



A Vision 2030 Flagship Project



## National Drought Management Authority Baringo County Drought Early Warning Bulletin for January 2021

JANUARY EW PHASE	Early Warning Phase Classification			
 <b>Drought Status: ALERT</b>  <b>Maandalizi ya mapema</b>	<b>LIVELIHOOD ZONE</b>	<b>EW PHASE</b>	<b>TRENDS</b>	
<p><b>Drought Situation &amp; EW Phase Classification</b> Drought Phase: <b>Normal- Stable</b></p> <p><b>Biophysical Indicators</b></p> <ul style="list-style-type: none"> <li>The county received below normal rains during the month.</li> <li>The Vegetation greenness as depicted by the VCI is above normal but with a declining trend.</li> <li>The Water levels in most water sources are below normal at 30-40% capacity.</li> </ul> <p><b>Socio Economic Indicators (Impact Indicators)</b></p> <p><b>Production indicators:</b></p> <ul style="list-style-type: none"> <li>The forage condition is fair to poor in both quality and quantity and is expected to deteriorate further with the cessation of the short rains season.</li> <li>Livestock body condition is fair to poor in all livelihood zones.</li> <li>Milk production is below the normal seasonal range across all livelihood zones.</li> <li>No drought related livestock deaths were reported during the reporting period.</li> </ul> <p><b>Access indicators</b></p> <ul style="list-style-type: none"> <li>Terms of trade are within the seasonal range and on a declining trend.</li> <li>Distances to water sources for households are below normal seasonal ranges and on an increasing trend due to reduction of water in the open water sources</li> </ul> <p><b>Utilization indicators:</b></p> <ul style="list-style-type: none"> <li>The number of under-five children at risk of malnutrition is on an increasing trend.</li> <li>Coping strategy index (CSI) for households is within normal ranges.</li> <li>The bulk of the households have acceptable food consumption score</li> </ul>	PASTORAL	ALERT	WORSENING	
	AGRO PASTORAL	ALERT	WORSENING	
	IRRIGATED CROP	NORMAL	STABLE	
	COUNTY	ALERT	WORSENING	
	<b>Biophysical Indicators</b>	<b>Value for the month Baringo</b>	<b>LTA-Monthly Baringo</b>	<b>Normal ranges Kenya %</b>
	Average rainfall MM (%)	26 %	22.1	80-120
	VCI-3month	67.78		35-50
	% Of water in the water pan	30%-40%		50-60
	<b>Production indicators</b>	<b>Value</b>	<b>Normal ranges</b>	
	Livestock Migration Pattern	Normal	Normal	
	Livestock Body Condition	4-5	3-4	
	Milk Production (Ltr /HH/Month)	1.5	1.76	
	Livestock deaths (for drought)	No deaths	No death	
	<b>Access Indicators</b>	<b>Value</b>	<b>Normal ranges</b>	
	Terms of Trade (ToT)	64.6	>63	
Milk Consumption (Ltr)	1.4	≥1.7		
Water for Households-trekking distance (km)	4.3	0-4		
Crops area planted for the season				
<b>Utilization indicators</b>	<b>Value</b>	<b>Normal ranges</b>		
Children at risk of malnutrition (MUAC %)	16.6%	<15		
CSI	12.7	>19.0		

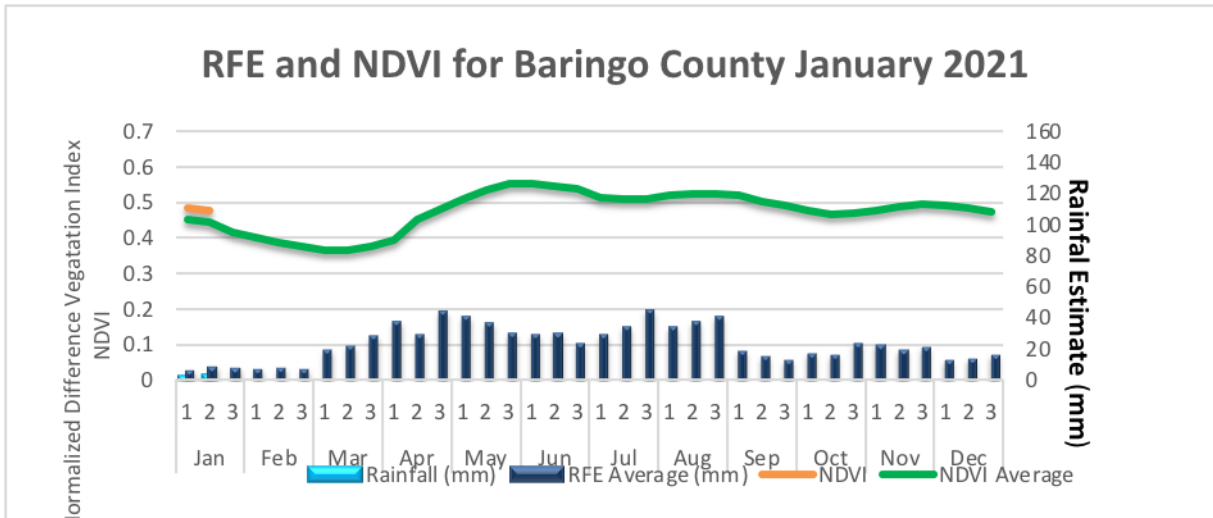
<ul style="list-style-type: none"> <li>▪ Short rains harvests</li> <li>▪ Short dry spell</li> <li>▪ Reduced milk yields</li> <li>▪ Increased HH Food Stocks</li> <li>▪ Land preparation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Planting/Weeding</li> <li>▪ Long rains</li> <li>▪ High Calving Rate</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

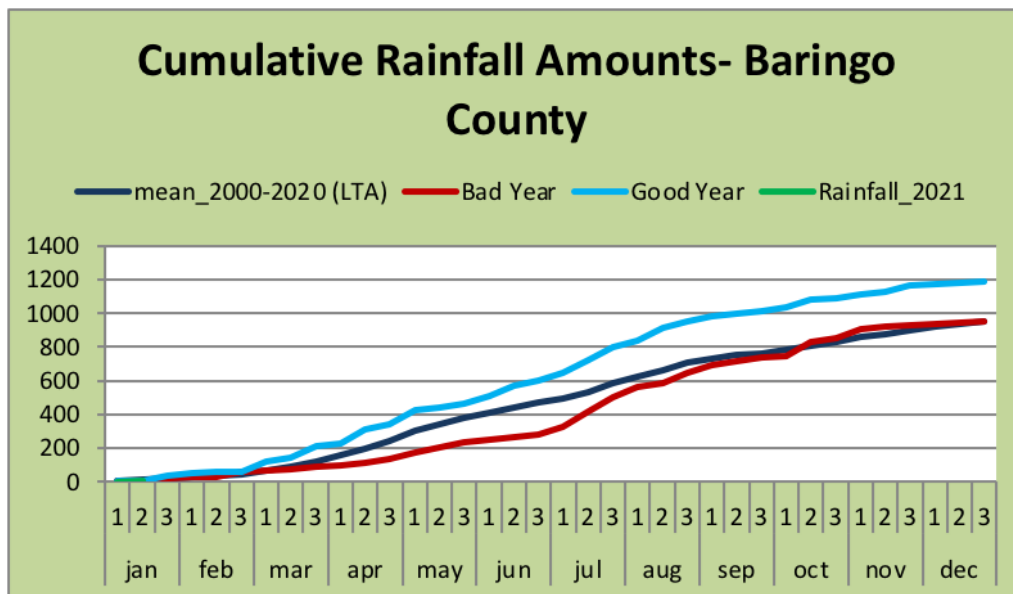
- During the month of January, the performance of the rains was poor across the county. The county has been experiencing dry spells during the month .

## 1.2 Amount of rainfall and spatial distribution



**Figure. 1. Rainfall performance**

- The county received below normal rains during the first two decades of the month translating into 26 percent of the normal rains (Figure 1). Both spatial and temporal distribution was poor across the livelihood zones. The vegetation greenness according to normalized differential vegetation index is marginally above long term means but on a declining trend for the month under review.



**Figure 2: Cumulative rainfall**

- The cumulative rainfall received for the month under review is slightly below the long term means as shown in Figure 2. This is due to the early cessation of the rainfall during the previous season

## 2.0 IMPACTS ON VEGETATION AND WATER

### 2.1 Vegetation condition index (VCI)

The vegetation condition index (VCI) is above normal in all the sub counties (Figure 3). The VCI is currently at 67.78 but on a declining trend as compared to the previous month at 83.07.

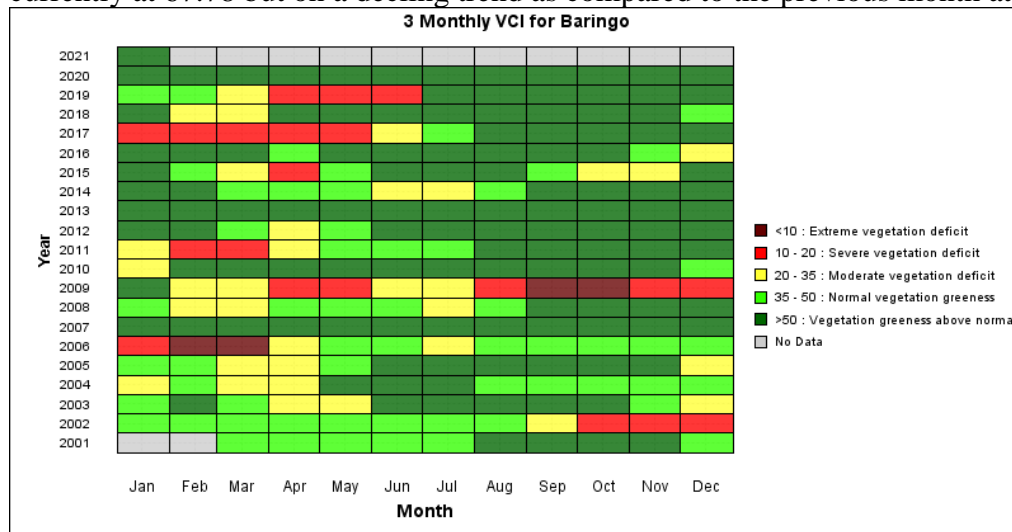


Figure 3. Vegetation Condition Index

The trend for the current VCI is above long term mean and lies within the maximum values for the month. However, there is significant decline on the trend of the VCI in Tiaty, Mogotio, Baringo North and Baringo South sub counties during the month of January due to the dry spells experienced in the last one month (Figure 4).

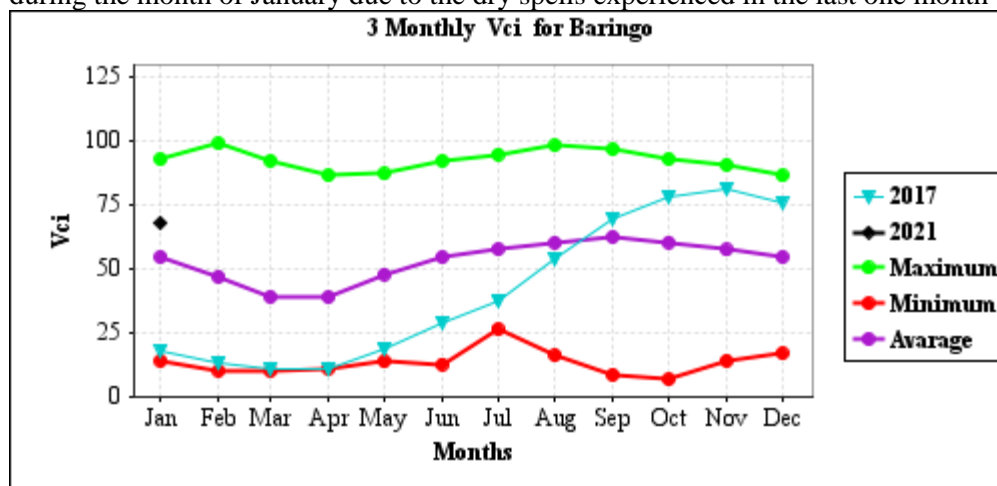
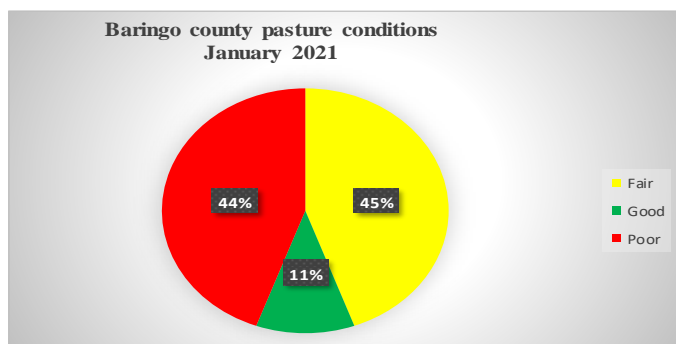


Figure 4: Vegetation condition index trend

#### 2.1.1 Field observation

##### 2.1.1.1 Pasture



The pasture conditions are poor mostly in pastoral and agropastoral areas (Figure 5). The most affected sub counties are Baringo South and Tiaty where there are hardly any pastures on the ground.

The current pastures are expected to last for less than one month in pastoral, agro pastoral and irrigated livelihood zones given the prevailing conditions.

Figure 5: Pasture conditions

### 2.1.1.2 Browse

The browse condition is fair to poor both in quantity and quality across all livelihood zones (Figure 6). However there are a few pockets of irrigated and agro pastoral livelihood zones with poor browse conditions. The condition is slightly below normal as compared to seasonal range at this time of the year.

The available browse is expected to last for two months in pastoral and agro pastoral livelihood zones and three months in irrigated cropping livelihood zone.

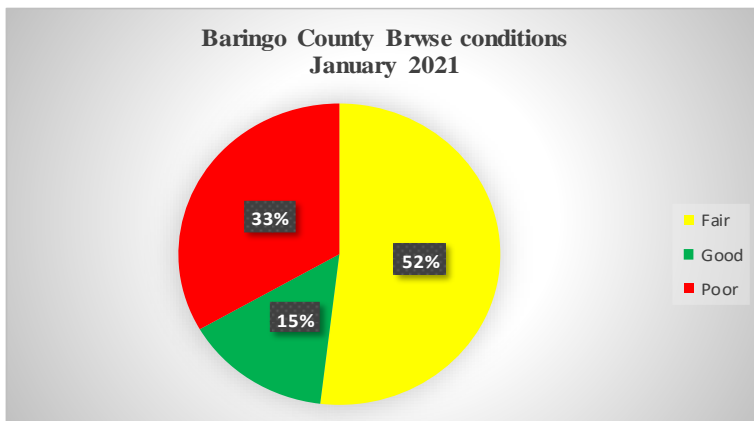


Figure 6: Browse conditions

## 2.2 Water resources

### 2.2.1 Source

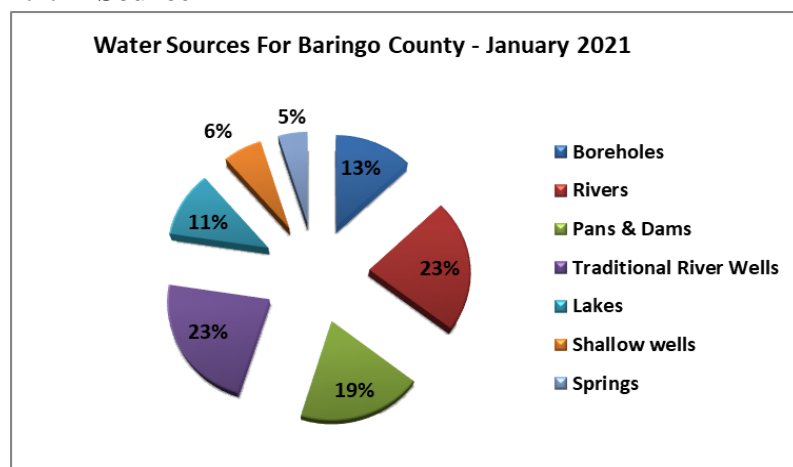


Figure 7: State of water sources

The main water sources for both livestock and human consumption across all livelihood zones were traditional water wells, water pans and rivers (Figure 7). Most water pans and dams were at 30 to 40 percent of their full capacity. Water quality and quantity across pastoral and agro-pastoral livelihood zones is poor, which is not normal at this time of the year. The current water sources are expected to last for one to two months in all livelihood zones due to the prevailing water conditions.

### 2.2.2 Household access and Utilization

The average household trekking distance to water sources increased by 10 percent from 3.9 km the previous month to 4.3 km (Figure 8). The distances are slightly below the long term average (LTA) by five percent. Irrigated cropping zone recorded the least trekking distance of one kilometre while agro pastoral livelihood zone recorded the highest average of 4.6 km. The increase in distances is attributed to decrease of water levels in the open water sources in the agro pastoral and pastoral livelihood zones due to poor performance of the short rains season.

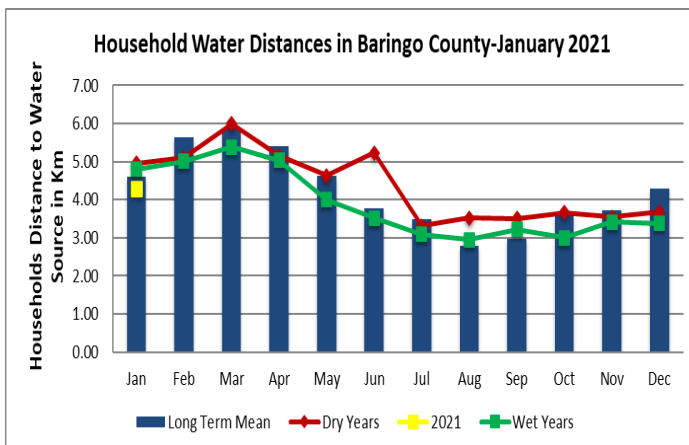


Figure 8: Water access

### 2.2.3 Livestock access

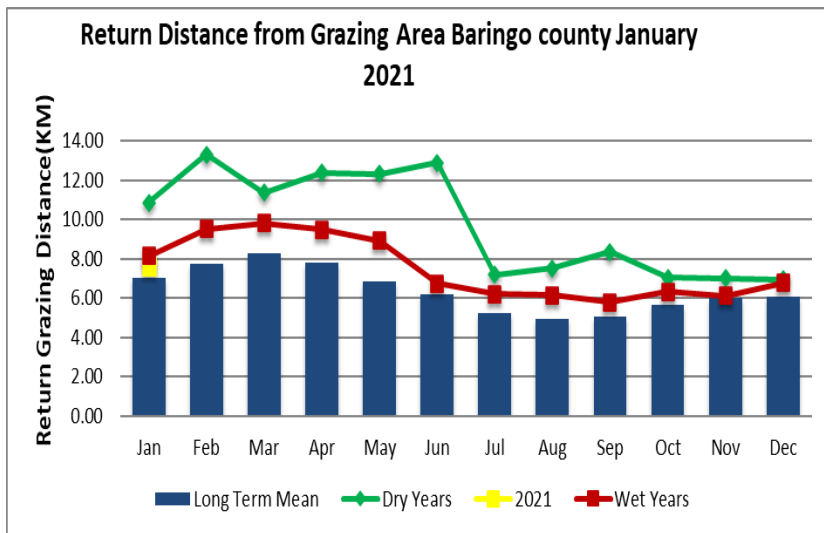


Figure 9: Grazing distances

The average return distance for livestock from grazing fields increased by 13 percent at 7.9 km in comparison to the previous month at 7.3 km (Figure 9). The pastoral livelihood zone recorded the longest average distance of 10 km while irrigated livelihood zone recorded the shortest average distance of two kilometres. The return distances are above the long term average by four percent and this is attributed to deteriorating pastures and water conditions at the traditional grazing sites in the county.

### 3.0 PRODUCTION INDICATORS

#### 3.1 Livestock Production

##### 3.1.1 Livestock Body Condition

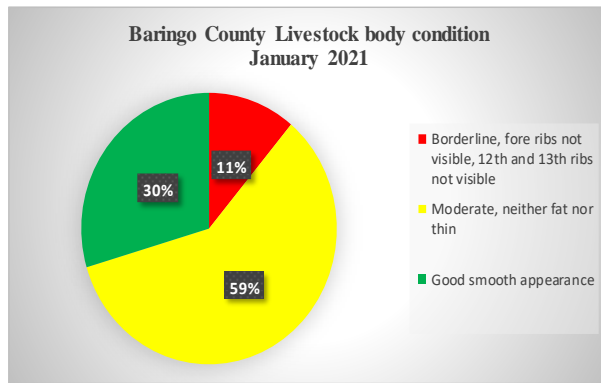


Figure 10: Livestock Body Condition

The livestock body condition is good to fair in irrigated livelihood zone and a few parts of agro pastoral livelihood zone while its fair to poor in pastoral and agro pastoral livelihood zones for all the livestock species. This has been occasioned by diminishing pasture, browse and water across the livelihood zones. The body condition is likely to continue declining due to the worsening forage and water conditions.

##### 3.1.2 Livestock Diseases

There were few disease cases reported. The diseases reported could not warrant quarantine as per spatial occurrence. Vaccination against lumpy skin disease (LSD), contagious caprine pleuropneumonia (CCPP) and pestes des petits ruminants (PPR) was done in Tiaty, Baringo North, Baringo South, Baringo Central and Mogotio.

##### 3.1.3 Milk Production

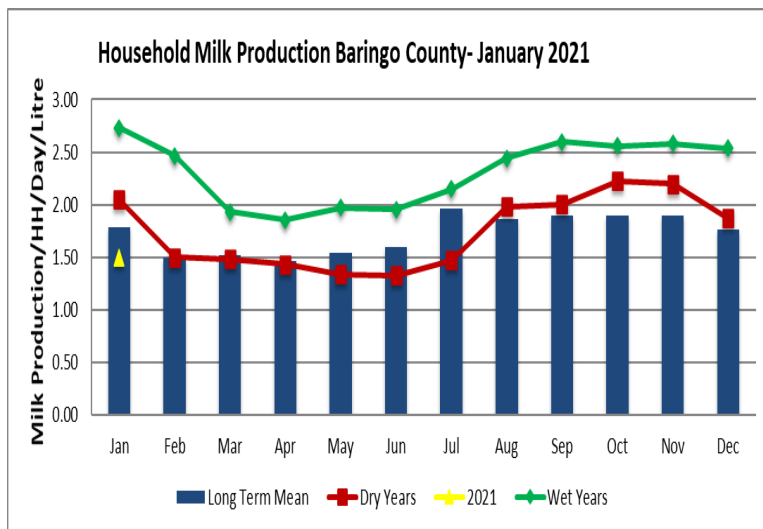


Figure 11: Milk production

The average milk produced per household per day was at 1.5 litres, a decrease of six percent as compared to the previous month (Figure 11). The milk was mainly from cattle and goats. Agro pastoral livelihood zone had the highest average milk produced of four litres while pastoral had the least at 2.1 litres.

The current milk production is below LTAs by 17 percent and this has been contributed mainly by migration of livestock from the irrigated livelihood zone due to flooding menace. The livestock have been moved to safer areas thus leaving households with fewer animals to milk. Deterioration of forage and water conditions is also contributing to the low milk production.

### 3.2 Rain fed crop production

#### 3.2.1 Stage and Condition of food Crops

- The poor performance of the short rains season affected planting activities thus most farmers did not have good harvests. Currently farmers have prepared their farms in all livelihood zones in anticipation of the long rains.

## 4.0.0 MARKET PERFORMANCE

### 4.1.0 Livestock marketing

#### 4.1.1 Cattle prices.

There was a minimal decrease in average price for medium-sized cattle as compared to the previous month at Ksh.18,741 (Figure 12). The price was above the long-term average by 20 percent. Irrigated livelihood zone posted the highest prices of Ksh.26,500 while pastoral livelihood zone recorded the least average price of Ksh.15,640. The reduction in prices was as a result of declining livestock body condition and disruption of markets in pastoral areas due to issues of insecurity.

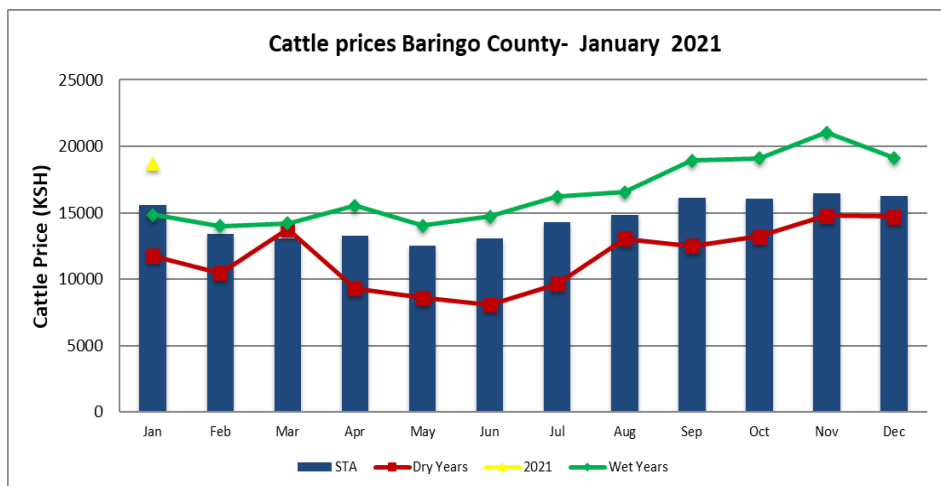


Figure 12: Cattle prices

#### 4.1.2 Goat Prices.

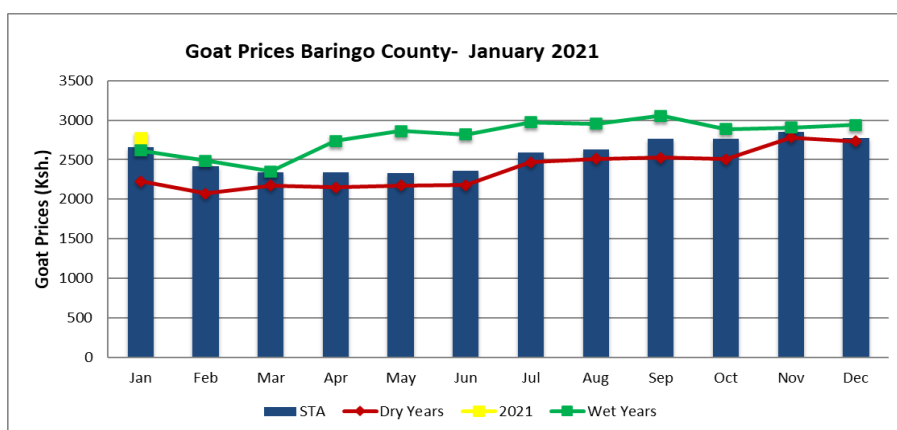


Figure 13: Goat prices

The average price of a medium sized goat was at Ksh.2,777, as compared to the previous month at Ksh. 3,042 (Figure 13). The price was above the LTA by four percent. The prices were highest in fishing livelihood zone at Ksh. 4,283 and lowest in pastoral livelihood zone at Ksh.2,598. The decline in price is as a result of disruption of markets.

### 4.2.0. Crop prices

#### 4.2.1 Maize

There was a rise of eight percent in the current average price for a kilogram of maize at Ksh. 43, compared to the previous month at 40 (Figure 14). The current prices are fairly below the long-term average at this time of the year. The increase in prices can be attributed to declining of maize stocks at household level and disruption of markets in the pastoral livelihood zones.

Pastoral livelihood zone recorded the highest price of Ksh.45 per kg while irrigated livelihood zone recorded the lowest at Ksh.30 per kg.

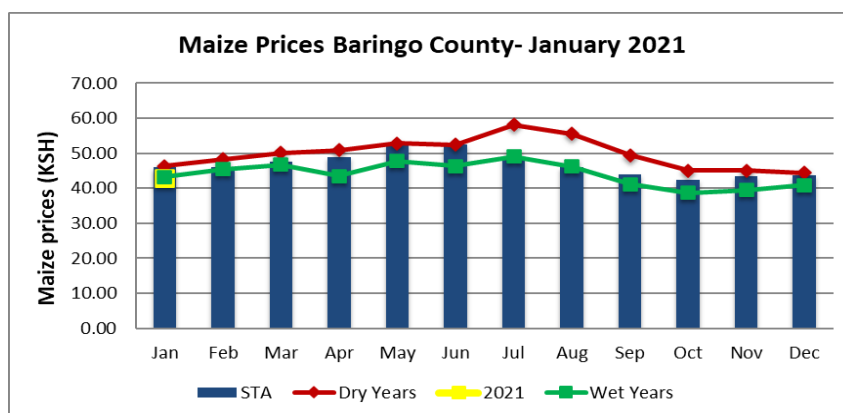
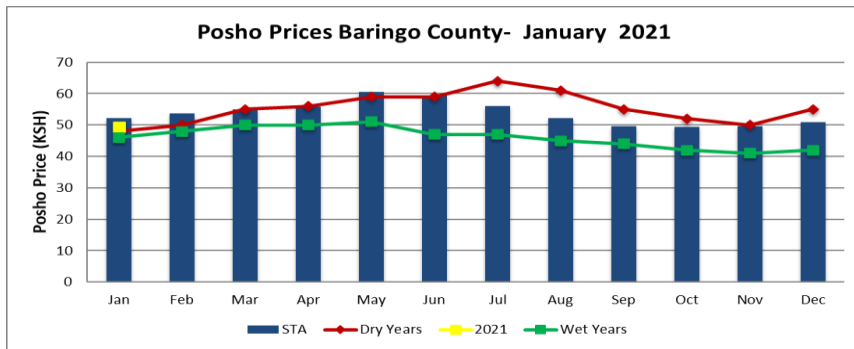


Figure 14: Maize prices

## 4.2.2 Posho (Maize meal)



The price per kilogram of posho was at Ksh.49.4, an increase of four compared to the previous month at Ksh.47.4. (Figure 15). The price was marginally below the long-term average. The increase in prices was attributed to decreasing maize stocks both at household level and trader's stores.

Figure15: Posho prices

## 4.2.3 Beans Prices

The average price per kilogram of beans increased by five percent from Kshs.114 last month to Ksh. 119.6 currently (Figure 16). The current prices are above the long-term average by eight percent.

The Pastoral livelihood zone recorded the highest average prices of Ksh.122 while the irrigated livelihood zone recorded the least prices of Ksh.90.

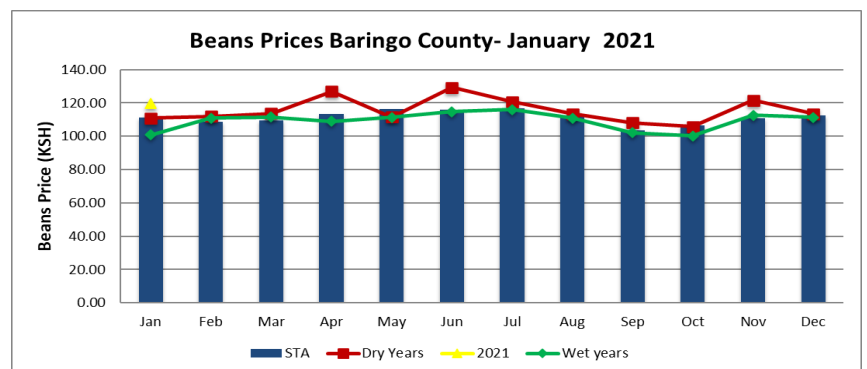


Figure 16: Beans prices

## 4.3 Terms of Trade

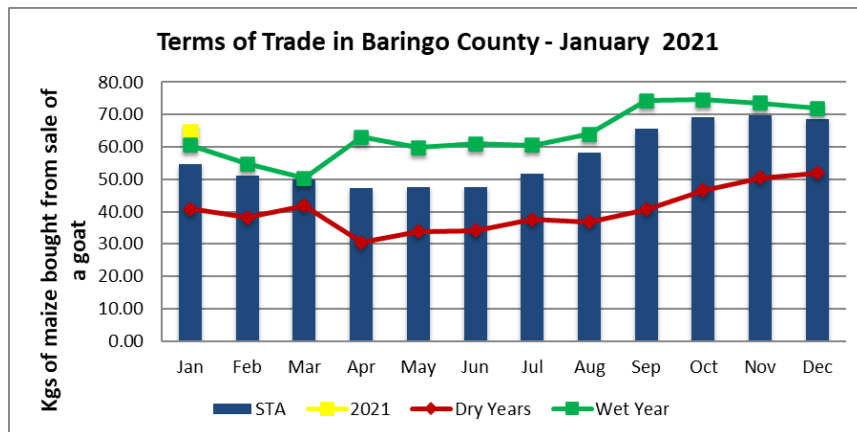


Figure17:Terms of trade

The terms of trade for the month under review decreased in comparison to the previous month. A sale of one goat is able to fetch 64.6 kgs of maize (Figure 17). This has been attributed to by increasing maize prices in comparison to decreasing goat prices.. The current terms of trade are better in comparison to the long-term average. Irrigated cropping livelihood zone had the highest terms of trade of 95.9 while pastoral livelihood zone had the least at 57.7



## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 Milk Consumption

The average milk consumption per household per day was at 1.4 litres, which was similar as compared to the previous month (Figure 18). Milk consumption was highest in the agro pastoral livelihood zone at two litres and lowest in irrigated livelihood zone at one litre. The amount consumed was below the long-term average partly due to reduced milk production in the irrigated livelihood zone.

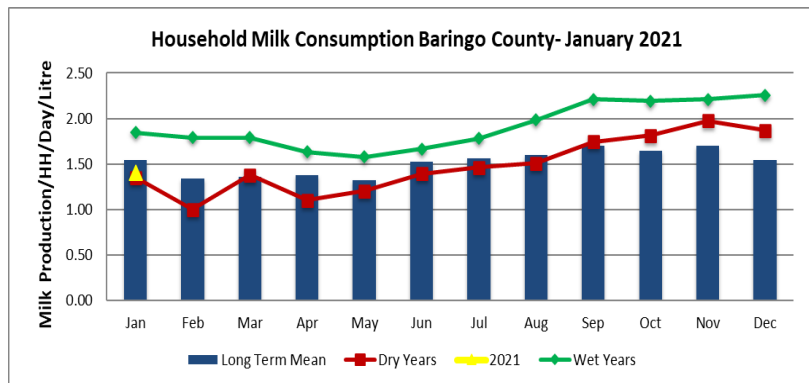


Figure18: Milk consumption

### 5.2 Food Consumption Score

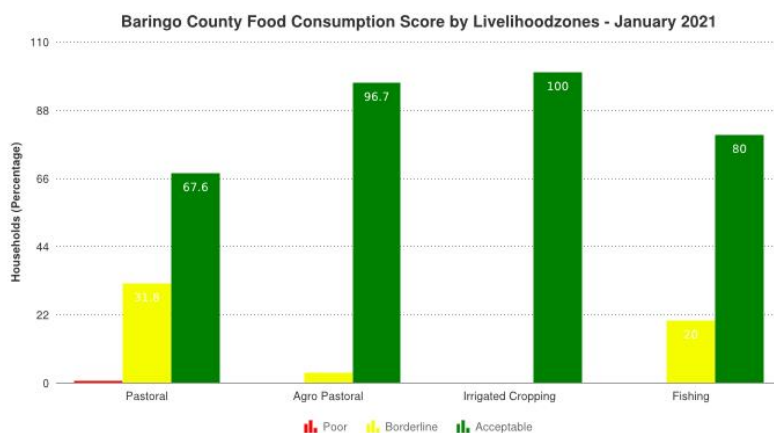


Figure19: Food consumption score

Generally, the county had an acceptable Food Consumption Score of 50 as compared to 49 the previous month. A proportion of 1.9, 25.2 and 72.9 percent of the households across the livelihood zones have poor, borderline and acceptable food consumption scores respectively. In the pastoral livelihood zone, about 38.6 percent of the households do not have acceptable food consumption (Figure 19). This implies that they are likely to be skipping some nutritious food stuffs mostly animal

proteins like meat, fish and milk.

### 5.3.1 Health and Nutrition Status

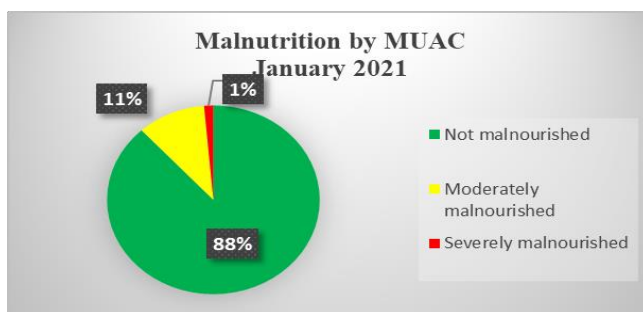


Figure 20: Nutrition status

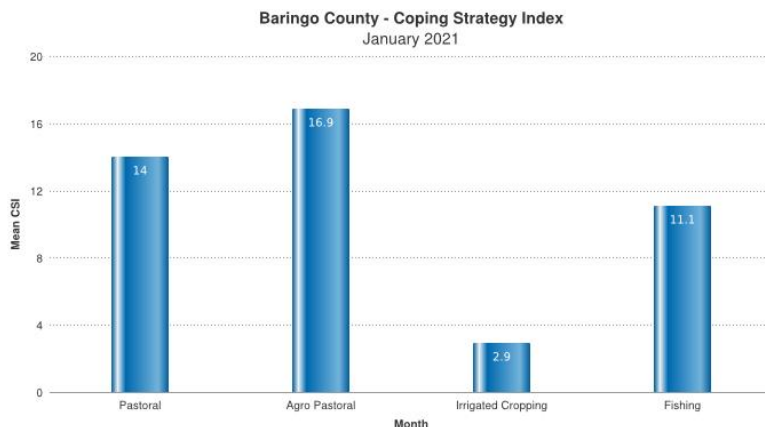
The nutrition status of the sampled children under five years of age is stable and on a deteriorating trend. About 88.2 percent of the sampled children were not malnourished while 10.4 and 1.4 percent were moderately and severely malnourished respectively (Figure 20). The situation was attributed to decreasing food and milk at household level.

### 5.3.2 Health

- During the reporting period, the illnesses that were reported were malaria and diarrhoea across livelihood zones. The diarrhoea cases were occasioned by use of water from stagnant water bodies and poor hygiene practices at household level. Water sources have also been contaminated by flood waters mostly in Baringo South and Tiaty sub counties.
- Sensitization campaigns against COVID -19 pandemic are ongoing across the county led by the County health teams.

## 5.4 Coping strategies

### 5.4.1 Coping Strategy Index



**Figure 21: Coping strategy index**

The current average coping strategy index was at 12.7, a slight increase as compared to the previous month at 12.47 (Figure 21). Households in agro pastoral livelihood zone employed more coping strategies at 16.6 followed by pastoral livelihood zone at 14. The irrigated zone employed the least coping mechanisms at 2.9. Overall, households in agropastoral livelihood zone have recorded relatively higher CSI values for the past three months.

## **6.0 CURRENT INTERVENTION MEASURES.**

### **6.1 Non-food interventions**

#### **Kenya Red Cross**

- Rehabilitation of boreholes in kolowa, Tangelbei and Chemirimion
- Enhancing market linkages of fodder for farmers in kisanana, Muchukwo, Akorian, Sandai and Kapkuikui
- Targeting and support of displaced persons from the ongoing operation in Kapedo in Tiaty Sub-County

#### **Self Help Africa**

- Provision of food supplies to 150 families affected by flood in baringo south worthy 5M supported by **Irish Aid Alliance**

#### **Agriculture Sector**

- Resilient building program to households invaded by Desert Locust- Supply of farm inputs (Seeds, Fertilizer, Pond Liners, Kitchen Garden materials)
- Lining of Sandai Irrigation scheme
- Rehabilitation and expansion of Kiboi irrigation scheme
- Youth in Agri Business
- Nutrition Sensitive and Food Utilization **initiatives**

#### **Livestock sector**

- Livestock upgrading
- Capacity strengthening to Youth groups and communities on pasture, beekeeping and trainings
- Pre-positioning of pasture seeds 2,500Kg for households.
- Provision of beehives
- Vaccination against CCPP, PPR, LSD.
- Capacity building of Farmers and staff.

#### **Water sector**

- Moderate water trucking to schools and institutions to in support of Covid 19 Protocols
- BHs rehabilitation
- COVID 19 PVC Tanks Installations / Pre-positioning
- Construction of New water Projects
- Drilling and Equipping of BHs
- Capacity building on water management and Catchment protection

#### **Health and Nutrition**

- Dissemination of Nutrition messaging through vernacular FM stations.
- Activation of radio listener groups through wind up radios.
- Conduct quarterly cooking demonstrations for complementary feeding at the community through organized community groups
- BFCI-A community-based initiative to promote and support maternal child nutrition, environment hygiene, food security and referrals
- Community sensitization on hand washing practices and nutrition messages(wash-CLTS and nutrition at community level
- Review of contingency plans, Response plan
- Capacity building of caregivers on child caring practices

## **7.0 EMERGING ISSUES**

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

- There has been some serious conflicts in some parts of the county which has triggered massive security operation by the government in an effort to restore law and order. The conflict was triggered by competition over natural resource sharing, cattle rustling and administrative/ political boundaries.
- The main hotspot is currently in Kapedo east and west in Silale ward, Tiaty sub county. Other hotspots include Nakoko sub location in Ribkwo ward in Tiaty sub county, Kalabta, Tulukand Kapturo, Barketiew, Loruk and Chemoe in Baringo North Sub county and also Mukutani, Rugus, Arabal and Kiserian sub locations in Baringo South Sub county. These conflicts have led to disruption of markets & market operations leading to closure in the affected areas hampering movement of goods and transport services in the affected areas. The conflict has also resulted into disruption of livelihoods and displacement of persons in the affected areas. The provision of health and education services has also been shut down mainly in Silale ward.

### **7.2 Migration**

- There were minimal Livestock migration from Kinyach, Baringo North to the hilly sides in search of pastures the migrations reported in Arabal in Baringo South, where the livestock are from Tiaty subcounty. With the prevailing conditions more livestock migration is expected due to declining pasture in the pastoral livelihood zones.

### **7.3 Food security prognosis**

- According to FEWSNET Food security outlook report of December 2021, international forecasts and the Kenya Meteorological Department (KMD) predict that La Niña conditions are expected to persist at least through April 2021. The Long rains season of 2021 will be normal. High day light temperatures are expected to persist up to March 2021.
- Covid 19 cases are likely to persist in the first half of 2021 and therefore necessitating the continuation of restrictions and other Covid 19 control measures.
- According to the Desert Locust Global Forecast by FAO, a small third generation of breeding is likely to commence in October in Samburu County and other areas with residual swarms but may be limited by the forecasted below-normal October to December short rains that will limit the moisture needed for the hatching of laid eggs. However, with the change of monsoon winds during the October-December short rains season, there is a risk of re-invasion from Ethiopia, Somalia, and Yemen into Kenya
- The ongoing conflict and security operations in Tiaty Sub County are likely to last through February to March 2021. This will likely trigger livestock migrations within and outside the county.
- Forage conditions in range lands are likely to deteriorate in pastoral and agro pastoral areas due to the depressed short rains season.
- Food prices are expected to be above normal in pastoral areas due to market disruptions due to insecurity.
- Lake water levels will continue to be higher than normal and that the long rains will exacerbate the situation.
- Water access and availability will be stressed in pastoral areas for the next two months
- Other than in pastoral areas, livestock body condition will remain good to fair. In pastoral areas, livestock body condition is likely to deteriorate in the next two months.
- Malnutrition rates will be below the long term means.

The above conditions provide a complex scenario for the County that warrants close monitoring of the different food and nutrition security and livelihood indicators by all stakeholders to ensure adequate mitigation measures are put in place to safeguard the most vulnerable households in the County's hotspots.

## **8.0 RECOMMENDATIONS**

### **8.1.0 Proposed Recommendations**

#### **8.1.1. Water Sector**

- 15 No. Water Supply Rehabilitation / upgrading / Servicing and replacement of pumping units
- Stock piling of Fast Moving Spares 18 No. community water supplies
- Capacity Strengthening on WASH / Water Management and Catchment protection
- Supply of Water treatment equipment's like water purifiers, Pur, Aqua tabs etc
- Water trucking to vulnerable Institutions and Communities
- Carry out appraisal of the water storage facilities in schools and institutions to establish the current status given the prolonged closure of learning centres.

#### **8.1.2. Nutrition and Health**

- Dissemination of Nutrition messaging on the evolving drought situation through vernacular FM stations.
- Activation of radio listener groups through wind up radios.
- Conduct quarterly cooking demonstrations for complementary feeding at the community through organized community groups
- BFCI-A community-based initiative to promote and support maternal child nutrition, environment hygiene, food security and referrals
- Community sensitization on hand washing practices and nutrition messages(wash-CLTS and nutrition at community level
- Review of contingency plans, Response plan
- Capacity building of caregivers on child caring practices

#### **8.1.3. Livestock and Veterinary sector**

- Vaccination against, CCPP, LSD and PPR
- Disease surveillance
- Establishment of strategic livestock feed reserves; in ward level 3 in Tiaty, 2 in Baringo North 2 in Baringo south and 1 in Mogotio
- Hay harvesting and baling machinery
- Provision of COVID-19 control facilities and like masks, water washing tanks and related sanitizers
- Covid 19 sensitization at markets
- Contact inventory on the available hay per ward to ascertain the available feed status.
- Active monitoring and reporting on the current livestock movements

#### **8.1.4. Agriculture Sector**

- Inputs provision (Seeds, Kitchen Garden Materials, Fertilizers) including capacity building on post-harvest and safe use of chemicals
- Value addition of produce cereals (Maize, Sorghum and Millet) through milling and fortification of flour and Market linkages
- Enhance asset creation for households especially Farm ponds and water pans for food production especially Kitchen Gardening
- Enhance irrigated Agriculture by conducting Soil analysis and crops suitability surveys in all irrigation schemes and canaling