



A Vision 2030 Flagship Project



**National Drought Management Authority  
NAROK COUNTY  
DROUGHT EARLY WARNING BULLETIN FOR MARCH 2021**



**MARCH EW PHASE**

**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

**Rainfall:**

- Most parts of the county received light to moderate rainfall in the third dekad of the month under review.
- The amounts received were fairly distributed in both time and space across all the livelihood zones.

**Vegetation condition:**

- The county vegetation condition was above normal across all the livelihood zones during the month under review.
- Pasture and browse condition ranged from fair to good across all the livelihood zones.

**Socio Economic Indicators (Impact Indicators)**

**Production indicators:**

- Land preparation and planting were the main activities ongoing during the month under review.
- Livestock body condition ranged from fair to good across all the livelihood zones.
- Milk production ranged from fair to good and within the normal range compared to the long-term average.

**Access indicators:**

- Terms of trade was favorable across all the livelihood zones.
- Household milk consumption was below long term average (LTA)
- Household and livestock water access was above the long term average (LTA) across all the livelihood zones.

**Utilization Indicators:**

- The number of children who were 'at risk' of malnutrition as measured by mid upper arm circumference (MUAC) reduced and below the LTAs.
- Most households were within acceptable food consumption scores and employed normal coping strategies in accessing food.

**Early Warning (EW) Phase Classification**

Livelihood Zone	Phase	Trend
AGRO PASTORAL	NORMAL	STABLE
MIXED FARMING)	NORMAL	STABLE
PASTORAL	NORMAL	STABLE
COUNTY	NORMAL	STABLE
Biophysical Indicators	Value	Normal Range/Value
VCI-3Month	71.51	>35
Forage condition	Fair-good	Good
Production indicators	Value	Normal
Crop Condition (Maize)	Fair-good	Normal
Livestock Body Condition	Fair-good	Good
Milk Production in litres	3.6	>2
Livestock Migration Pattern	No migration	Normal
Livestock deaths (Drought related))	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	104.6	>64.7
Milk Consumption in litres	2.1	>1
Return distance to water sources in km	3.0	<5
Cost of water at source in Kshs (20 litres)	0-5	<5
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	1.0%	<10

**Seasonal Calendar**

<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

## 1.0 CLIMATIC CONDITIONS

### 1.1 RAINFALL PERFORMANCE

- During the month under review, the amounts received were fairly distributed in time and space across the county.
- Most areas in the mixed farming and agro-pastoral livelihood zones such as Trans Mara East, Trans-Mara West and Mau Ward in Narok North sub counties received moderate to heavy rainfalls in the third dekad of the month. Light to moderate rainfall was experienced in the pastoral areas of Mosiro, Suswa, Siana, Mara and Naroosura wards.

### 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

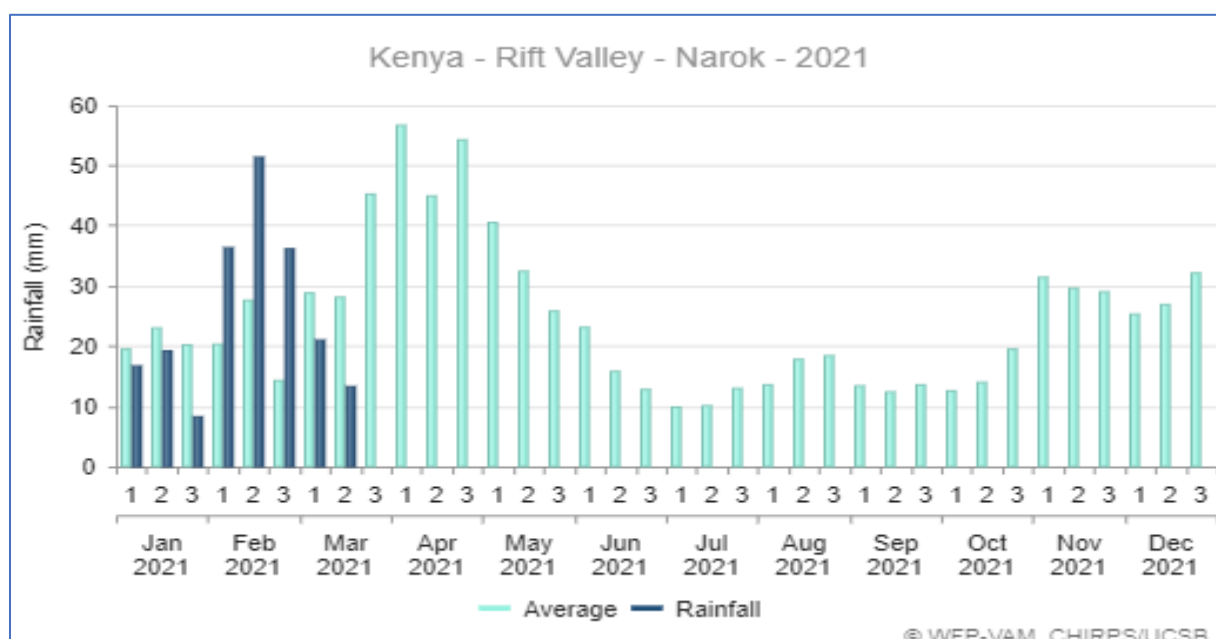


Figure 1 Rainfall Estimates (RFE) trends for Narok County (Source WFP-VAM, CHIRPS/UCSB)

- From the figure 1 shown above, dekad rainfall for estimate (RFE) amounts for two dekad were below normal rainfall amounts.
- From figure 1 above, the county recorded a total of 34.1 millimetres of rainfall in March compared to a LTA of 56.7 millimetres.

### 1.2 Other Shocks

Desert Locusts swarms have been sighted in Olpusumoru, Naroosura and Melili Wards. However, no significant damage to crops or pasture has been reported. The department of agriculture through its field extension officers and communities are closely monitoring the situation.

## 2.0 IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

The vegetation conditions in March, as measured by the satellite-derived Normalized Difference Vegetation Index (NDVI), indicates above normal greenness across all the livelihood zones (Figure 2). The highest VCI was recorded in Emurua Dikir at 82.44 percent while the lowest was recorded in Narok North and Narok East at 59.17 and 60.99 percent, respectively.

The above normal vegetation light to moderate rainfall experienced in the county in the third dekad.

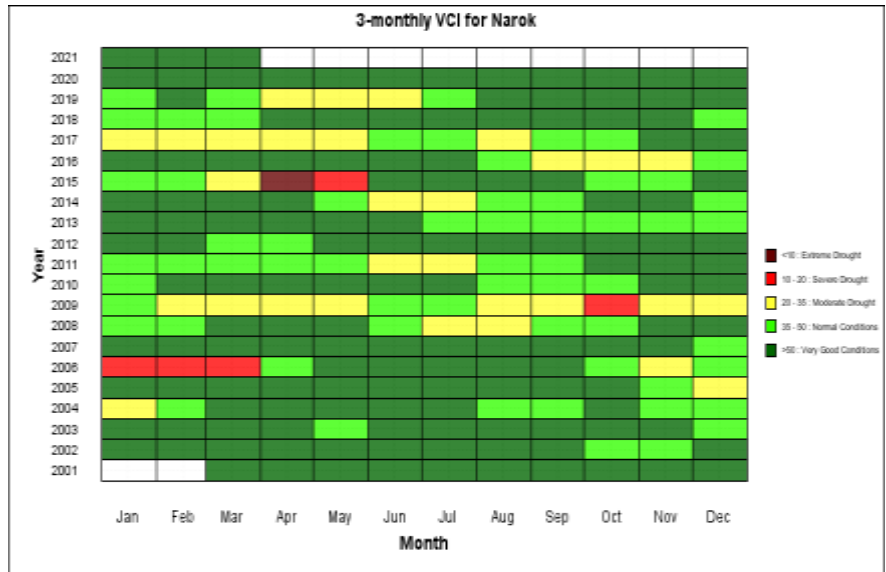


Figure 2 : Figure showing 3-months VCI for Narok County

The county vegetation greenness is normal compared to long term average but lower the maximum recorded value as shown in figure 3 below.

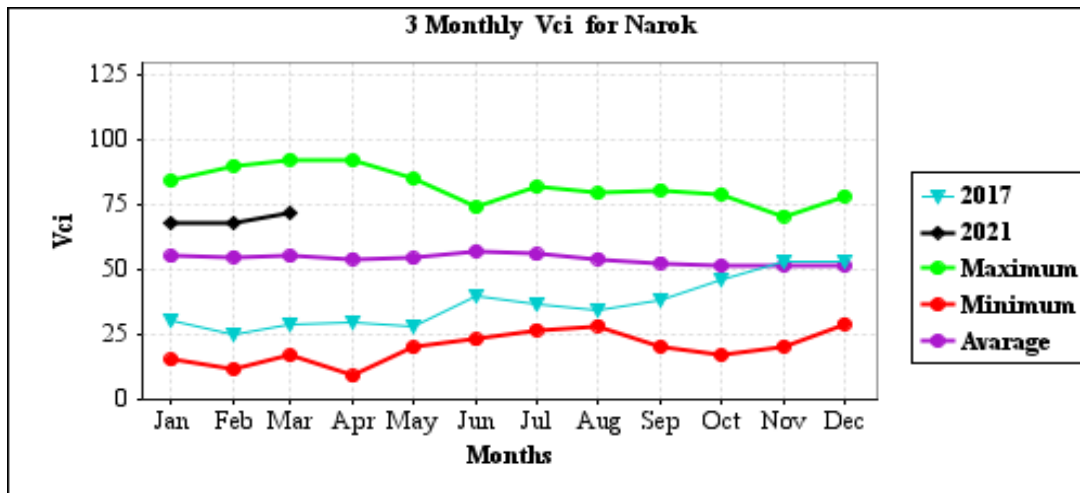


Figure 3 : Narok County 3 Months VCI trends

## 2.1.1 Field observations

### 2.1.1.1 Pasture

- The quantity and quality of pasture in the mixed farming livelihood zones of Trans Mara West, Emurua Dikir, Narok North and, Northern parts of Narok West and Narok South Sub-Countries and agro-pastoral livelihood zone remained from fair to good with pastoral livelihoods zones which comprises most parts of Narok East, Narok South and parts of Narok West exhibiting fair to poor conditions during the month under review.
- The available pasture is likely to last for more than two months in mixed farming and agro-pastoral livelihood zones and a month in the pastoral livelihood zone.
- The current pasture situation is within the normal range.

### 2.1.1.2 Browse

- The quantity and quality of browse in the mixed farming zone remained good with pastoral and agro-pastoral livelihoods exhibiting fair to good conditions.
- The available browse is expected to last for three months in mixed farming livelihood zone while in pastoral livelihood zone, it is likely to last for 1-2 months.
- The current browse situation is within the normal range.

## 2.2 Water resources

### 2.2.1 Sources of Waters

- The three main sources of water for livestock and human consumption in the county were pans/dams, rivers and shallow wells .Other sources of water in the county include boreholes, traditional river wells, springs and boreholes (Figure 4.)
- The quantity and quality of water ranged from fair to good in the mixed farming and agro-pastoral livelihood zones with the pastoral livelihood zone ranging from poor to fair quality this is because of siltation of open water sources and poor sanitation. Pans and dams were the most used sources in the pastoral and agro-pastoral livelihood zones.
- The current water sources were expected to last for about 3-4 months in mixed farming and agro-pastoral livelihood zones. In pastoral livelihood zone, the water is likely to last for 2 months.
- The current water situation is above the normal range at this time of the year.

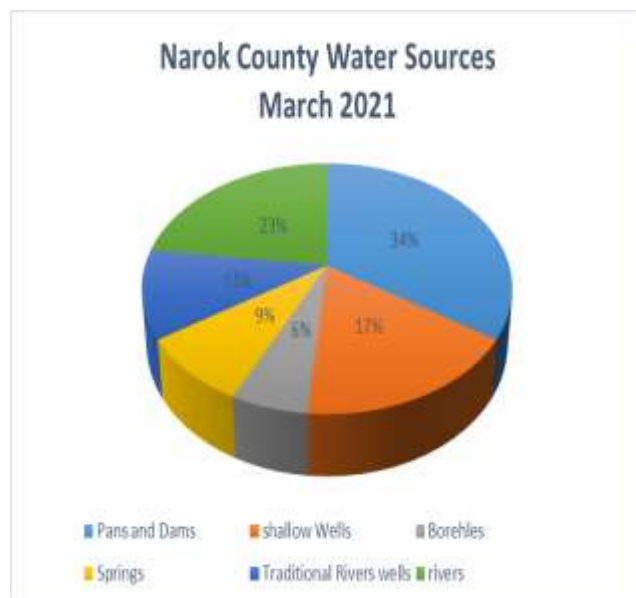
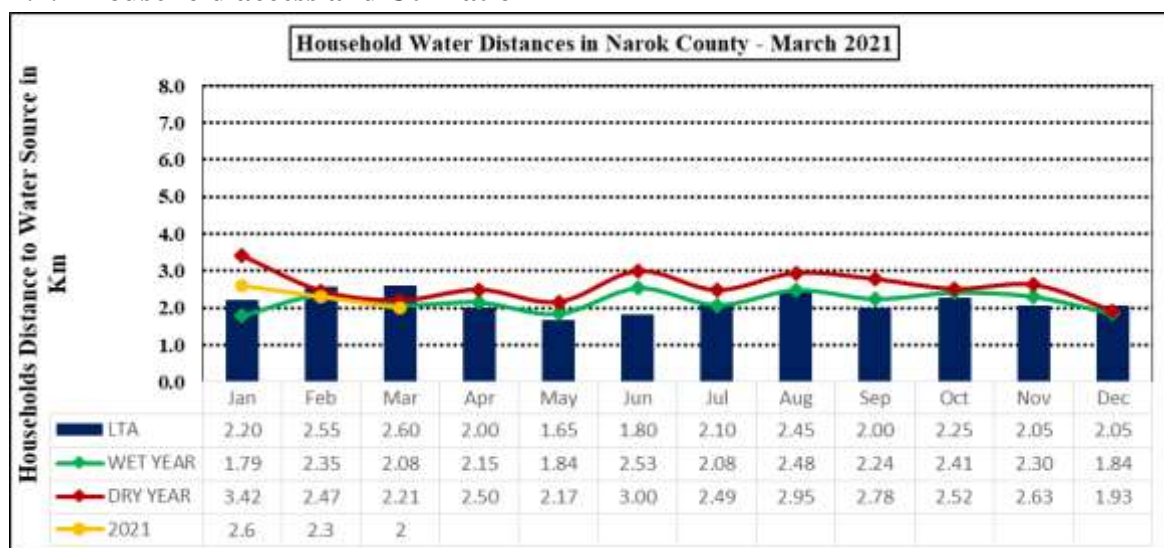


Figure 4: Water Sources in Narok County

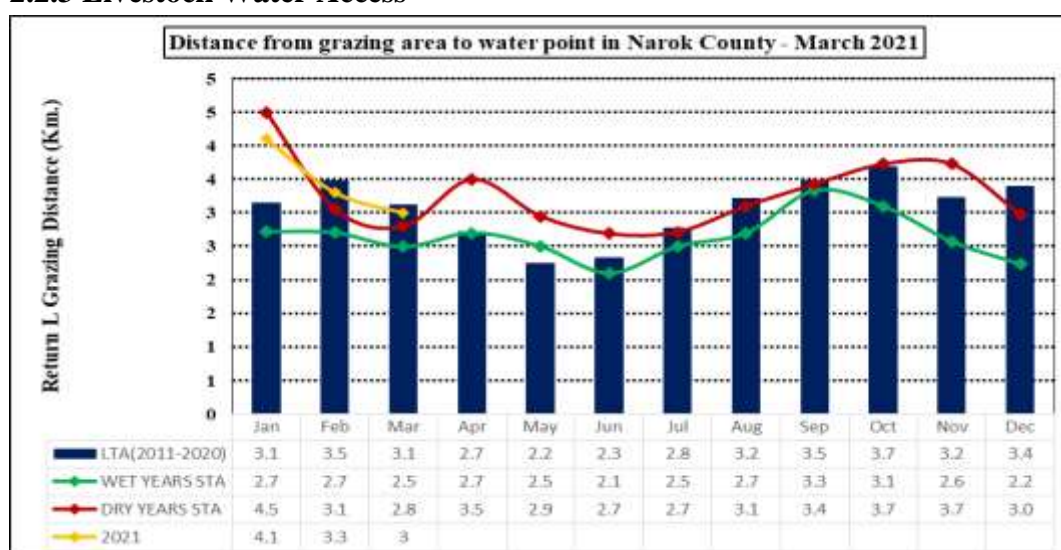
## 2.2.2 Household access and Utilization



**Figure 5: Household Water Distances in Km as compared to LTA**

- The average distance to watering points for households reduced to 2.0 kilometres (km) from 2.3 km as compared to the previous month. The decrease in return-distance to water sources is as result of the re-charge of the water sources by the light to moderate rainfall experienced in the county.
- Pastoral livelihood zones of Narok East, Narok West and some regions of Narok South sub-counties recorded the longest average distance at 4 km while the shortest average distance was recorded in the mixed farming areas of Trans Mara East, Trans Mara West and Narok North Sub-counties at 0.5 km.
- Cost of a 20 litre *jerican* of water ranged from Kshs.0.5 in mixed farming and agro-pastoral livelihood zones and Kshs 5-10 in pastoral areas.
- The current trekking distances to water points are below normal compared to the long-term averages as shown by Figure 5.

## 2.2.3 Livestock Water Access



**Figure 6: Current Livestock trekking distances as compared to LTA**

- The average distance to main water sources from grazing areas reduced to 3 km from 3.3 km as compared to the previous month. The decrease in distance is attributed to recharge of water sources owing to the onset of the long rains season.
- The pastoral livelihood zone recorded the longest distance of 5 kilometres while the shortest distance was recorded in the mixed farming livelihood zone at 0.5 km
- The current average trekking distance is within 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 body condition for cattle, sheep and goats ranged from fair to good across all the livelihood zones which is normal and was attributed to availability of forage, enhanced water availability, minimal movement and less prevalence of pests and diseases
- The trend of the body conditions is likely to remain stable owing to onset of the long rains. The current body condition is within the normal range at this time of the year.

##### 3.1.2 Livestock Diseases

- Suspected cases of bluetongue disease in sheep, contagious Caprine Pleuro-Pneumonia (CCPP) in goats, Contagious Bovine Pleuro-Pneumonia (CBPP) in cattle and Foot and Mouth Disease (FMD) were reported in Trans Mara West, Trans Mara East, Narok East and Narok South sub counties.
- Treatment and vaccinations measures were done upon request by farmers and own arrangements with animal practitioners.

##### 3.1.3 Milk Production

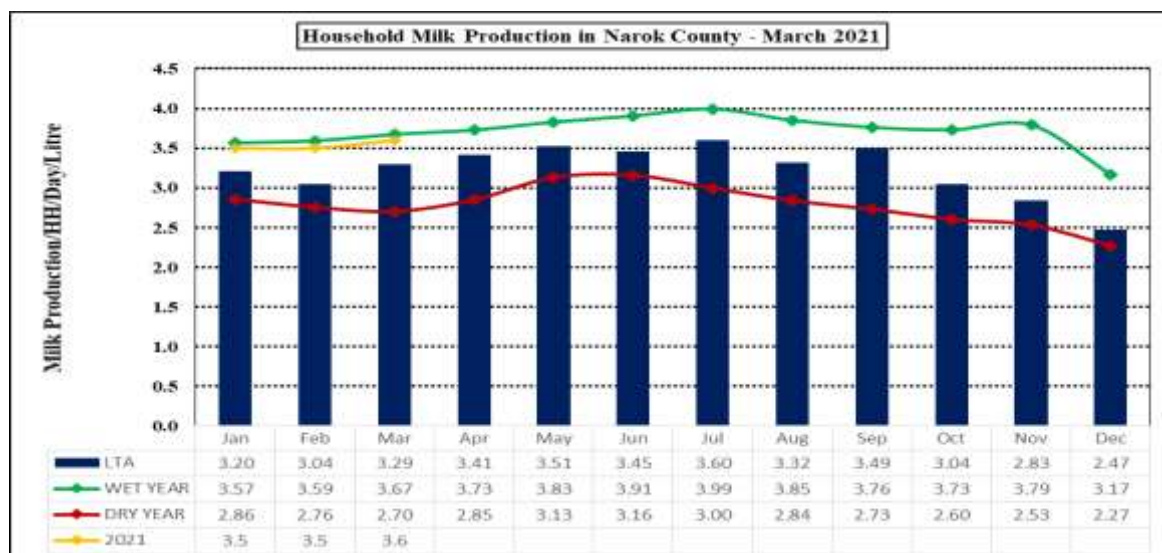


Figure 7: Milk Production

- From figure 7 above, the average milk produced per household per day slightly increased to 3.6 litres from 3.5 litres as compared to the previous month.
- Milk production is 2.0 litres/day/household in the pastoral areas, 4.0 litres/day/household in mixed farming zone and 3 litres/day/household in the agro-pastoral livelihood zone. The stable milk production was attributed to availability of forage and reduced trekking distances to water sources
- The current milk production is above the normal range.

### 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.

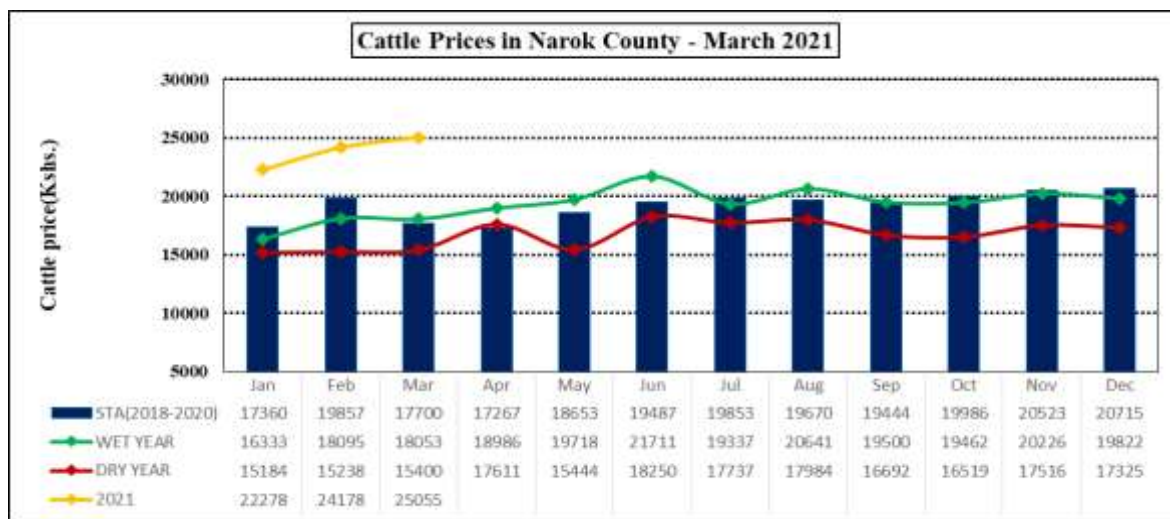
- The crops were at germination in regions of Ilkerin and Mogondo wards in Trans Mara East Sub County and Mau and Melili wards in Narok North Sub County.
- Minimal cases of Fall Army Worms (FAW) were reported in Elenerai in Narok West sub-county.



## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

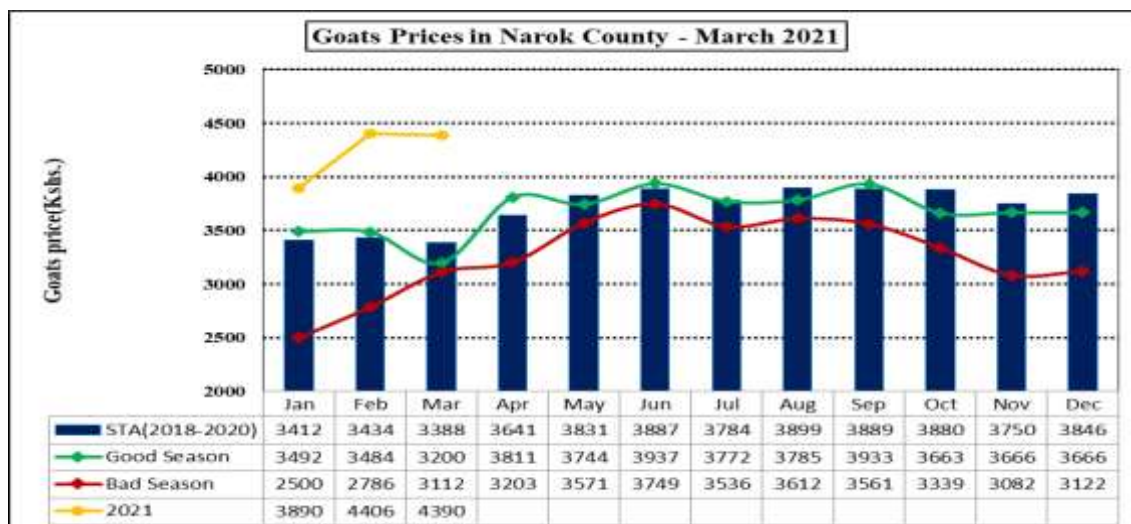
#### 4.1.1 Cattle Prices



**Figure 8 Cattle prices**

- From the figure 7 shown above, the average price for a medium-sized cattle in March increased to Kshs 25,055 from Kshs 24,178 as compared to the previous month.
- Those in the pastoral zone fetched more prices at Kshs 29,376 per head while the lowest price was in the agro-pastoral livelihood zone at an average price of Kshs 18,000 per head. The increase in price is owned to improved livestock body condition across all the livelihood zones and restocking.
- The current cattle price is above normal compared to short-term average as shown by (Figure 8).

#### 4.1.2 Goat Prices



**Figure 9: Goat prices**

- The average for a medium sized goat reduced slightly to Kshs 4390 compared to the previous month price of Kshs 4406.
- The highest price was posted in the mixed farming and agro-pastoral livelihood zones at Kshs 4,860 per head while the lowest price was recorded in the agro-pastoral livelihood zone at Kshs 4,120 per head.

- The average goat price was above the normal range at this time of the year as shown in figure 9

## 4.1 CROP PRICES

### 4.2.1 Maize Prices

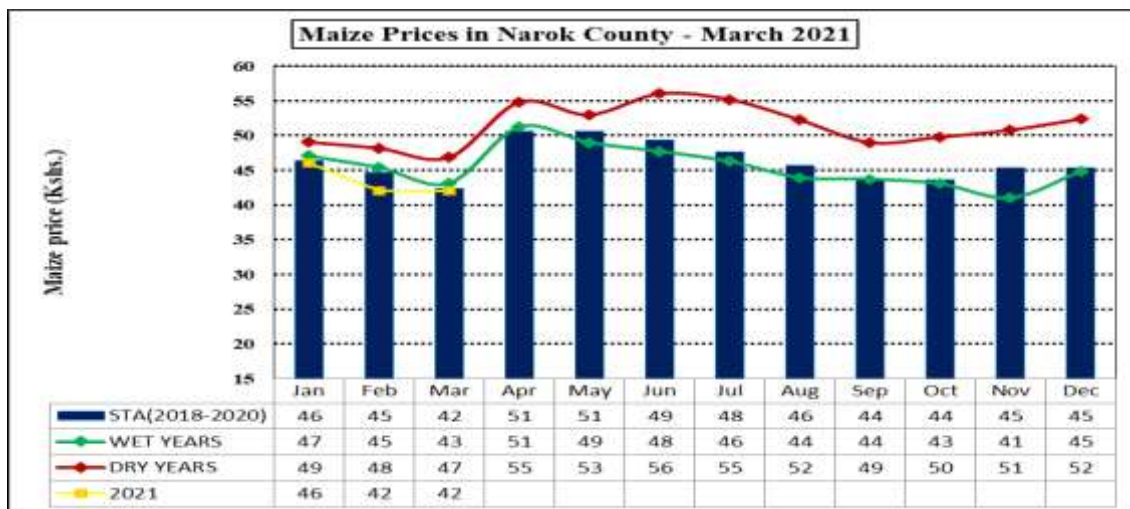


Figure 10: Maize prices

- The average price of maize per kilogram remained at Kshs 42 compared to the previous month. The stability in price is owed to high yield from the short rains seasons.
- The highest price was recorded in the pastoral livelihood zone at Kshs. 54/Kg while the lowest price was recorded in the agro-pastoral at Kshs. 25/Kg.
- The current price is within the normal average as shown by Figure 10.

### 4.2.2 Beans

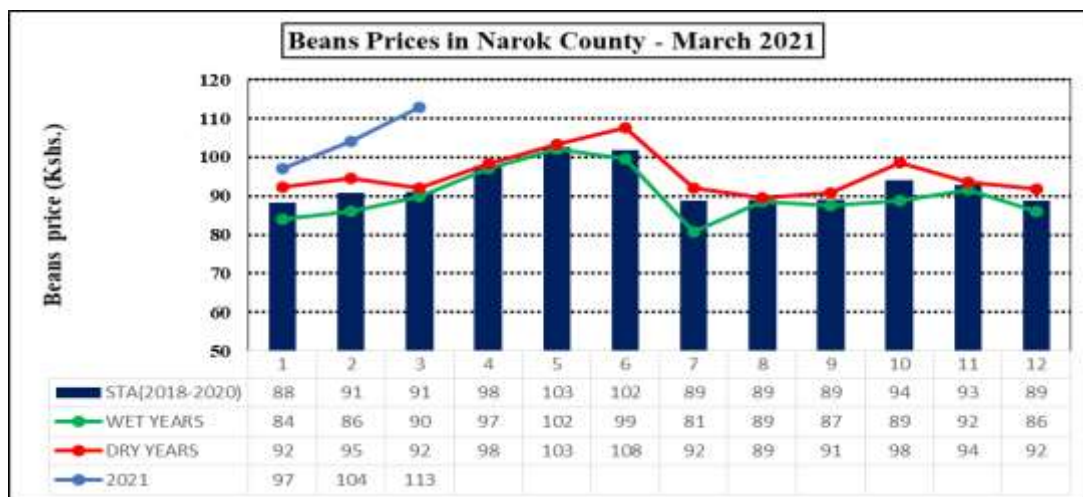
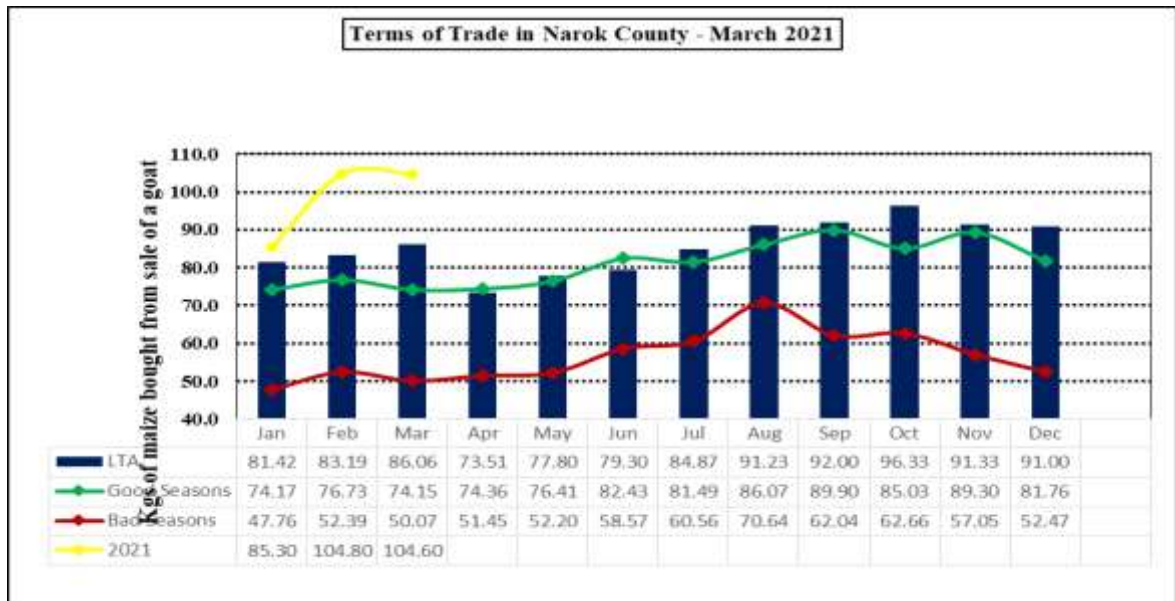


Figure 11 Bean prices

- The average price of beans increased to Ksh.113/kg from Ksh.104/kg compared to the previous month. The highest price was recorded in the agro-pastoral and pastoral livelihood zones at Kshs. 125/kg while the lowest was recorded in the mixed farming livelihood zone at Kshs.102/kg.
- The current price is above the normal range at this time of the year as shown by Figure 11.

### 4.3 Terms of Trade



**Figure 12: ToTs compared with LTA**

- The Terms of Trade (ToTs) based on the cereal/meat prices remained the same at 104 compared to the previous month.
- This implies that a sale of a medium-sized goat fetched 104.6 kgs of cereals. The ToTs were less favourable in the agro-pastoral and mixed farming livelihood zones compared to pastoral livelihood zone.
- The current cereal/goat price ratio is above normal range as shown in Figure 12.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

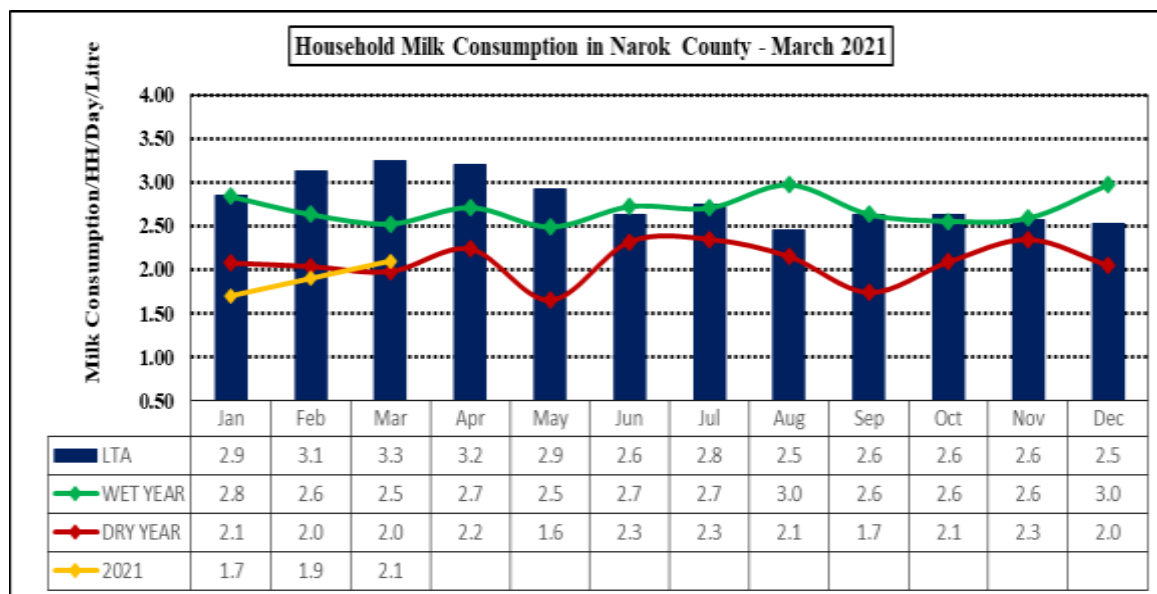


Figure 12: Milk consumption

- The current average household milk consumption increased to 2.1 from 1.9 litres/household per day as compared to the previous month. There were inter-livelihood variations in milk consumption with agro-pastoral livelihood zone having the highest consumption rate at 1.8 litres followed by mixed farming at 1.6 litres and pastoral livelihood zones having the least at consumption rate at 1.5 litres. The current milk consumption rate is below normal range at this time of the year as shown by Figure 12.

### 5.2 FOOD CONSUMPTION SCORE

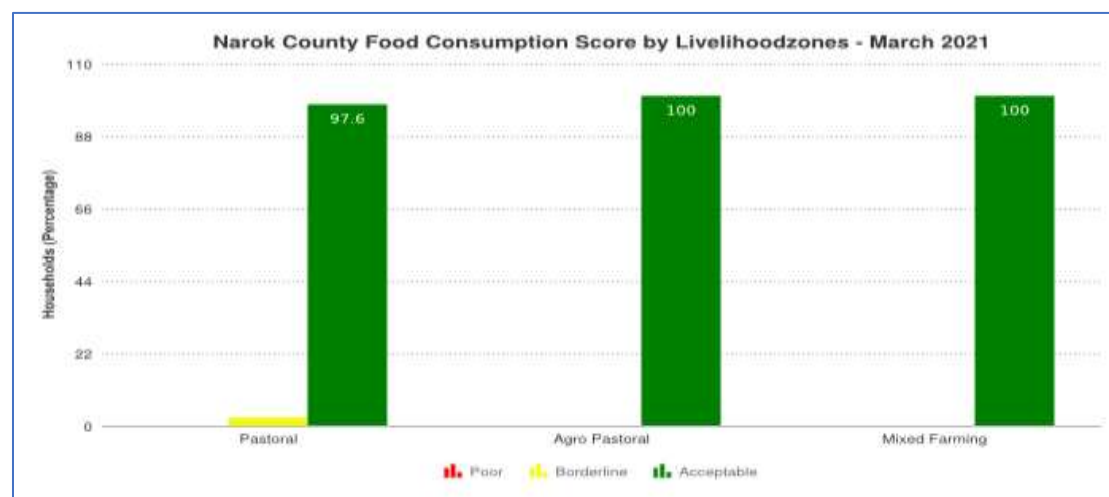


Figure 13: Food consumption score

- Food consumption patterns across the livelihood zones were stable with majority of households remaining in acceptable band. The largest proportion of about 99.2 percent of the households had acceptable food consumption score. This implies that majority of households were able to take diverse food groups more frequently thus able to meet their essential food needs.



- In pastoral livelihood zone, 97.6 percent had acceptable and 2.4 percent within borderline consumption. In the agro-pastoral and mixed farming zone, 100 percent of the respondents had acceptable food consumption score (Fig 13).

### 5.3 HEALTH AND NUTRITION STATUS

#### 5.3.1 Nutrition Status

- Six hundred and twenty children below the age of five years were sampled for family MUAC measurement.
- The proportion of children under the age of five years who were ‘at risk’ of malnutrition reduced to 1 percent from 2.6 percent in previous month (Fig 14). Mosiro, Naroosura and Koyiaki wards in the pastoral livelihood zone had 1.6 percent of children with moderate malnutrition cases attributed to poor accessibility to market, and diarrhoea due to poor sanitation and fever in the pastoral livelihood zone.

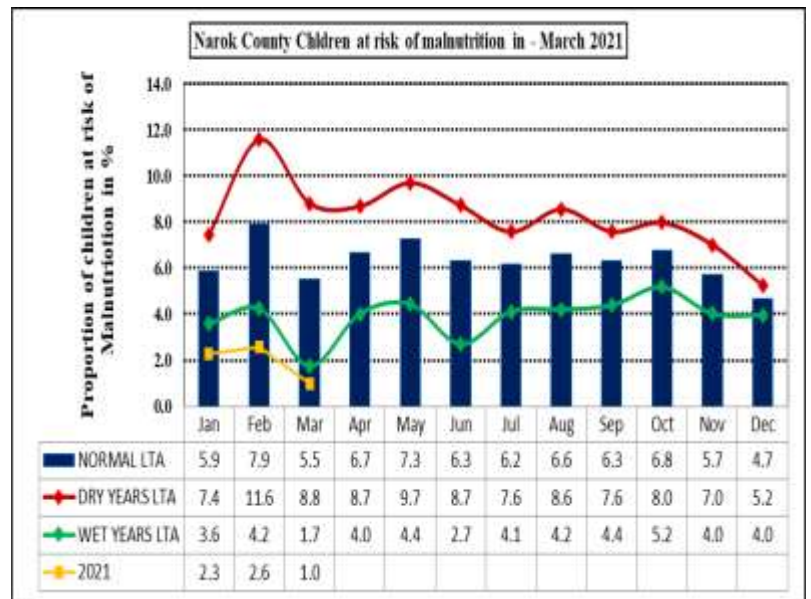


Figure 14: Proportion of Children ‘at risk’ of malnutrition

- The current rate of malnutrition is below the normal range compared to the long-term average as shown by Figure 14.

#### 5.3.2 Health

- A few cases of fever and diarrhoea were reported across the livelihood zones during the month under review due to change of weather and poor sanitation.

### 5.3 COPING STRATEGIES

- The CSI for the County in March was at 1.9. Households employed normal coping strategies in accessing food across all the livelihood zones as shown by Figure 15. The pastoral livelihood zone had higher CSI at 5.7 compared to agro-pastoral and mixed farming zone which did not employ any coping strategy.
- The coping strategies are below the normal at this time of the year.

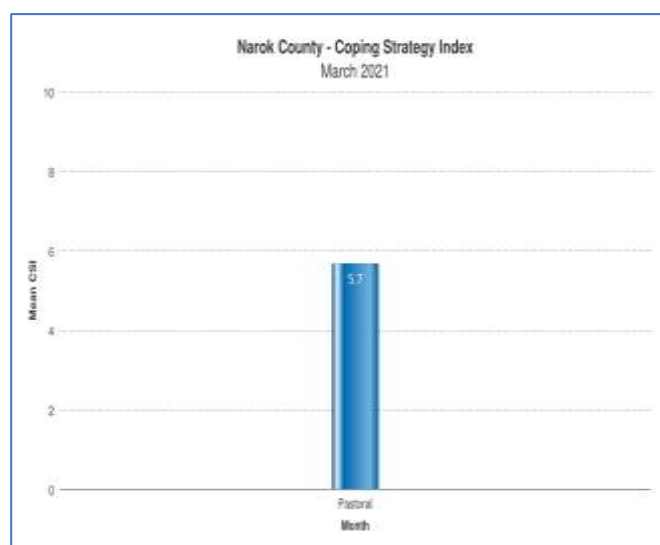


Figure 15: Coping Strategies

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

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

- Regular Covid-19 surveillance and sensitization by Ministry of Health and KRCS.
- WHH supported 15 relevant TWG in Domestication of Food and Nutrition Security Policy
- ASDSP in collaboration with NDMA, Met Department and the TWG supported participatory scenario planning for MAM.

### **6.2 FOOD AID**

- No food aid

## **7.0 EMERGING ISSUES**

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

- No major emerging issues related to drought were reported during the month under review.

### **7.2 FOOD SECURITY PROGNOSIS**

- The rains received during the month under review is likely to improve accessibility and availability of water for the next 1-3 month across all the livelihood zones.
- Maize harvests in some parts of the county is expected to maintain average to below-average maize prices for the next 1-3 months in the mixed Farming and agro-pastoral livelihood zones coupled with increased household food stock.
- The livestock body condition and productivity is expected to remain stable for the next 1-3 months due to availability of forage and water.
- Malnutrition rates are expected to remain below long term average due to favorable terms of trade leading to availability of diversified diets coupled with reported increased health seeking behaviors among the pastoralist and improved hygiene at the household level.

## **8.0 RECOMMENDATIONS**

- Continuous surveillance of crop pests such as fall army worm (FAW), Desert Locust and *Quelea Quelea* birds
- Protection of water sources through catchments rehabilitation and de-silting, as well as protecting /repairing of water harvesting structures
- Institutions and individuals should plant more indigenous and fruit trees in order to increase forest cover and minimise degradation
- Enhance range rehabilitation, reseeded , pasture establishment , harvesting and conservation
- Intensify disease surveillance and control, vector control and treatments.
- Vaccination of livestock against diseases such as FMD,CCPP, Blue Tongue among others
- Increase awareness on health and sanitation in the communities
- Scale up High Impact Nutrition Interventions (HINI) across the county.