

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



A Vision 2030 Flagship Project



AUGUST EW PHASE

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- Rainfall:**
 - Minimal showers were recorded in the third dekad mostly in the Mixed farming zone with some areas of the county recording dry days during the month.
 - Vegetation condition: The 3 month vegetation condition index (VCI) for the County is 29.06 depicting a moderate vegetation deficit.

Socio Economic Indicators (Impact Indicators)

Production indicators:

- Off season harvesting of maize was done in Nkareta ward in the 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 still being experienced.
- Livestock in and out-migration in search of pasture in Pastoral livelihood zone is increasing.
- 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 10.78, higher than the long term average of 9

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, Naroosura, Olmesutie, Ntuka and Elang'ata Enterit)	ALARM	WORSENING
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	29.06	>35
Forage condition	Fair-poor	Fair
Production indicators	Value	Normal
Crop Condition (Maize)	-	-
Livestock Body Condition	Fair-poor	fair
Milk Production	3.1	>5 Litres
Livestock Migration Pattern	Not normal	Normal
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	55.3	>100
Milk Consumption	1.8	>4 litres
Return distance to water sources	6.4	<5 Km
Cost of water at source (20 litres)	5-20	<5Kshs
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	10.78	<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 was poor. Rains performed poorly during the month with some parts of the county receiving no showers coupled with dry, 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

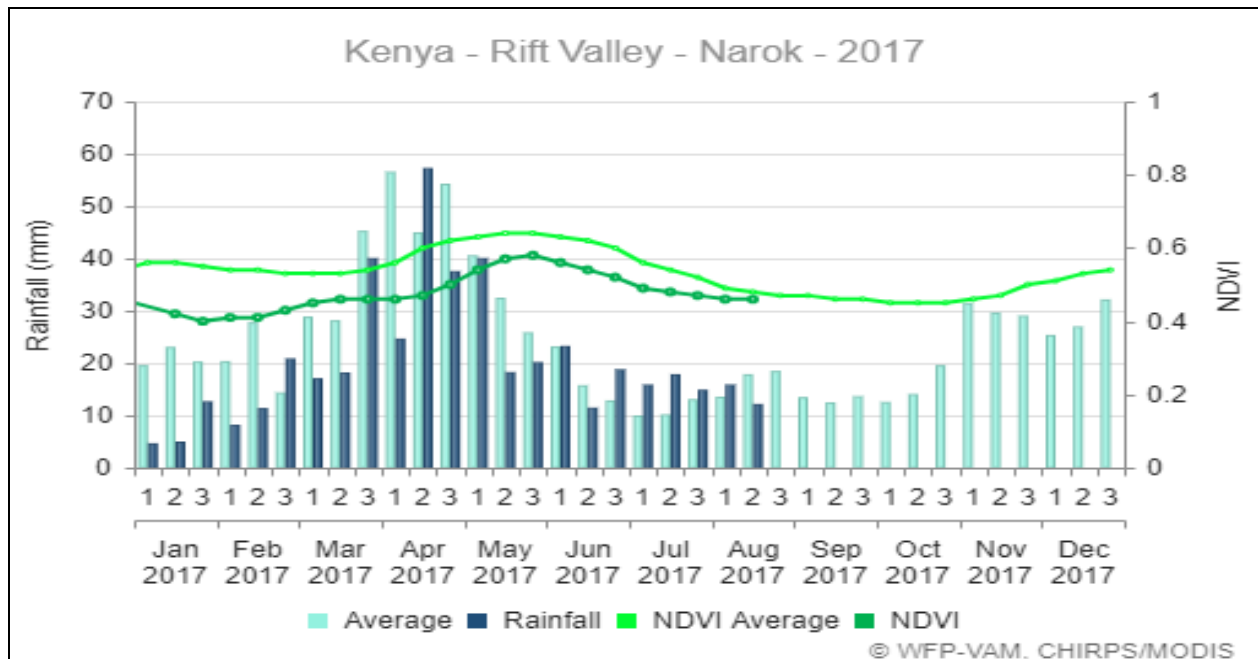


Figure 1

- 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 but slightly above normal rains in the first dekad as opposed to the second dekad which recorded below normal rains during the month of August. Minimal showers were mostly witnessed in Transmara East, Narok North and in Narok East highlands sub counties in the third dekad of the month.

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

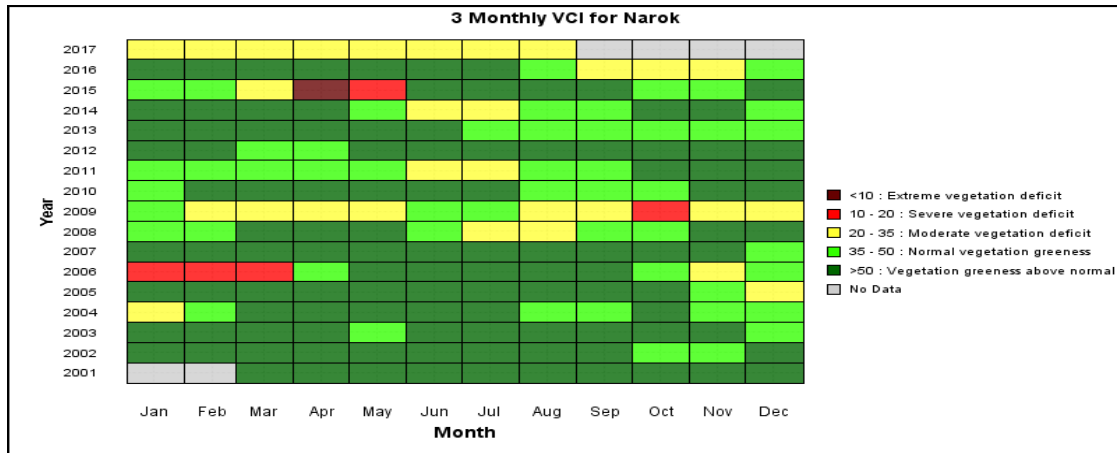


Figure 2

- The vegetation greenness as depicted by the vegetation condition index (VCI) shows moderate vegetation deficit with a value of 29.06 as shown in Figure 2 above.
- Other than Emurua Dikirr, Narok East and Narok North Sub Counties, all the other three Sub Counties are experiencing vegetation deficit with Kilgoris sub county being the most affected with an extreme vegetation deficit of 7.77 as shown in Figure 3 below.

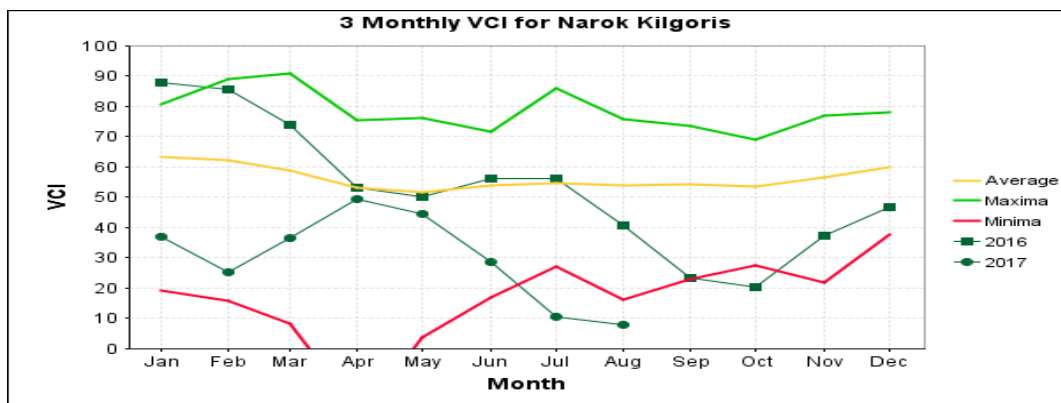


Figure 3

2.1.1 Field observations

2.1.1.1 Pasture

- The quantity and quality of pasture in Mixed farming livelihood zone 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, Kilgoris and Siana ward in Narok West Sub County were the most affected by poor rainfall performance which led to poor pasture condition.
- 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 with Mosiro areas in Narok East facing extreme vegetation deficit coupled with large stock migration in search of pasture.

- 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 one and 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 (27.6%), Rivers (20.7%) and Shallow wells at 10.3 % as shown by Figure 4 below.

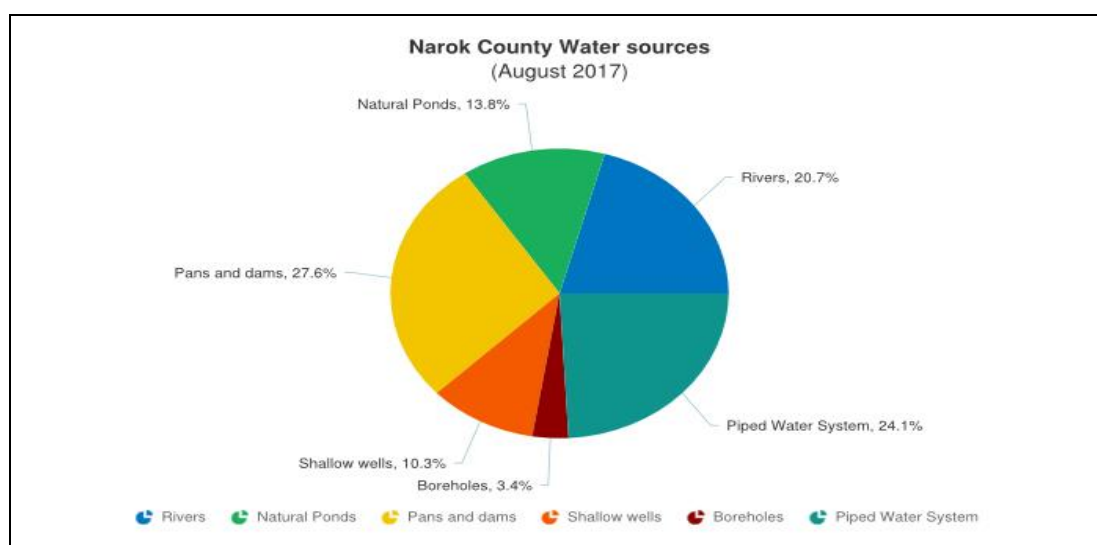


Figure 4

- 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 was fair 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 one month in Mixed farming livelihood zone. In Pastoral and Agro-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 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 3.2 km having reduced slightly from 3.5 km recorded in the previous month as shown in figure 5 below.

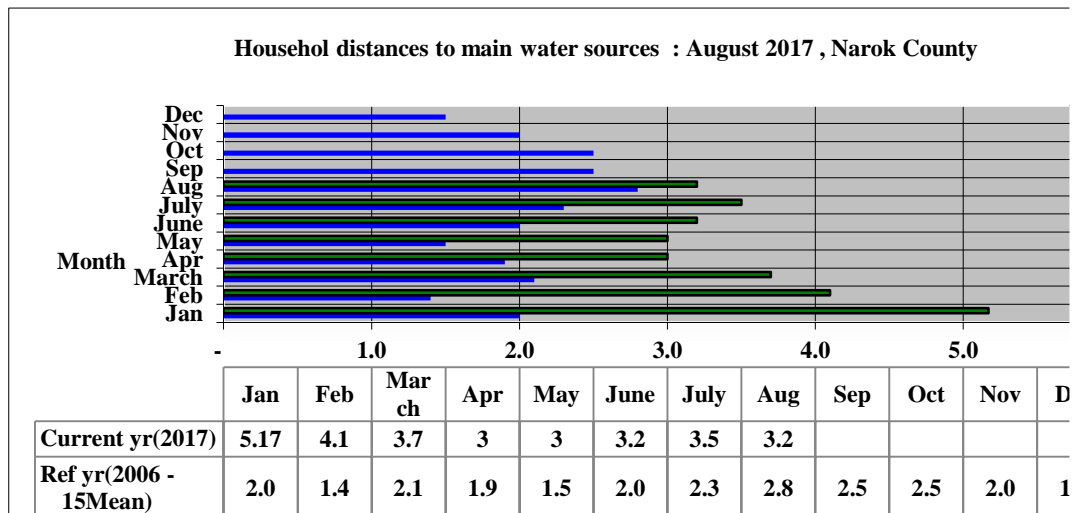


Figure 5

- Pastoral livelihood zone recorded the longest average distance of 10 km having increased from 5 km as recorded in the previous month while the shortest average distance was recorded in Mixed farming livelihood zone remained at 1 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 6.4 km from 5.8 km recorded last month as shown by Figure 6 below.

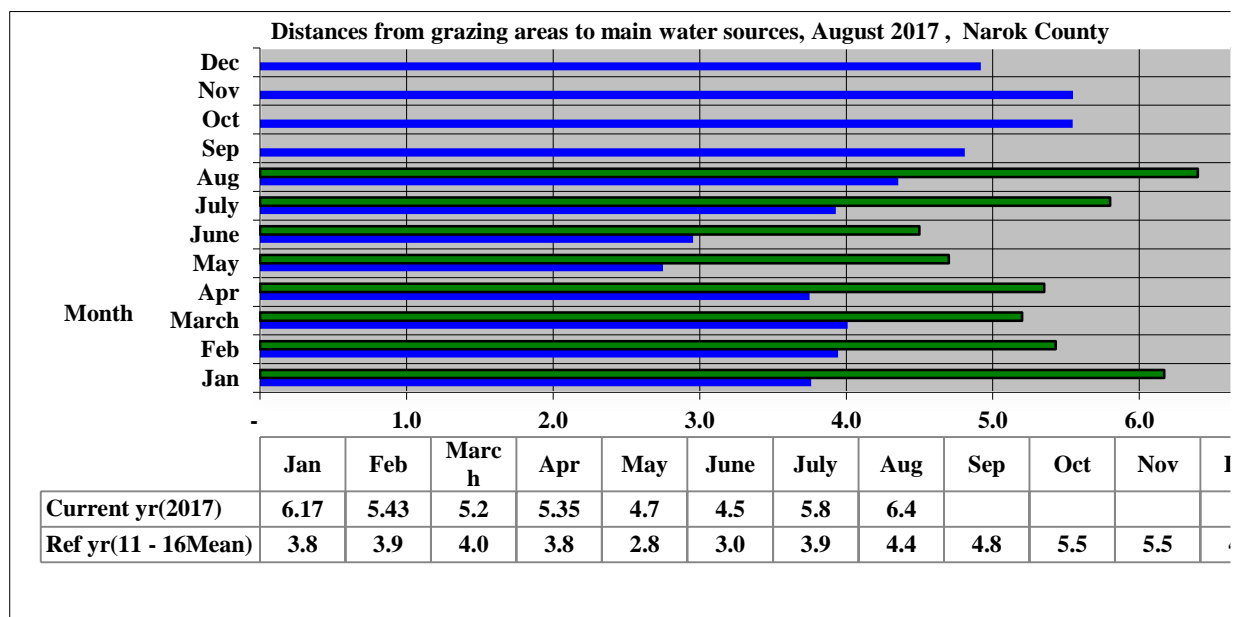


Figure 6

- 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, Kirindoni, Mara region, 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 consecutive dry months.
- 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 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 3.1 bottles per household from 3.5 bottles recorded in the previous month as shown in figure 7 below.

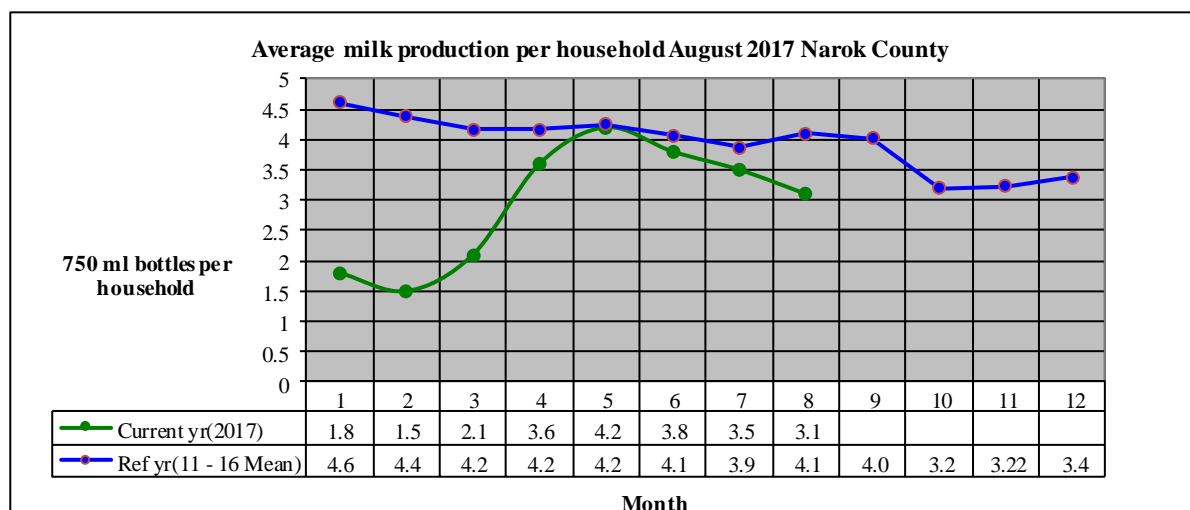


Figure 7

(n = 180)

- The decrease in milk production is attributed to deterioration in livestock body condition which is in turn being affected by poor forage condition 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 further due to

deteriorating pasture and livestock body condition mostly in the pastoral and agro-pastoral livelihood zones.

- 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 crops harvested in the county during the month include beans, sorghum, irish potatoes, maize and wheat.
- The on-going farming activity in Mixed farming is harvesting of wheat and maize in Narok North sub county. Most of the crops in the farms have failed due to poor moisture due to poor rainfall performance and outbreak of fall army worms 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 decreased to Kshs 14,700/head from Kshs 18,600 /head compared to the previous month as shown by Figure 8 below.

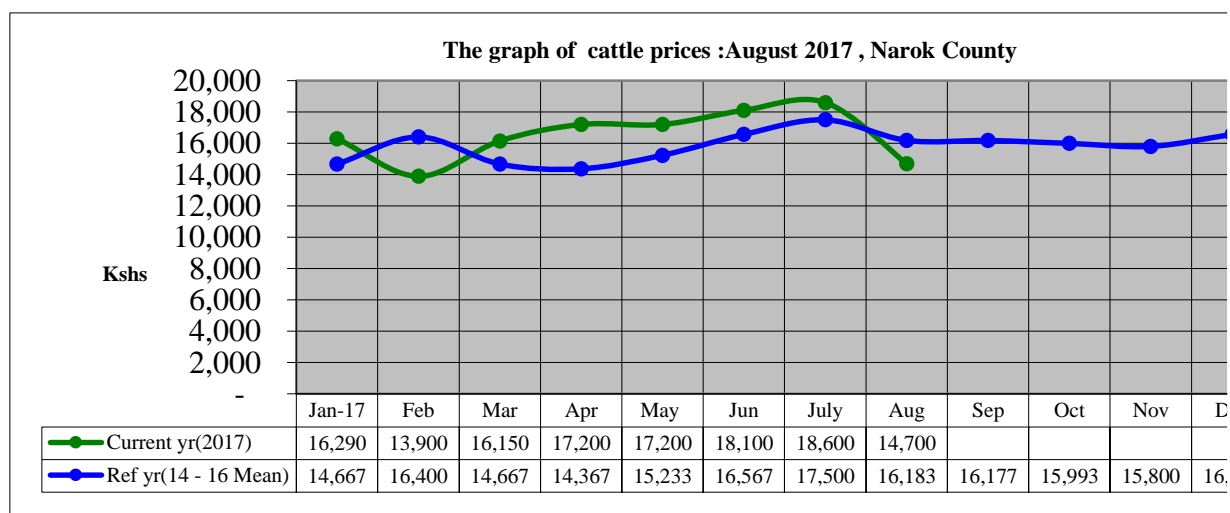


Figure 8

(n = 180)

- The highest prices were recorded in Agro-Pastoral livelihood zone at Kshs 18,000 per head and the lowest in the Pastoral livelihood zones at an average of Kshs 11,800 per head. The decrease in livestock prices is owed to poor livestock condition.
- The current cattle prices are below 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. 3050 from Kshs. 2,700 per head recorded last month as indicated by Figure 9 below.

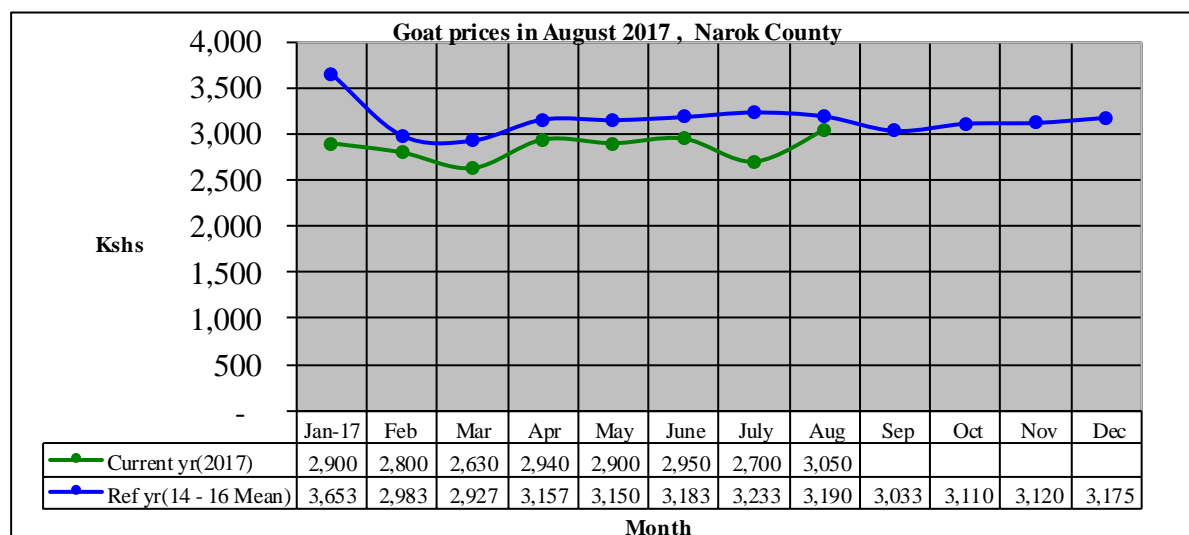


Figure 9

(n = 180)

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- 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 Agro-Pastoral livelihood sold at Kshs. 4,000 compared to the pastoralist who sold at Kshs. 3050.
- 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.62 from Kshs. 78 of last month as shown in Figure 10 below.

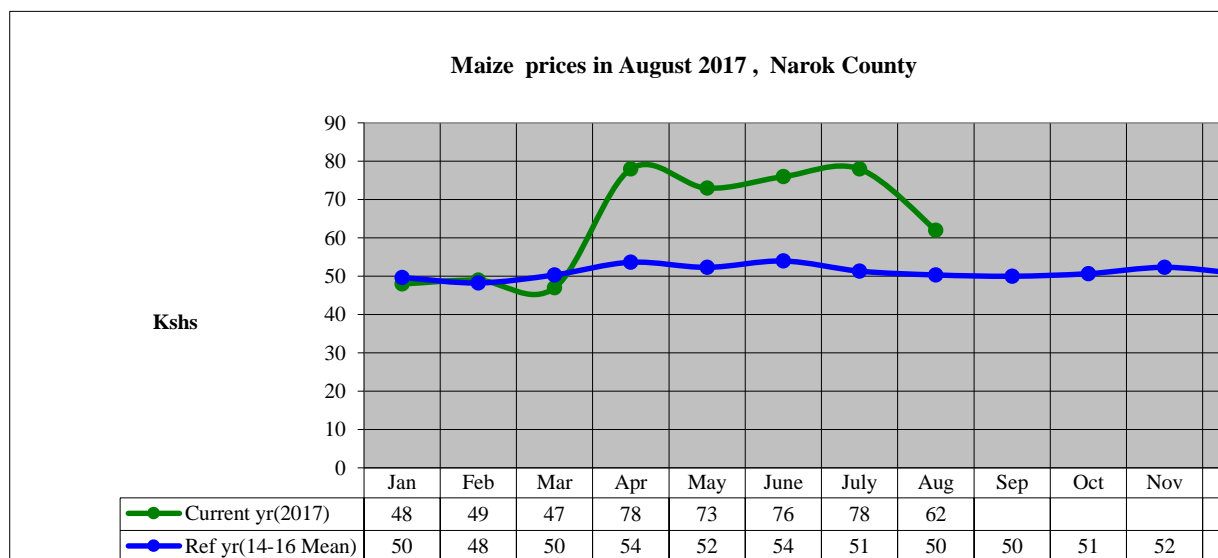


Figure 10

(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 80 per kg while the lowest was recorded in the Mixed farming livelihood zone at an average of Kshs 42 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 reduced to Kshs. 84 compared to the previous month of Kshs. 97 as shown in Figure 11 below.

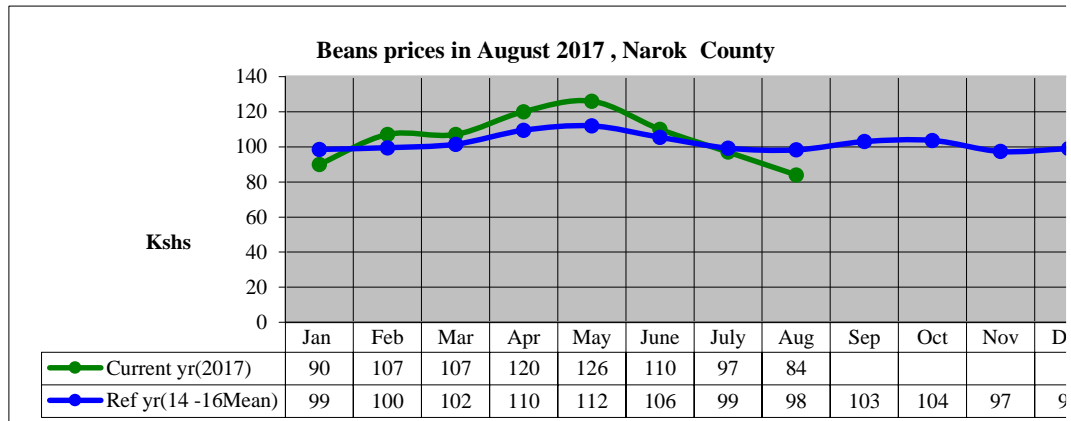


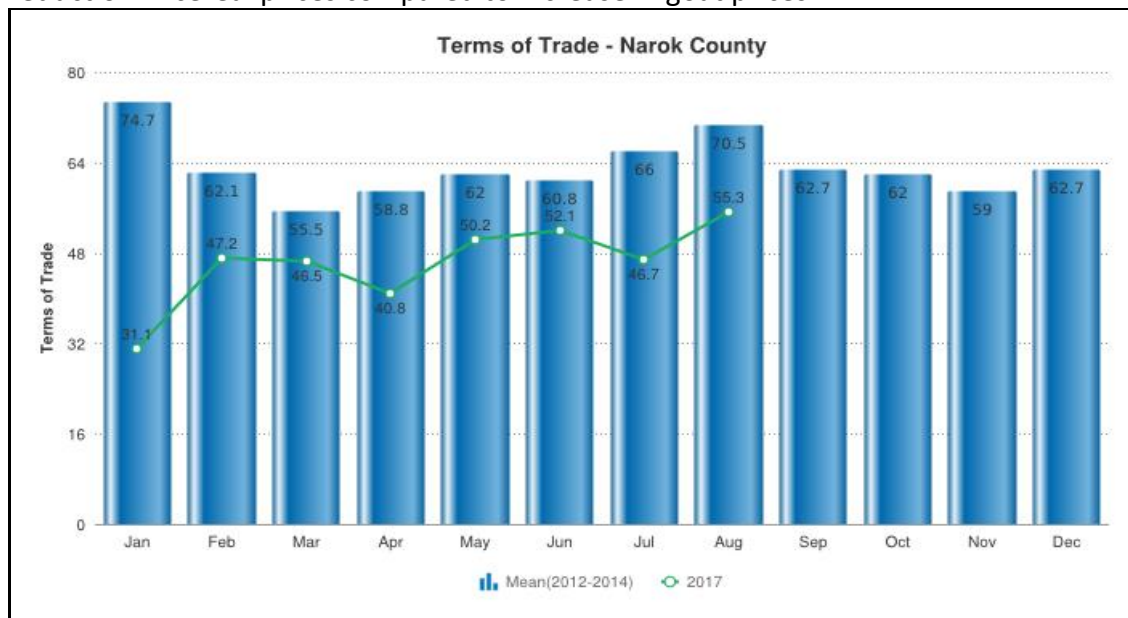
Figure 11

(n = 180)

- The Pastoral and Agro-pastoral livelihood zones recorded a higher average price of Kshs. 100/kg, compared to the Mixed farming livelihood zone, which recorded a lower price of Kshs.74 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 below 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 to 55.3 from 46.7 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 Argo-pastoral and Pastoral areas recorded much higher cereal prices accompanied with increased goat prices compared to mixed farming zones which recorded low goat prices with low cereal prices.
- 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 1.5 litres from 1.8 litres per household per day recorded in the previous month as shown in Figure 12 below.

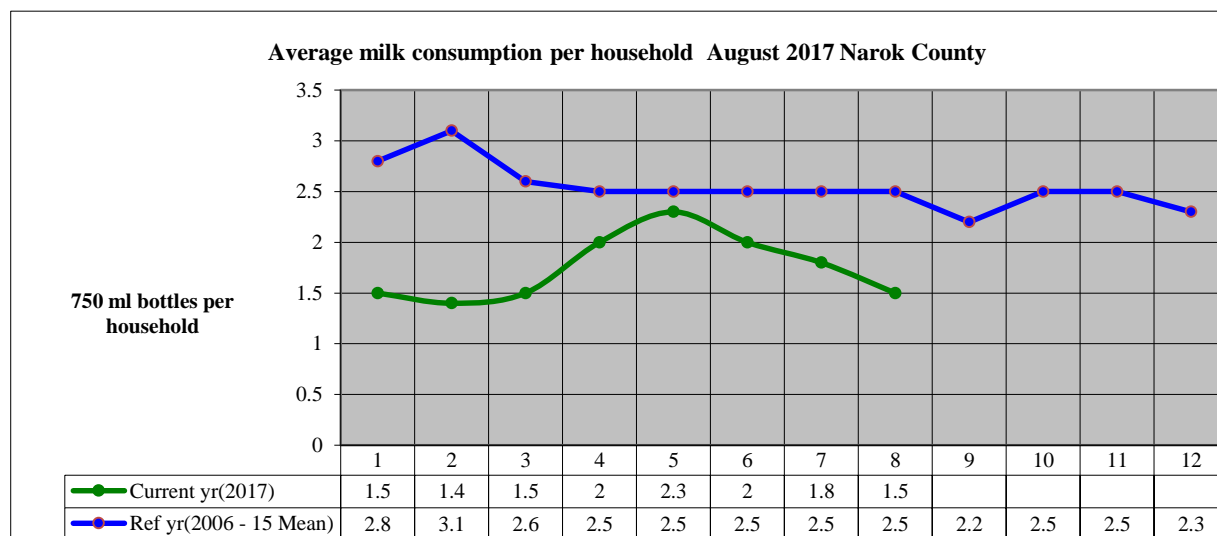


Figure 12

- Milk consumption rate is expected to decline further in September 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 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 reduced to 10.78% from 14.5% as shown by Figure 13 below.

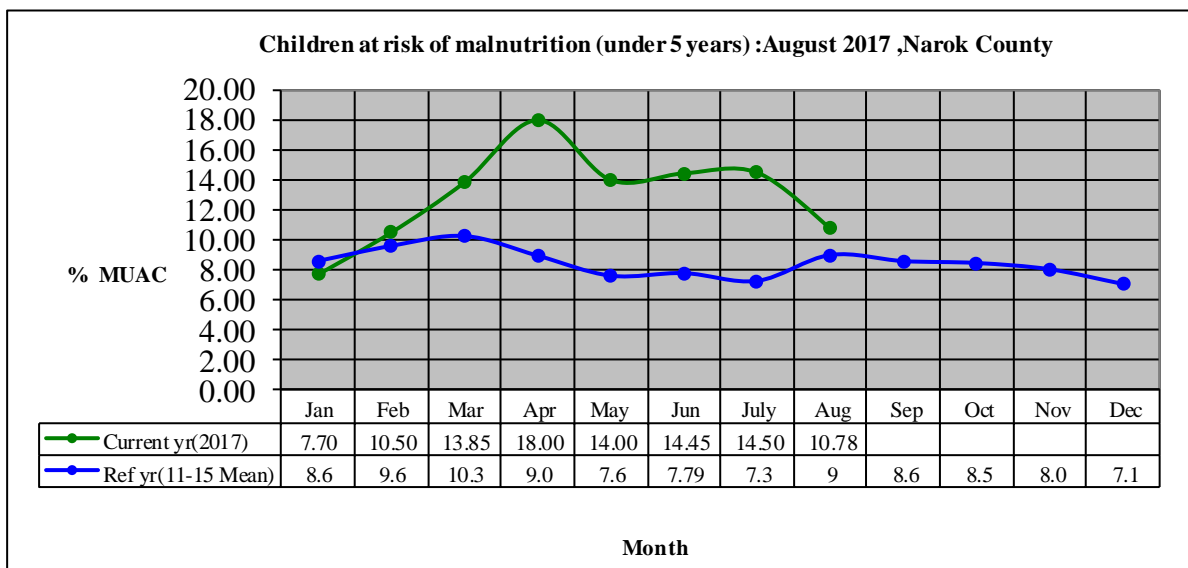


Figure 13

(n = 649)

- The improved nutrition status has been attributed by slight improvement in food security mostly in mixed farming zone where harvesting of maize and beans is taking place.
- The pastoral and the agro-pastoral livelihood zones recorded the highest number of children at risk of malnutrition at 25% compared to Mixed farming livelihood zone which recorded 2.7%. 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 coping strategy index (CSI) was 12.5 while that of agro-pastoral and pastoral livelihood zone was 3.9 and 1.3 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. 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.

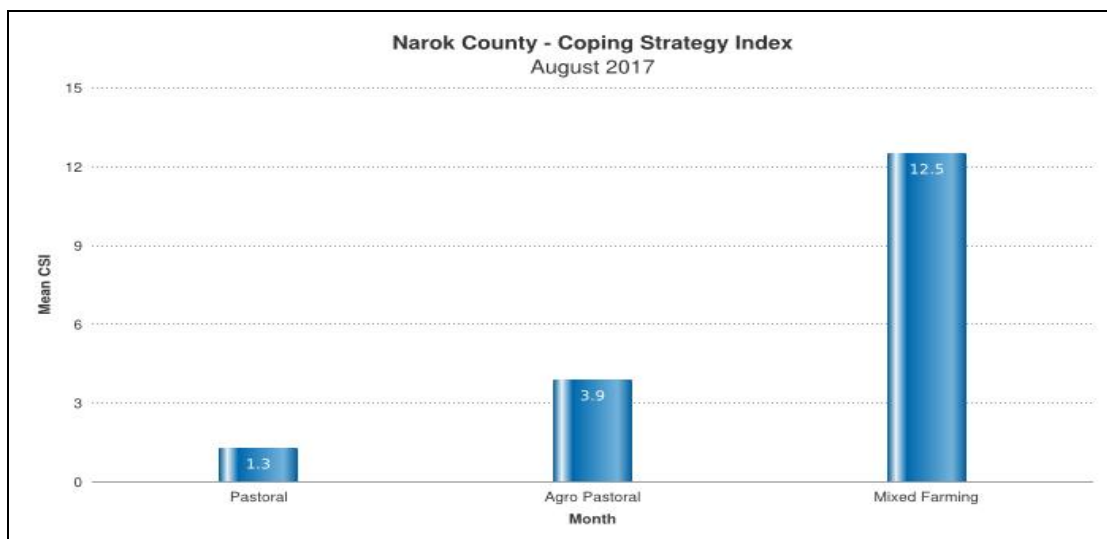


Figure 14

- 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.
- 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 –

- No non-food aid was done during the month.

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 increased 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 and Ntulele in Narok East sub-county.
- Witnessed cases of in-migration from Kajiado County was also reported during the month.

7.3 FOOD SECURITY PROGNOSIS

- Pasture and browse conditions are still below the normal conditions in the three sub counties of Narok West, Narok South and Kilgoris. Livestock productivity is bound to be affected adversely in these areas and consequently affecting food security.
- Maize prices are expected to stabilize due to modest harvest realized in some parts of the County. This will have a positive impact on food access, at least for the next one month
- The off season rains witnessed in some parts of the County will improve water access and availability, thus reducing pressure at the water source points with regards to livestock and human access to water.

8.0 RECOMMENDATIONS

- Kilgoris Sub County should receive special attention with respect to drought interventions as the area is currently experiencing extreme vegetation deficit. It has recorded the lowest VCI value ever recorded in history since year 2001. Special attention should be given to livestock and crop sectors which are the most vulnerable sectors with regards to drought effects.
- 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. Narosura Ward in Narok South Sub County and

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