



A Vision 2030 Flagship Project



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

FEBRUARY EW PHASE	Early Warning Phase Classification			
	LIVELIHOOD ZO	EW PHASE	TRENDS	
<p><b>Drought Situation &amp; EW Phase Classification</b> Drought Phase: Normal- Stable</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 with the prevailing conditions</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>Copping 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	NORMAL	WORSENING	
	IRRIGATED CROP	NORMAL	STABLE	
	COUNTY	NORMAL	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 (%)	103%	21.6	80-120
	VCI-3month	41.62		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)	1.4	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)	64.8	>63	
Milk Consumption (Ltr)	1.3	≥1.7		
Water for Households-trekking distance (km)	4.5	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	12.3	>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

# 1.0 CLIMATIC CONDITIONS

## 1.1 Rainfall performance

- The county experienced dry spells most of the time, although there were some parts that received light showers.

## 1.2 Amount of rainfall and spatial distribution

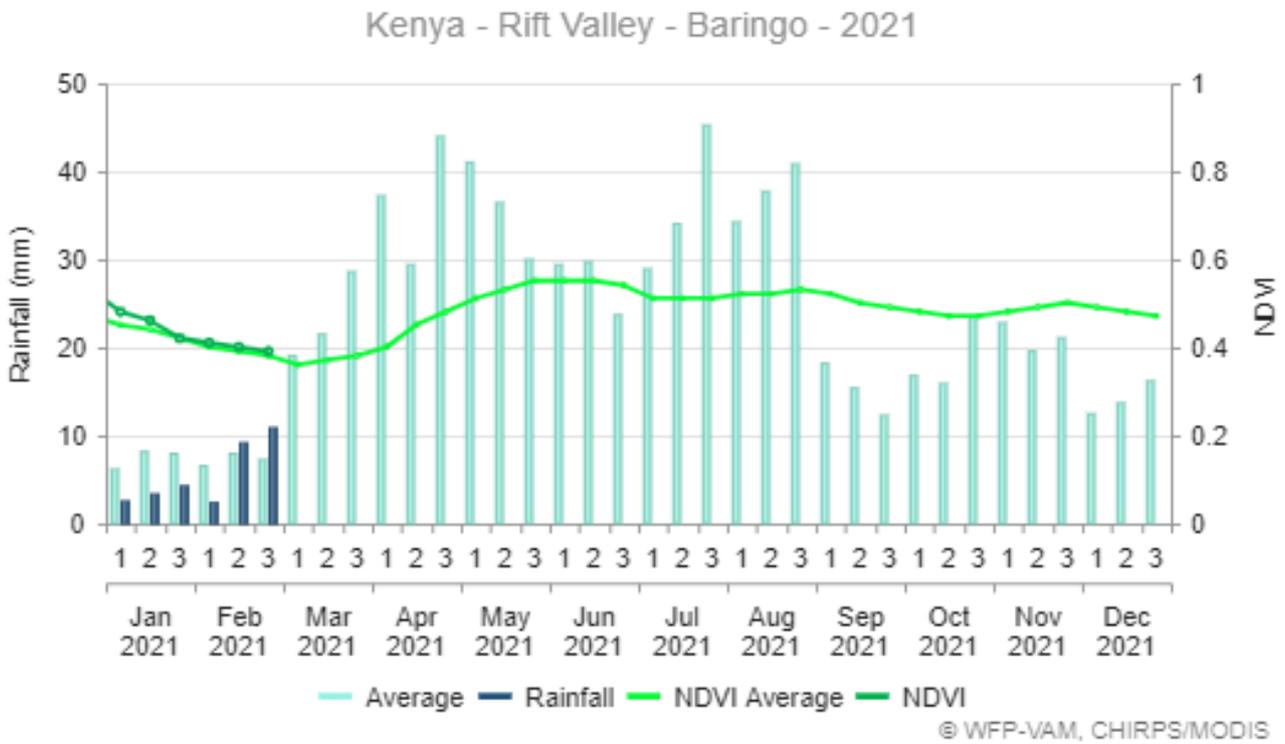


Figure 1. Rainfall performance

- The county received below normal rains during the first two decades of the month translating into 79 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.

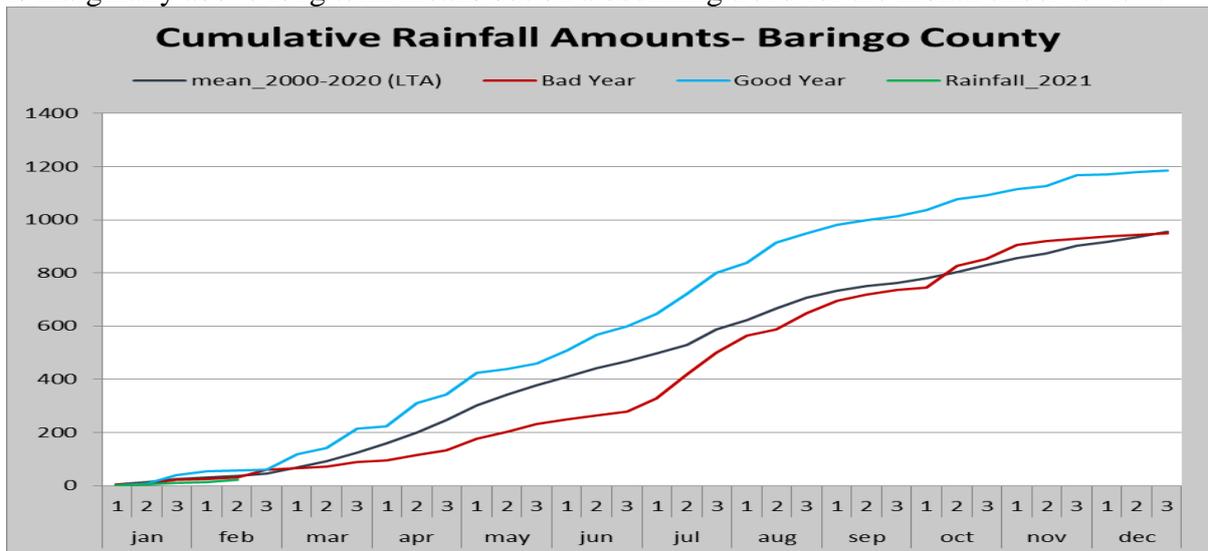


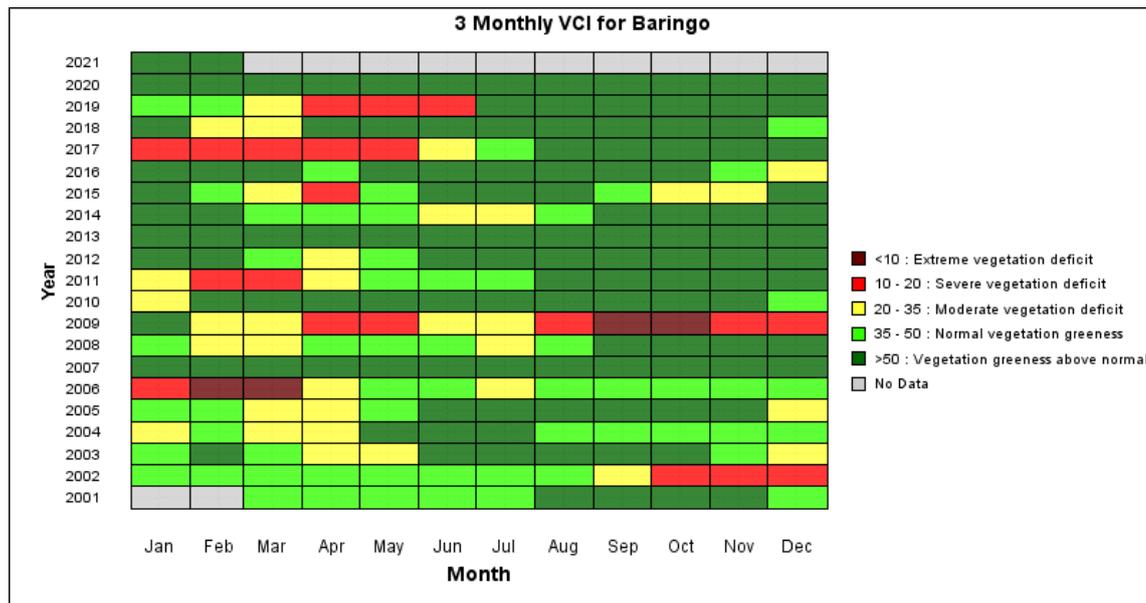
Figure 2: Cummulative rainfall

- The cumulative rainfall received for the month under review is slightly below the long term means as shown in Figure 2.

## 2.0 IMPACTS ON VEGETATION AND WATER

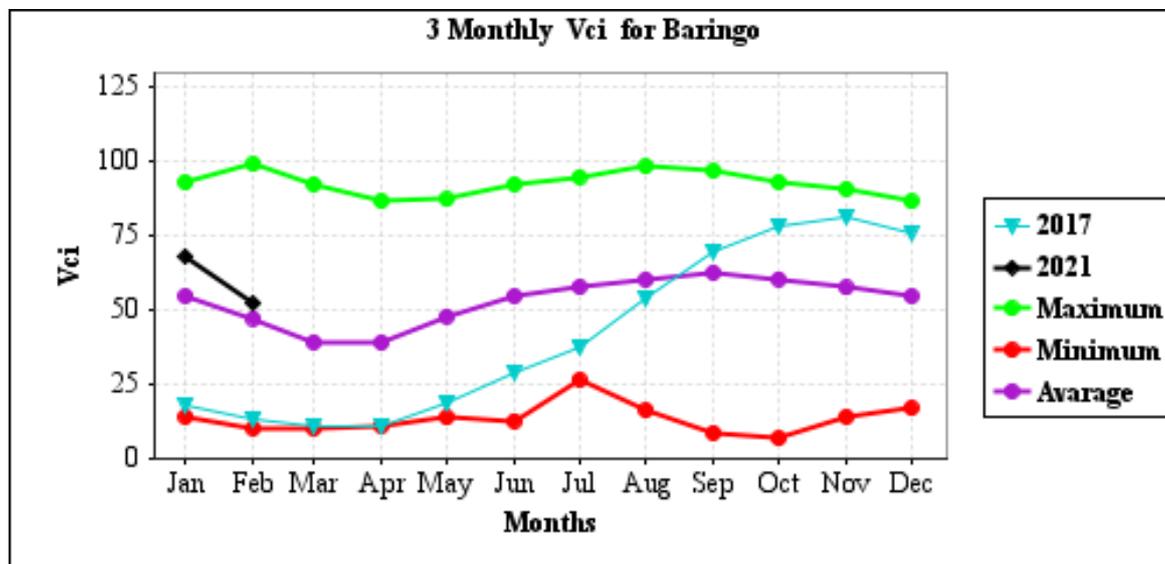
### 2.1 Vegetation condition index (VCI)

The vegetation condition index (VCI) is above normal in all the sub counties (Figure 3). The VCI is currently at 41.62 and is on a declining trend as compared to the previous month at 67.78



**Figure 3. Vegetation Condition Index**

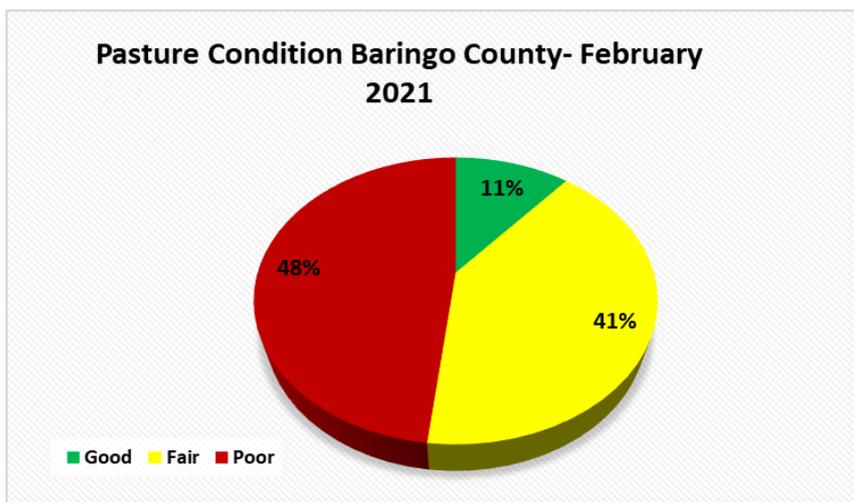
The current VCI is above long term mean but there is a significant declining trend across the sub counties. (Figure 4).



**Figure 4: Vegetation condition index trend**

## 2.1.1 Field observation

### 2.1.1.1 Pasture



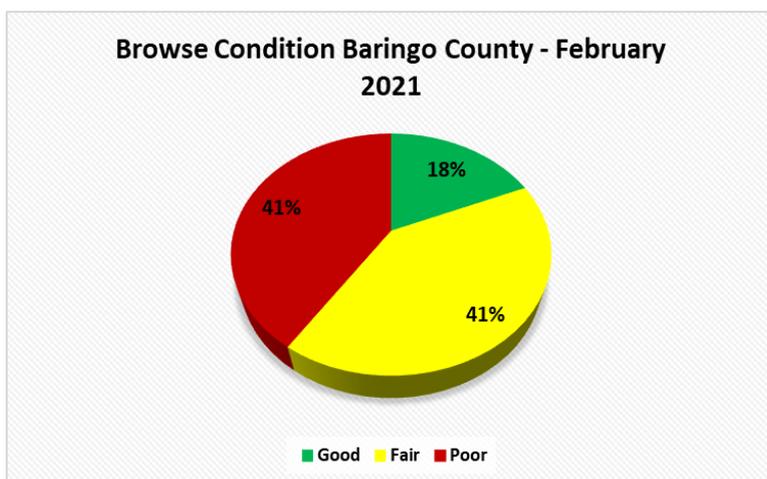
The pasture conditions are poor mostly in pastoral and agropastoral areas (Figure 5). The most affected sub counties are Baringo South and Tiaty. The current pastures are expected to last for less than one month in pastoral, agro pastoral and irrigated livelihood zones given the prevailing conditions.

**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.

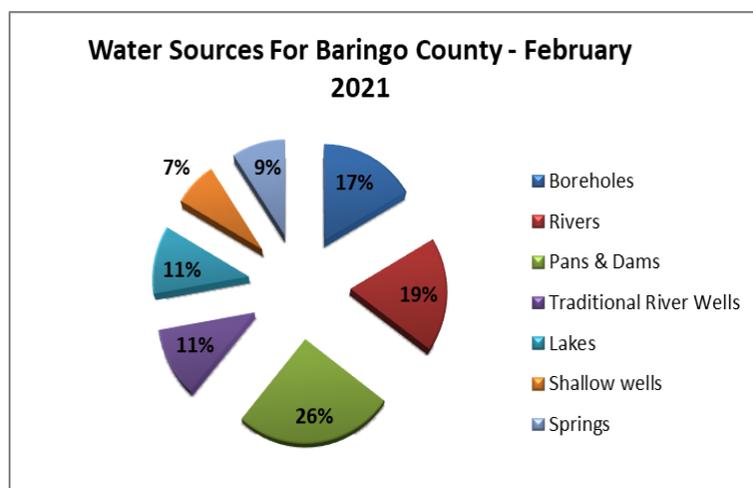
The available browse is expected to last for two months in pastoral and agro pastoral livelihood zones and three months in irrigated cropping livelihood zone.



**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 water pans, rivers and boreholes (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.

## 2.2.2 Household access and Utilization

The average household trekking distance to water sources increased slightly from 4.3km the previous month to 4.5km (Figure 8). The distances are below the long term average (LTA) by 20%. Irrigated cropping zone recorded the least trekking distance of 1.6 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.

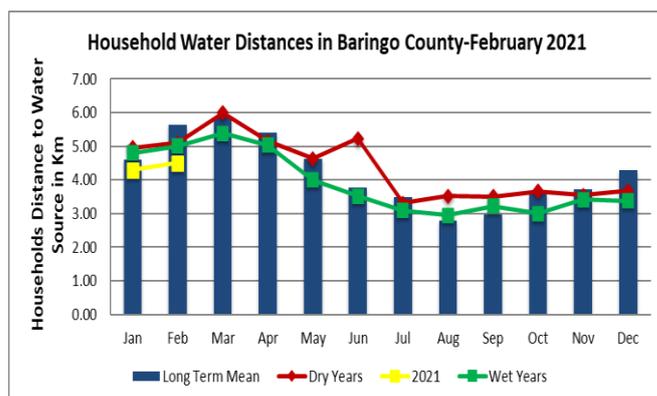


Figure 8: Water access

## 2.2.3 Livestock access

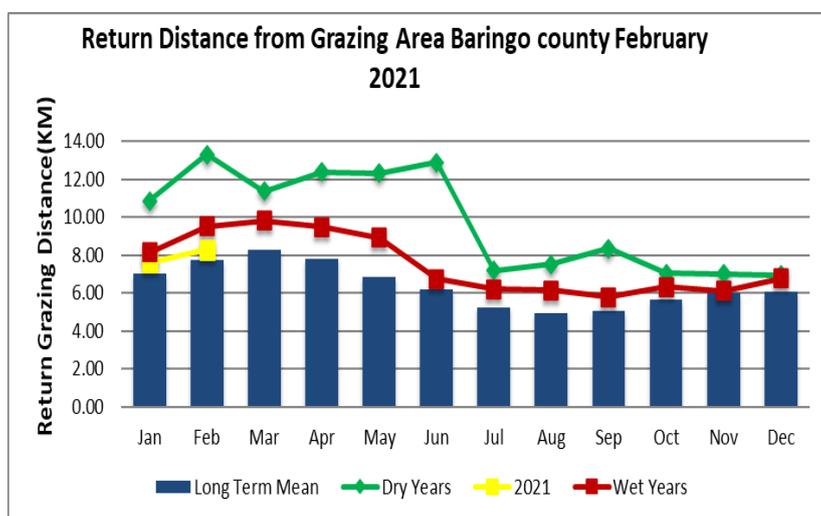


Figure 9: Grazing distances

The average return distance for livestock from grazing fields increased by five percent at 8.3 km in comparison to the previous month at 7.9 km (Figure 9). The pastoral livelihood zone recorded the longest average distance of 9.6 km while irrigated livelihood zone recorded the shortest average distance of 2 kilometres. The return distances are above the long term average by seven 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

The livestock body condition is good to fair in irrigated livelihood zone and a few parts of agro pastoral livelihood zone while 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. However, the body condition is likely to continue declining due to the worsening forage and water conditions.

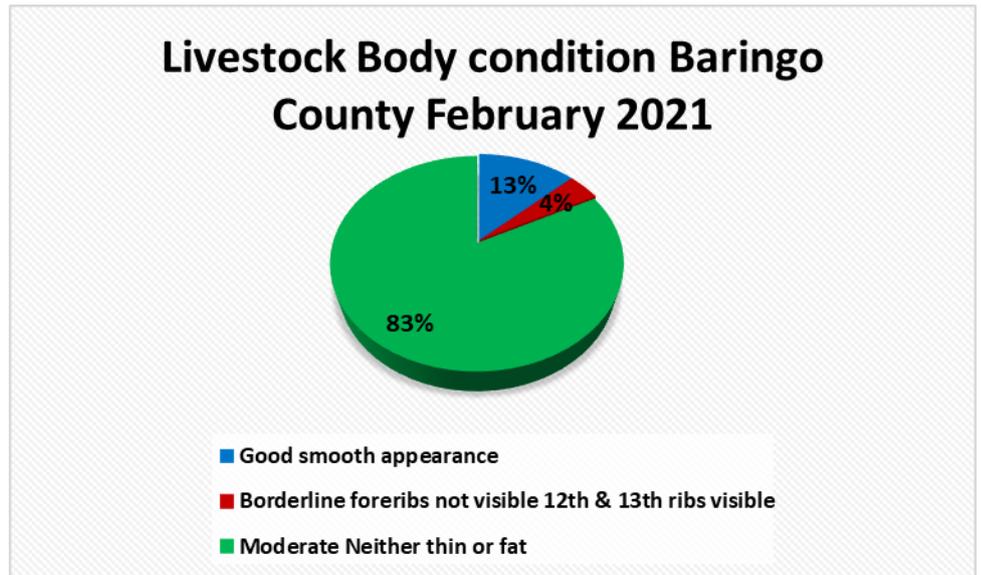


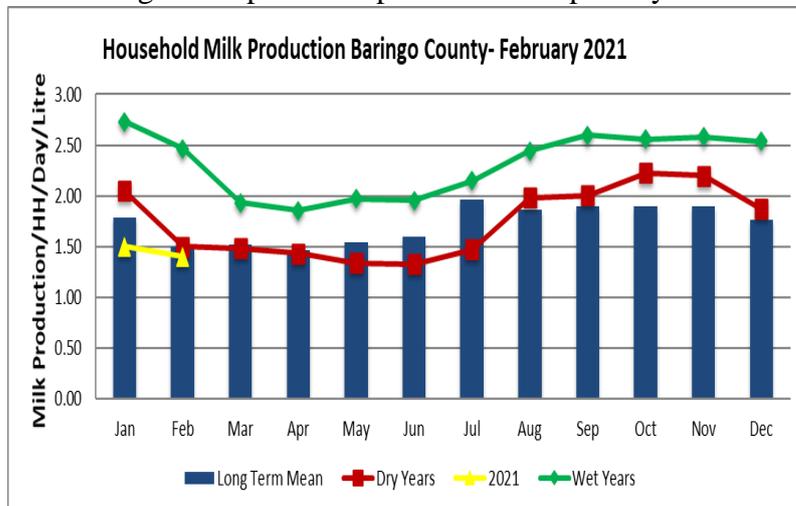
Figure 10: Livestock Body Condition

##### 3.1.2 Livestock Diseases

There were few cases of livestock diseases being reported although they could not warrant quarantine as per spatial occurrence. Vaccination against LSD, CCPP and PPR was done in Tiaty, Baringo North, Baringo South, Baringo Central and Mogotio.

##### 3.1.3 Milk Production

The average milk produced per household per day was at 1.4 litres, a decrease of seven 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 three litres while pastoral had the least at 2.1 litres.



The current milk production is below LTAs by seven 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.

Figure 11: Milk production

### 3.2 Rain fed crop production

#### 3.2.1 Stage and Condition of food Crops

- Currently farmers have prepared their farms in all livelihood zones in anticipation of the long rains. However, crop productivity might be affected by the presence of desert locusts which have been reported in the county for the last one month. At least five swarms have been reported in Tiaty, Baringo North and Baringo South sub counties.

## 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.18,292 (Figure 12). The price was above the long-term average by 36 percent. Irrigated livelihood zone posted the highest prices of Ksh.28,833 while pastoral livelihood zone recorded the least average price of Ksh.14,380. The reduction in prices was as a result of declining livestock body condition mostly in the pastoral areas.

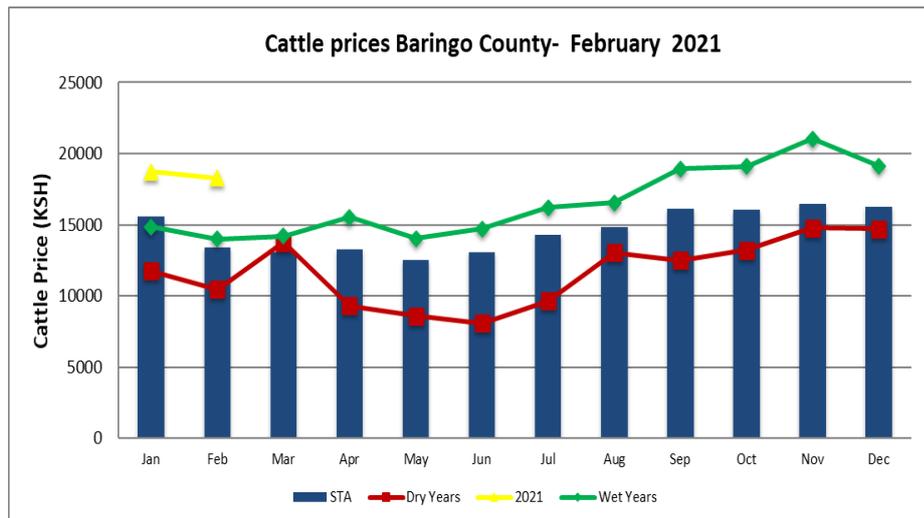


Figure 12: Cattle prices

#### 4.1.2 Goat Prices.

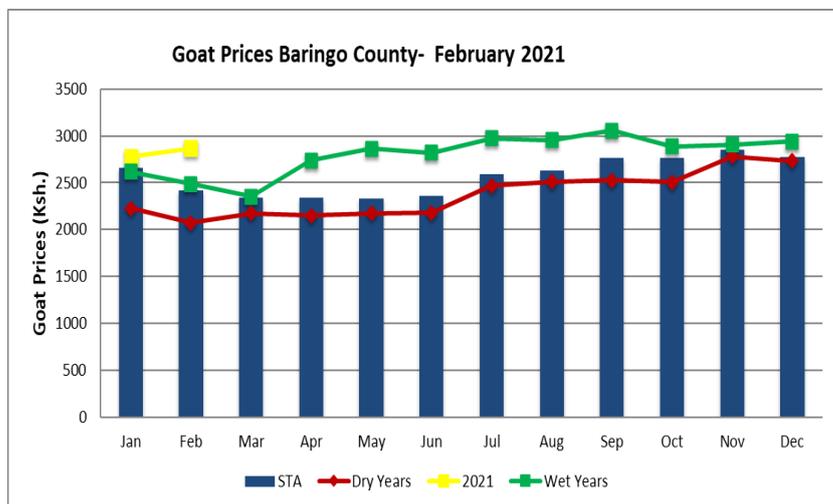


Figure 13: Goat prices

The average price of a medium sized goat was at Ksh.2,867, as compared to the previous month at Ksh. 2,777 (Figure 13). The price was above the LTA by 19 percent. The prices were highest in fishing livelihood zone at Ksh. 3,783 and lowest in agro pastoral livelihood zone at Ksh.2,300. The increase in price is as a result of favourable market conditions.

### 4.2.0. Crop prices

#### 4.2.1 Maize

There was a rise of three percent in the current average price for a kilogram of maize at Ksh. 44., compared to the previous month at 43 (Figure 14). The current prices are faintly 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.

Pastoral livelihood zone recorded the highest price of Ksh.48 per kg while irrigated livelihood zone recorded the lowest at Ksh.30 per kg.

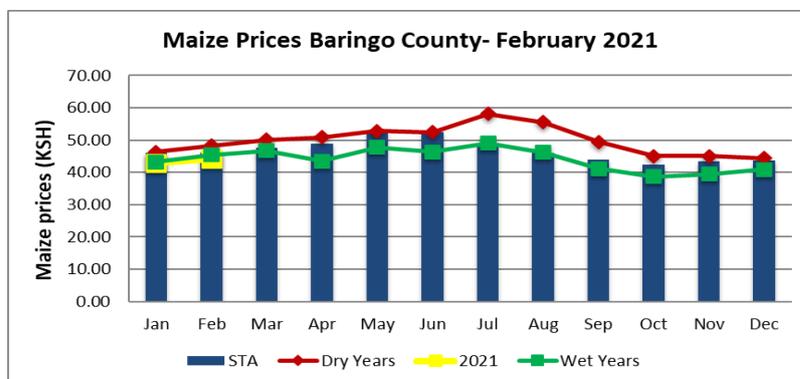
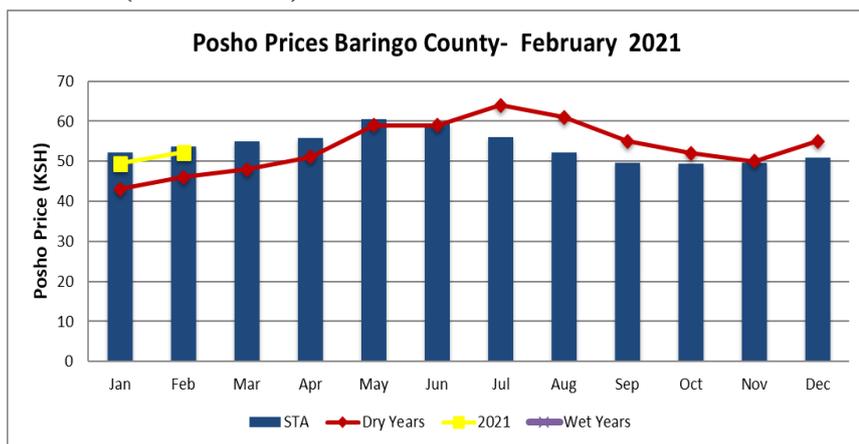


Figure 14: Maize prices

### 4.2.2 Posho (Maize meal)



The average price per kilogram of posho was at Ksh.52.2, an increase of six percent compared to the previous month at Ksh. 49.4. (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.

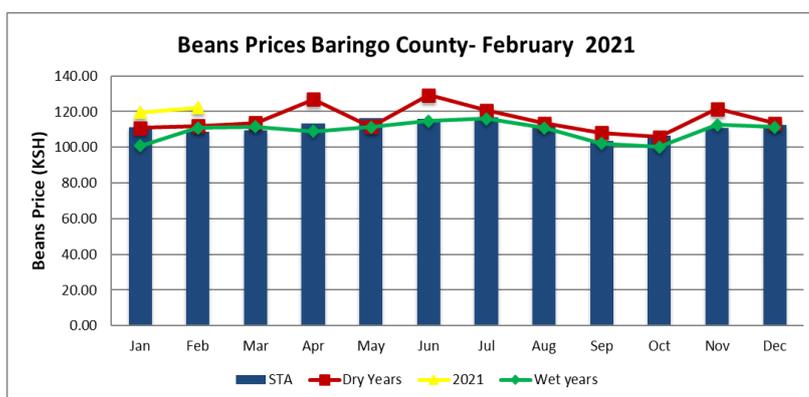


Figure 16: Beans prices

### 4.3 Terms of Trade

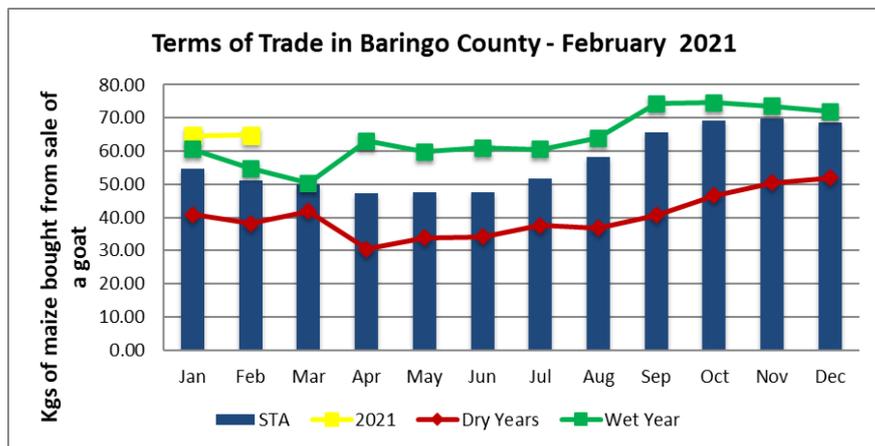


Figure17: Terms of trade

The terms of trade for the month under review are stable in comparison to the previous month. A sale of one goat is able to fetch 64.8 kgs of maize (Figure 17). This has been attributed to by stability in cereal and livestock 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 103.6 while pastoral livelihood zone had the least at 56.7

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 Milk Consumption

The average milk consumption per household per day was at 1.3 litres, which was a decrease of seven percent compared to the previous month (Figure 18). The milk consumption was highest in the agro pastoral livelihood zone at 1.9 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.

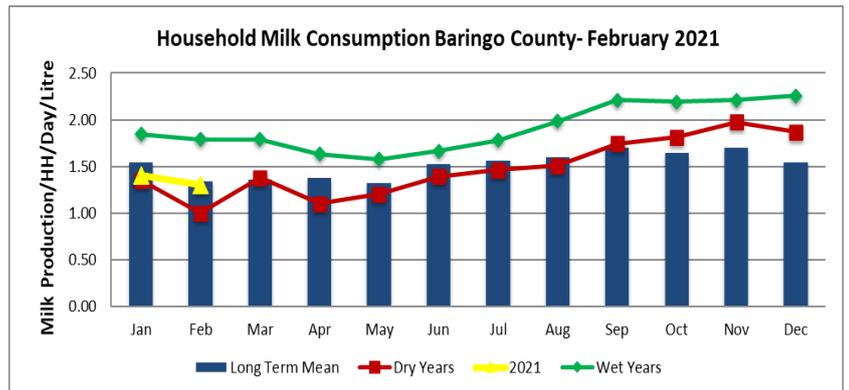


Figure18: Milk consumption

### 5.2 Food Consumption Score

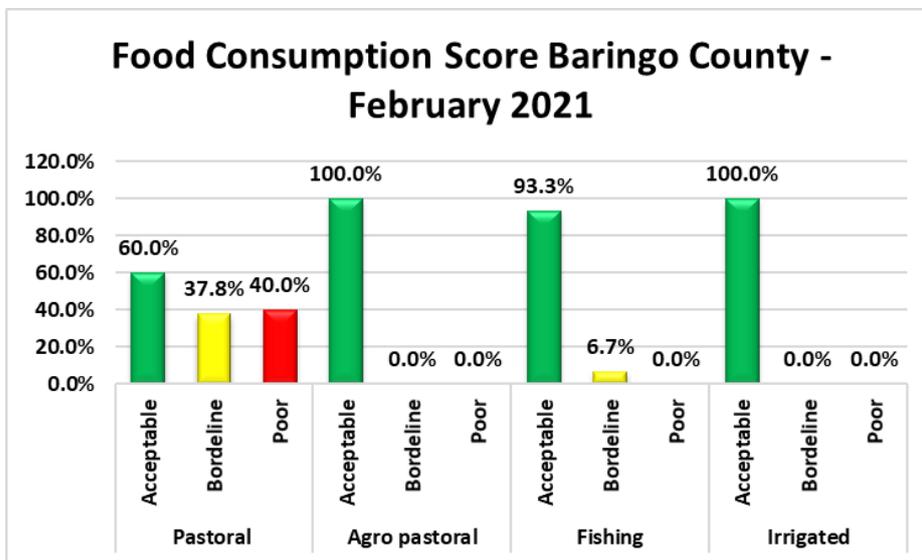


Figure19: Food consumption score

Generally, the county had an acceptable Food Consumption Score of 48.17 as compared to 50 the previous month. A proportion of 1.5, 25.9 and 72.6 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). The good consumption score can be attributed to consumption of meat in the pastoral and fishing livelihood

zones because of the initiation ceremonies

#### 5.3.1 Health and Nutrition Status

The nutrition status of the sampled children under five years of age is stable as compared to the previous month, whereby about 92 percent of the sampled children were not malnourished while 7.8 and 0.2 percent were moderately and severely malnourished respectively (Figure 20). The situation was attributed to availability of food at household level especially meat due to ongoing circumcision ceremonies.

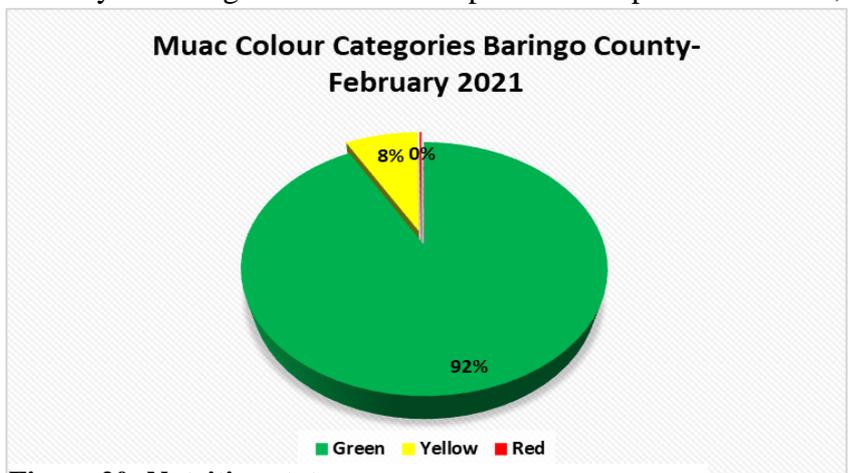


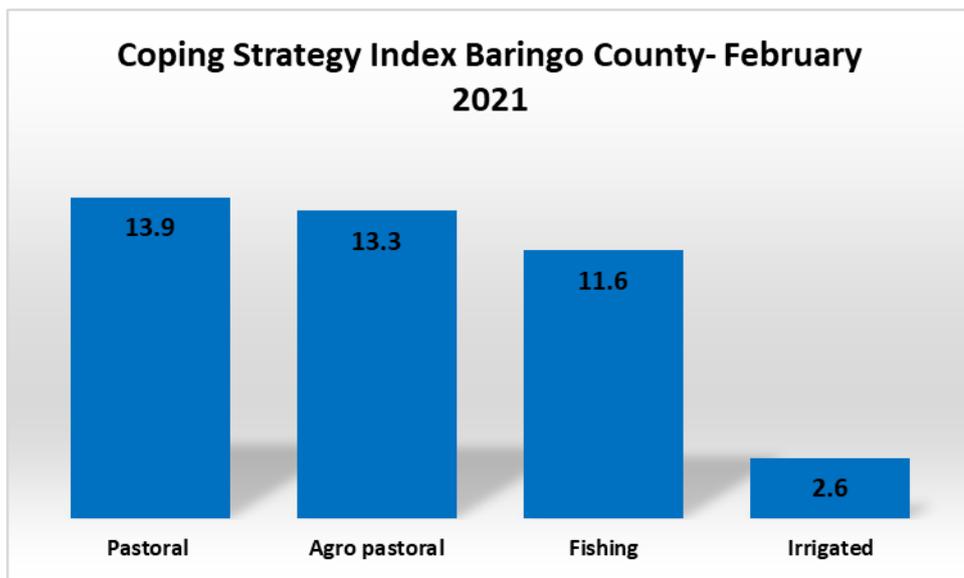
Figure 20: Nutrition status

### 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 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



The current average coping strategy index was at 12.3 which is stable compared to the previous month (Figure 21). Households in pastoral livelihood zone employed more coping strategies at 13.9 followed by agro pastoral livelihood zone at 13.3. The irrigated zone employed the least coping mechanisms at 2.6

Figure 21: Coping strategy index

## **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

#### **Self Help Africa**

- Provision of food supplies to 150 families affected by flood in Baringo South worth Ksh5M supported by **Irish Aid Alliance**

#### **Agriculture Sector**

- Resilient building program to households invaded by DL- 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
- Control of desert locusts by FAO, County and National government is ongoing in the county.

#### **Livestock sector**

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

#### **Water sector**

- Water trucking
- 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
- Carry out data quality audits

## **7.0 EMERGING ISSUES**

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

- Security operations are ongoing in Tiaty sub county where cases of banditry were reported in the last two months. The main hotspots are in Kapedo east and west in Silale ward, Tiaty sub county. Nomadism is slowly returning and the schools that had closed due to insecurity have now reopened.

### **7.2 Migration**

- There were minimal livestock migration from Kinyach, Baringo North to the hilly sides in search of pastures.

### **7.3 Desert locusts**

- At least five swarms of desert locusts were reported in Tiaty, Baringo North and Baringo Central sub counties in the last one month and control measures are underway. If not checked, they have the potential to affect the crops that will be planted in the coming long rains season.

### **7.4 Food security prognosis**

- According to the forecast of the Kenya Meteorological Department, the county is expected to have above average rains for the coming long rains season. It therefore implies that the water situation will improve significantly in the next one month as recharge of water sources is expected to be enhanced.
- Regeneration of pasture and browse is expected to improve with the onset of the long rains season and therefore improving forage availability and access.
- 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.
- Food prices are expected to be above normal in pastoral areas due to market disruptions due to insecurity.
- Other than in pastoral areas, livestock body condition will remain good to fair.
- Malnutrition rates are expected to remain stable in the next one month.

## **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

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

- 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
- Carry out data quality audits

#### **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

#### **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

