

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



A Vision 2030 Flagship Project



**APRIL EW PHASE**

**Drought Status: ALERT**



**Maandalizi ya mapema**

**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

- **Rainfall:** Most parts of the county have received rains within the last two weeks of April.
- **Vegetation condition:** The 3 month vegetation condition index (VCI) for the County is 29.61, depicting a moderate vegetation deficit.

**Socio Economic Indicators (Impact Indicators)**

**Production indicators:**

- No harvest recorded
- Livestock body condition is fair to good and improving in all the livelihood zones.
- Milk production increased and slightly less than long term average.
- Livestock migration in search of pasture in Pastoral livelihood zone has reduced. There were cases of livestock deaths reports during the month in the Pastoral livelihood zone caused by chilly weather and consumption of lush pastures.

**Access indicators:**

- Terms of trade were not favorable especially in Pastoral livelihood zone.
- Milk consumption ranged from fair to poor.
- Water access by both livestock and humans has improved due to the ongoing long rains season.

**Utilization Indicators:**

- The percent of Mid Upper Arm Circumference (MUAC) showing children at risk of malnutrition was 18, higher than the long term average of 9, more than the previous month of 13.85%, indicating a rise in malnutrition cases in the county.

**Early Warning (EW) Phase Classification**

Livelihood Zone	Phase	Trend
AGRO PASTORAL (Kirindoni, Naroosura, Mosiro and Suswa)	ALERT	IMPROVING
MIXED FARMING (Nairregi-Enkare, and Kilgoris)	NORMAL	STABLE
PASTORAL (Loita, Olmesutie, Ntuka and Elang'ata Enterit)	ALERT	STABLE
LEASING/PASTORAL (Lemek)	ALERT	IMPROVING
<b>COUNTY</b>	<b>ALERT</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	29.61	>35
Forage condition	Fair	Fair
<b>Production indicators</b>	<b>Value</b>	<b>Normal</b>
Crop Condition (Maize)	-	-
Livestock Body Condition	Fair	Normal
Milk Production	3.6	>5 Litres
Livestock Migration Pattern	Not normal	Normal
Livestock deaths (from drought)	Minimal death	No death
<b>Access Indicators</b>	<b>Value</b>	<b>Normal</b>
Terms of Trade (ToT)	41	>100
Milk Consumption	2.0	>4 litres
Return distance to water sources	5.35	<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)	18	<10
Coping Strategy Index (CSI)	1.8	<2.0

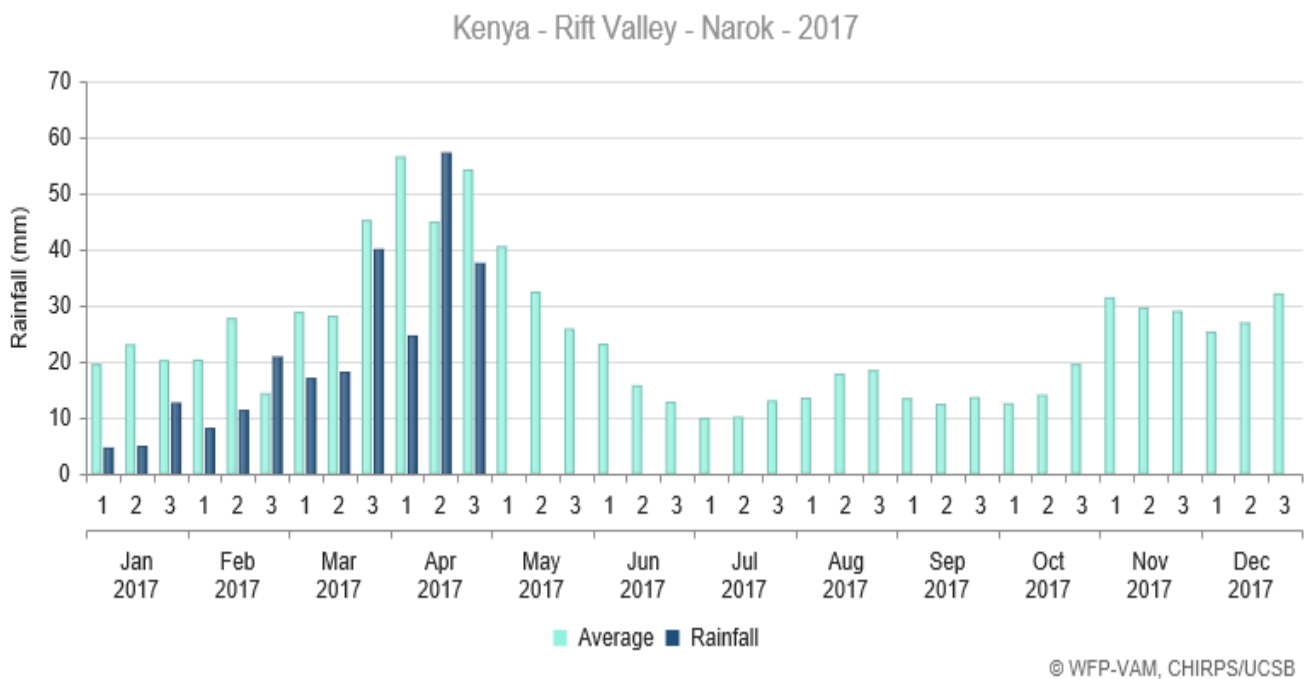
<ul style="list-style-type: none"> <li>▪ Short rains harvests</li> <li>▪ Short dry spell</li> <li>▪ Reduced milk yields</li> <li>▪ Increased HH Food Stocks</li> <li>▪ Land preparation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Planting/Weeding</li> <li>▪ Long rains</li> <li>▪ High Calving Rate</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 have received rains despite the late onset in the Eastern part of the county. The Western part of the County had a normal onset.

## 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION



© WFP-VAM, CHIRPS/UCSB

Figure 1

- The satellite image in Figure 1 above highlights the general performance of the rains in the County from the first to third dekad of the month. The performance was below normal in the first dekad and gained momentum in the second dekad which indicates an above normal rainfall in the county. However, during the third dekad, the rainfall amounts declined and were below normal.

## 2. IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

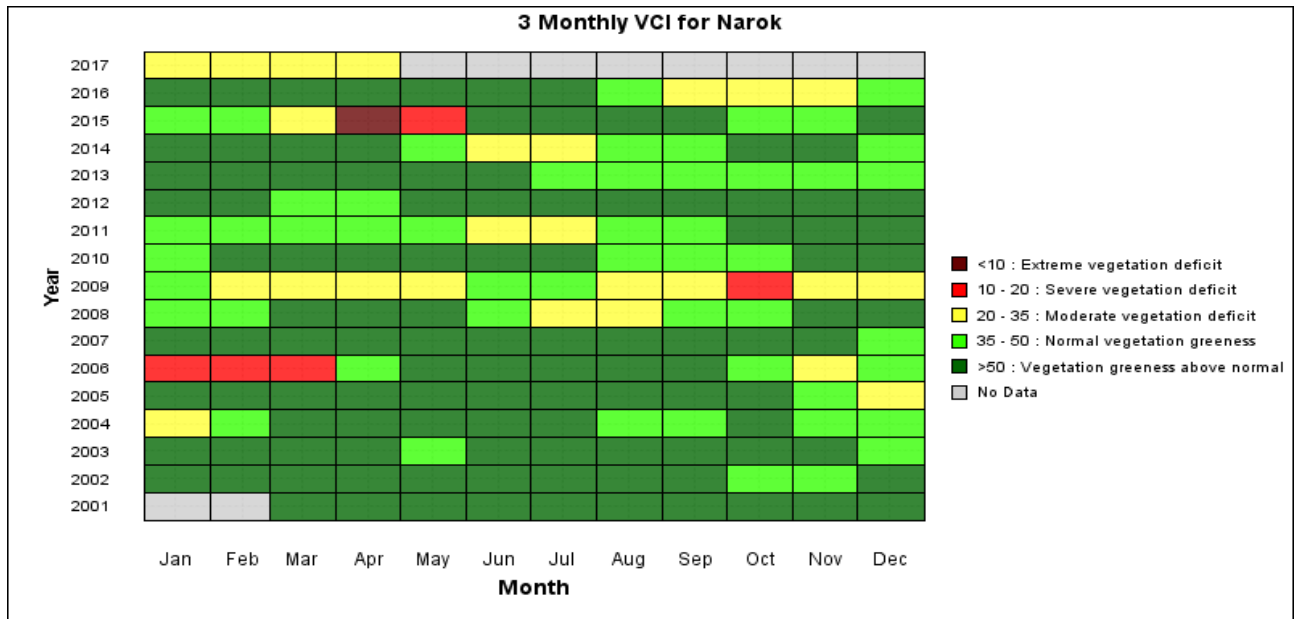


Figure 2

- The vegetation greenness as depicted by the vegetation condition index (VCI) shows moderate vegetation deficit with a value of 29.61 as shown in Figure 2 above. Due to time lag effect, vegetation recovery is still ongoing despite the presence of rains in the County.
- Other than Emurua Dikir and Kilgoris Sub Counties, all the other four Sub Counties are experiencing some form of vegetation deficit with Narok East being the most affected as it is having severe vegetation deficit. Figure 4 below shows that Narok South and Narok East Sub Counties had the least VCI indices of 21.19 and 18.43 , depicting a moderate and severe vegetation deficit respectively

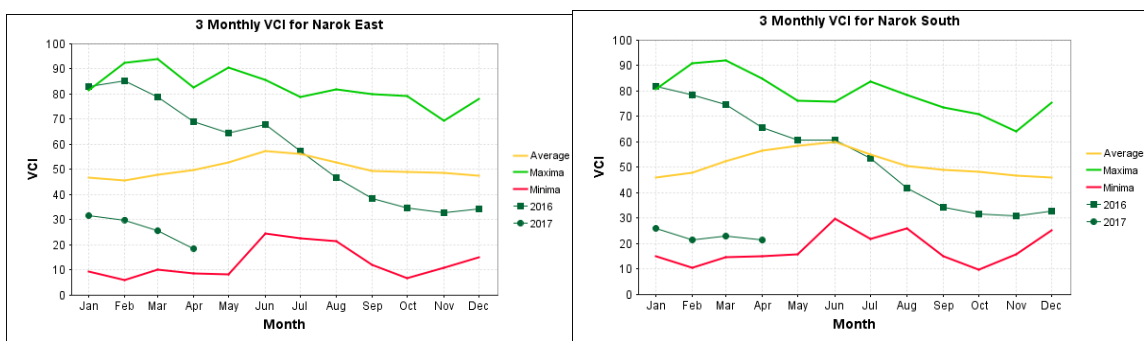


Figure 3

## 2.1.2 Field observations

### 2.1.2.1 Pasture

- The pasture quality and quantity in the Mixed farming livelihood zone and some parts of Agro pastoral livelihood zone such as Kirindon in Transmara West, Ilkerin in Transmara East and Nkareta in Narok North remained fair. There was a slight improvement in pasture condition in the Pastoral livelihood zone and parts of Agro-pastoral livelihood zone compared to the previous month. Only parts of Mosiro ward and Naroosura Ward both in the Pastoral livelihood zone still faced a challenge of Pasture regeneration having been hard hit by drought coupled with overgrazing and late onset of the rains.
- The bulk of the pastures constitute lush pastures which are young and wet.
- The available pasture is likely to last for two and half months in Mixed farming and the Agro-pastoral livelihood Zones and a month in Pastoral livelihood zone.
- The situation is not normal at this time of the year.

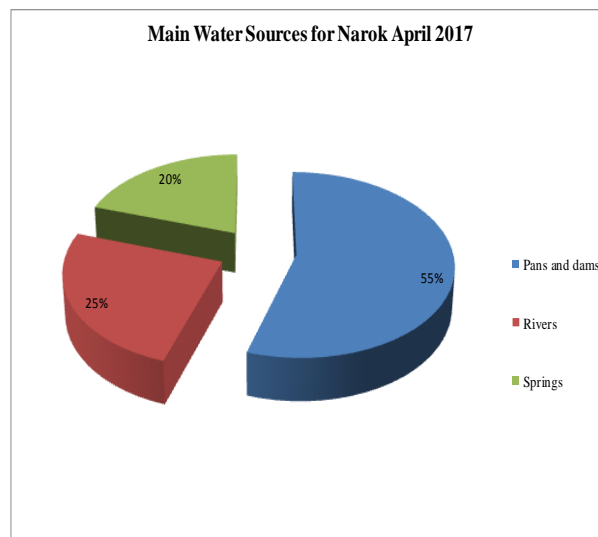
### 2.1.2.2 Browse

- The quality and quantity of browse in the Mixed farming livelihood zone and some areas of the Agro pastoral livelihood zone ranged from fair to good depicting an improvement compared to last month. In Pastoral livelihood zone, the browse condition was fair. The available browse is expected to last for three months in Mixed farming whereas in Agro-pastoral and Pastoral livelihood zones it is projected to last for 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 (55%), Rivers (25%) and spring (20%) as shown by Figure 4.
- Most households relied on Pans and Dams as most of them were recharged by the off season rains in March and April with improved water volumes and other emerging water sources like springs.
- The quantity and quality of water was fair to good in Mixed farming livelihood zones. In Pastoral and Agro Pastoral livelihood zones, water volumes are improving. The situation is expected to improve further with the ongoing rains.

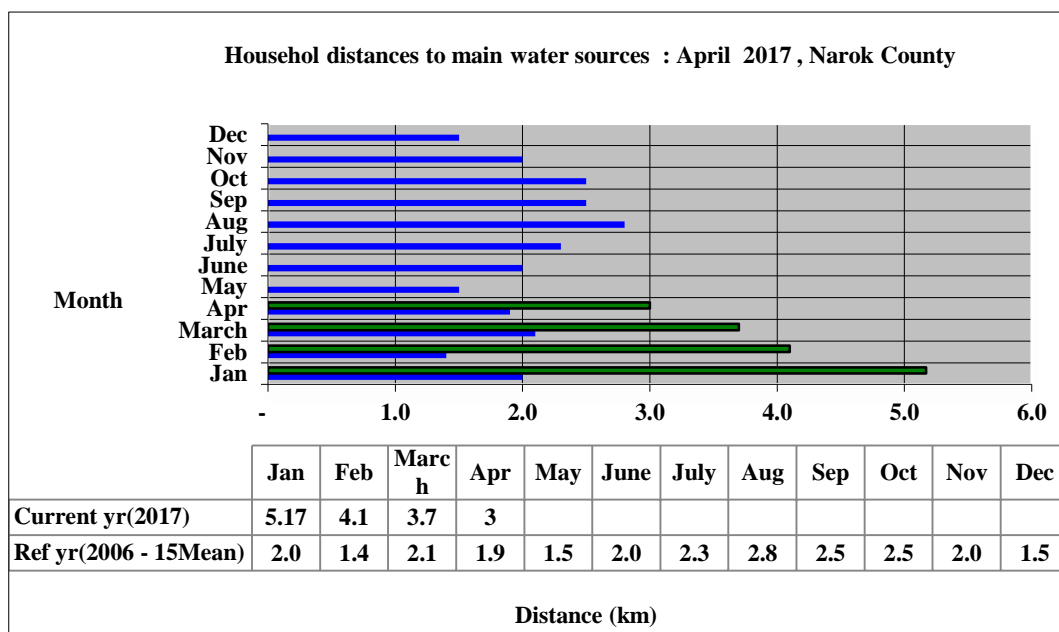


**Figure 4**

- The current water sources are expected to last for three months in Mixed farming livelihood zone. In Pastoral and Agro-pastoral livelihood zones, the water is to last for one to two month. Some areas like Koyiaki in Siana Ward, Ntuka in Naroosura Ward and Mosiro ward had little water thus triggering livestock movement in search of water.
- The status of main sources of water is still below normal at this time of the year despite rainfall onset in the county.

### 2.2.2 Household access and Utilization

- The average distance to watering points for households reduced to 3 km from 3.7 km of last month as shown in Figure 5 below. The distance reduction was occasioned by the onset of the rains in the county.

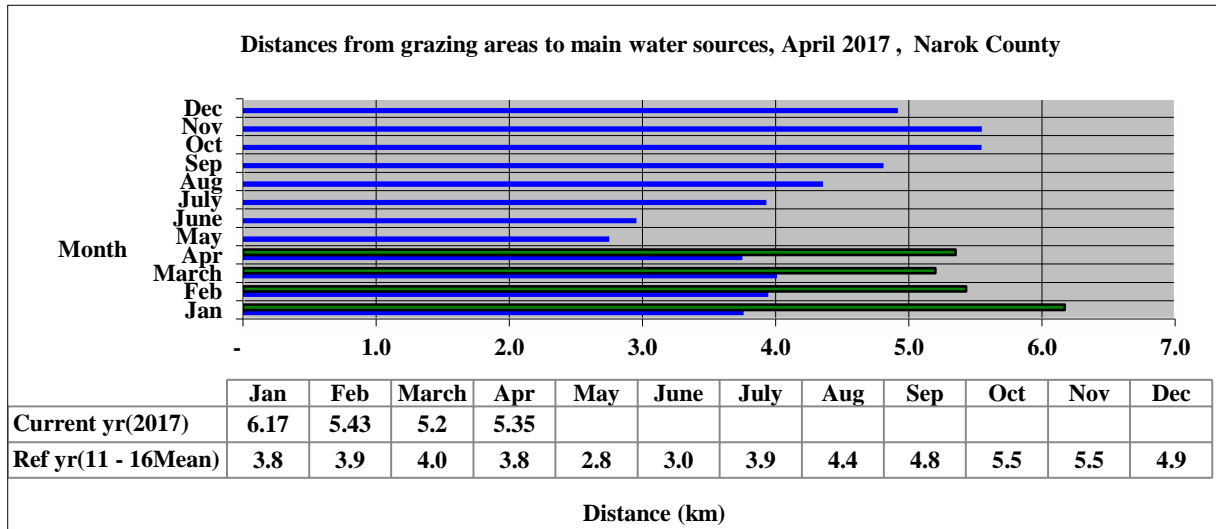


**Figure 5**

- Pastoral livelihood zone recorded the longest average distance of 4 km having remained the same as previous month while the shortest average distance was recorded in Mixed farming livelihood zone at 0.5 km.
- The current trekking distances to water points are above normal at this time of the year.

### 2.2.3 Livestock access

- The average distance to main water sources from grazing areas increased slightly to 5.35 km from 5.2 km recorded last month as shown by Figure 6 below.



**Figure 6**

- Pastoral livelihood zone recorded the longest distance at 7 km while the shortest distance was recorded in the Mixed farming livelihood zone at 1.5 km. Mosiro and Suswa areas in the Pastoral livelihood zone were still experiencing long distances in accessing water points as the water available were for household use .The current situation is likely to improve as rains continues in the county.
- 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

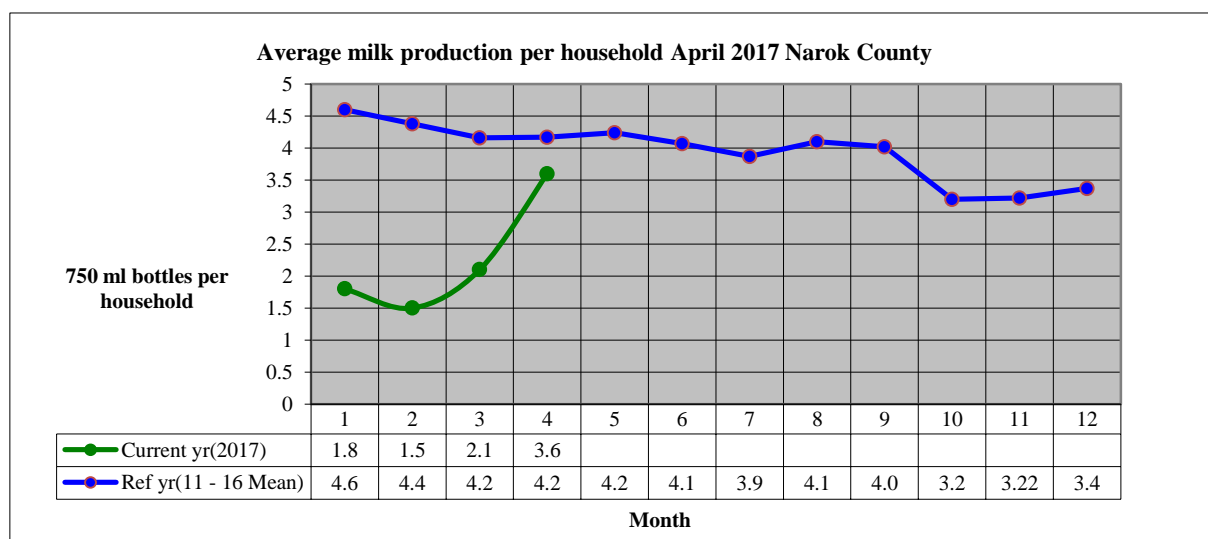
- The Cattle body condition ranged from fair to good in the Mixed farming and Agro-Pastoral livelihood zones and fair to poor in the Pastoral livelihood zone. The body condition for sheep and goat were generally good in all livelihood zones.
- The livestock body condition improvement is attributed to pasture regeneration and improved water access and availability.
- The current livestock body condition is slightly below normal at this time of the year.

#### 3.1.2 Livestock Diseases

- There were increased reported cases of Sheep and goat Pox outbreaks in Naikara ward in Narok West Sub-County, Loita Ward in Narok South Sub-County, Lolgorian ward in Transmara West Sub county and Mosiro Ward in Narok East Sub County. Foot and Mouth disease (FMD), Contagious Bovine Pleuropneumonia (CBPP) and Lumpy Skin Disease (LSD) were reported mostly in the pastoral livelihood zones of the larger Narok.
- There were cases of diarrhoea in livestock as a result of consuming lush pastures. This led to some death cases being reported in some parts of the County especially in Pastoral livelihood zone.

#### 3.1.3 Milk Production

- The average milk production per household per day increased to 3.6 bottles per household from 2.1 bottles recorded in the previous month as shown in figure 7 below.



**Figure 7**

(n = 180)

- The increase in milk production is attributed to improvement in pasture regeneration coupled with increased water volumes in the county.
- The quantity of milk produced is slightly below normal at this time of the year.

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

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

- Some of the on-going farming activities in Mixed farming and Agro-pastoral livelihood zones include planting and weeding. Most of the crops are at germination stage but for the farmers who planted earlier, the crops are approaching tussling stage.
- The crops planted in the County include beans, sorghum, maize and potatoes.

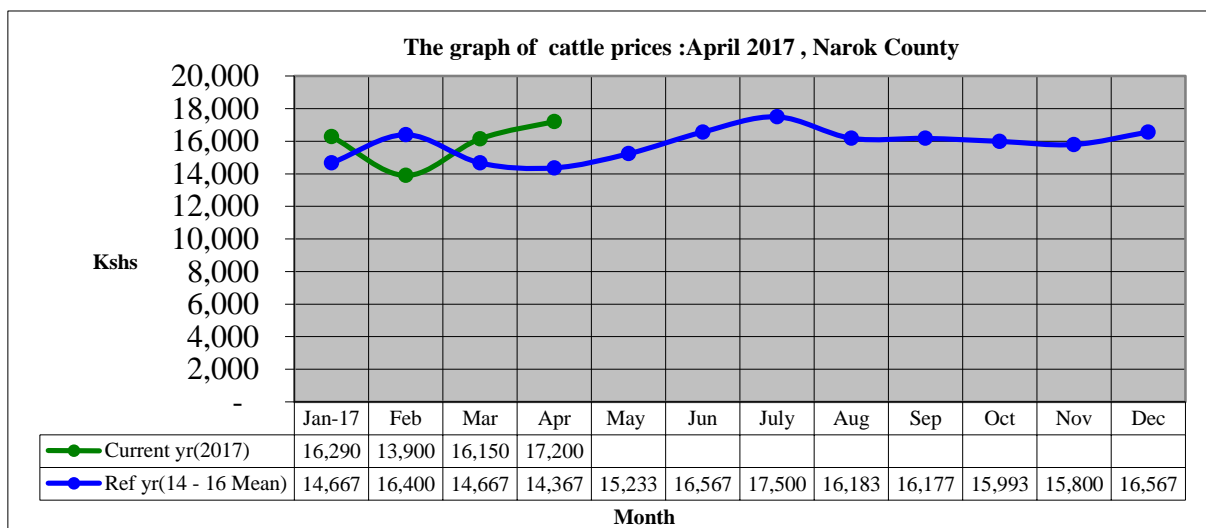


## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

- The average price for the medium size cattle increased to Kshs 17,200 /head from Kshs 16,150/head of the previous month as shown by Figure 8 below.



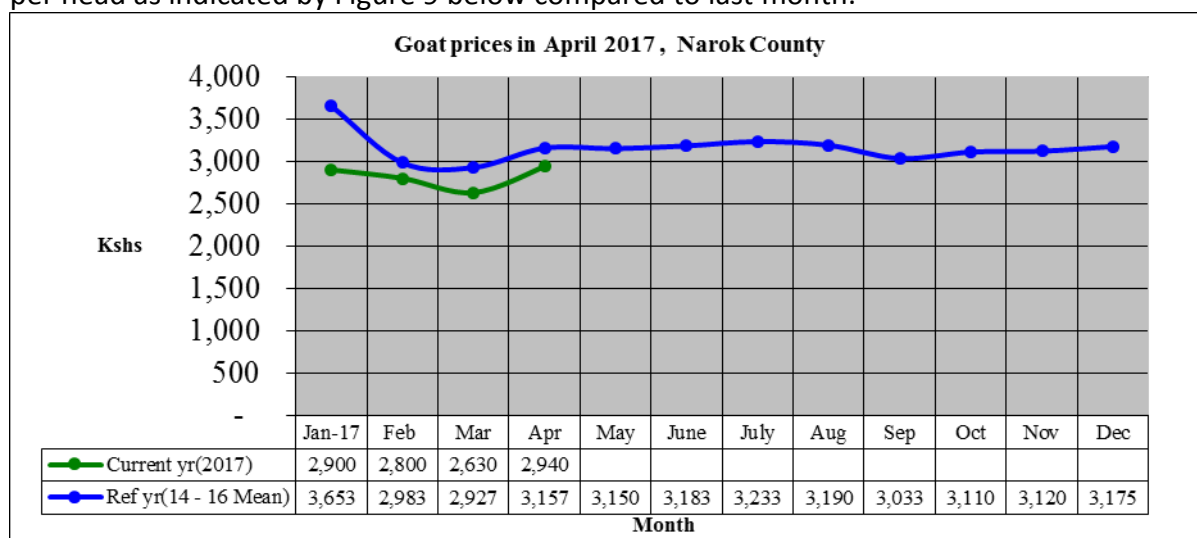
**Figure 8**

(n = 180)

- The increase in cattle prices is attributed to improvement in body condition of cattle in all the livelihood zones.
- The highest prices were recorded in Mixed farming livelihood zone at Kshs 25,000 per head and the lowest in the Pastoral livelihood zones at an average of Kshs 10,000 per head.
- The current cattle prices are above normal compared to long term average at this time of the year.

#### 4.1.2 Goat Prices

The average price of a medium sized two year old goat increased to Kshs. 2,940 from Kshs. 2,630 per head as indicated by Figure 9 below compared to last month.



**Figure 9**

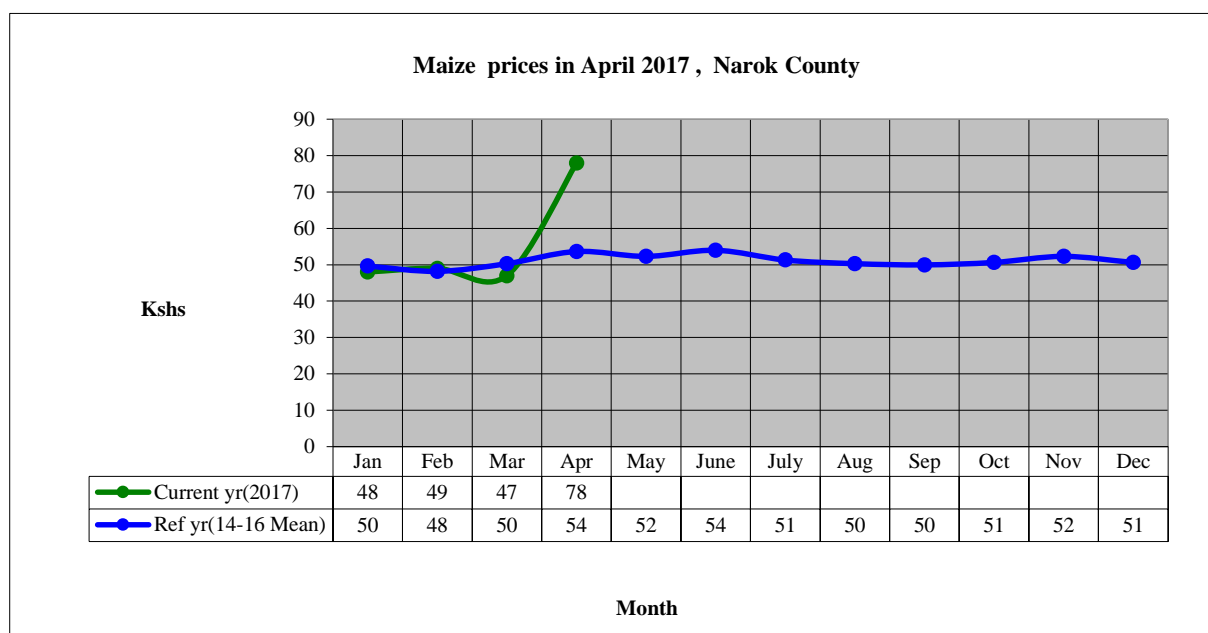
(n = 180)

- The increase in goat prices is attributed to low supply of goats in the markets and increased demand owned to high restocking rate.
- Households are disposing the goats to the markets in an effort to get cash for purchasing food and other important household expenditures such as school fees.
- There was significant inter-livelihood variation in goat prices as farmers in the Mixed farming livelihood zone were selling at Kshs 3,570/head compared to those in the pastoral livelihood zone selling at Kshs 2,500/head.
- The average goat price was slightly below normal at this time of the year.

## 4.2 CROP PRICES

### 4.2.1 Maize

The average prices of maize per kilogram drastically increased to Kshs.78 from Kshs. 47 of last month as shown in Figure 10 below.



**Figure 10**

**(n = 180)**

- There is generally low supply of maize in the country leading maize shortage and sudden increase in maize prices.
- The highest prices were recorded in Pastoral livelihood zone at Kshs 80 per kg while the lowest was recorded in the Mixed farming livelihood zone at an average of Kshs 65 per kg.
- The overall price was higher than the long-term average at this time of the year.

#### 4.2.2 Beans

- The average price of beans per kg increased to Kshs. 120 compared to the previous month of Kshs. 107 as shown in Figure 11 below.

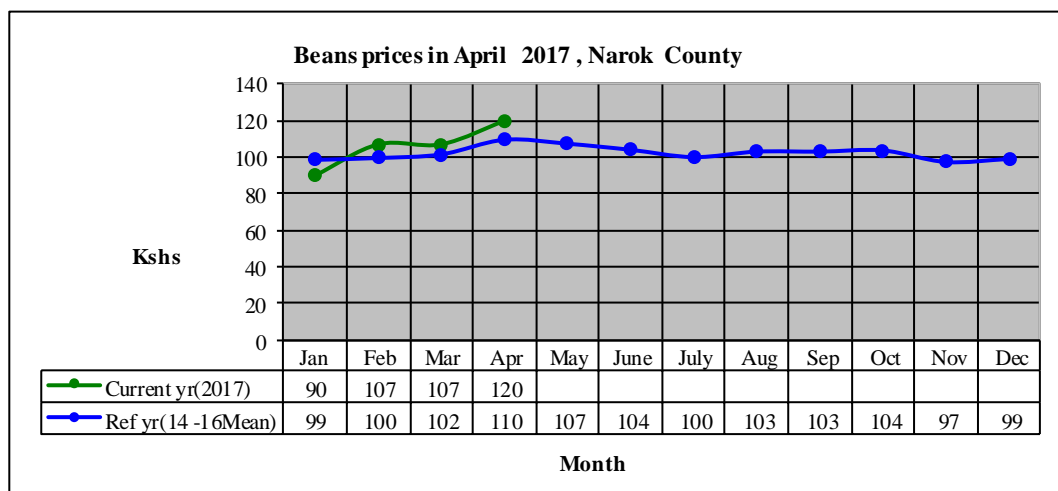


Figure 11

(n = 180)

- The Pastoral and Agro-pastoral livelihood zones recorded a higher average price of Kshs. 150/kg, compared to the Mixed farming livelihood zone, which recorded a lower price of Kshs.80 per kg. The inter-livelihood price variation is attributed to additional costs during transportation due to poor market access networks.
- The price is above normal at this time of the year.

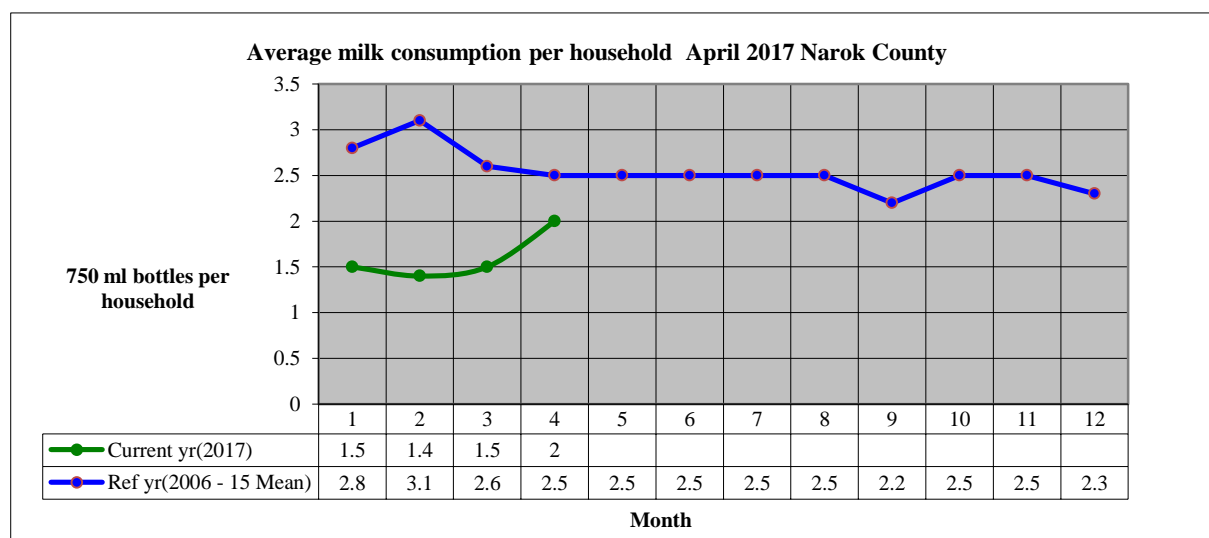
#### 4.3 Livestock Price Ratio/Terms of Trade

- The Terms of Trade based on the Cereal/Meat price ratio reduced to 41 from 56 as recorded in the previous month. Fewer amounts of cereals could be obtained in exchange for meat than the previous month. This was occasioned by the drastic increase in cereal prices compared to steady goat prices.
- The terms of trade was not favourable in the pastoral livelihood zone as it was much lower compared to Mixed farming livelihood zone. The Pastoral areas recorded much higher cereal prices accompanied with relatively lower livestock prices compared to Mixed farming zones.
- The cereal/meat price ratio is not 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 increased to 2.0 litres from 1.5 litres per household per day recorded in the previous month as shown in Figure 12 below.



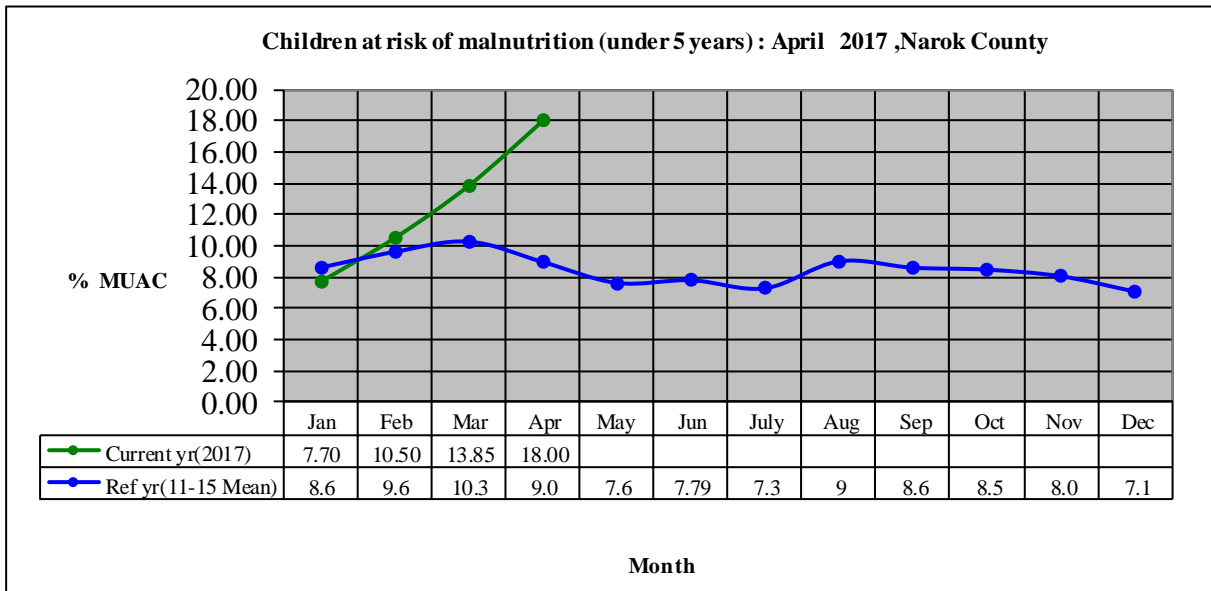
**Figure 12**

- Household milk consumption is improving gradually though it is still low compared to long term means. Milk consumption rate is expected to improve as production increases.
- The situation is slightly 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) increased to 18% from 13.85% of the previous month as shown by Figure 13 below. The current status is attributed to increased cases of fever, poor dietary diversity, low milk consumption at household level (compared to normal) and poor access to food items due to high market prices.



**Figure 13**

(n = 756)

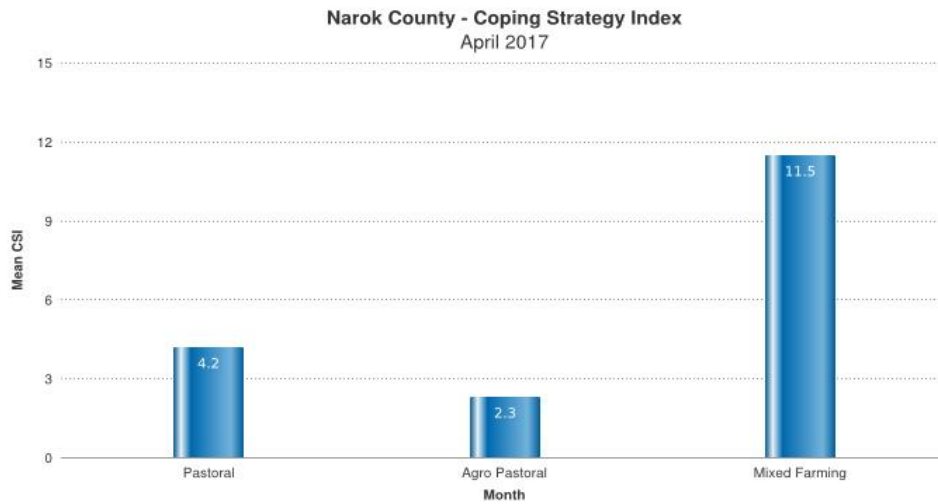
- The Pastoral and the Agro-pastoral livelihood zones recorded the highest number of children at risk of malnutrition at 23% compared to Mixed farming livelihood zone which recorded 2%. The highest number of children at risk of malnutrition was witnessed in Mosiro Ward and Naroosura ward in the Agro-pastoral and Pastoral livelihood zones.
- 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 high cases of fever in children, especially in the Pastoral livelihood zone.

**5.3 COPING STRATEGIES**

- In the Mixed Farming zone the CSI was 11.5 while that of Pastoral and Agro-pastoral livelihood zone was 4.2 and 2.3 respectively. This implies that food insecurity in the Mixed farming zone employed more coping strategies compared to those in Pastoral and Agro-pastoral livelihood zones. The high CSI in Mixed Farming livelihood zone is being contributed by availability of minimal income sources (in this case casual labour) which renders households not to be in a position to afford basic food items due to drastic upshot in food prices.



- The dietary diversity was worsening, with households concentrating on cereals compared to other food groups. Households have reduced the number of meals consumed per day from the usual two to once a day.
- Charcoal burning and casual labour as a means of getting income to purchase food was on the increase in Transmara East and Narok East Sub Counties.
- The coping strategies were not normal at this time of the year.

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

### **6.1 NON-FOOD INTERVENTIONS –**

- Repair and rehabilitation of serviceable boreholes in Narok West, East and South sub-counties **(By NDMA, under the DCF and Water Services Board)**
- On-going Vaccination campaign against contagious bovine pleuropneumonia (CBPP) in various parts of the county. **(By Regional Pastoral Livelihood Resilience Project).**
- Ongoing Vaccination mop-up campaign against sheep pox in Narok West and Transmara West. **(By NDMA, under the DCF and County Government).**
- The National Government assisted the County with relief seeds which include 10 tons of gadam sorghum and 5 tons of KATX56 beans. The County has also received livestock feed supplements which include 2400 range cubes (50kg) and 6,000 bags of mineral blocks (15 tons). The supplements are awaiting distribution to the beneficiaries.

### **6.2 FOOD AID**

- Some food aid was received through the Ministry of Interior and Coordination. The consignment consisted of 3000 bags of maize (90kg), 666 bags of beans (90kg), 1,200 bags of rice (50kg), 174 cartons of cooking oil (24 x 0.5 litres) and 60 bales of fortified health food
- The bulk of the food was issued to Primary Schools while the rest was issued to community members.

## **7.0 EMERGING ISSUES**

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

- No major incidences of insecurity, conflict or human displacement was reported in the County during the month.

### **7.2 Migration**

- Some herders who had migrated into the Masaai Mara game reserve and beyond have started coming back to their normal grazing fields especially in Narok West and Narok South Sub Counties.

### **7.3 FOOD SECURITY PROGNOSIS**

- The onset of the long rains season has started in all the parts of the County although it was late. We expect the water situation to improve significantly in terms of access and availability. Most of the water pans and dams are almost back to their normal levels apart from a few areas in Narok East Sub County.
- Pasture and browse are gradually regenerating. Within the next one month, we expect both pastures and browse to be back to their normal levels with the ongoing rains. This will in turn translate into improved livestock body condition thus enhancing livestock productivity.
- Crop production is in good condition mostly in Eastern parts of the County where the season started earlier. However, crop production in Narok East and Narok West Sub Counties will be highly compromised due to late onset of the rains.

## **8.0 RECOMMENDATIONS**

- Upscaling of campaign against various livestock diseases in areas not being covered by the ongoing drought contingency funds (DCF) activities.
- Surveillance of human and livestock disease outbreaks is necessary. The livestock that are coming back from where they had migrated are likely to bring with them livestock diseases.
- Provision of supplementary feeding programme at selected health facilities as cases of malnutrition are on the increase.
- The drought situation in Narok East Sub County needs close monitoring with regards to the performance of rains in this region. The Sub County is currently undergoing severe vegetation deficit due to prolonged drought spell.