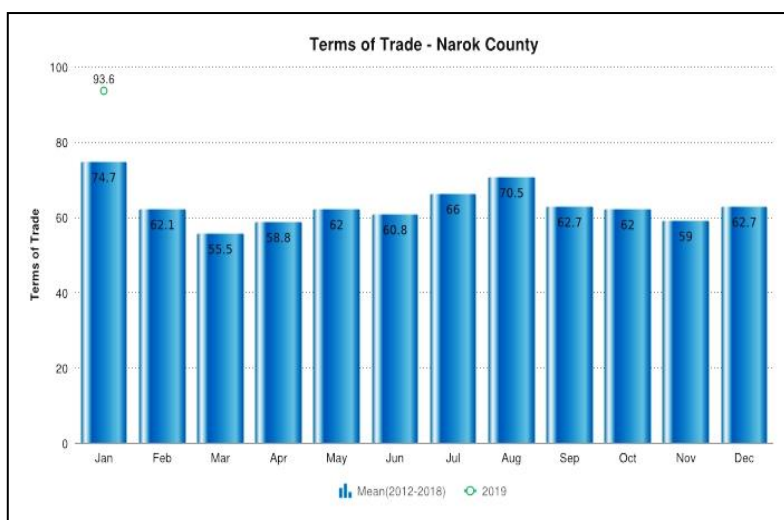
- The average price of beans reduced by eighteen percent compared to the previous month. The highest price was recorded in the pastoral livelihood zone at Kshs. 95/kg compared to the agro-pastoral livelihood zone which recorded a



lower price of Kshs.75 per kg. **Figure 10: Beans prices**

- The current price is below the normal range at this time of the year as shown by Figure 10.

#### 4.3 Livestock Price Ratio/Terms of Trade



**Figure 11: Terms of trade**

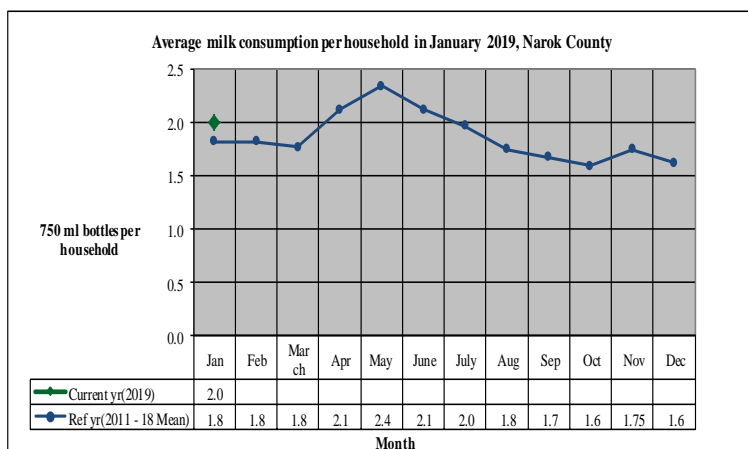
The Terms of Trade (ToTs) based on the Cereal/Meat price ratio reduced by nine percent compared to last month. The increase in ToTs is due to decreased goat prices and stability in maize prices.

This implies that a sale of one goat fetched 93.6 kg of cereals. The ToTs were less favourable in the pastoral and mixed farming livelihood zones compared to agro-pastoral livelihood zone.

The current cereal/meat price ratio is above the normal range at this time of the year as shown in Figure 11.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

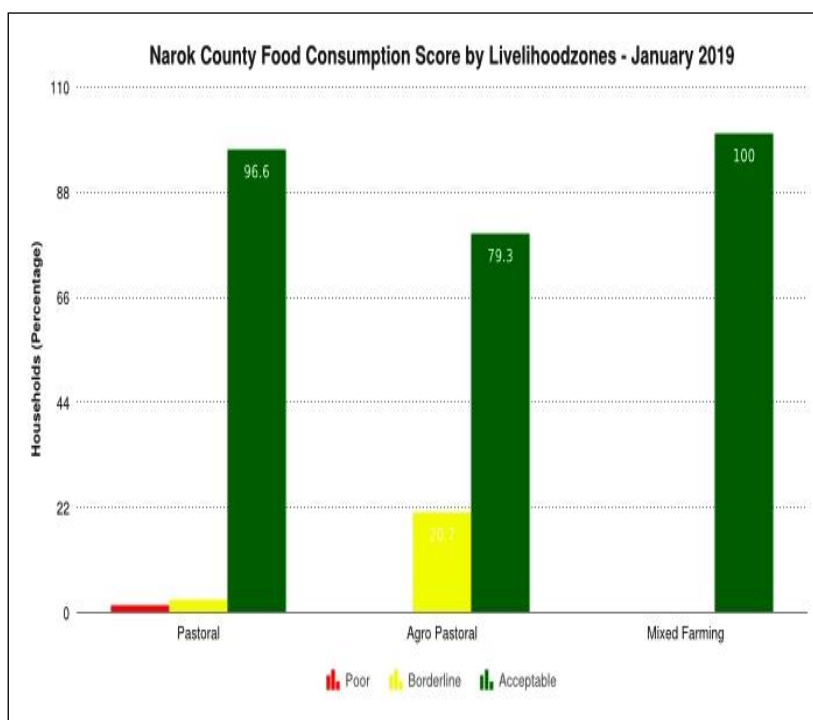


**Figure 12: Milk consumption**  
normal range at this time of the year as shown by Figure 12.

Average household milk consumption per day increased by eleven percent compared to the previous month. There was major inter-livelihood variation in milk consumption with mixed farming zone having the highest consumption rate at 3.3 litres, followed by agro-pastoral zone at 3 litres. The pastoral zone had the least consumption rate at 1.4 litre. The current milk consumption rate is within

### 5.2 FOOD CONSUMPTION SCORE

- About 91% and 8% of the households fell within the acceptable and borderline food consumption score categories respectively in the month under review.
- The poor food consumption score implies households are not consuming a balanced diet and rarely consuming food rich in protein. 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.
- There was minimal variation across the livelihood zones as shown in Figure 13 whereby most households had acceptable food consumption scores.



**Figure 13: Food consumption score**



### 5.3 HEALTH AND NUTRITION STATUS

#### 5.3.1 Nutrition Status

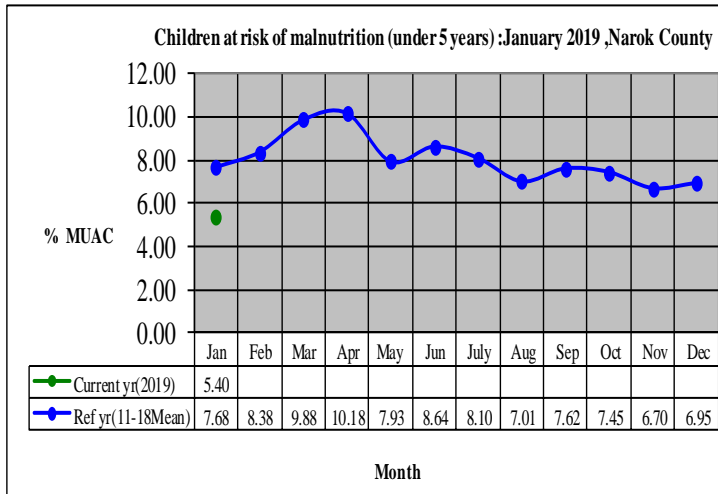


Figure 14: Children at risk of malnutrition

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 reduced by eleven percent compared to the previous month. The pastoral and the agro-pastoral livelihood zones recorded the highest number of children at risk of malnutrition at 7.4 percent compared to mixed farming livelihood zone which recorded no child under risk of malnutrition.

The dietary diversity in mixed farming livelihood zone is stable due to increase in milk consumption and availability of vegetables.

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

There were no outbreaks of human diseases in the county during the month under review.

### 5.4 COPING STRATEGIES

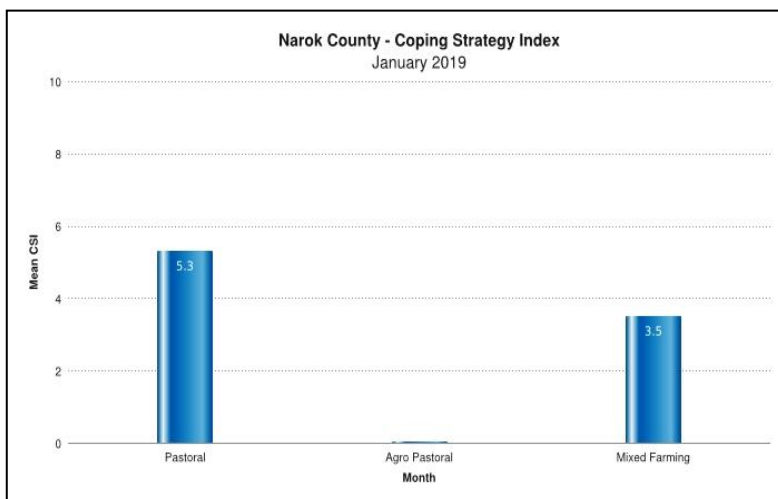


Figure 15: Coping strategies

Households employed normal coping strategies in accessing food across all the livelihood zones as shown by Figure 15. 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 Kenya Red Cross society is assisting flood victims in Mosiro ward in Narok East Sub County by reconstructing their houses.

### **6.2 FOOD AID**

- No food aid was issued during the month.

## **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**

- There was no abnormal migration experienced in the county. Most livestock had reverted back to their normal grazing areas.

### **7.3 FOOD SECURITY PROGNOSIS**

- The delayed onset of the season has affected the crop calendar mostly in the mixed farming livelihood zone. A modest harvest is likely to be realised by the end of the season. Water and livestock sectors will benefit most from the onset. Improved water and forage availability is likely to translate into improved livestock productivity in the next one month. Milk production and consumption is expected to be stable and consequently improve nutrition status of households.

## **8.0 RECOMMENDATIONS**

- 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.
- Establishment of value chain activities for various crop enterprises so as to minimise wastage during times of surplus.
- Livestock disease surveillance should be enhanced across the county.