

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



A Vision 2030 Flagship Project



JULY EW PHASE

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- **Rainfall:**
- The cessation of long rains was experienced in the third dekad of May.
- Vegetation condition: The 3 month vegetation condition index (VCI) for the County is 27.48 depicting a moderate vegetation deficit.

Socio Economic Indicators (Impact Indicators)

Production indicators:

- Limited harvesting of beans, sorghum and cow peas was done in mixed farming livelihood zones
- Livestock body condition is fair to poor in all the livelihood zones.
- Reduced milk production and less than long term average.
- Livestock migration in search of pasture in Pastoral livelihood zone has started.
- Poor 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.
- Poor to fair access to water for both livestock and humans but slightly below the long term average.

Utilization Indicators:

- The percent of Mid Upper Arm Circumference (MUAC) showing children at risk of malnutrition was 14.5, higher than the long term average of 7.3.

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
AGRO PASTORAL (Kirindoni, Kilgoris)	ALERT	WORSENING
MIXED FARMING (ololulunga, Nkareta and Emurua Dikirr)	ALERT	STABLE
PASTORAL (Loita, Narooksura, Olmesutie, Ntuka and Elang'ata Enterit)	ALARM	STABLE
LEASING/PASTORAL (Lemek, Siana)	ALERT	WORSENING
COUNTY	ALERT	WORSENING
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	0	>90
SPI-3Month (TAMSAT)	-	-1.0 to 1.0
VCI-3Month	27.48	>35
Forage condition	Fair	Fair
Production indicators	Value	Normal
Crop Condition (Maize)	-	-
Livestock Body Condition	Fair	Normal
Milk Production		>5 Litres
Livestock Migration Pattern	Not normal	Normal
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	45.5	>100
Milk Consumption	1.8	>4 litres
Return distance to water sources	5.8	<5 Km
Cost of water at source (20 litres)	5-20	<5Kshs
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	14.5	<10

<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 								
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 in July was poor. Rains performed poorly during the month with some parts of the county receiving negligible showers coupled with dry and chilly weather conditions.
- The current condition is normal at this time of the month.

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

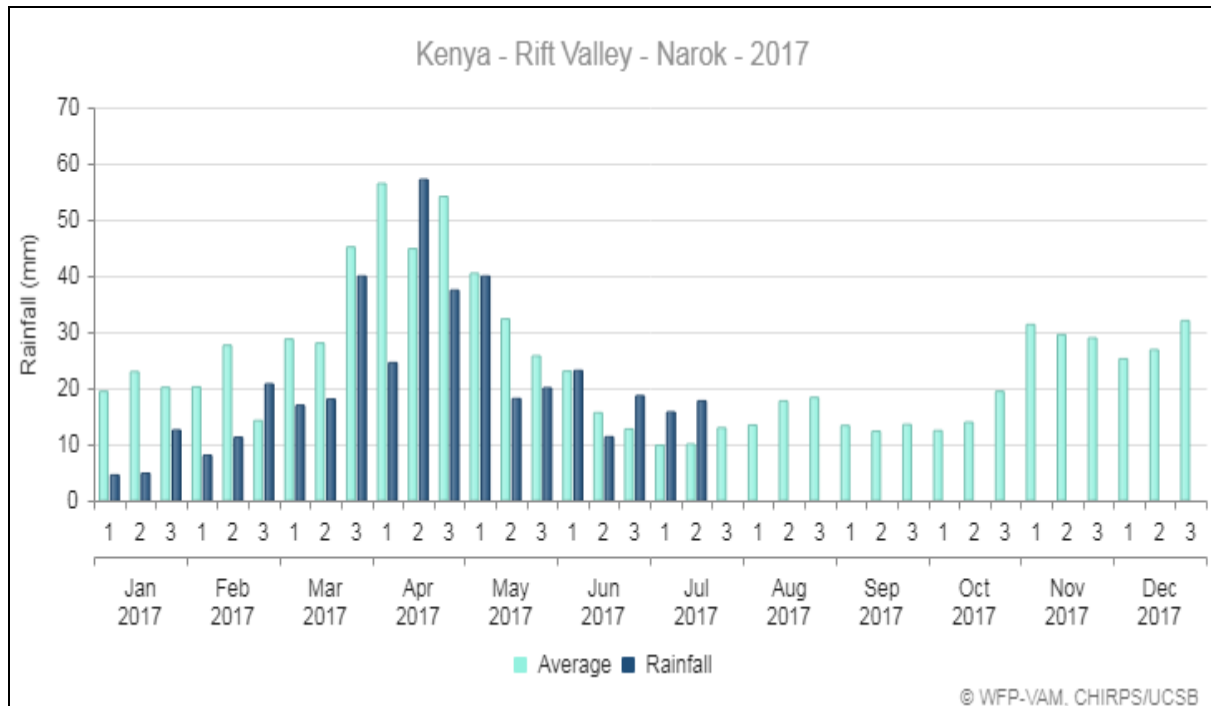


Figure 1

- The satellite image in Figure 1 above highlights the general performance of the rains in the County from the first to second dekad of the month. Generally, the County experienced low but above normal rains during the first and second dekad of July. The showers were mostly witnessed in Transmara West and Narok North sub counties.

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

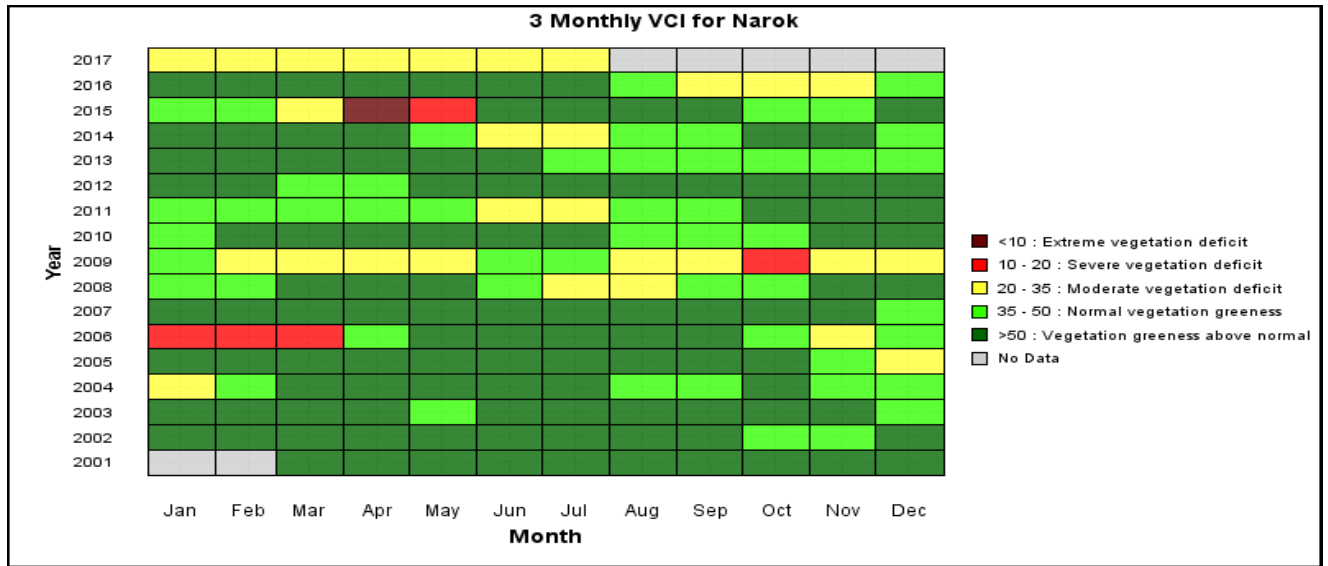


Figure 2

- The vegetation greenness as depicted by the vegetation condition index (VCI) shows moderate vegetation deficit with a value of 27.48 as shown in Figure 2 above.
- Other than Emurua Dikirr, Narok South and Narok North Sub Counties, all the other three Sub Counties are experiencing some form of vegetation deficit with Narok West being the most affected as it is having severe vegetation deficit. Narok West and Kilgoris Sub Counties had the least VCI indices of 10.45 and 15.73, showing a severe vegetation deficit as shown in Figure 3 below.

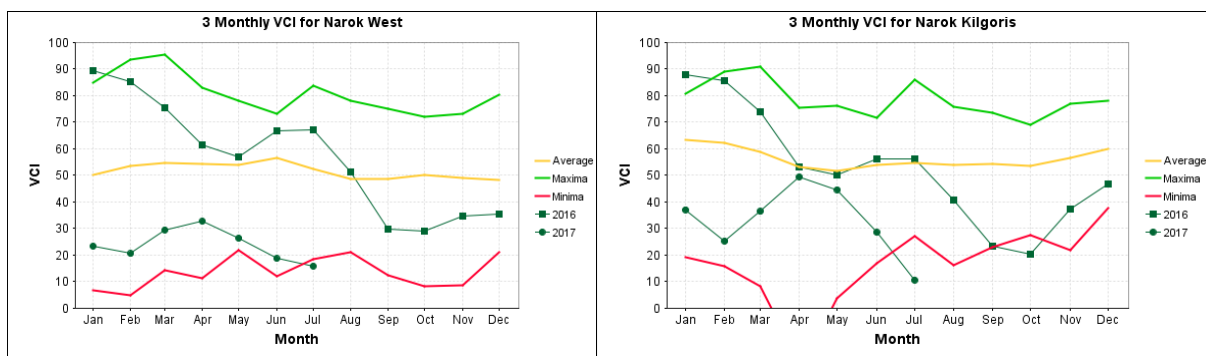


Figure 3

2.1.1 Field observations

2.1.1.1 Pasture

- The quantity and quality of pasture in Mixed farming livelihood zone and few parts of Agro Pastoral livelihood zones were fair. In Pastoral and some other parts of the Agro pastoral livelihood zones had pasture conditions ranging from poor to fair. Mosiro Ward in Narok East Sub County, Naroosura ward in Narok South Sub County and Siana ward in Narok West Sub County were the most affected by poor rainfall performance which led to suppressed pasture regrowth.

- The available pasture is likely to last for one month in Mixed farming and in the Agro-pastoral livelihood Zones and less than a month in Pastoral livelihood zone.
- 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 compared to last month. In Pastoral livelihood zone, the browse condition is poor to fair. The available browse is expected to last for two 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 (36%), Rivers (12%) and Shallow wells at 9.8 % as shown by Figure 4 below.

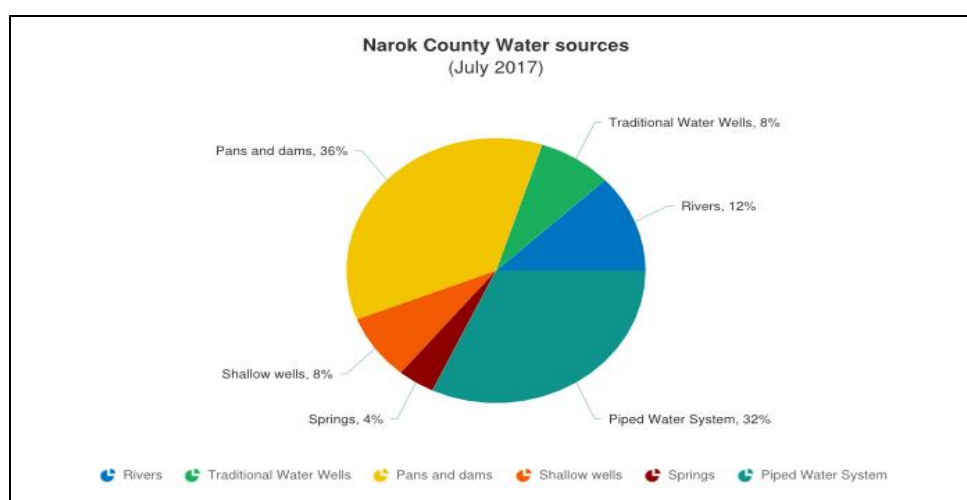


Figure 4

- Most households relied on Pans and Dams as most of other sources had dried up.
- The quantity and quality of water was fair to good in Mixed farming livelihood zones. In Pastoral and Agro-Pastoral livelihood zones, water volumes were poor.
- The current water sources are expected to last for two months in Mixed farming livelihood zone. In Pastoral and Agro-pastoral livelihood zones, the water is to last for one month.
- The status of main sources of water is still below normal at this time of the year and is likely to worsen as rains have ceased in the county.

2.2.2 Household access and Utilization

- The average distance to watering points for households was recorded at 3.5 km having increased slightly from 3.2 km recorded in the previous month as shown in figure 5 below.

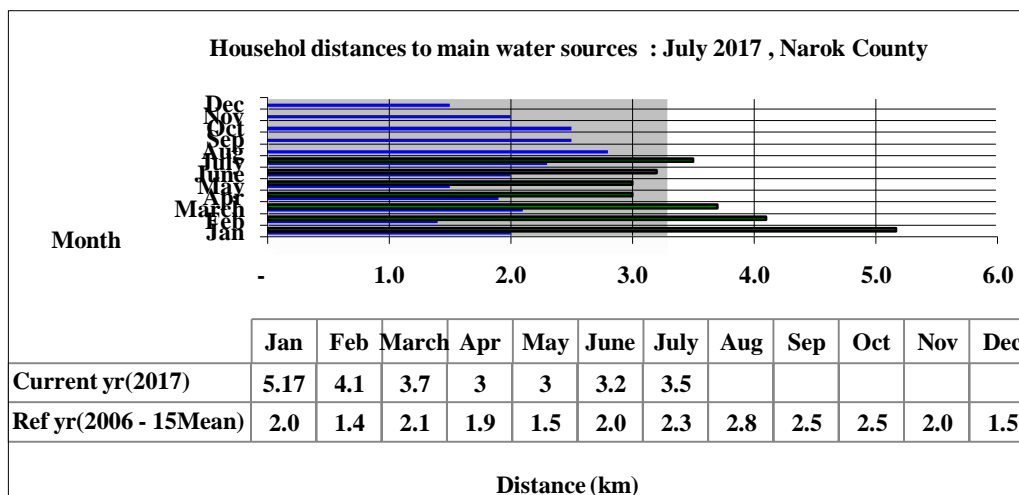


Figure 5

- Pastoral livelihood zone recorded the longest average distance of 6.7 km having increased from 6 km as recorded in the previous month while the shortest average distance was recorded in Mixed farming livelihood zone remained at 1.5 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 to 5.8 km from 4.5 km recorded last month as shown by Figure 6 below.

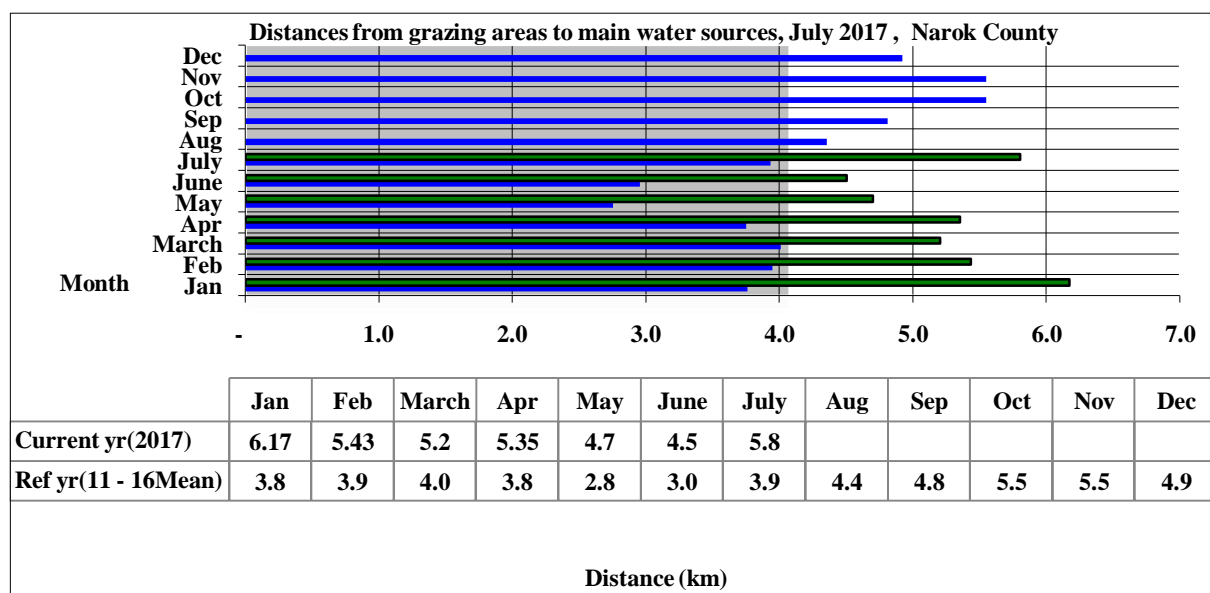


Figure 6

- Pastoral livelihood zone recorded the longest distance at 8.4km while the shortest distance was recorded in the Mixed farming livelihood zone at 1.2 km. Mosiro, Ntuka and Siana areas in the Pastoral livelihood zone are some of the areas experiencing challenges in accessing water points. The situation is likely to worsen owing to poor performance of the long rains season.
- 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 were fair 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.
- The deteriorating livestock body condition is attributed to decrease in Pasture and water source access and availability mostly in the Pastoral and Agro-pastoral livelihood zones.
- The current livestock body condition is below normal at this time of the year.

3.1.2 Livestock Diseases

- Foot and Mouth disease (FMD), Contagious Bovine Pleuropneumonia (CBPP) and West and Lumpy Skin Disease (LSD) 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. LSD was reported in Narok West and Kilgoris Sub Counties
- There is a confirmed outbreak of PPR diseases in Transmara West and Narok West Sub Counties.

3.1.3 Milk Production

- The average milk production per household per day reduced to 3.5 bottles per household from 3.8 bottles recorded in the previous month as shown in figure 7 below.

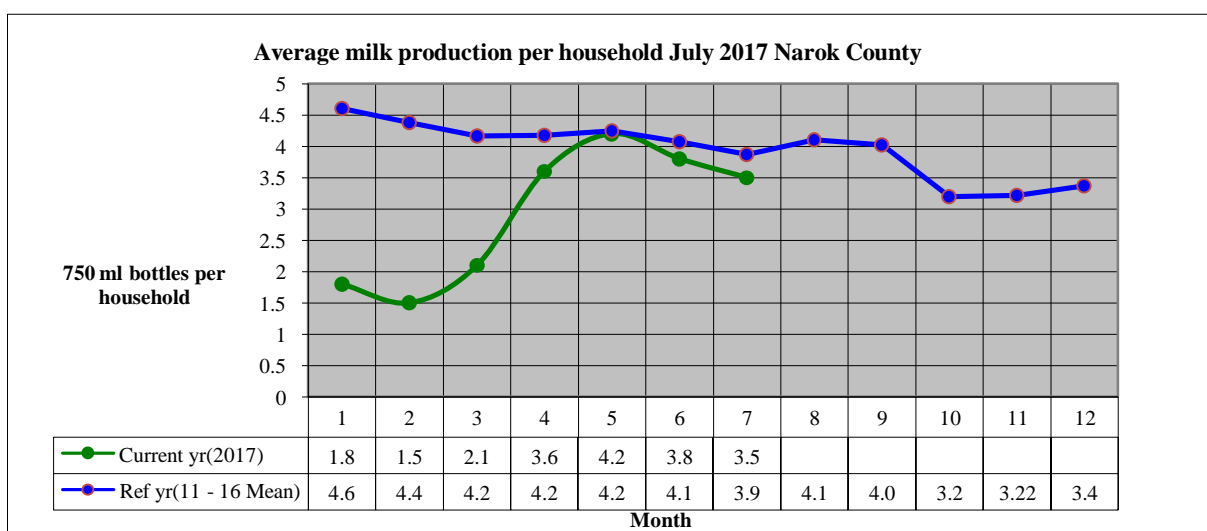


Figure 7

(n = 180)

- The decrease in milk production is attributed to decrease in pasture quantity and quality as well as water in the pastoral and agro pastoral livelihood zones. Milk production in the mixed farming zone is still stable compared to last month. Milk production is likely to decrease even further due to deteriorating pasture and livestock body condition mostly in the pastoral and agro-pastoral livelihood zones.

- The quantity of milk produced is 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 crops harvested in the county during the month include beans, sorghum, irish potatoes and wheat.
- The on-going farming activity in Mixed farming is harvesting of wheat. Most of the crops in the farms have failed due to poor moisture as a result of rains cessation and outbreak of fall army worms and African army worms which attacked crops and pasture. 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 increased to Kshs 18,600 from Kshs 18,100 /head compared to the previous month as shown by Figure 8 below.

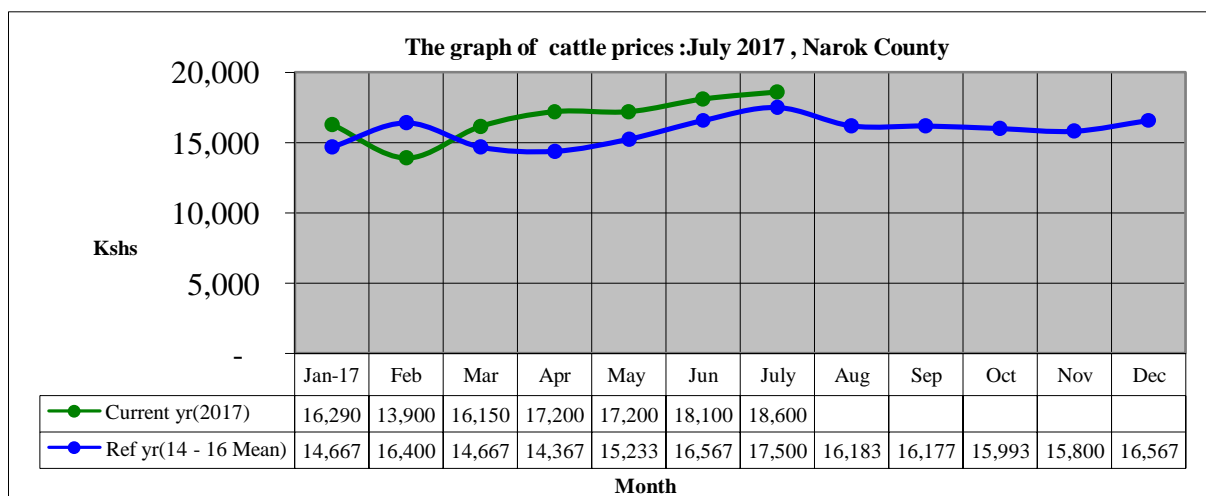


Figure 8

(n = 180)

- The highest prices were recorded in Mixed farming livelihood zone at Kshs 25,000 per head and the lowest in the Pastoral livelihood zones at an average of Kshs 6,700 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 reduced to Kshs. 2,700 from Kshs. 2,950 per head recorded last month as indicated by Figure 9 below.

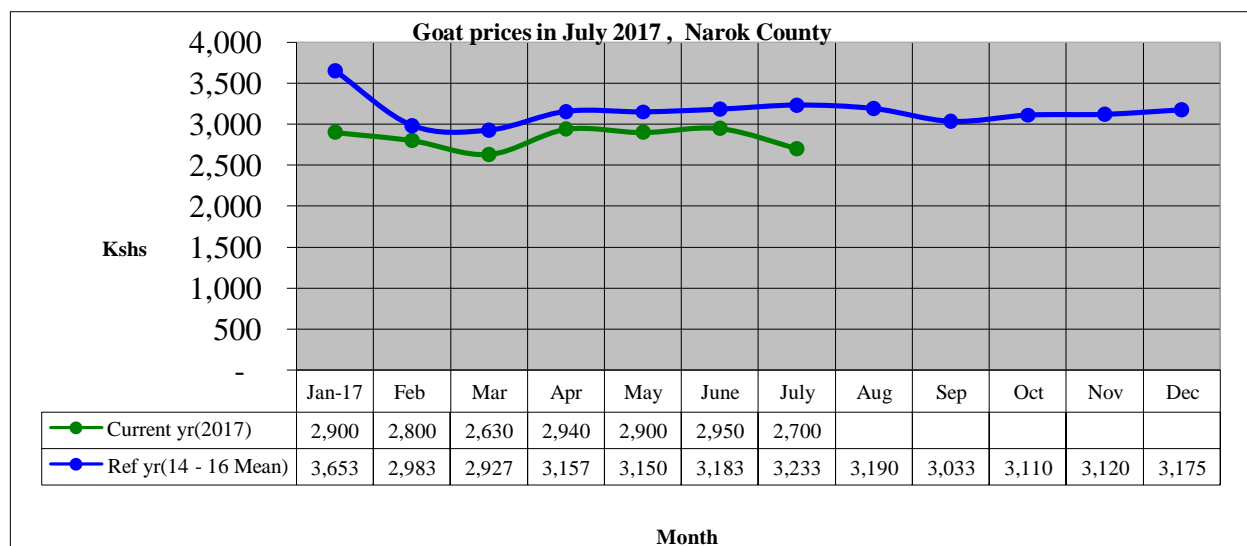


Figure 9

(n = 180)

- The decrease in goat prices is attributed to high supply of goats in the markets with less demand.
- 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. 3,150 compared to the pastoralist who sold at Kshs. 2,500.
- The average goat price was below normal at this time of the year.

4.2 CROP PRICES

4.2.1 Maize

The average prices of maize per kilogram increased to Kshs.78 from Kshs. 76 of last month as shown in Figure 10 below.

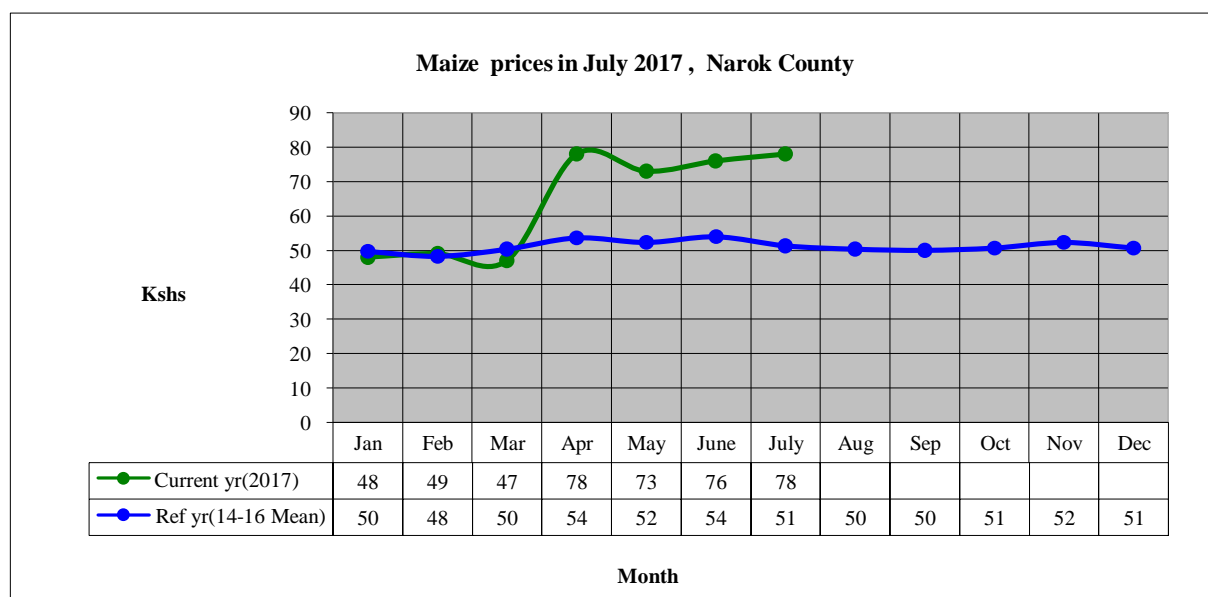


Figure 10

(n = 180)

- There is generally low supply of maize in the country leading to maize shortages and sharp increase in maize prices as from last month.
- The highest prices were recorded in Pastoral livelihood zone at Kshs 110 per kg while the lowest was recorded in the Mixed farming livelihood zone at an average of Kshs 70 per kg. The prices are likely to increase owing to decreasing maize stocks coupled with high demand and crop failure in the county.
- 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 reduced to Kshs. 97 compared to the previous month of Kshs. 110 as shown in Figure 11 below.

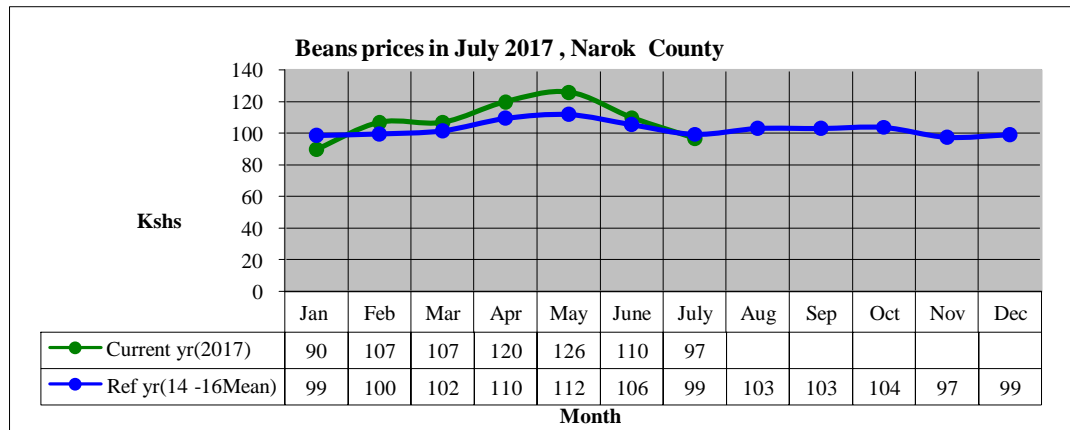


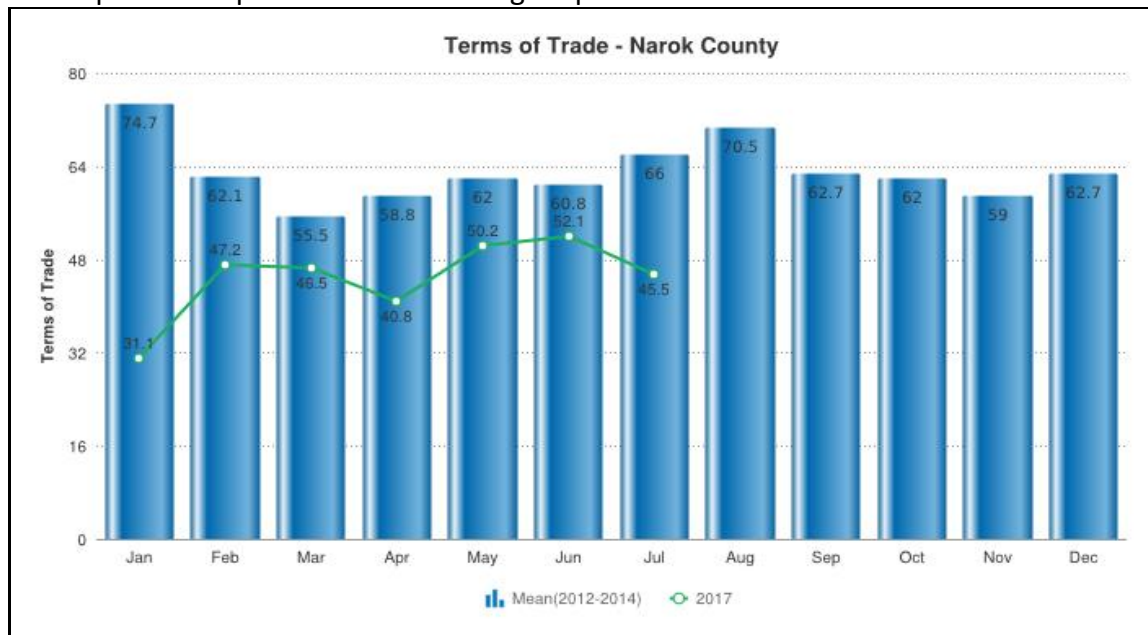
Figure 11

(n = 180)

- The Pastoral and Agro-pastoral livelihood zones recorded a higher average price of Kshs. 120/kg, compared to the Mixed farming livelihood zone, which recorded a lower price of Kshs.60 per kg. The inter-livelihood price variation is attributed to additional costs during transportation due to poor market access networks and high demand.
- The drop in prices is attributed to ongoing beans harvest in the mixed farming livelihood zone.
- 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 reduced to 45.5 from 52.1 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 increase in cereal prices compared to decrease in goat prices.



- The terms of trade were 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 reduced to 1.8 litres from 2.0 litres per household per day recorded in the previous month as shown in Figure 12 below.

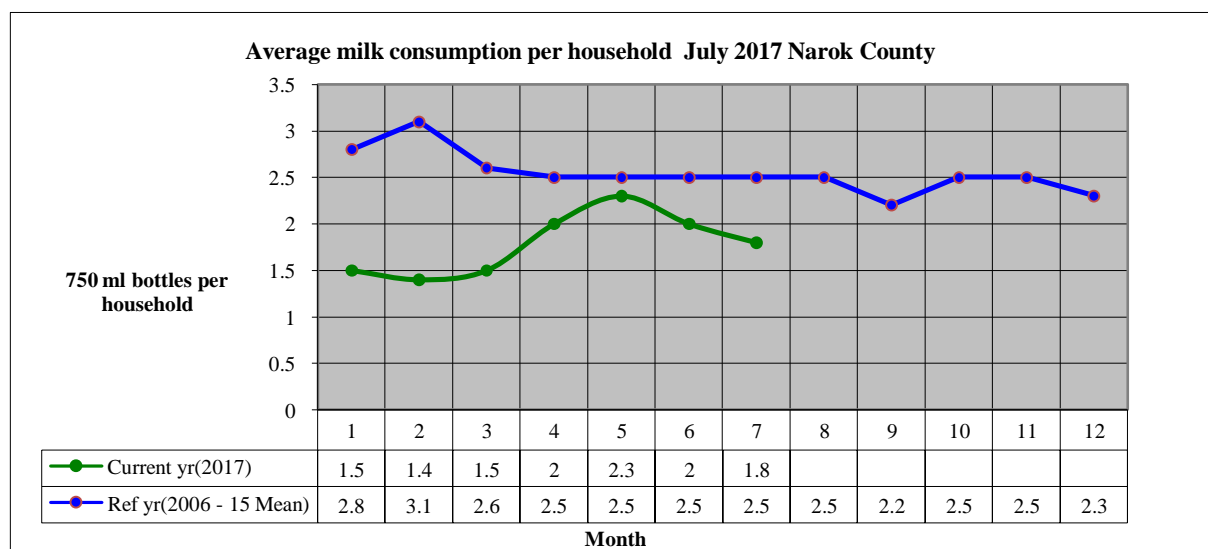


Figure 12

- Milk consumption rate is expected to decline further in August in all the livelihood zone since pasture quality and quantity is on deteriorating trend owing to poor rainfall performance. In the pastoral livelihood zone, milk consumption is still poor due to low milk production and poor livestock body condition.
- The situation 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 remained stable compared to previous month at 14.5% as shown by Figure 13 below.

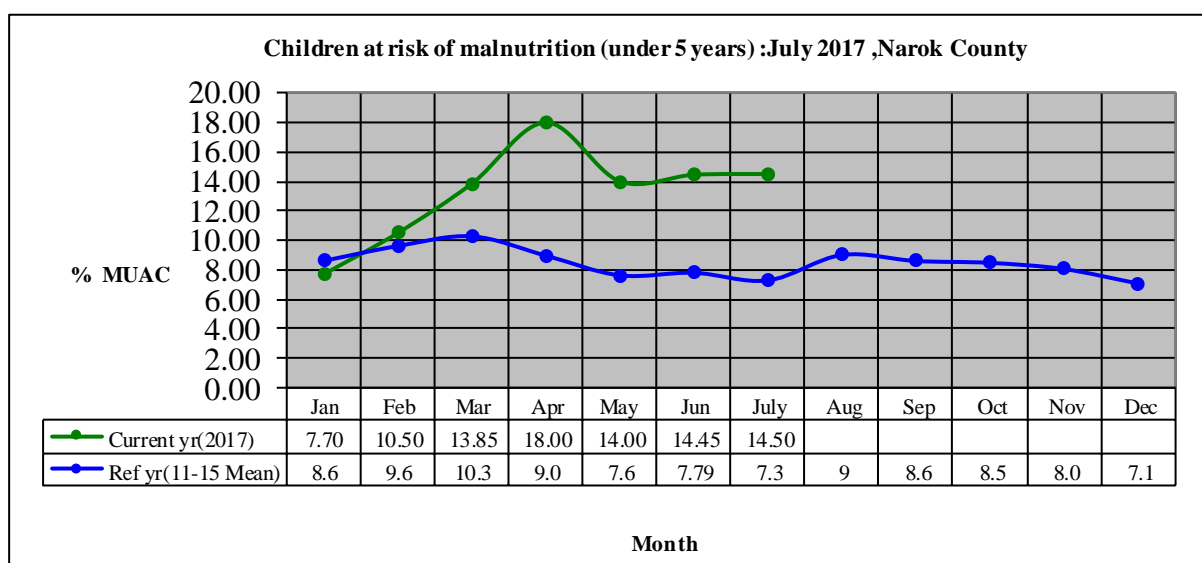


Figure 13

(n = 593)

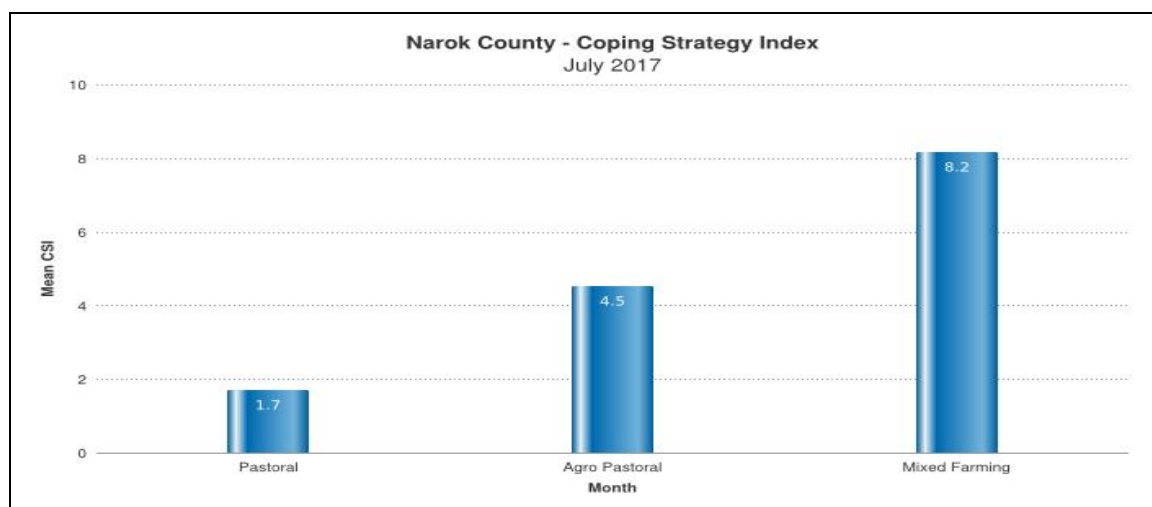
- The high rate of malnutrition is attributed to poor dietary diversity owing to low food rich in vitamins and decreasing milk consumption at household mostly in the pastoral and agro-pastoral livelihood zone.
- The pastoral and the agro-pastoral livelihood zones recorded the highest number of children at risk of malnutrition at 27% compared to Mixed farming livelihood zone which recorded 3.1%. The highest number of children at risk of malnutrition was witnessed in Mosiro and Naroosura wards in Pastoral livelihood zone.
- 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 CSI was 8.2 while that of pastoral and agro-pastoral livelihood zone was 4.5 and 1.7 respectively. 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. The high CSI in mixed farming livelihood zone is being contributed by reduced availability of income sources (in this case casual labour) which renders households not to be in a position to afford basic food items due to drastic increase in food prices coupled with low purchasing power.



- The dietary diversity has improved in mixed farming livelihood zone, even though households are still dependent 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 and this is being witnessed across the entire livelihood zones.
- 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 –

- Vaccination campaign against contagious bovine pleuropneumonia (CBPP) in various parts of the county. **(By Regional Pastoral Livelihood Resilience Project).**

6.2 FOOD AID

- No food aid was issued during the month.

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

- There was increase in 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 witnessed in wheat and maize harvested farms in Ololulunga in Narok South Sub County, Mau in Narok North and Ntulele in Narok East sub-county.

7.3 FOOD SECURITY PROGNOSIS

- Pasture and browse conditions are still below the normal conditions particularly in Pastoral and Agro pastoral livelihood zones and on a declining trend. Due to rains cessation, vegetation in this zone will not be able to recover and chances of further deterioration are real. This will have adverse impacts on livestock productivity coupled with declining milk production and low livestock prices in the market. Increased livestock migration cases are likely to be on the increase in search of greener pastures and this is likely to trigger transmission of diseases.
- Crop condition has been affected negatively by rainfall performance and most areas faced total crop failure resulting to food insecurity and hiking of food commodity prices in the county. Additionally, outbreak of African army worms and fall army worms has affected maize harvest in the county.
- The Pastoral and Agro pastoral livelihood zones are expected to slide further into worst drought and food security phases.

8.0 RECOMMENDATIONS

- Upscaling of campaign against various livestock diseases in the county by all stakeholders
- Surveillance of livestock disease outbreaks is necessary. . Increased monitoring of livestock convergence zones due to livestock migration is necessary in order to avert possible resource based conflicts.
- Due to relatively high cases of malnutrition, there is a need to carry out mass screening of children in Pastoral livelihood zone for the purpose of carrying out targeted nutrition interventions. Such interventions include provision of supplementary feeding programme at selected health facilities. Naroosura Ward in Narok South Sub County and

Mosiro Ward in Narok East Sub County must be given first priority in terms of targeted intervention.