

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



A Vision 2030 Flagship Project



SEPTEMBER EW PHASE

Drought Status: **ALERT**



Maandalizi ya mapema

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
AGRO PASTORAL (Kiririr, 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	33.64	>35
Forage condition	Fair-poor	Fair
Production indicators	Value	Normal
Crop Condition (Maize)	-	-
Livestock Body Condition	Fair-poor	fair
Milk Production	2.6	>5 Litres
Livestock Migration Pattern	Not normal	Normal
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	57.9	>100
Milk Consumption	1.5	>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)	12.53	<10

Drought Situation & EW Phase Classification

Biophysical Indicators

- **Rainfall:**
- Showers were recorded with dry days intervals in the first dekad and second dekad of the month 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 33.64 depicting a moderate vegetation deficit.

Socio Economic Indicators (Impact Indicators)

Production indicators:

- Harvesting of wheat was recorded in Oloolulunga in Narok south, Suswa and Ntulele in Narok East and Mau region in Narok North sub counties.
- Livestock body condition is fair to poor in the Pastoral livelihood zone.
- 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 mostly in pastoral livelihood zone.
- 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 12.53, higher than the long term average of 8.6.

<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 ranged from poor to fair. Rains were poorly distributed during the month with some parts of the county receiving negligible showers 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

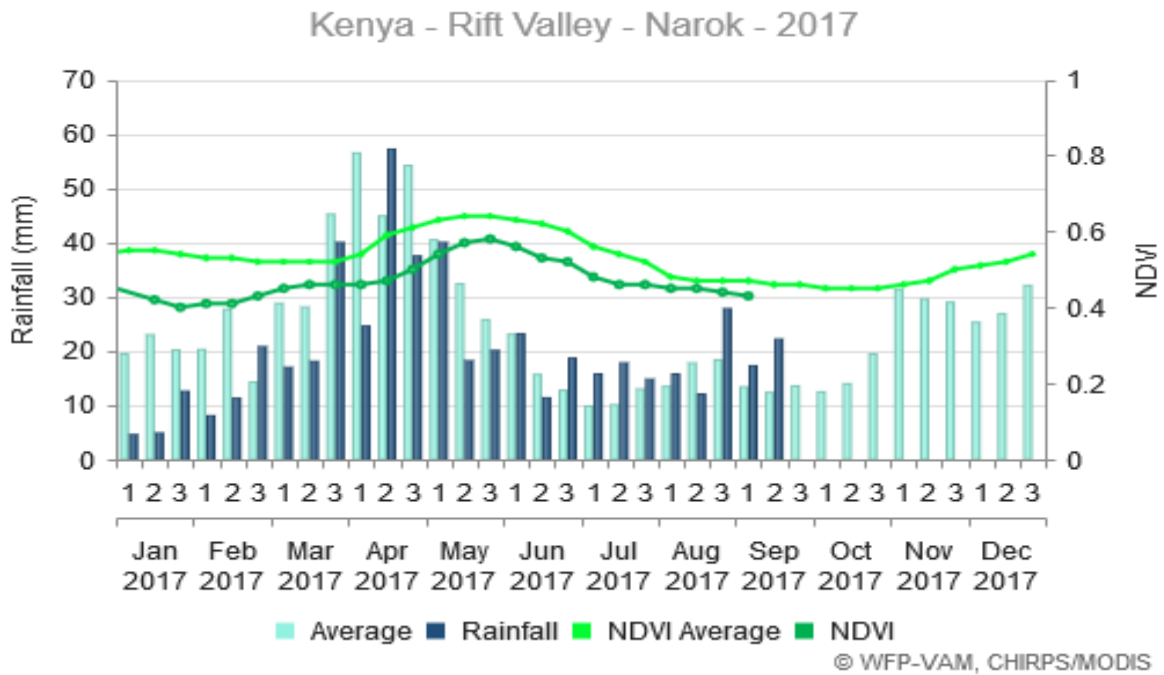


Figure 1

- 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 but above average compared to the long term means. Showers were mostly witnessed in Transmara East, Narok North, Narok South, Transmara West and in Narok East sub counties in the first and second dekad of the month.

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

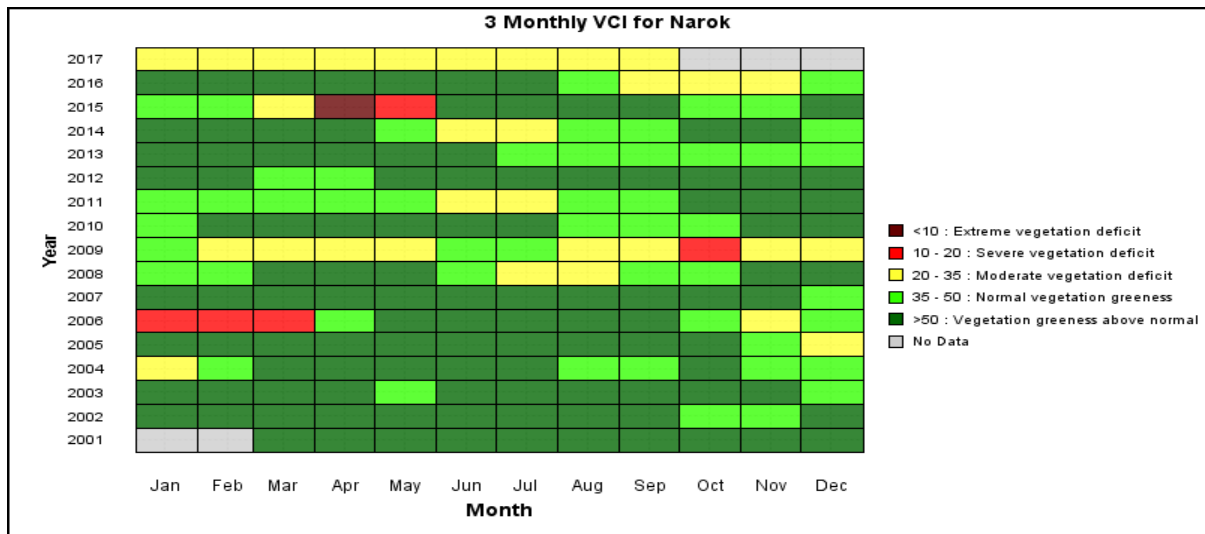


Figure 2

- The vegetation greenness as depicted by the vegetation condition index (VCI) shows moderate vegetation deficit with a value of 33.64 as shown in Figure 2 above.
- Other than Emurua Dikirr, Narok West and Narok North, all the other three Sub Counties are experiencing vegetation deficit with Kilgoris Sub County experiencing severe vegetation deficit of 16.8 as shown in Figure 3 below.

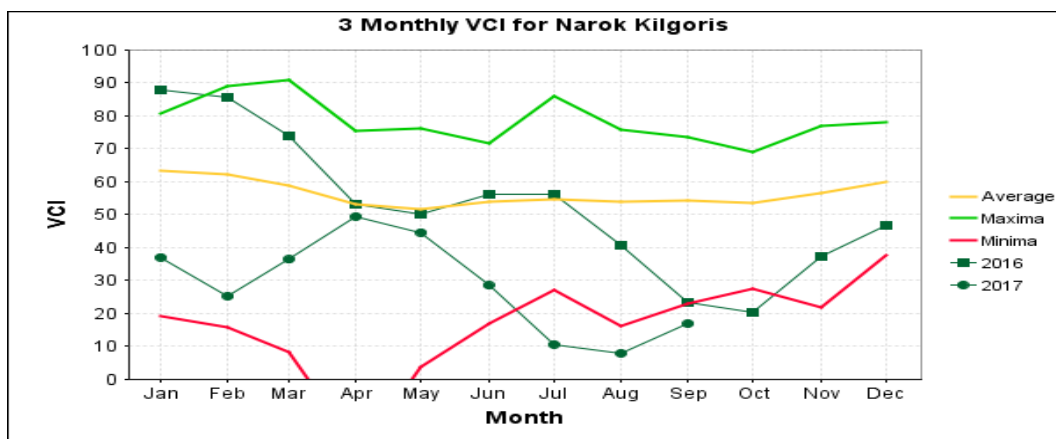


Figure 3

2.1.1 Field observations

2.1.1.1 Pasture

- The quantity and quality of pasture in Mixed farming livelihood zone was fair. 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, 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 poor pasture regeneration.
- The available pasture is likely to last for one and half month 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 is poor to 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 (36%), Rivers (16%) and boreholes at 11 % as shown by Figure 4 below.

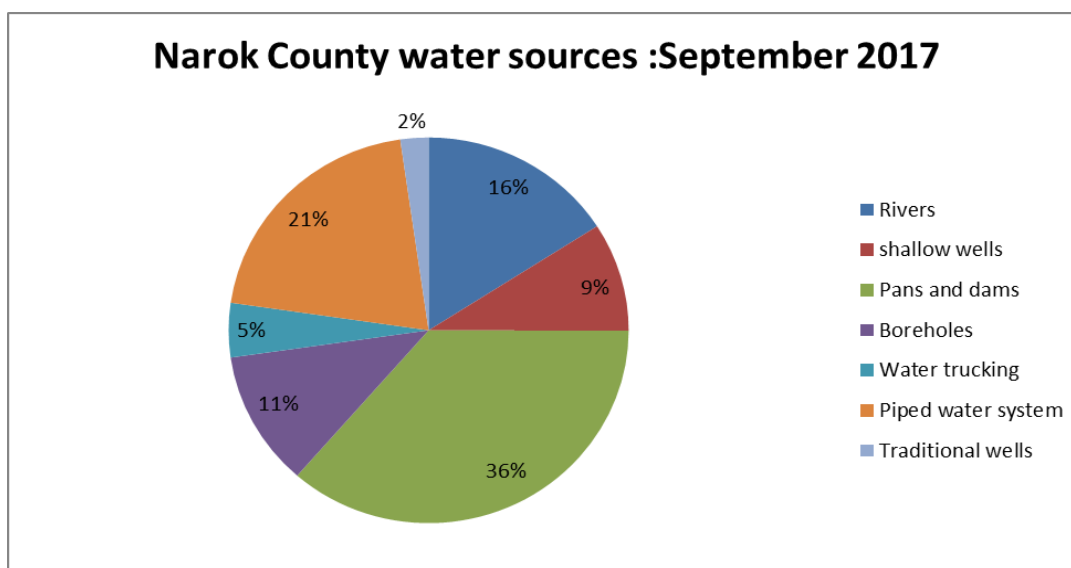


Figure 4

- 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 month 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 worsen more in the Pastoral livelihood zone 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 2.8 km having reduced from 3.5 km recorded in the previous month as shown in figure 5 below.

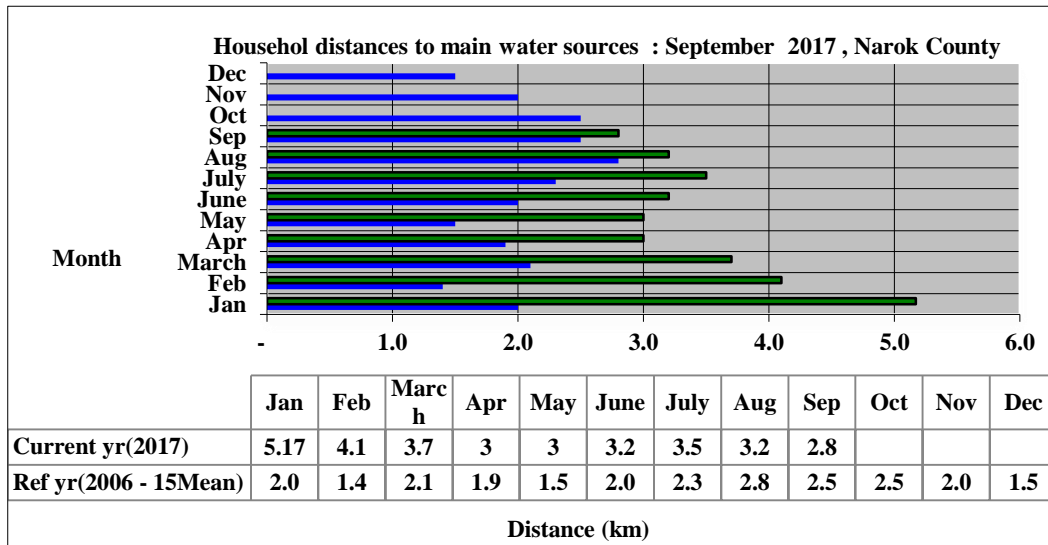


Figure 5

- Pastoral livelihood zone recorded the longest average return distance of 10 km having remained the same as last month while the shortest average distance was recorded in Mixed farming livelihood zone, reducing to 0.5 km from 1 km of last month.
- 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 reduced to 5.8 km from 6.4 km recorded last month as shown by Figure 6 below.

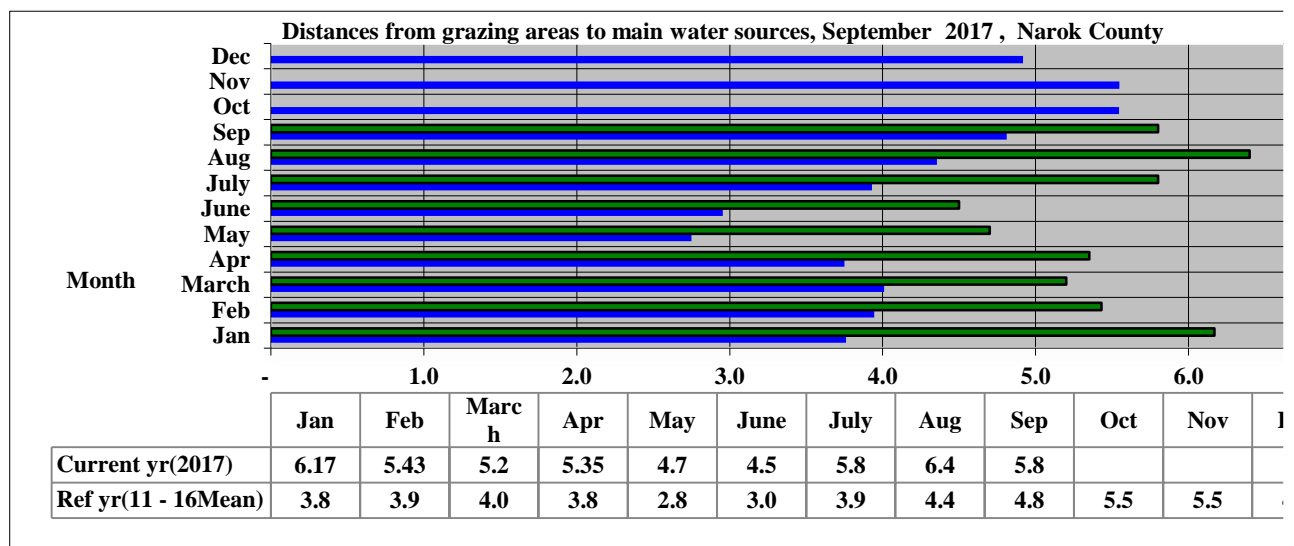


Figure 6

- Pastoral livelihood zone recorded the longest distance at 9 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.
- 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 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.
- The deteriorating livestock body condition is attributed to extreme poor Pasture and access and availability to water source mostly in the 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) 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.
- There is a confirmed outbreak of PPR diseases in Transmara West and Narok West Sub Counties. The case has since been handled by the county veterinary services department.

3.1.3 Milk Production

- The average milk production per household per day reduced to 2.6 bottles per household from 3.1 bottles recorded in the previous month as shown in figure 7 below.

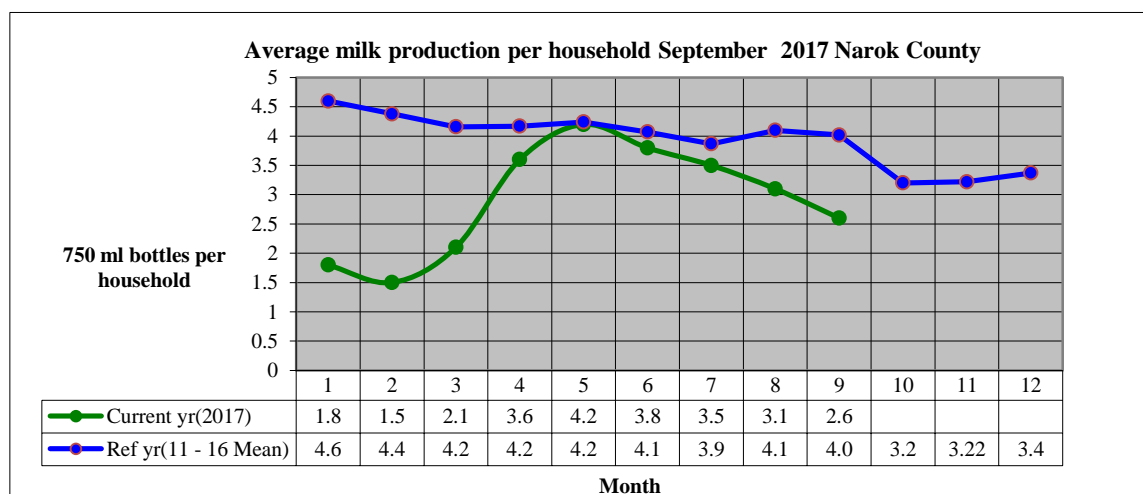


Figure 7

(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 has improved 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 on-going farming activity in Mixed farming is 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 slightly decreased to Kshs 14,300/head from Kshs 14,700 /head compared to the previous month as shown by Figure 8 below.

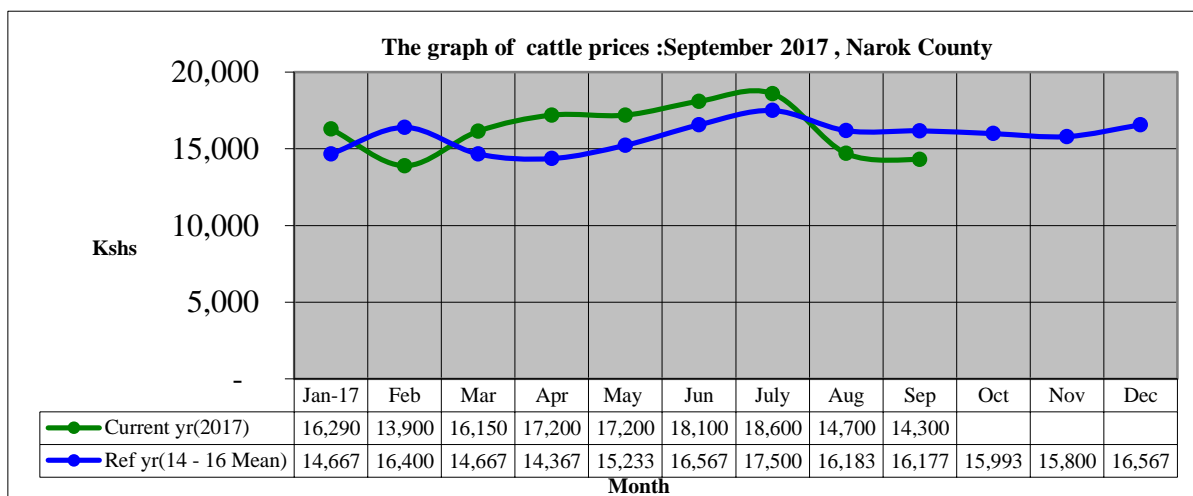


Figure 8

(n = 180)

- The highest prices were recorded in Mixed farming livelihood zone at Kshs 20,000 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 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. 3,455 from Kshs. 3,050 per head recorded last month as indicated by Figure 9 below.

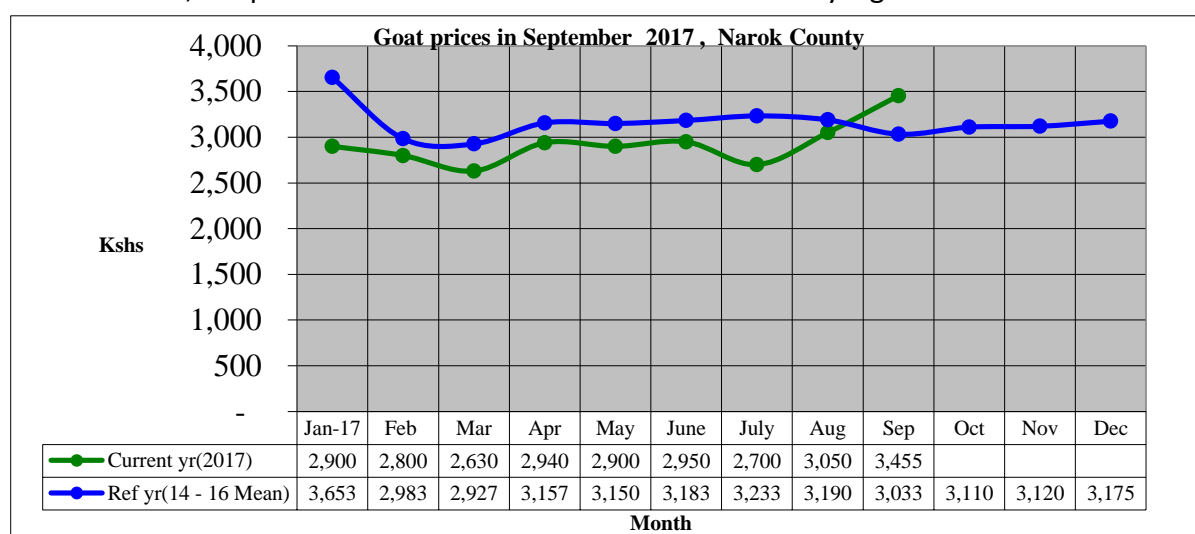


Figure 9

(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. 2,500.
- 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.58 from Kshs. 62 of last month as shown in Figure 10 below.

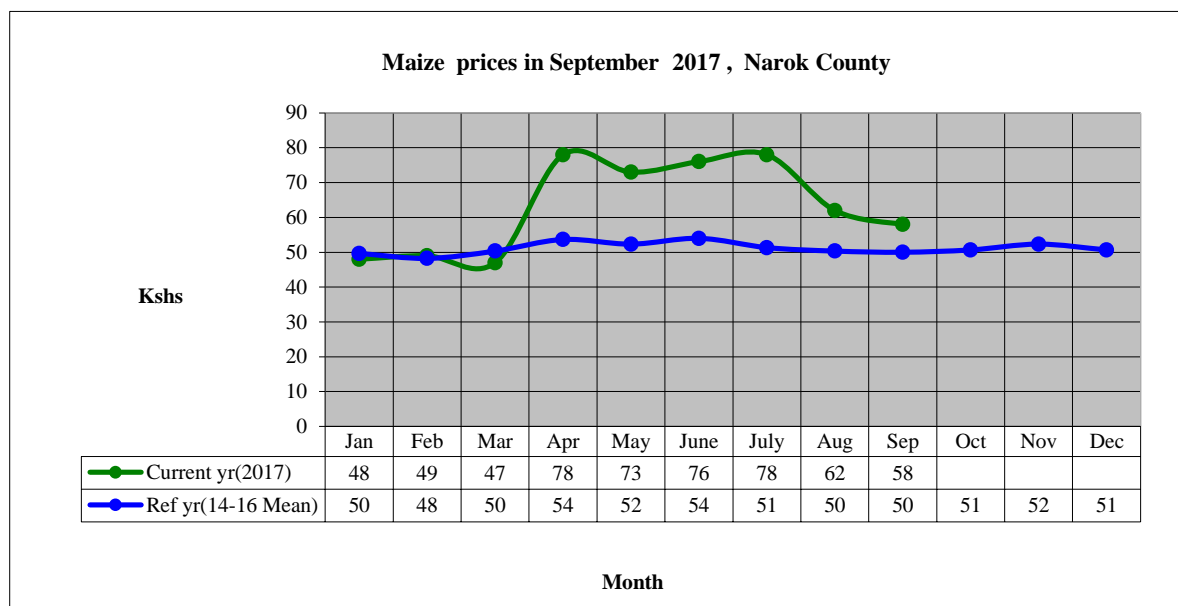


Figure 10

(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 35 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. 89 compared to the previous month of Kshs. 84 as shown in Figure 11 below.

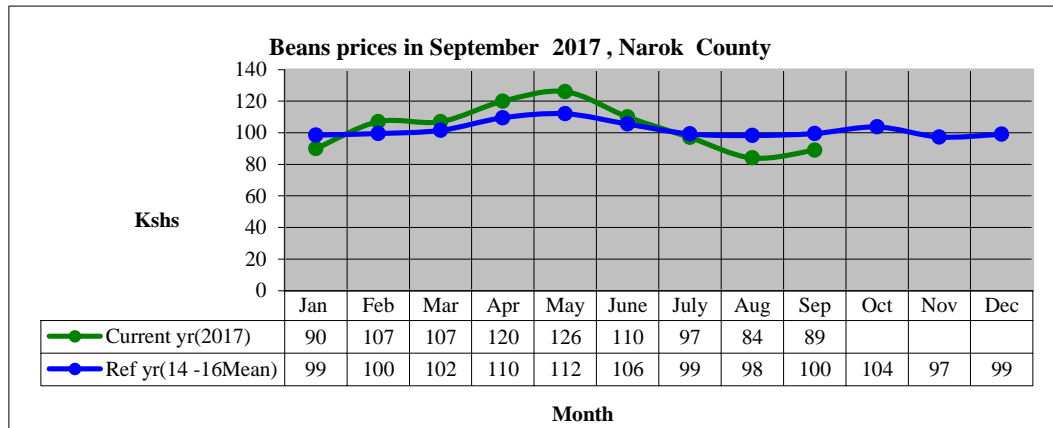


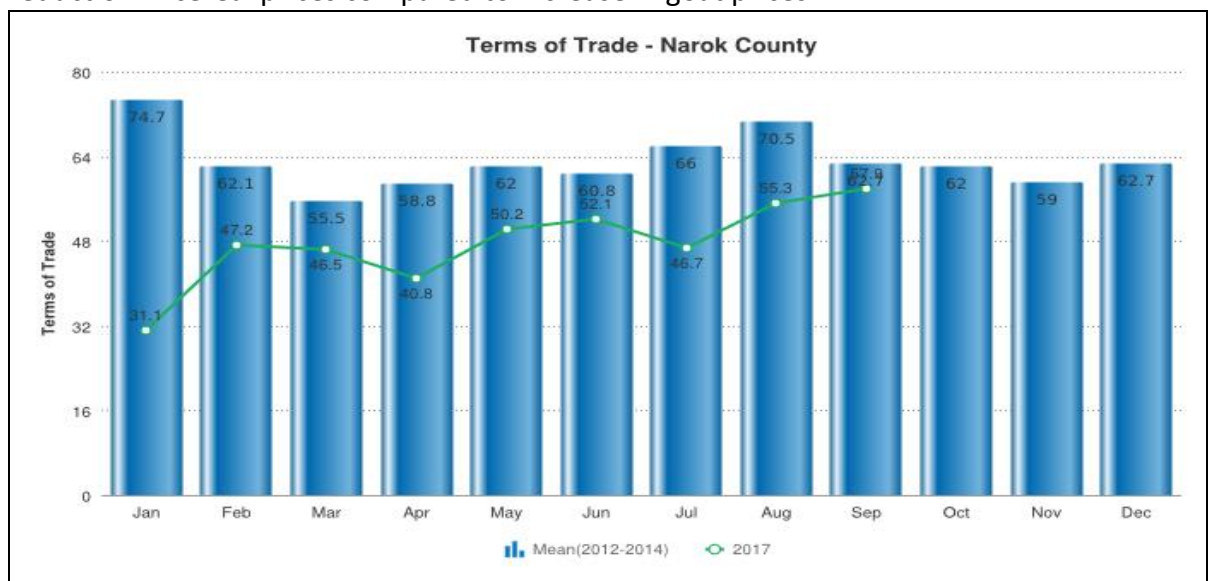
Figure 11

(n = 180)

- The highest price was recorded in the Pastoral livelihood zones at Kshs. 120/kg, compared to the Mixed farming livelihood zone, which recorded a lower price of Kshs.90 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 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 57.9 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 Argo-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 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 remained at 1.5 litres compared to previous month as shown in Figure 12 below.

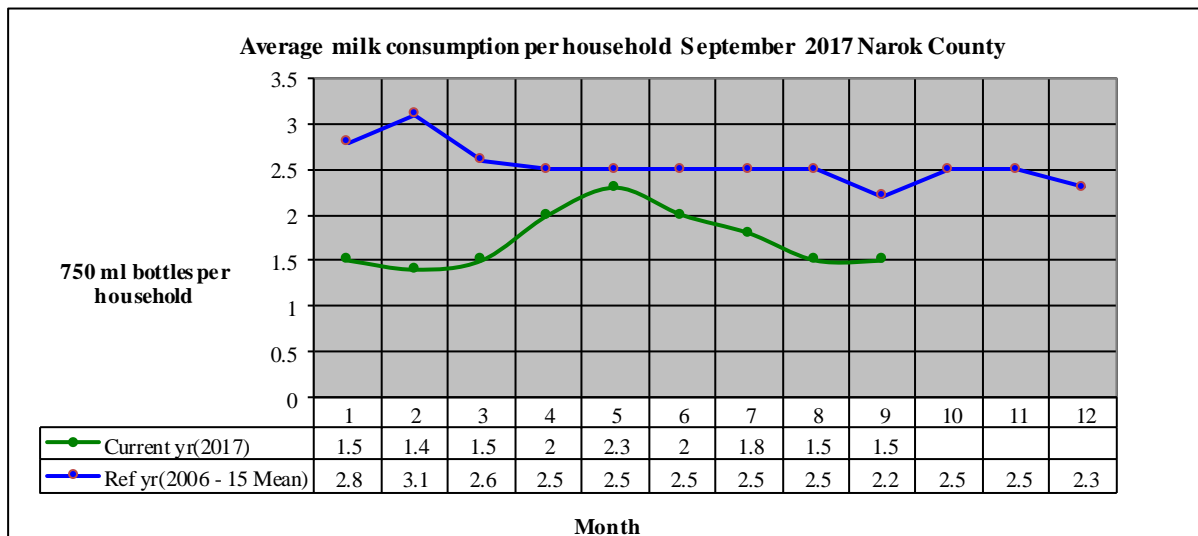


Figure 12

- Milk consumption rate is expected to improve in October in the county since short rains are expected to start during the month.
- 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 increased to 12.53% from 10.78% as shown by Figure 13 below.

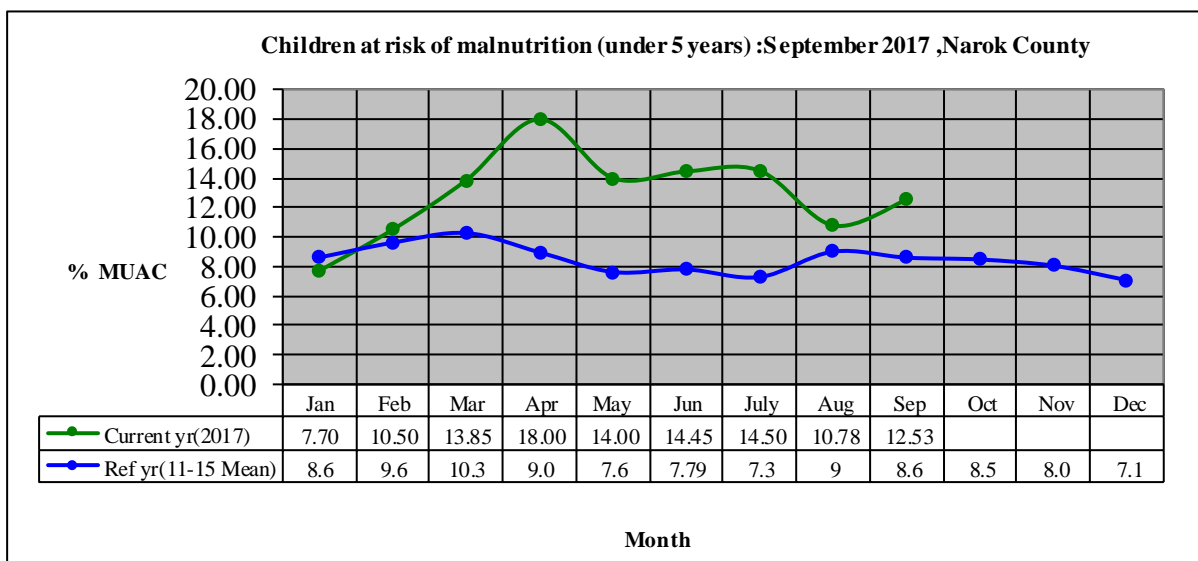


Figure 13

(n = 686)

- 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 2.1%. The highest number of children at risk of malnutrition was witnessed in Mosiro and Naroosura wards in Pastoral livelihood zone owing to poor dietary diversity and increased food prices coupled with reduced milk consumption.
- 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. 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.
- 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 15.1 while that of agro-pastoral and pastoral livelihood zone was 3.5 and 3.4 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.

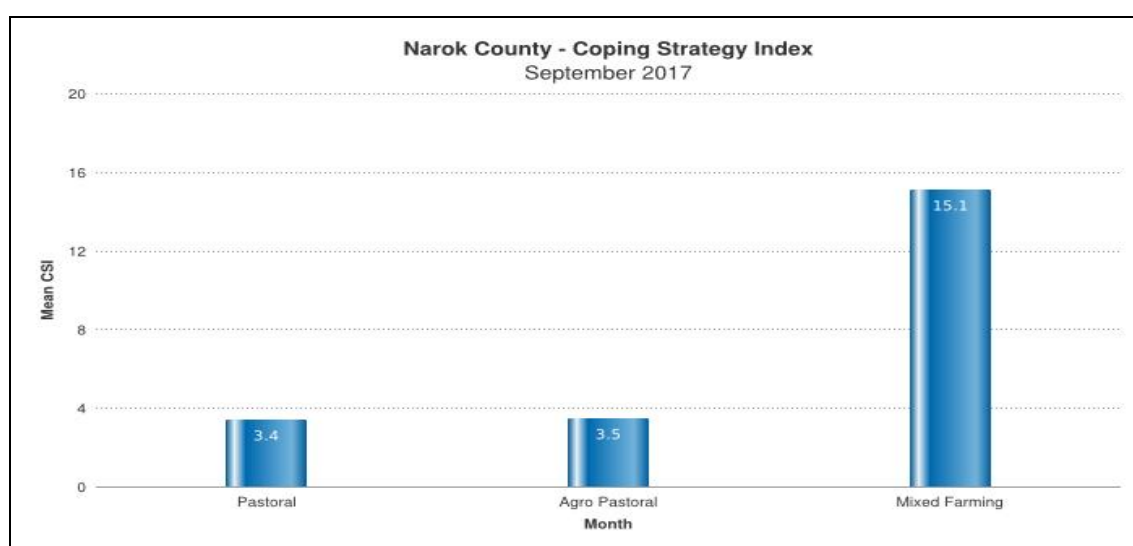


Figure 14

- 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 –

- 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

- There were some skirmishes in Esoit area in Kilgoris Sub County where some lives were lost and a number of people were also injured. Appropriate security measures have been put in place to contain the situation.

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 Oloolunga in Narok South Sub County, Mau and Ntulele in Narok East sub-county.
- 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 East, Narok South and Kilgoris. Livestock productivity is bound to be affected adversely in these areas and consequently affecting food security. Reduced milk production will have an adverse effect on household nutrition status particularly among the young children.
- 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.

8.0 RECOMMENDATIONS

- Kilgoris Sub County should receive special attention with respect to drought interventions as the area is currently experiencing severe vegetation deficit. Special attention should be given to livestock and crop sectors which are the most vulnerable sectors with regards to drought effects. Supplementary livestock feeding should be put in place targeting the vulnerable livestock populations.
- 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.