

**National Drought Management Authority**  
**NAROK COUNTY**  
**DROUGHT EARLY WARNING BULLETIN FOR OCTOBER 2017**



A Vision 2030 Flagship Project



**OCTOBER EW PHASE**



**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

- **Rainfall:**
- Heavy downpour was experienced in the second dekad and Third dekad in the Mixed farming zone and Agro-pastoral livelihood zone with some areas in the Pastoral livelihood zones receiving few showers during the month.
- Vegetation condition: The 3 month vegetation condition index (VCI) for the County is 46.02, depicting normal vegetation greenness.

**Socio Economic Indicators (Impact Indicators)**

**Production indicators:**

- Planting of wheat and maize was recorded in Oloolunga in Narok south, Suswa and Ntulele in Narok East and Mau region in Narok North sub counties with some regions doing land preparation.
- Livestock body condition is fair to poor in the Pastoral livelihood zone and generally fair in the Mixed farming zone.
- Reduced milk production and less than long term average still being experienced.
- Fair Pasture situation in Pastoral and a few areas in the Agro-pastoral livelihood zone.

**Access indicators:**

- Terms of trade were not favorable in Pastoral livelihood zone and Mixed farming zone.
- Milk consumption ranged from fair to poor.
- Water access for both human and livestock is poor to fair

**Utilization Indicators:**

- The percent of Mid Upper Arm Circumference (MUAC) showing children at risk of malnutrition was 10.94, higher than the long term average of 8.5.

**Early Warning (EW) Phase Classification**

Livelihood Zone	Phase	Trend
AGRO PASTORAL (Kirindoni, Kilgoris)	NORMAL	IMPROVING
MIXED FARMING (ololunga, Nkareta and Emurua Dikirr)	NORMAL	IMPROVING
PASTORAL (Loita, Narosura, Olmesutie, Ntuka and Elang'ata Enterit)	ALERT	IMPROVING
LEASING/PASTORAL (Lemek, Siana)	NORMAL	STABLE
<b>COUNTY</b>	<b>NORMAL</b>	<b>IMPROVING</b>
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	0	>90
SPI-3Month (TAMSAT)	-	-1.0 to 1.0
VCI-3Month	46.02	>35
Forage condition	Fair-poor	Fair
<b>Production indicators</b>	<b>Value</b>	<b>Normal</b>
Crop Condition (Maize)	-	-
Livestock Body Condition	Fair-poor	fair
Milk Production	1.9	>5 Litres
Livestock Migration Pattern	Not normal	Normal
Livestock deaths (from drought)	No death	No death
<b>Access Indicators</b>	<b>Value</b>	<b>Normal</b>
Terms of Trade (ToT)	64.7	>100
Milk Consumption	1.3	>4 litres
Return distance to water sources	6.7	<5 Km
Cost of water at source (20 litres)	5-20	<5Kshs
<b>Utilization indicators</b>	<b>Value</b>	<b>Normal</b>
Nutrition Status, MUAC (% at risk of malnutrition)	10.94	<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

- Both spatial and temporal distribution of rainfall was fair to good. Rains were fairly distributed during the month with some parts of the county receiving heavy downpour coupled with windy and chilly weather conditions.
- The performance of the rains is generally normal at this time of the year.

## 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

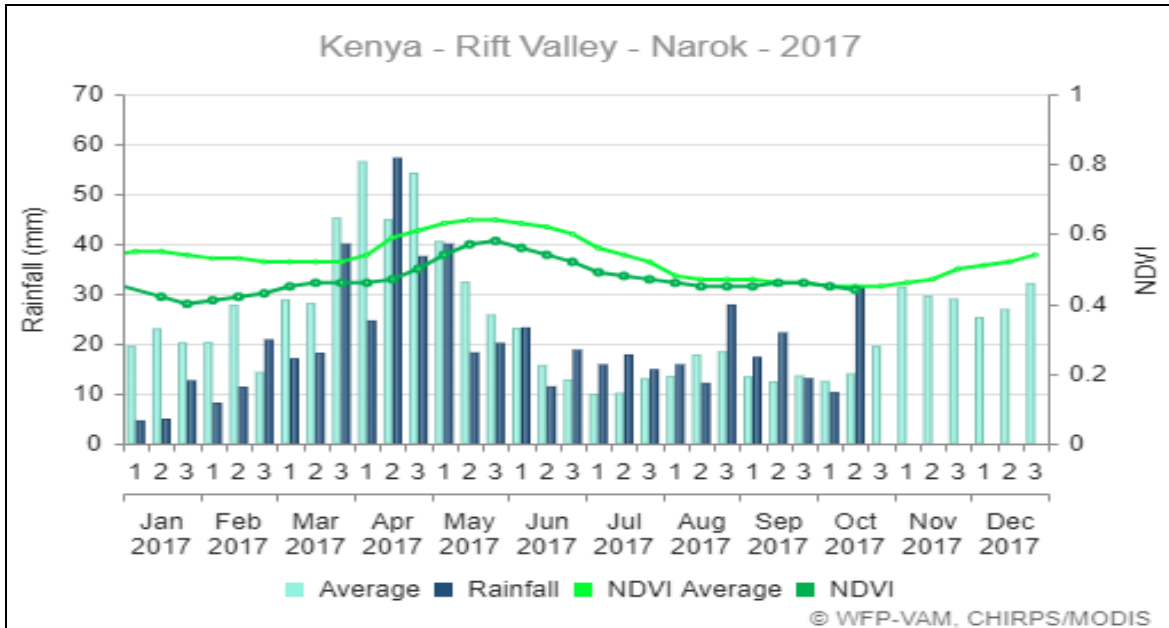


Figure 1

- The above satellite image highlights the general performance of the rains in the County from the first to second dekad of the month. Generally, the County experienced low rainfall in the first dekad, however, rains picked its momentum in the second dekad of the month. The amounts of rains recorded were above average compared to the long term means. Showers were mostly witnessed in Transmara East, Narok North, Narok South, Transmara West and Narok West sub counties in the second and third dekad of the month.

## 2. IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

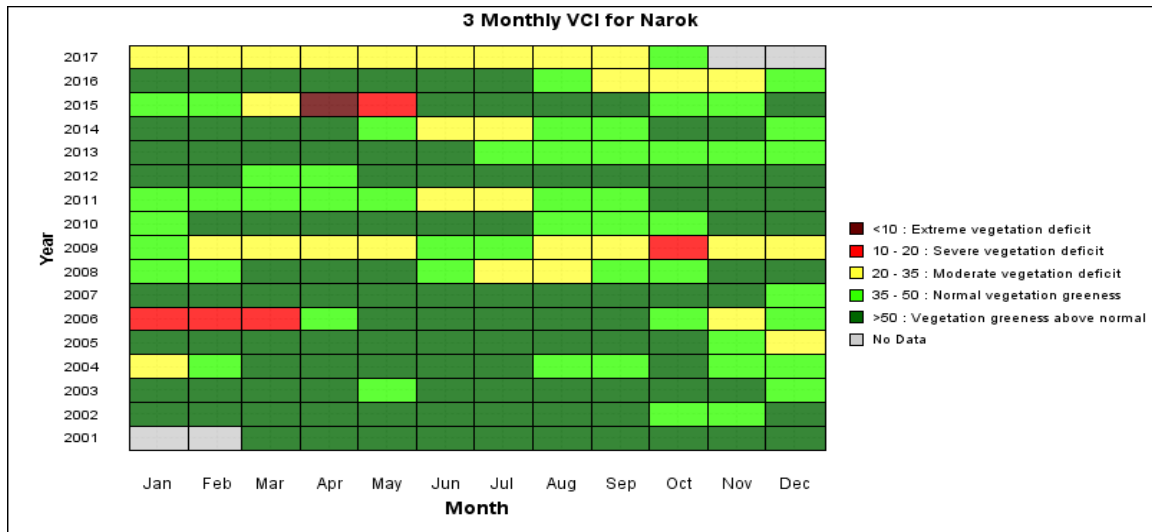


Figure 2

- The vegetation greenness as depicted by the vegetation condition index (VCI) shows normal vegetation greenness with a value of 46.02 as shown in Figure 2 above.
- However, the vegetation is still recovering and is yet to reach their normal VCI values as shown in Figure 3 below, where the VCI is still below the long term means for Norok East Sub County.

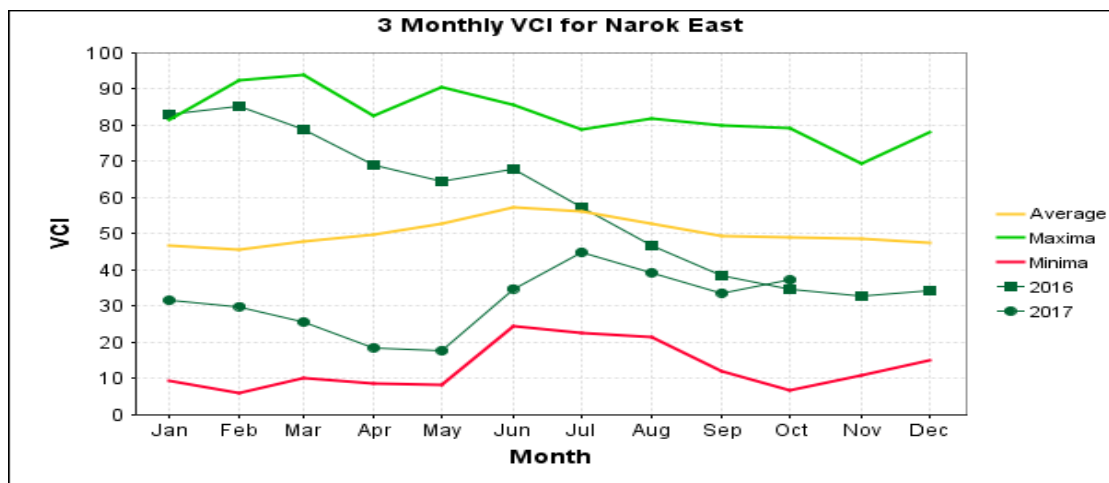


Figure 3

#### 2.1.1 Field observations

##### 2.1.1.1 Pasture

- The quantity and quality of pasture in Mixed farming livelihood zone was good. In Pastoral and some other parts of the Agro pastoral livelihood zones, pasture conditions were ranging from poor to fair. Mosiro Ward in Narok East Sub County and Naroosura ward in Narok South Sub County are still experiencing poor pastures due to depressed rains in this zone.
- The available pasture is likely to last for two months in Mixed farming and the Agro-pastoral livelihood Zones. In Pastoral livelihood zones, pastures are likely to last for

less than a month. Mosiro and Naroosura Wards are the most affected with vegetation deficit and consequently witnessing outmigration of cattle in search of pastures.

- The situation is not normal at this time of the year.

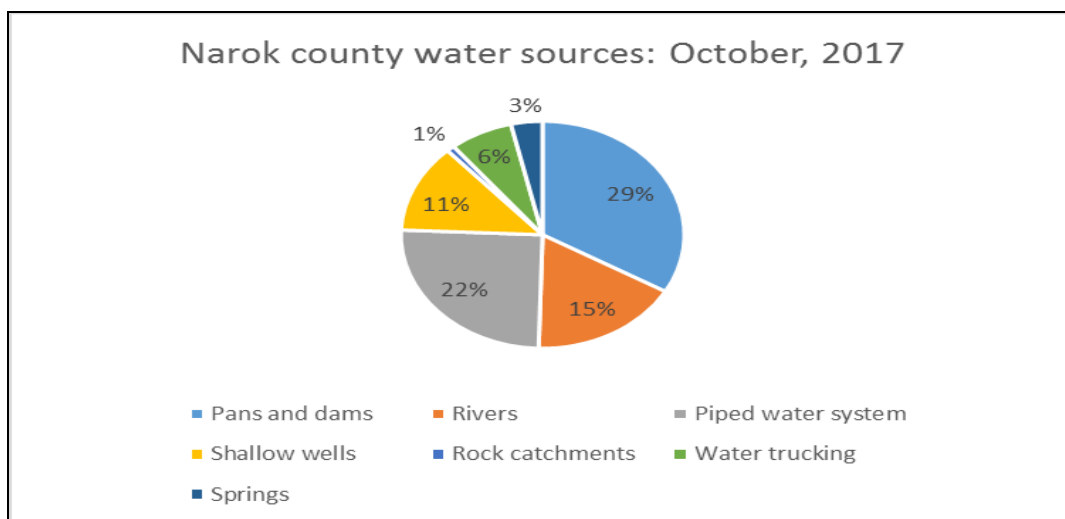
### 2.1.1.2 Browse

- The quality and quantity of browse in the Mixed farming livelihood zone and some areas in Agro pastoral livelihood zone ranged from fair to good. In Pastoral livelihood zone, the browse condition was fair. The available browse is expected to last for one and a half months in Mixed farming whereas in Agro-pastoral and Pastoral livelihood zones it is likely to last for less than a month.
- The current situation is not normal at this time of the year.

## 2.2 Water resource

### 2.2.1 Sources

- The main sources of water for livestock and human consumption in the county were Pans/Dams (29%), Rivers (15%) and boreholes at (11%) as shown by Figure 4 below.

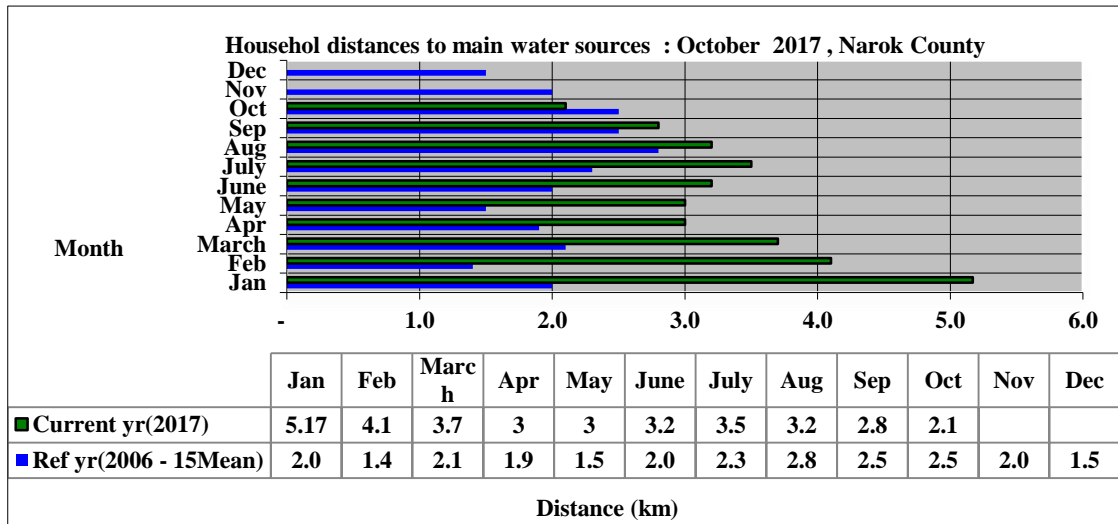


**Figure 4**

- Most households relied on Pans and Dams and rivers as most of other sources had dried up due to poor surface recharge during the long rains season.
- The quantity and quality of water ranged from fair to good in Mixed farming livelihood zones. In Pastoral livelihood zones, water volumes were low.
- The current water sources are expected to last for two months in Mixed farming and Agro-Pastoral livelihood zones. In Pastoral livelihood zones, the water is to last for less than a month.
- The status of main sources of water is still below normal at this time of the year and is likely to improve as rains intensify in the county.

### 2.2.2 Household access and Utilization

- The average distance to watering points for households was recorded at 2.1 km having reduced from 2.8 km recorded in the previous month as shown in figure 5 below.

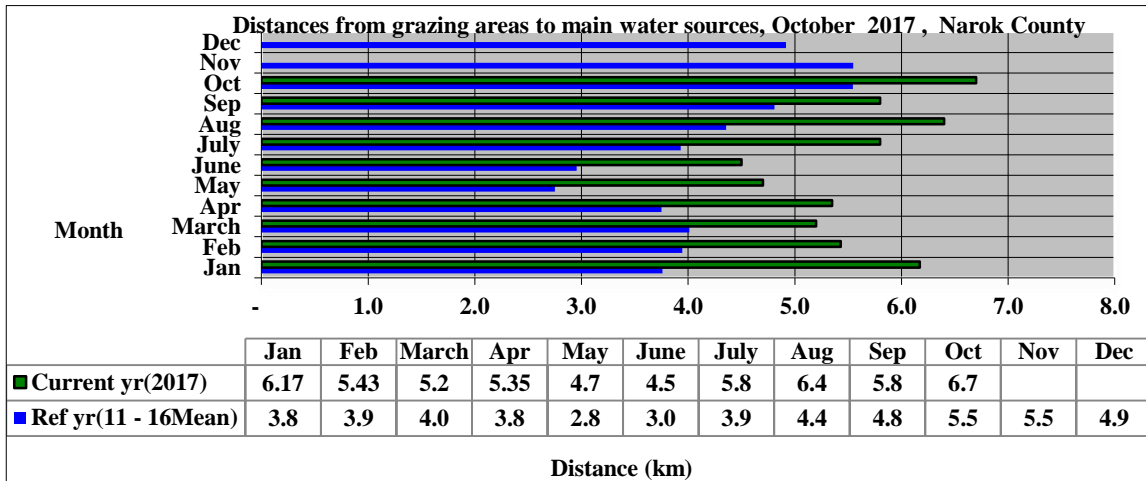


**Figure 5**

- Pastoral livelihood zone recorded the longest average return distance of 8.7 km having reduced from 10 km last month while the shortest average distance was recorded in Mixed farming livelihood zone, remaining at 0.5 km as recorded last month. The decrease in distance is owed to rains received in the county.
- The current trekking distances to water points are below normal at this time of the year.

### 2.2.3 Livestock access

- The average distance to main water sources from grazing areas increased to 6.7 km from 5.8 km recorded last month as shown by Figure 6 below.



**Figure 6**

- Pastoral livelihood zone recorded the longest distance at 10 km while the shortest distance was recorded in the Mixed farming livelihood zone at 1 km. Mosiro, Suswa, Ntuka and Siana areas in the Pastoral livelihood zone are some of the areas experiencing challenges in accessing water due to poor surface recharge. Pasture access constraint is also contributing to longer distances to watering points as most of the livestock is yet to return to their normal grazing fields. However, this is expected to change as the rains progresses.
- The current average distance is above normal at this time of the year.

### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

##### 3.1.1 Livestock Body Condition

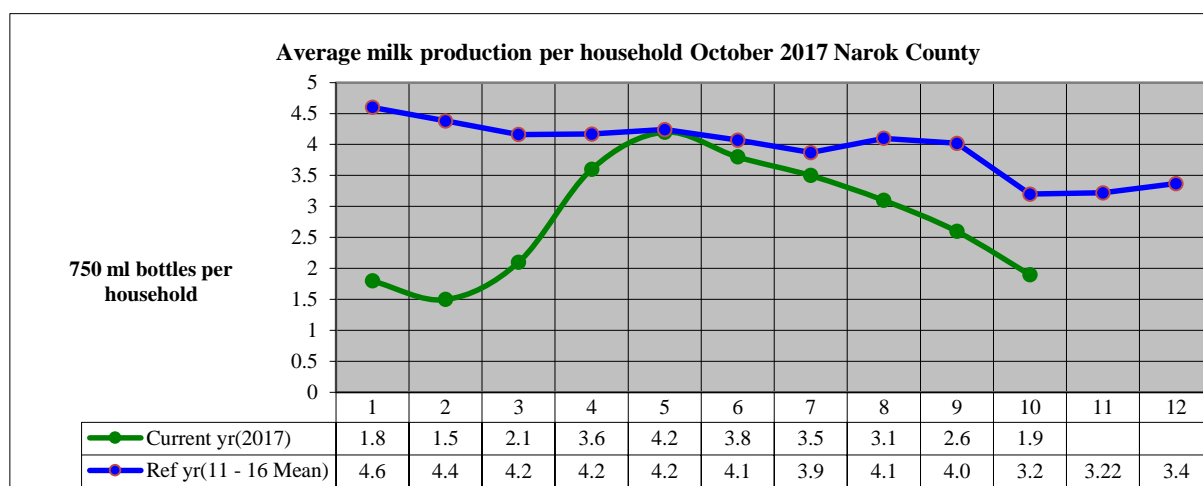
- The Cattle body condition generally ranged from fair to good in the Mixed farming and Agro-Pastoral livelihood zones and poor to fair in the Pastoral livelihood zone and a few areas in the Agro-pastoral livelihood zone compared to last month. The body condition for sheep and goat ranged from fair to good across all livelihood zones as they were least affected by drought effects.
- The livestock body condition is likely to improve since pasture has started regenerating and water sources have started recharging in the county.
- The current livestock body condition is below normal at this time of the year.

##### 3.1.2 Livestock Diseases

- Foot and Mouth disease (FMD) and Contagious Bovine Pleuropneumonia (CBPP) were reported mostly in the pastoral and in the Agro-pastoral livelihood zones. FMD was reported in Narok South and Narok East Sub Counties. CBPP was reported in Narok West and Narok South Sub Counties.
- A few cases of confirmed outbreak of PPR diseases in Transmara West and Narok West Sub Counties were reported during the month. The cases have since been handled by the county veterinary services department.

##### 3.1.3 Milk Production

- The average milk production per household per day reduced to 1.9 bottles per household from 2.6 bottles recorded in the previous month as shown in figure 7 below.



**Figure 7**

(n = 180)

- The decrease in milk production is attributed to poor livestock body condition which is in turn being affected by poor forage condition in the pastoral and agro pastoral livelihood zones despite the rains being experienced in the county. Milk production in the mixed farming zone has improved compared to last month. Milk production is likely to increase owing to onset of the short rains season.
- The quantity of milk produced is below normal at this time of the year.

## **3.2 RAIN-FED CROP PRODUCTION**

### **3.2.1 Stage and Condition of food Crops**

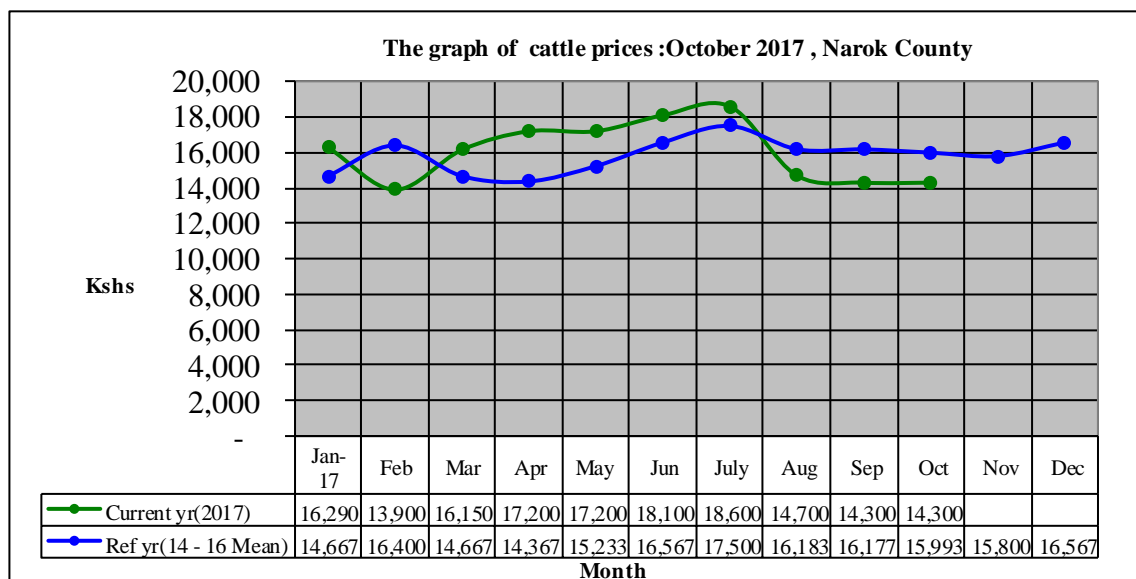
- The crops planted in the County include beans, sorghum, maize, wheat and potatoes.
- The on-going farming activity in Mixed farming is minimal harvesting of wheat in Narok North and Narok South sub counties. Most crops performed poorly due to poor rainfall performance and outbreak of fall and African army worms which attacked crops and pastures in most parts of the county. The pests have been observed in Narok East, Narok West, Transmara West and Transmara East sub counties.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

- The average price for the medium size cattle remained at Kshs 14,300/head compared to the previous month as shown by Figure 8 below.



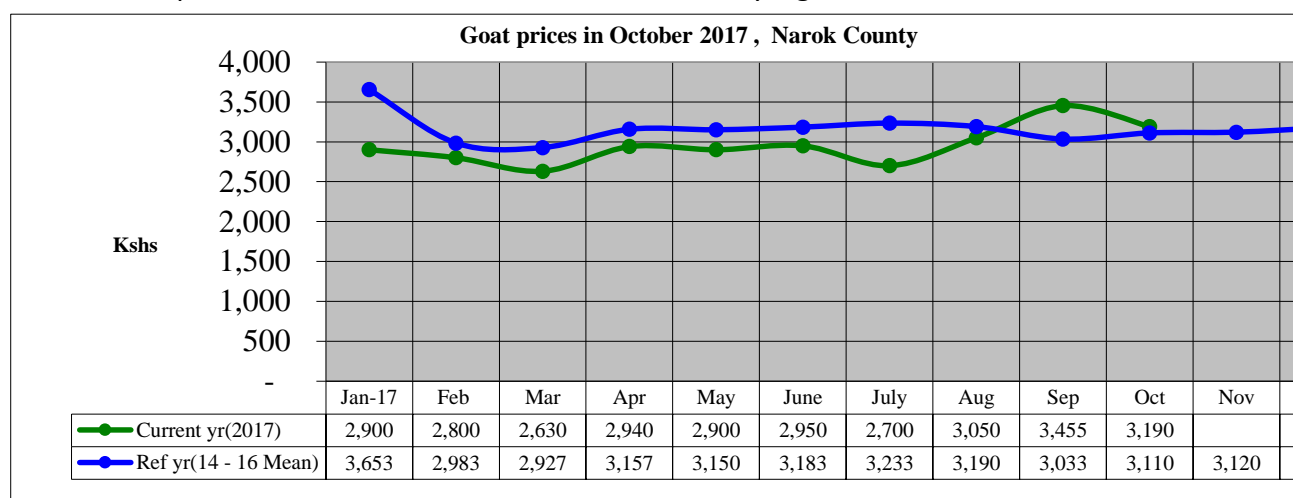
**Figure 8**

(n = 180)

- The highest prices were recorded in Mixed farming livelihood zone and the Agro Pastoral livelihood zone at Kshs 15,300 per head and the lowest in the Pastoral livelihood zones at an average of Kshs 12,000 per head. The decrease in livestock prices is owed to poor livestock condition in the Pastoral livelihood zone.
- The current cattle prices are below normal compared to long term means at this time of the year.

#### 4.1.2 Goat Prices

- The average price of a medium sized two year old goat reduced to Kshs. 3,190 from Kshs. 3,455 per head recorded last month as indicated by Figure 9 below.



**Figure 9**



(n = 180)

- Households are disposing the goats to the markets in an effort to get cash for purchasing food and other important household expenditures such as animal feeds.
- There was a significant inter-livelihood variation in goat prices, as those in Mixed farming zone sold at Kshs. 3,975 compared to the pastoralist who sold at Kshs. 3,100.
- The average goat price was almost normal at this time of the year.

## 4.2 CROP PRICES

### 4.2.1 Maize

The average prices of maize per kilogram reduced to Kshs.52 from Kshs. 58 of last month as shown in Figure 10 below.

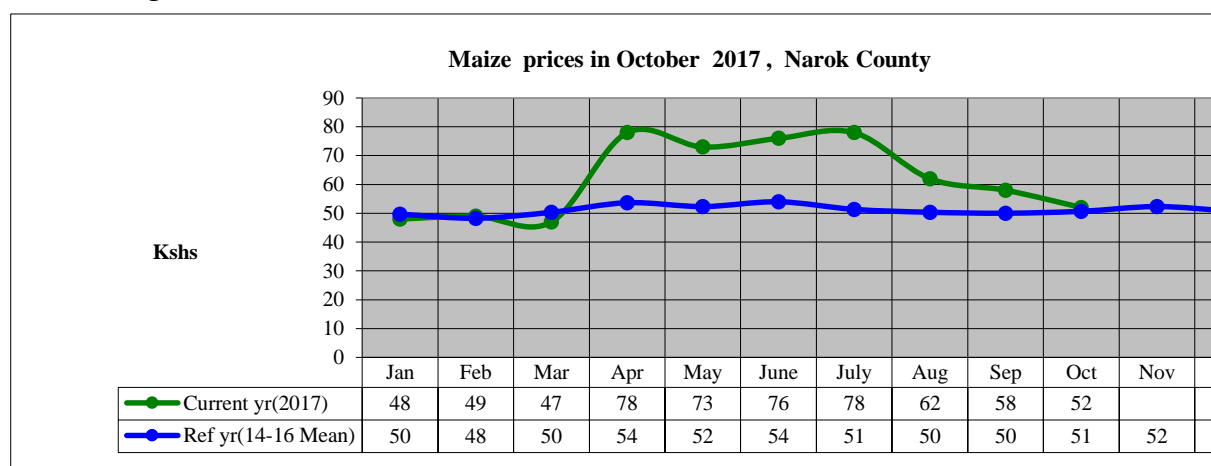


Figure 10

(n = 180)

- The current maize prices are still higher than the normal since there is generally low supply of maize in the country leading to maize shortages. Maize availability was greatly affected by outbreak of fall army worms in the county.
- The highest prices were recorded in Pastoral livelihood zone at Kshs 70 per kg while the lowest was recorded in the Mixed farming livelihood zone at an average of Kshs 40 per kg.
- The overall price is almost normal compared to the long term means at this time of the year.

### 4.2.2 Beans

- The average price of beans per kg increased to Kshs. 101 compared to the previous month of Kshs. 89 as shown in Figure 11 below.

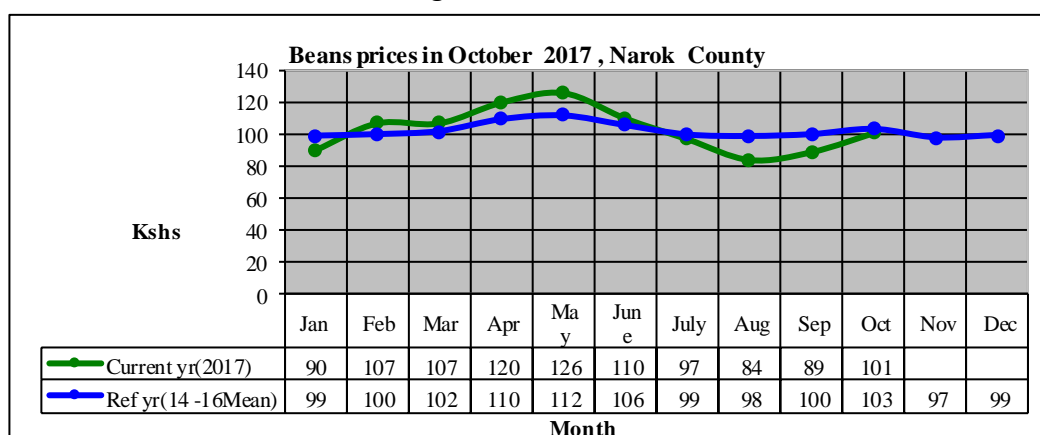


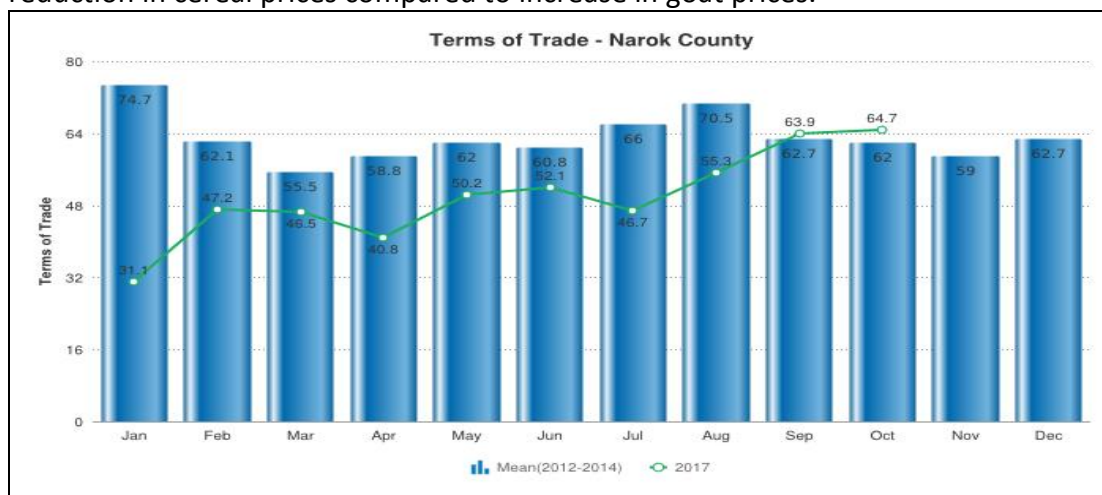
Figure 11

(n = 180)

- The highest price was recorded in the Pastoral livelihood zones at Kshs. 140/kg, compared to the Mixed farming livelihood zone, which recorded a lower price of Kshs.93 per kg. The inter-livelihood price variation is attributed to additional costs during transportation due to poor market access networks and high demand.
- The increase in prices is attributed to diminishing stock at household level.
- The price is almost normal at this time of the year.

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

- The Terms of Trade based on the Cereal/Meat price ratio increased slightly to 64.7 from 63.9 as recorded in the previous month. More amounts of cereals could be obtained in exchange for meat than the previous month. The increase was occasioned by the reduction in cereal prices compared to increase in goat prices.

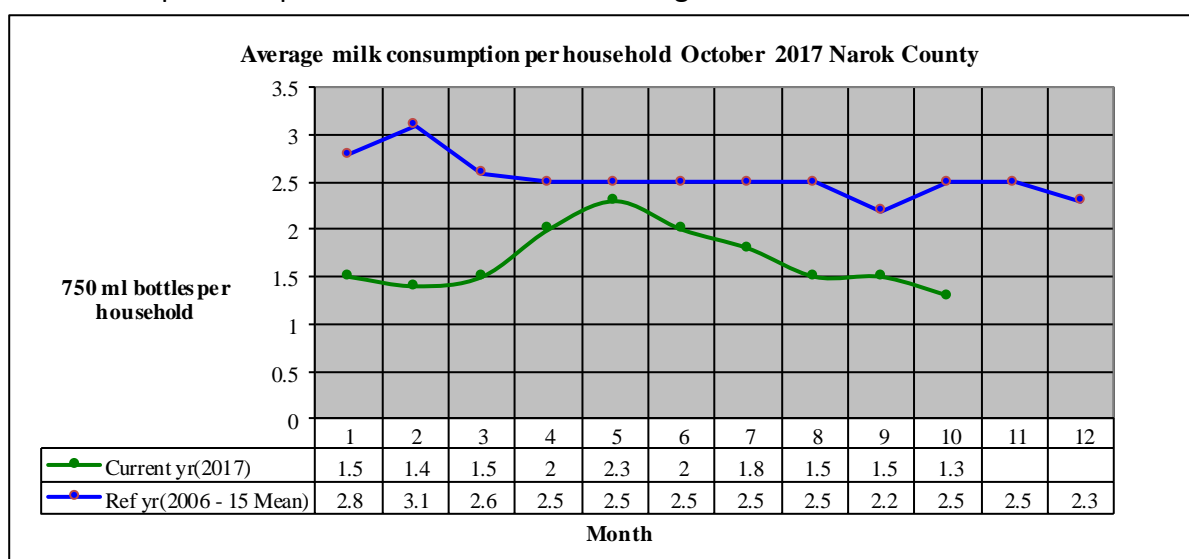


- The terms of trade were not favourable in the Pastoral livelihood and Mixed farming livelihood zones as it was much lower compared to Agro-Pastoral livelihood zone. The Agro-pastoral and Pastoral areas recorded much higher cereal prices accompanied with increased goat prices compared to mixed farming zones which recorded low goat and cereal prices.
- The cereal/meat price ratio is slightly above normal at this time of the year.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

- Average milk consumption at the household level reduced to 1.3 litres from 1.5 litres compared to previous month as shown in Figure 12 below.



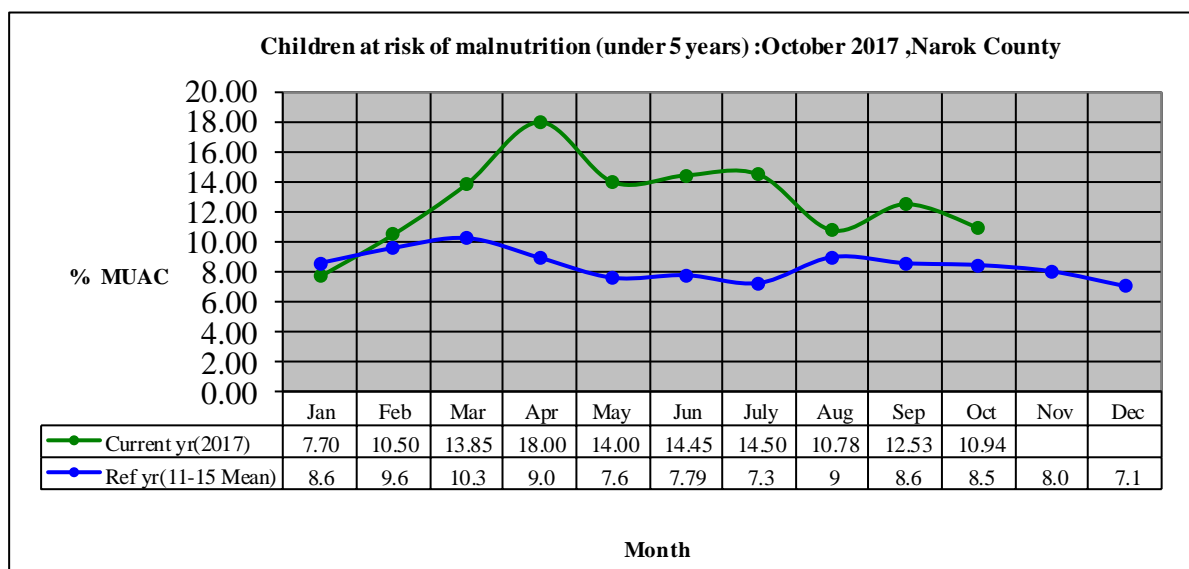
**Figure 12**

- Milk consumption rate is expected to increase in the county if rains continues.
- In the pastoral livelihood zone, milk consumption is still poor due to livestock migration coupled with low milk production and poor livestock body condition.
- The current milk consumption rate is below normal at this time of the year.

## 5.2 HEALTH AND NUTRITION STATUS

### 5.2.1 Nutrition Status

- 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 decreased to 10.94% from 12.53% as shown by Figure 13 below.



**Figure 13**

(n = 649)

- The reduction in MUAC cases was mostly witnessed in mixed farming livelihood zone. The pastoral and the agro-pastoral livelihood zones recorded the highest number of children at risk of malnutrition at 24% compared to Mixed farming livelihood zone which recorded 1.7%. The highest number of children at risk of malnutrition was witnessed in Mosiro and Narosura wards in Pastoral livelihood zone owing to poor dietary diversity and increased food prices coupled with reduced milk consumption rate.
- The dietary diversity in mixed farming livelihood zone has improved slightly due to green vegetables availability owing to showers received during the month, even though households are still dependent on cereals compared to other food groups.
- The current rate of malnutrition is above normal compared to the long term average.

### 5.2.2 Health

- No major disease outbreaks were reported during the month apart from a few cases of fever in children as a result of chilly weather condition across all the livelihood zones

### 5.3 COPING STRATEGIES

- In the mixed Farming zone, the coping strategy index (CSI) was 14.9 while that of agro-pastoral and pastoral livelihood zone was 5.4 and 4.5 respectively (Figure 14). This implies that households in the mixed farming zone employed more coping strategies compared to those in pastoral and agro-pastoral livelihood zones who can sell livestock and livestock products to purchase food. In the mixed farming livelihood zone, there are limited income opportunities.

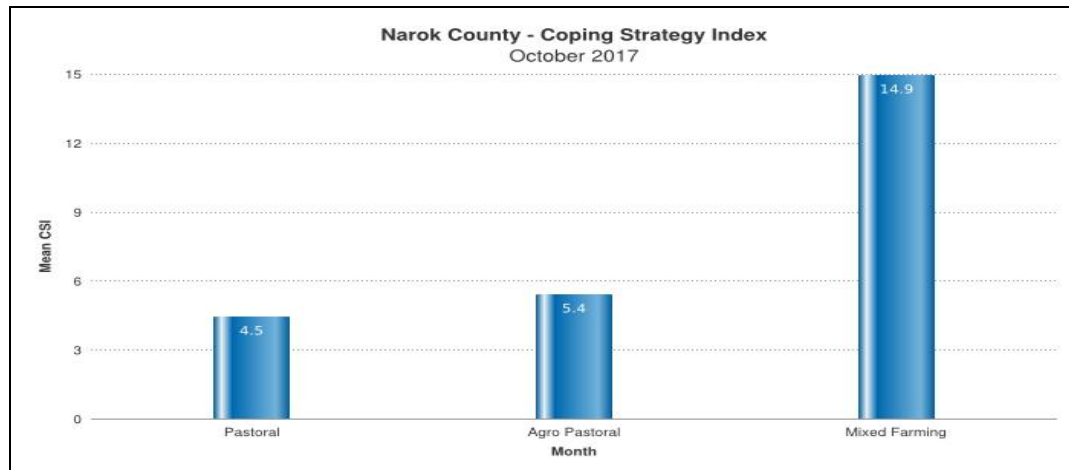


Figure 14

- Increased cases of charcoal burning and casual labour as a means of getting income to purchase food was on the increase in Emurua Dikir and Narok East Sub Counties.
- The coping strategies are not normal at this time of the year.

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

### **6.1 NON-FOOD INTERVENTIONS –**

- NDMA distributed 5,000 bags (50kg) of drought pellets and 5,000 packets (2.5kg) of mineral blocks to vulnerable households in Transmara West, Narok East, Narok South and Narok West sub counties. The supplements were targeted to key productive stocks left behind at the households with the intention of sustaining household milk production and incomes until the onset of the short rains season.

### **6.2 FOOD AID**

- No food aid was issued during the month.

## **7.0 EMERGING ISSUES**

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

- There was no major incident witnessed during the month under review.

### **7.2 Migration**

- There was reduced migration in search of pasture and water in Mara region, Mosiro ward and Naroosura ward in the Pastoral livelihood zones. High concentration of cattle was still being witnessed in wheat and maize harvested farms in Oloolulunga in Narok South Sub County, Mau and Ntulele in Narok East sub-county.
- Reduced cases of in-migration from Kajiado County was also reported during the month.

### **7.3 FOOD SECURITY PROGNOSIS**

- With the onset of the short rains season, pasture and browse conditions are expected to improve. This will translate into improved livestock body condition hence leading to improvement in livestock productivity. Milk production is expected to improve and consequently leading to better milk consumption and hence improving household food and nutrition security.
- Water access and availability is expected to improve as the rains progresses. Recharge of water sources is ongoing.
- Cases of malnutrition are likely to go down with the expected improvement in milk production and consumption at the household level.

## **8.0 RECOMMENDATIONS**

- With the onset of the short rains season, chances of outbreak of opportunistic diseases are high. Increased disease surveillance mostly in pastoral zones should be done.
- Sanitation and hygiene standards must be upheld in order to minimise chances of outbreak of water borne disease during the current rains season.