

# National Drought Management Authority

## NAROK COUNTY

### DROUGHT EARLY WARNING BULLETIN FOR APRIL 2018



A Vision 2030 Flagship Project



#### APRIL EW PHASE

##### Drought Situation & EW Phase Classification

###### Biophysical Indicators

###### Rainfall

- There was an early onset of long rains, which started in third dekad of February. The county recorded above normal rains during the month which were characterized by heavy downpours and chilly weather condition across all the livelihood zones.

###### Vegetation condition:

- The vegetation greenness as depicted by the vegetation condition index (VCI) is normal. However, Narok North sub county is experiencing moderate vegetation deficit.

###### Socio Economic Indicators (Impact Indicators)

###### Production indicators:

- The on-going farming activities include weeding of Maize and beans in Mau in Narok North, Narok East, Narok South, Transmara East and kilgoris sub-counties. Most crops are at flowering stage and kneeling.
- Livestock body condition still ranged from fair to good in the pastoral livelihood zone and good in the mixed farming and the agro-pastoral livelihood zones.
- Milk production is stable and within the normal range compared to the long term average.

###### Access indicators:

- Terms of trade were not favorable in the mixed farming livelihood zones.
- Milk consumption ranged from fair to good in all the livelihood zones.
- Water access for both human and livestock was good in all the livelihood zones

###### Utilization Indicators:

- The rate of malnutrition cases is stable and below the normal range as indicated by percent of mid upper arm Circumference (MUAC).

#### Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
AGRO PASTORAL (Kirindoni, Kilgoris)	NORMAL	STABLE
MIXED FARMING (ololulunga, Nkareta and Emurua Dikirr)	NORMAL	STABLE
PASTORAL (Loita, Naroosura, Olmesutie, Ntuka and Elang'ata Enterit)	NORMAL	STABLE
LEASING/PASTORAL (Mosiro Ward)	NORMAL	STABLE
<b>COUNTY</b>	<b>NORMAL</b>	<b>STABLE</b>
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	258%	>90%
VCI-3Month	54.49	>35
Forage condition	Good	Good
Production indicators	Value	Normal
Crop Condition (Maize)	Normal	Normal
Livestock Body Condition	Fair-good	Good
Milk Production in litres	3.5	>5
Livestock Migration Pattern	Normal	Normal
Livestock deaths (Drought related)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	65.6	>100
Milk Consumption in litres	2.4	>4
Return distance to water sources in km	3.4	<5
Cost of water at source in ksh (20 litres)	2-5	<5
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	8.07	<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

- There was an early onset of long rains which started in the third dekad of February. The rains have continued throughout the month of March and April characterized by heavy downpour in all parts of the County.
- The showers were well distributed in both time and space in all parts of the county.

## 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

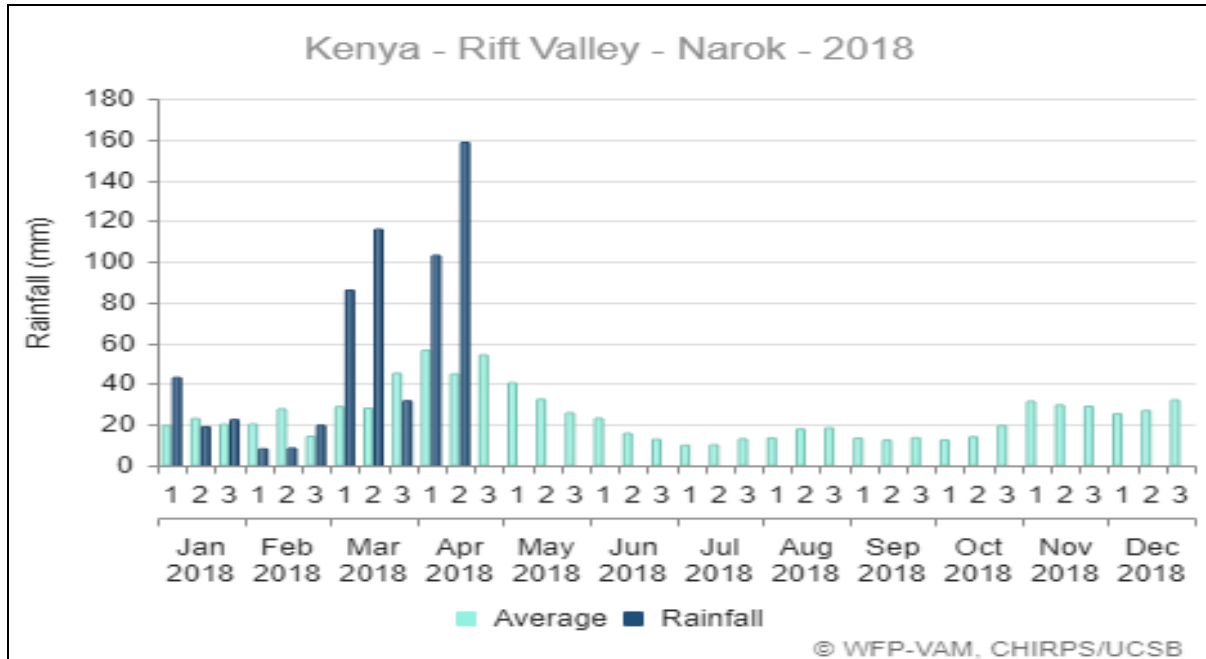


Figure 1

- The above satellite image highlights the general performance of the rains in the county for the month under review. The rainfall performance was above the normal range by almost 258% within the first two dekads of the month as shown in Figure 1 above.

## 2. IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

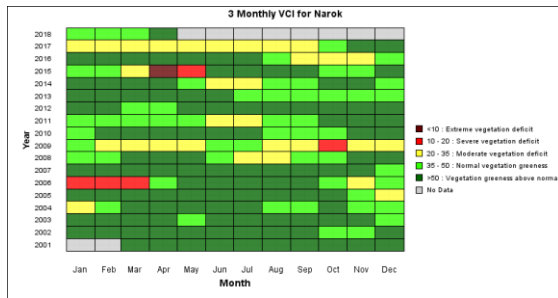


Figure 2

The vegetation greenness as depicted by the vegetation condition index (VCI) shows normal vegetation greenness as shown in Figure 2. However, Narok North Sub County is having moderate vegetation deficit as shown by Figure 3, probably due to bare land due to absence of crops. Most farmers in this sub county have delayed planting due to excessive rains.

#### 2.1.1 Field observations

##### 2.1.1.1 Pasture

- The quantity and quality of pasture in mixed farming and agro pastoral livelihood zones remained good. In pastoral livelihood zone, pasture conditions ranged from fair to good. The pasture conditions in Mosiro Ward in Narok East sub county and Naroosura ward in Narok south sub county have improved compared to last month due to rains received in the county.
- The available pasture is likely to last for more than five months in mixed farming and agro-pastoral livelihood zones. In pastoral livelihood zone, pastures are likely to last for three to four months.
- The current pasture situation is within the normal range.

##### 2.1.1.2 Browse

- The quality and quantity of browse in all the livelihood zones was good. The available browse is expected to last for more than six months in mixed farming livelihood zone while in pastoral livelihood zone, it is likely to last for three to four months.
- The current browse situation is above the normal range.

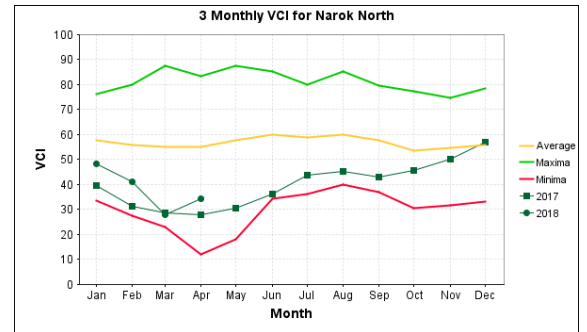


Figure 3

The pasture conditions in Mosiro Ward in Narok East sub county and Naroosura ward in Narok south sub county have improved compared to last month due to rains received in the county.

## 2.2 Water resources

### 2.2.1 Sources

- The main sources of water for livestock and human consumption in the county were Boreholes, pans/dams, rivers, traditional river wells and shallow wells as shown by Figure 4.
- The quantity and quality of water was generally good in all the livelihood zones with pans and dams being the most used.

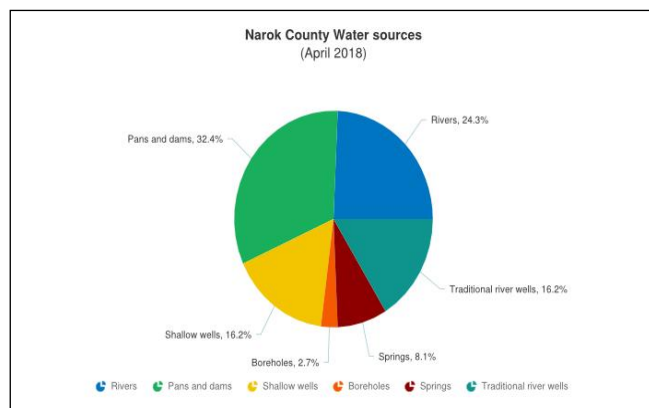


Figure 4

- In pastoral livelihood zone, water quality ranged from fair to good even though some of the pans are silted. In mixed farming and agro pastoral livelihood zones, water quality was good and this was attributed to onset of long rains in the county.
- The current water sources are expected to last for more than five months in mixed farming and agro-pastoral livelihood zones. In pastoral livelihood zone, the water is likely to last for four months.
- The status of main sources of water is above normal at this time of the year.

### 2.2.2 Household access and Utilization

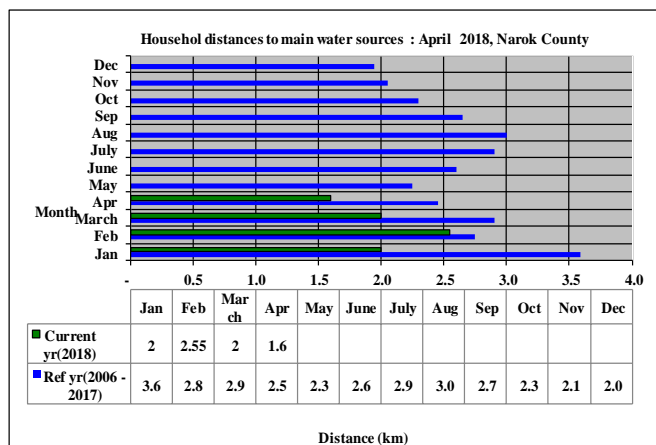


Figure 5

points were below the normal range compared to the long term means as shown by Figure 5.

The average distance to watering points for households reduced by 38% compared to the previous month.

Pastoral livelihood zone recorded the longest average return distance of four km having decreased from five km last month while the shortest average distance was recorded in mixed farming livelihood zone at 0.3 km. The reduction in trekking distance is due to ongoing rains and most household can now access water within the vicinity of their households.

The current trekking distances to water

### 2.2.3 Livestock access

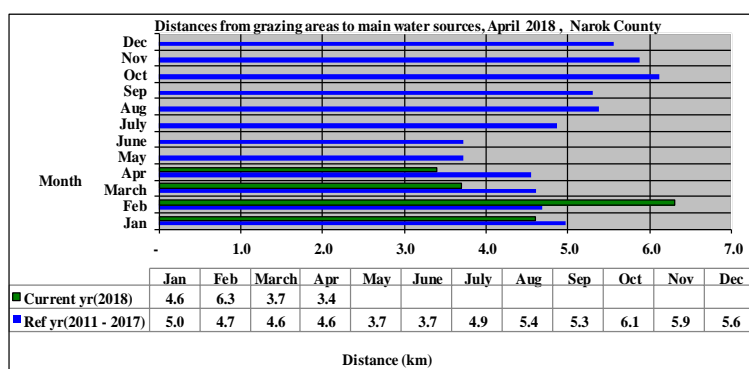


Figure 6

The average distance to main water sources from grazing areas reduced slightly by 9% compared to the previous month. Pastoral livelihood zone recorded the longest distance of four km while the shortest distance was recorded in the mixed farming livelihood zone at 0.5 km. The current average trekking distance is below

the normal range at this time of the year as shown in Figure 6.

### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

##### 3.1.1 Livestock Body Condition

- The cattle body condition was generally good in the mixed farming and some parts in the agro-pastoral livelihood zones. Cattle body condition ranged from fair to good in the pastoral livelihood zone. The body condition for sheep and goats was good across all livelihood zones.
- The stability in livestock body condition is attributed to improved forage condition and water availability due to ongoing rains in the county.
- The current livestock body condition is normal at this time of the year.

##### 3.1.2 Livestock Diseases

- There were no alarming disease outbreaks in the county except minimal cases of blue tongue and pneumonia in small stocks which were being reported in Narok South, Narok East and Narok West sub-counties. This is due to heavy rains and chilly weather conditions being experienced in the county

##### 3.1.3 Milk Production

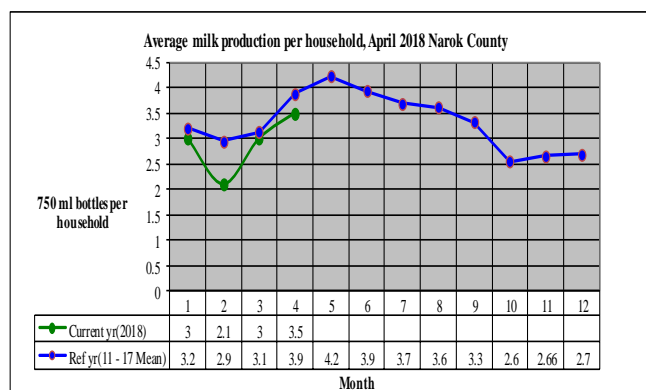


Figure 7

The average milk production per household per day increased by 17% compared to the previous month. The improvement in milk production was attributed to improved livestock body condition as well as pasture and water availability in the county. The current milk production rate is within the normal range at this time of the year as shown by Figure 7.

### 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 in Narok North, Kilgoris and Emurua Dikirr sub-counties.
- The on-going farming activities include weeding of maize, wheat and beans in Mau areas found in Narok North, Narok East, Transmara East and Kilgoris Sub-counties.
- The performance of crops was generally good and high yield is expected this season.
- However, some crops have been damaged due to excess rains and floods. In Mosiro ward, some crops within the irrigation scheme were swept away. In Transmara East and West sub counties, crops that were planted earlier have been damaged due to water logging.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

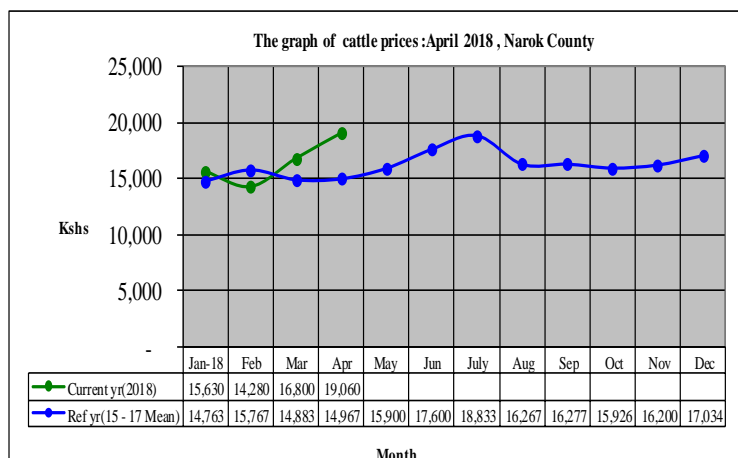


Figure 8

The average price for the medium sized cattle increased by 14 percent compared to the previous month.

The highest prices were recorded in the pastoral livelihood zone at Kshs 21,100 per head and the lowest in the agro-pastoral livelihood zone at an average price of Kshs 16,000 per head.

The current cattle prices are above the normal range compared to long term means at this time of the year as shown by Figure 8.

#### 4.1.2 Goat Prices

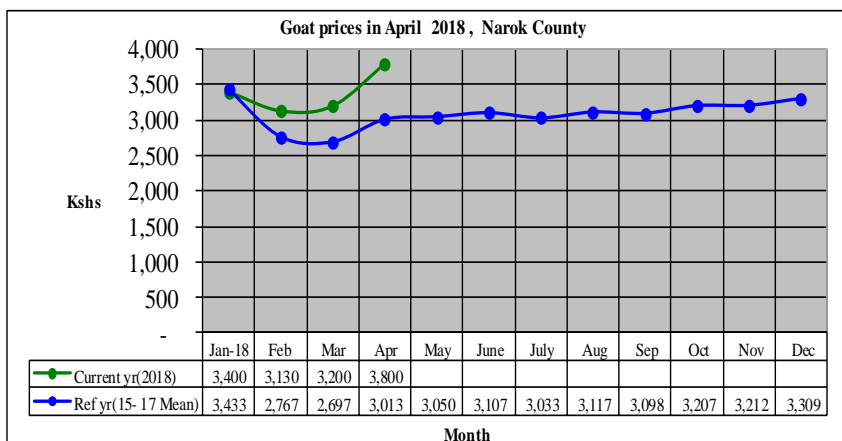


Figure 9

The average goat price increased by 18 percent compared to the previous month.

The price increase is attributed to good body condition and forage availability in all the livelihood zones. There was no major significant inter-livelihood variation in goat prices,

The average goat price was above the normal range at this time of the year.

## 4.2 CROP PRICES

### 4.2.1 Maize

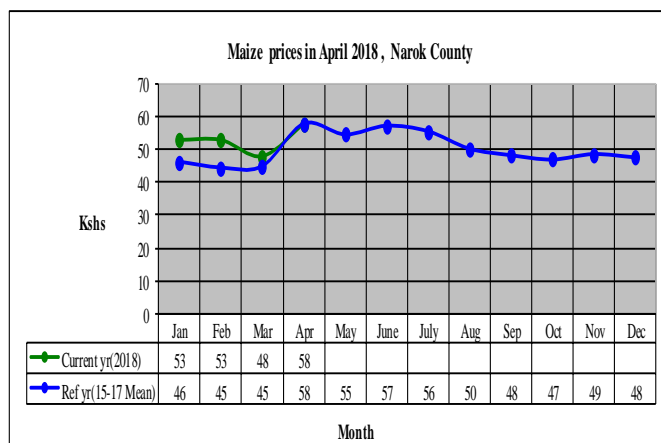


Figure 10

The average price of maize per kilogram increased by 20 percent compared to last month. The highest prices were recorded in pastoral livelihood zone at Kshs 75 per kg while the lowest was recorded in the mixed farming livelihood zone at an average price of Kshs 35 per kg. The increase in price is owned to diminishing stock at household level and increased cost of transportation. The overall price is within the normal range as shown by Figure 10.

### 4.2.2 Beans

- The average price of beans increased by 23% compared to the previous month. The highest price was recorded in the agro-pastoral livelihood zone at Kshs. 115/kg compared to the mixed farming livelihood zone which recorded a lower price of Kshs.70 per kg.
- The current price is below the normal range at this time of the year as shown by Figure 11.

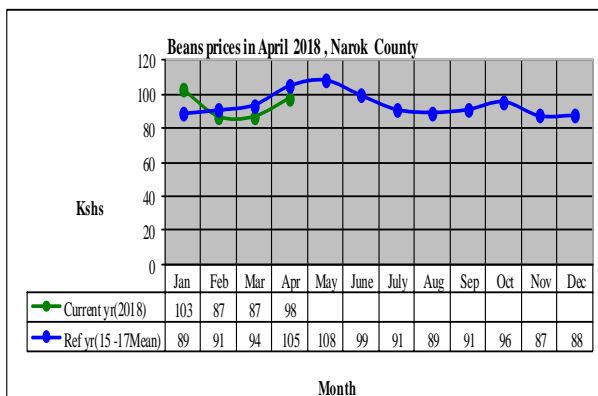


Figure 11

### 4.3 Livestock Price Ratio/Terms of Trade

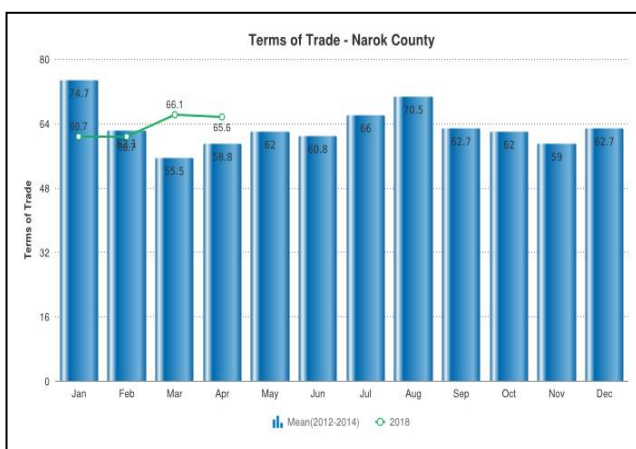


Figure 12

The Terms of Trade (ToTs) based on the Cereal/Meat price ratio increased by six percent compared to last month. The increase was attributed to decrease in maize price and increase in goat price. This implies that a sale of one goat fetched 65.6kg of cereals. The ToTs were less favourable in the pastoral and mixed farming livelihood zones compared to agro pastoral livelihood zone. The cereal/meat price ratio is above the normal range at this time of the year as shown in Figure 12.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

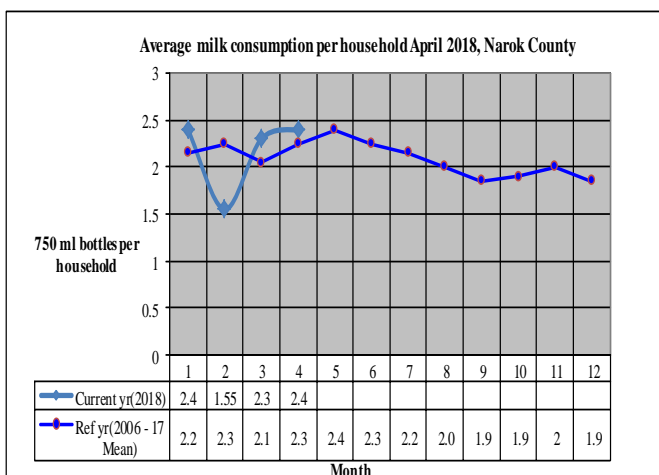


Figure 13

Average household milk consumption per day slightly increased compared to the previous month. There was significant disparity in milk consumption across the livelihoods with agro pastoral zone having the highest consumption rate at 4.6 litres, followed by mixed farming zone at 5.2 litres while the pastoral zone had the least consumption rate at 1.7 litres. The current milk consumption rate is within normal range at this time of the year as shown by Figure 13.

### 5.2 FOOD CONSUMPTION SCORE

- In reference to Food consumption scores, a total of 66.3%, 23% and 10.73% of households fell within the acceptable, borderline and poor food consumption score categories respectively in the month under review.
- The poor food consumption score implies household are not consuming a balanced diet rarely consuming food rich in protein, borderline imply household consuming staples, vegetables every day accompanied by oil and pulses a few times in a week while the acceptable imply households consuming staples, protein(milk and meat), vegetables every day and frequently accompanied by pulses.
- However, there was a significant variation across livelihood zones as shown in Figure 14 with mixed farming and pastoral livelihood zones having the bulk of their populations with acceptable food consumption scores same as last month. In agro-pastoral livelihood zone, the majority of the population had marginal food consumption scores. The inter-livelihood variation is attributed to high consumption of meat and milk in most households in the pastoral and mixed farming livelihood zones compared to those in the agro-pastoral livelihood zone.

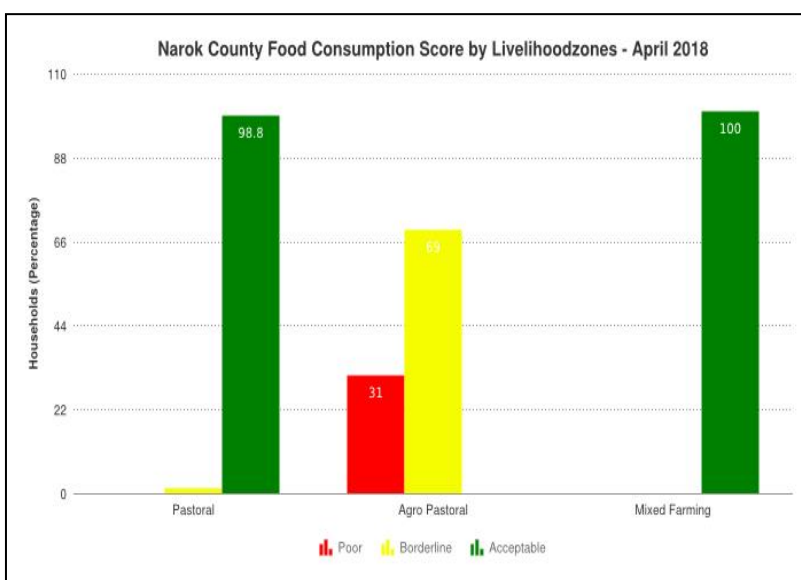


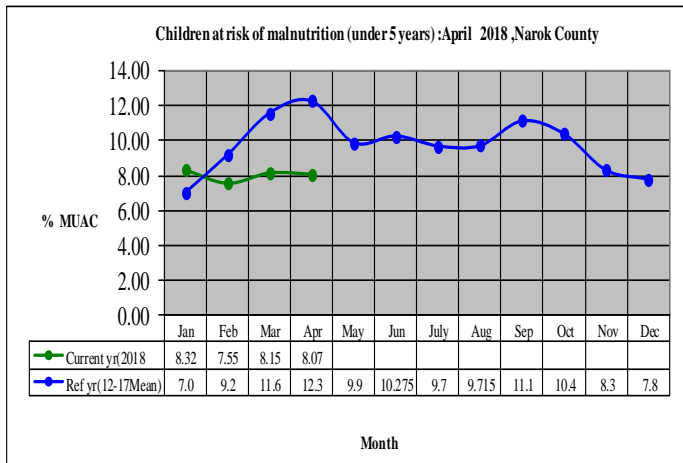
Figure 14



### 5.3 HEALTH AND NUTRITION STATUS

#### 5.3.1 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) is stable compared to the previous month. The pastoral and the agro-pastoral livelihood zones recorded the highest number of children at risk of malnutrition at nine percent compared to mixed farming livelihood zone

**Figure 15**

which recorded two percent. The highest number of children at risk of malnutrition was still being witnessed in Mosiro and Naroosura wards in pastoral livelihood zone owing to poor dietary diversity coupled with low household milk consumption and high food prices.

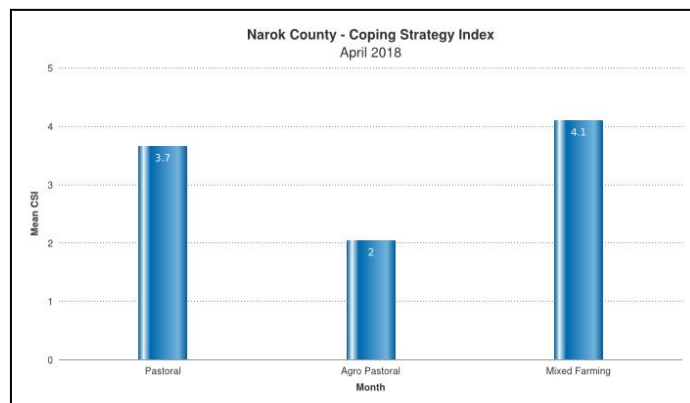
- The dietary diversity in mixed farming livelihood zone has improved slightly due to availability of green vegetables and cereals. This zone harvested maize in January and February which contributed positively to children’s nutrition status coupled with improved milk intake.
- The current rate of malnutrition is below the normal range compared to the long term average as shown by Figure 15.

#### 5.3.2 Health

- The county experienced increased cases of fever due to drastic change of weather though it is not alarming.

### 5.4 COPING STRATEGIES

5.5 Household employed less unusual coping strategies in accessing food across all the livelihood zones as shown by Figure 16. The pastoral livelihood zone had higher CSI compared to other zones. This implies that households in the pastoral livelihood zone employed more coping strategies compared to those in mixed farming and agro-pastoral livelihood zones who can sell livestock and livestock products to purchase food.



**Figure 16**

- The coping strategies are normal at this time of the year

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

### **6.1 NON-FOOD INTERVENTIONS**

- Malnutrition screening is ongoing. It is being conducted by NDMA in collaboration with Ministry of Health through EU/DCF support in Narok East, Narok South and Transmara East Sub counties.
- The County Government in collaboration with the National Government and the World Bank have started implementing NARIGP project. (National Agricultural Rural Investment Growth Project) targeting small holder farms in 20 Wards of Narok County.
- The Regional Pastoral Livelihood Resilience Project is undertaking some drought response interventions which include livestock restocking, animal feeds supplementation of 6,000 bags of range cubes and 5,000 pieces of mineral blocks. They will also be rehabilitating some water pans at a cost of 1.5 million shillings.

### **6.2 FOOD AID**

- No food aid was issued during the month.

## **7.0 EMERGING ISSUES**

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

- Following the heavy downpours experienced in the county, cases of flooding were reported which led to damage of infrastructure including the main Narok-Mai Mahiu highway and Narok town. The National Government took action to repair the damaged sections of the road. Some animals were also washed away by the floods in Narok East and Narok South sub counties.

### **7.2 Migration**

- There were no incidences of migration in the county.

### **7.3 FOOD SECURITY PROGNOSIS**

- With the onset of the long rains season, food security situation is expected to improve significantly. Forage quality and quantity is expected to improve and therefore enhancing livestock productivity. Water access and availability will stabilise thus ensuring better water consumption by both humans and livestock. Crop production is expected to do well as most of the farmers have planted. Household nutrition will significantly improve due to expected increase in milk production and consumption.

## **8.0 RECOMMENDATIONS**

- Rainfall water harvesting should be promoted in order to maximise the prevailing heavy rains being experienced in the county.
- Water hygiene and sanitation standards must be observed in order to minimise chances of outbreak of water borne diseases.
- Repair of damaged infrastructure due to heavy rains particularly rural access roads. The Ntulele-Mosiro road should be given top priority to ease movements of goods to the markets.