




A Vision 2030 Flagship Project



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

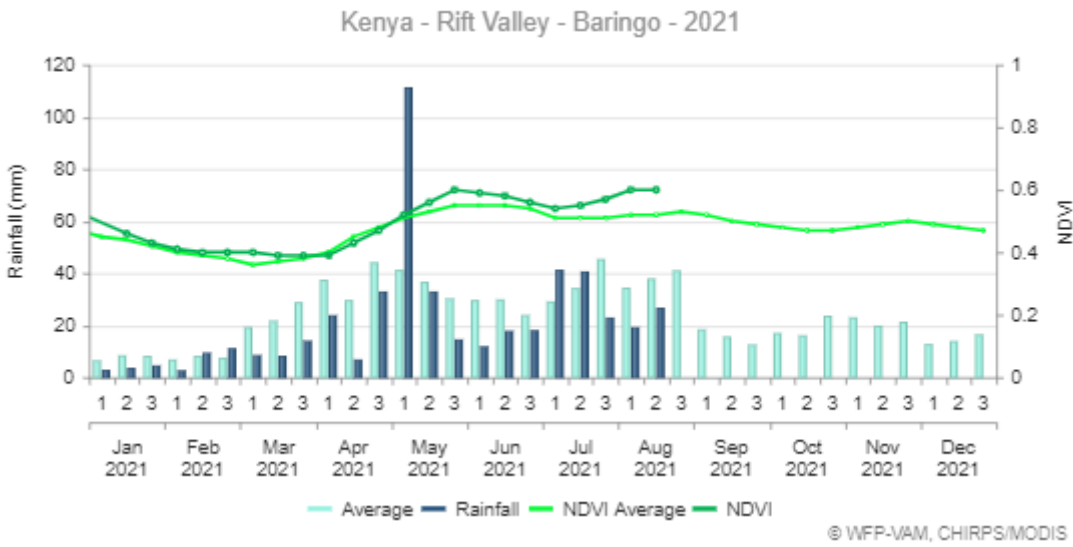
AUGUST EW PHASE	Early Warning Phase Classification			
	LIVELIHOOD ZONE	EW PHASE	TRENDS	
<p><b>Drought Situation &amp; EW Phase Classification</b> Drought Phase: Normal- Stable</p> <p><b>Biophysical Indicators</b></p> <ul style="list-style-type: none"> <li>The county received below normal rains during the first two decades of August which was characterised by poor distribution.</li> <li>The Vegetation greenness as depicted by the VCI is above normal across all sub counties</li> <li>The water levels in most water sources are below normal at 50-60% 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 good in both quality and quantity</li> <li>Livestock body condition is fair to good in all livelihood zones.</li> <li>Milk production is below the normal seasonal range across all livelihood zones.</li> </ul> <p><b>Access indicators</b></p> <ul style="list-style-type: none"> <li>Terms of trade are stable and above long term means</li> <li>Distances to water sources for households are above normal seasonal ranges .</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 stable and below the long term mean</li> <li>Copping strategy index (CSI) for households is stable and within normal seasonal range.</li> <li>The bulk of the households have acceptable food consumption score</li> </ul>	PASTORAL	NORMAL	STABLE	
	AGRO PASTORAL	NORMAL	STABLE	
	IRRIGATED CROP	NORMAL	STABLE	
	COUNTY	NORMAL	STABLE	
	<b>Biophysical Indicators</b>	<b>Value for the month Baringo</b>	<b>LTA-Monthly Baringo</b>	<b>Normal ranges Kenya %</b>
	Average rainfall MM (%)	63%	71.7	80-120
	VCI-3month	58.42		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)	1.3	1.86	
	Livestock deaths (for drought)	None	No death	
	<b>Access Indicators</b>	<b>Value</b>	<b>Normal ranges</b>	
	Terms of Trade (ToT)	58.8	>58.16	
Milk Consumption (Ltr)	1.3	≥1.60		
Water for Households-trekking distance (km)	3.7	≥2.78		
Crops area planted for the season(Maize)	42%	>80%		
<b>Utilization indicators</b>	<b>Value</b>	<b>Normal ranges</b>		
Nutrition status of children 6-59 months at risk of malnutrition by numbered MUAC (% at risk)	15%	<14.08		
Nutrition status of malnourished children 6-59 months by family MUAC	10%	<6.6		
CSI	13.46	>19.0		
FCS	48.25	>35		

<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

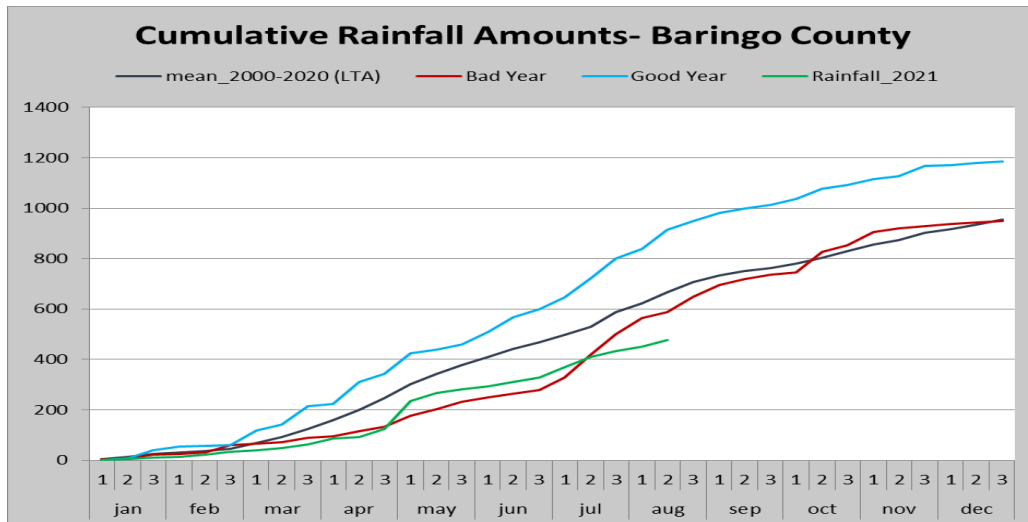
## 1.1 Rainfall performance

### 1.1.1 Amount of rainfall and spatial distribution



**Figure 1. Rainfall performance**

- During the month under review, off season light rains were observed totalling to 63 percent of the normal rains during the first two dekads (Figure 1). Both spatial and temporal distribution of the rains was fair to poor across all the livelihood zones, with the bulk of the rains being received in the highlands.
- The vegetation greenness according to normalized differential vegetation index (NDVI) is above normal compared to the long term average.



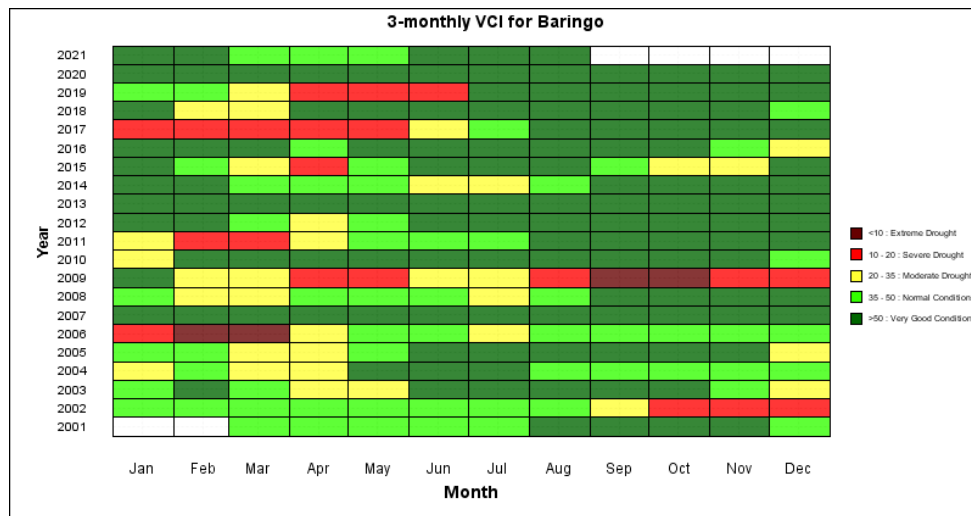
**Figure 2: Cummulative rainfall**

- The cumulative rainfall received for the month under review is below the long term mean and this is as a result of the poor performance of the long rains season.

## 2.0 IMPACTS ON VEGETATION AND WATER

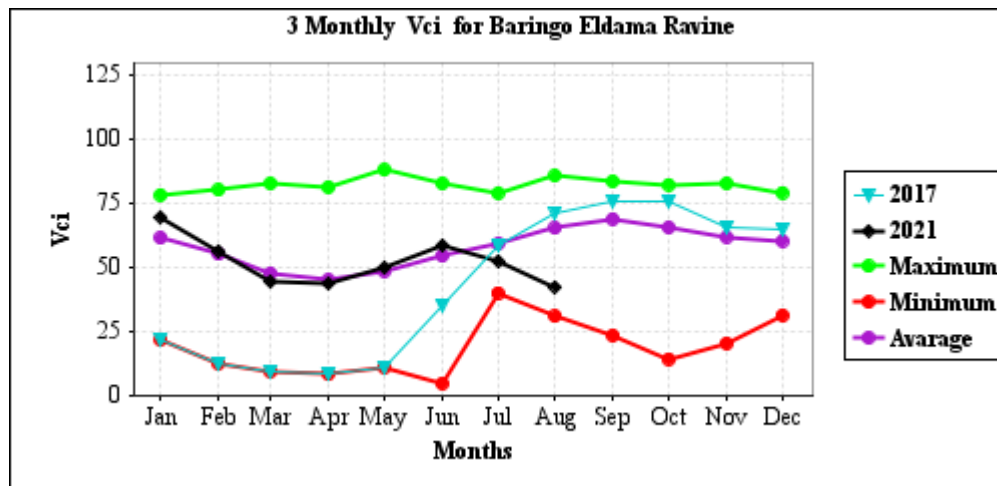
### 2.1 Vegetation condition index (VCI)

The vegetation condition index (VCI) is normal in all the sub counties (Figure 3). The VCI is currently at 58.42.



**Figure 3. Vegetation Condition Index**

The VCI for Eldama Ravine sub county is below the long term mean and showing a declined trend compared to other sub counties (Figure 4).



**Figure 4: Vegetation condition index trend**

## 2.1.1 Field observation

### 2.1.1.1 Pasture

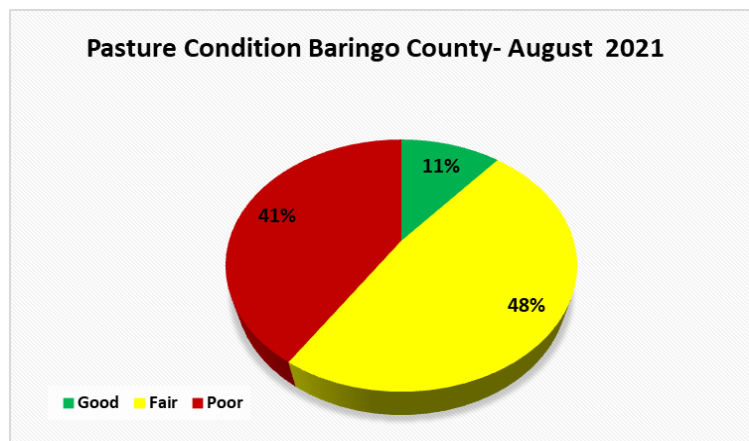


Figure 5: Pasture conditions

The pastures in pastoral and agropastoral livelihood zones are mostly fair to poor condition. (Figure 5). The most affected sub counties are Baringo South ( Kiserian), kinyach in baringo North and Tiaty where the pastures are poor due minimal and poorly distributed rains received. In the Irrigated livelihood zone the pastures are in fair to good conditions. The current pastures are expected to last for more than one month in pastoral and agro pastoral livelihood zones and two to three months in Irrigated livelihood zone given the prevailing conditions.

### 2.1.2 Browse

The browse condition during the month under review was fair both in quantity and quality in pastoral and agropastoral livelihood zones except in some pockects of the pastoral livelihood zone (Figure 6). Browse condition was good in the irrigated livelihood zone. 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 to three months in pastoral and agro pastoral livelihood zones and four months in irrigated cropping livelihood zone.

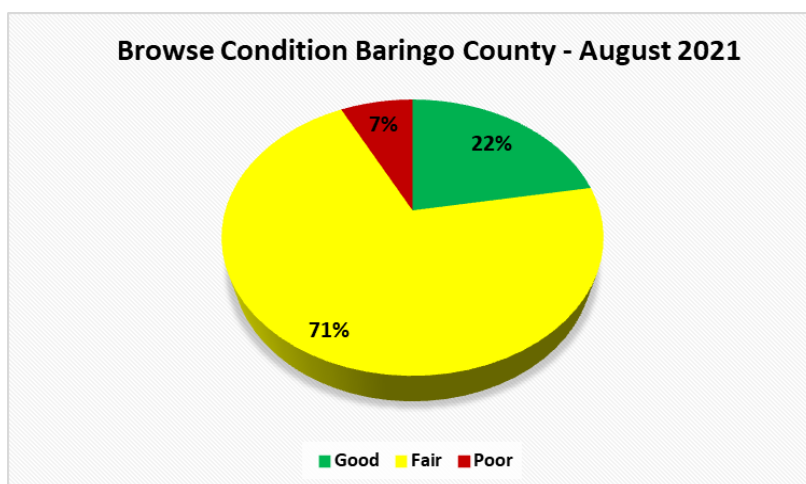


Figure 6: Browse conditions

## 2.2 Water resources

### 2.2.1 Source

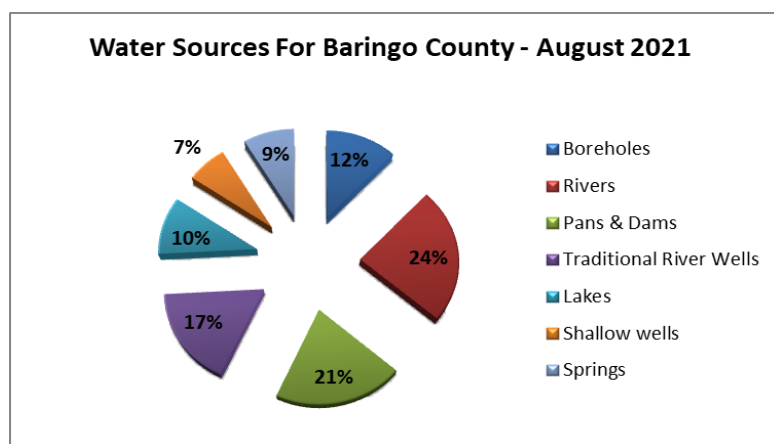


Figure 7: State of water sources

The main water sources for both livestock and human consumption across all livelihood zones were rivers and water pans, (Figure 7). Most water pans and dams were at 50 to 60 percent of their full capacity though in the pastora; livelihood zone, most pans had less than 40 percent of their holding capacity. Water quality and quantity across pastoral and agro-pastoral livelihood zones is poor to fair, which is not normal at this time of the year. Notable livestock migration towards Lake baringo in order to access water was observed .The current open water sources are

expected to last for two month in pastoral and agro pastoral livelihood zones and three months in irrigated livelihood zone.

### 2.2.2 Household access and Utilization

The average household trekking distance to water sources was 3.7 km, with a decrease of eight percent in comparison to the previous month at four kilometres (Figure 8). The distances are above the long term average (LTA) by 33 percent. Irrigated cropping livelihood zone recorded the least trekking distance of one kilometre while pastoral livelihood zone recorded the highest average of 4.6 km. The decreasing distances are attributed to sporadic rains received during the month.

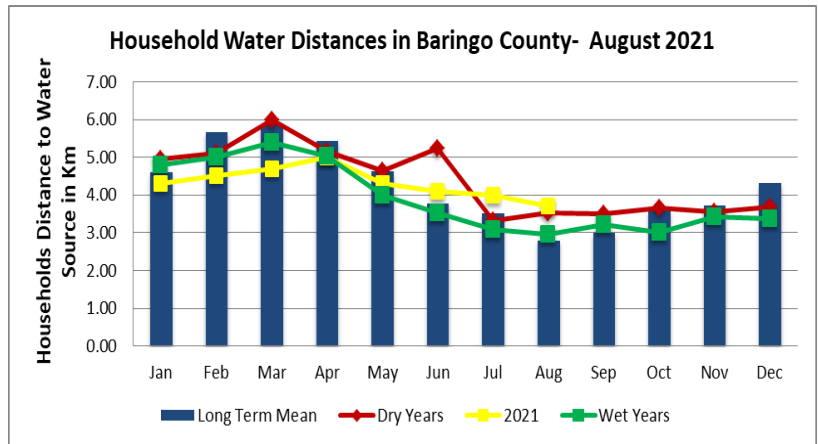


Figure 8: Water access

### 2.2.3 Livestock access

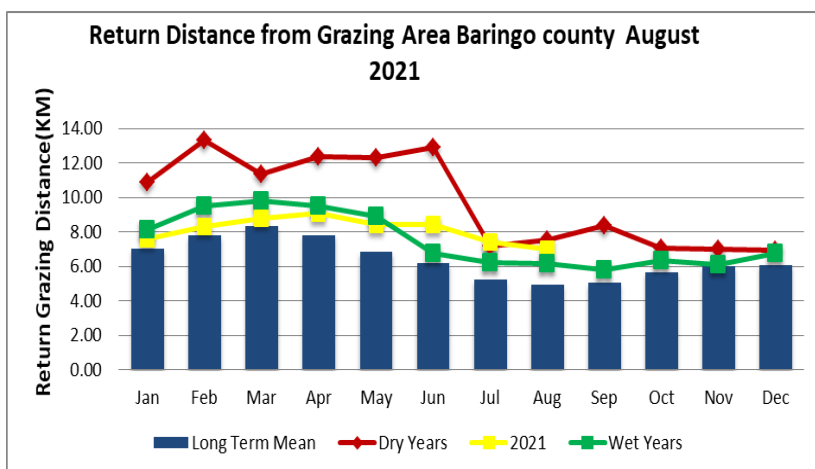


Figure 9: Grazing distances

The average return distance for livestock from grazing fields was at 7 km, which was a decrease of five percent as compared to the previous month (Figure 9). The current distances are above the long term mean by 42 percent. The pastoral livelihood zone recorded the longest average distance of 9 km while irrigated livelihood zone recorded the shortest average distance of two kilometres. The decline in return distances are attributed to the ongoing pasture regeneration in the county.

### 3.0 PRODUCTION INDICATORS

#### 3.1 Livestock Production

##### 3.1.1 Livestock Body Condition

The livestock body condition is mostly moderate in all livelihood zones for the cattle species. This has been occasioned by slow regeneration of pasture, browse and improved water availability across the livelihood zones. The body condition is likely to continue improving due to the impact of off season showers.

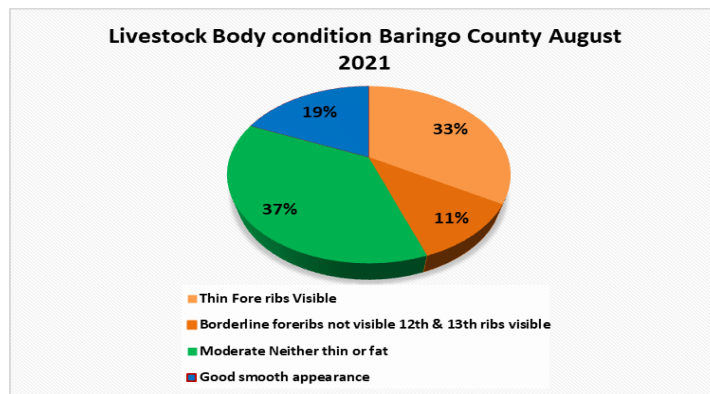


Figure 10: Livestock Body Condition

##### 3.1.2 Livestock Diseases

Some cases of livestock diseases have been reported and include pestes des petits ruminants (PPR), Contagious caprine pleuropneumonia (CCPP), East coast fever, foot and mouth (FMD) and lumpy skin disease across all the livelihood zones. FMD was reported in Kollowa, Loiwat, Sirinyo and parts of Ravine.

##### 3.1.3 Milk Production

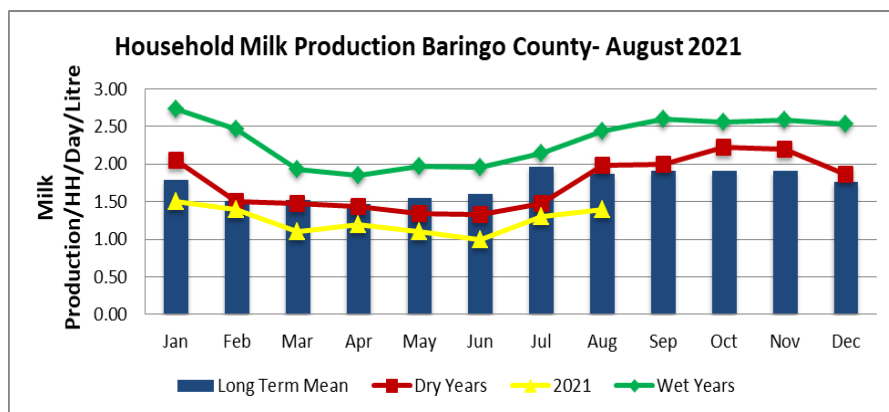


Figure 11: Milk production

The average milk produced per household per day during the month was 1.4 litres an increase of eight percent as compared to the previous month at 1.3 litres (Figure 11). The milk was mainly from cattle and goats. The increase has been contributed the calving period. Agro pastoral had the highest average of three litres while irrigated cropping has the least average of 1.1 litres

The current milk production is below LTAs by 34 percent.

#### 3.2 Rain fed crop production

##### 3.2.1 Stage and Condition of food Crops

- Harvesting of maize crop is ongoing but the yield is expected to be less than 50 percent of the long term mean and this was contributed by poor performance of the long rains season.

## 4.0.0 MARKET PERFORMANCE

### 4.1.0 Livestock marketing

#### 4.1.1 Cattle prices.

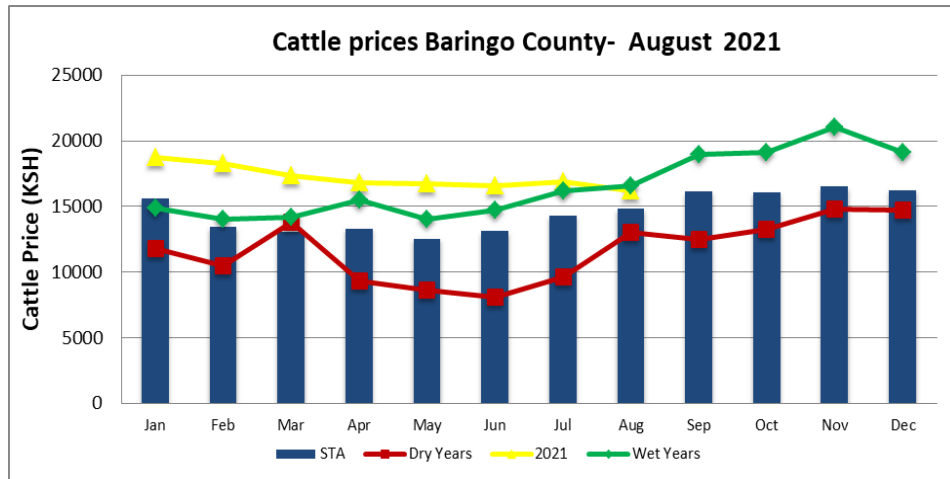


Figure 12: Cattle prices

The current average price for medium-sized cattle was Ksh. 16,203 a minimal decrease of four percent in comparison to the previous month. (Figure 12). The price was above the short-term average by nine percent. Irrigated livelihood zone posted the highest prices of Ksh.28,167 while pastoral livelihood zone recorded the least average price of Ksh.13,848. The least prices in the pastoral livelihood zone is due to outbreak of FMD that has affected the livestock volumes in

the markets.

#### 4.1.2 Goat Prices.

The average price of a medium sized goat was stable at Ksh.2,624, as compared to the previous month at Ksh. 2,675 (Figure 13). The price was similar to the short term average (STA). The prices were highest in Fishing livelihood zone at Ksh. 3,533 and lowest in agro pastoral livelihood zone at Ksh.2,100. The stability in price is as a result resumption of markets operations in the pastoral zones mostly in Tiaty areas.

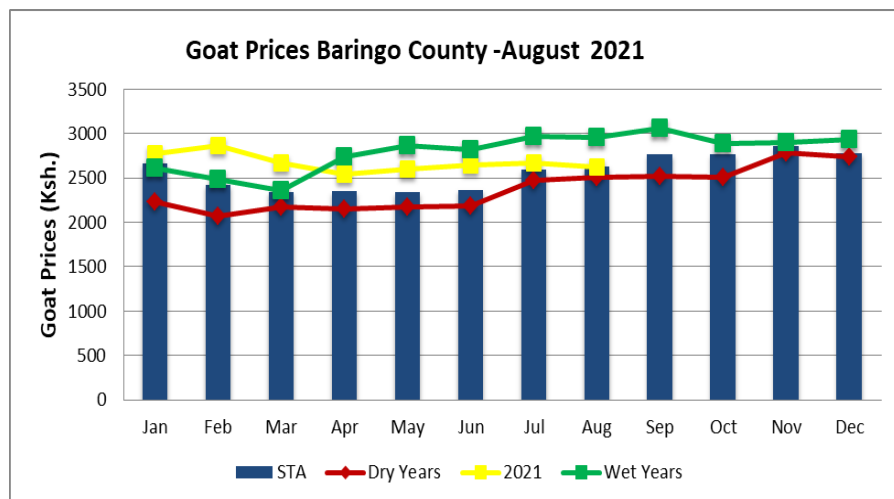


Figure 13: Goat prices

## 4.2.0. Crop prices

### 4.2.1 Maize

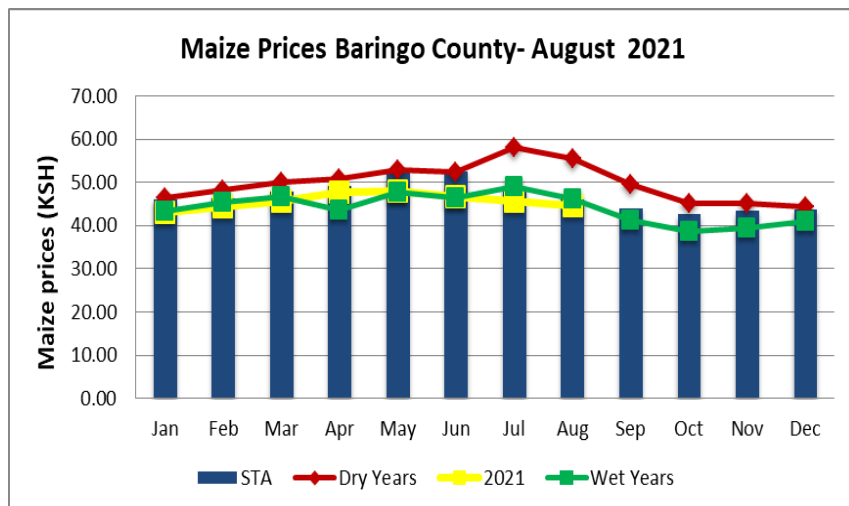


Figure 14: Maize prices

The current maize prices decreased slightly by two percent as compared to the previous month at Ksh 45/kg (Figure 14). The current prices are below the long-term average at this time of the year by three percent. The stability in maize prices can be attributed to availability of maize stocks at the household level in the mixed farming livelihood zone especially in Eldama Ravine sub county and start of harvesting in irrigated and agro pastoral livelihood zone. Pastoral livelihood zone recorded the highest average price of Ksh.46 per kg while irrigated livelihood zone recorded the lowest at Ksh.40 per kg.

#### 4.2.2 Posho (Maize meal)

The average household posho price was at Ksh 51/kg compared to the previous month at Ksh 52/kg (Figure 15). The price was below the short-term average by two percent. The decrease in prices was attributed to decreasing maize prices. The pastoral livelihood zone recorded the highest average price of Ksh. 54 while the Irrigated cropping zone had the least average price of Ksh. 45.

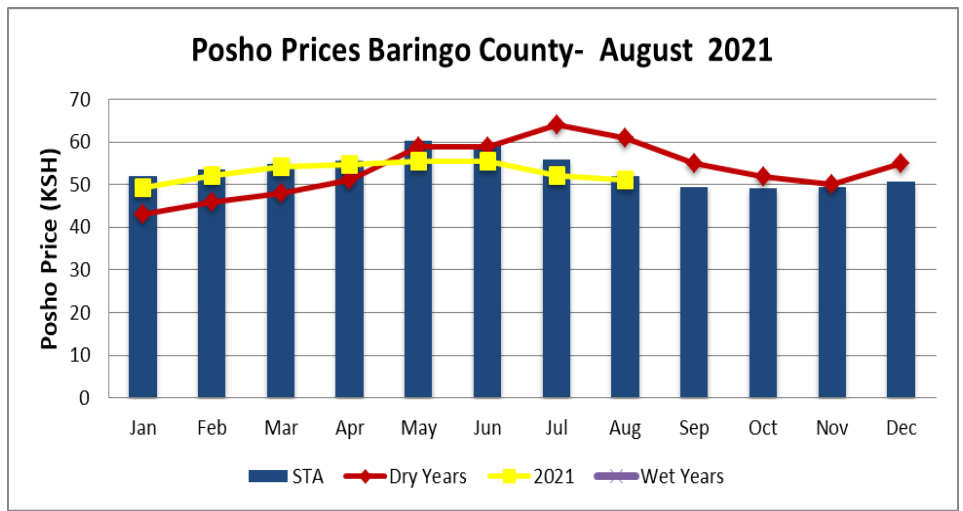


Figure15: Posho prices

#### 4.2.3 Beans Prices

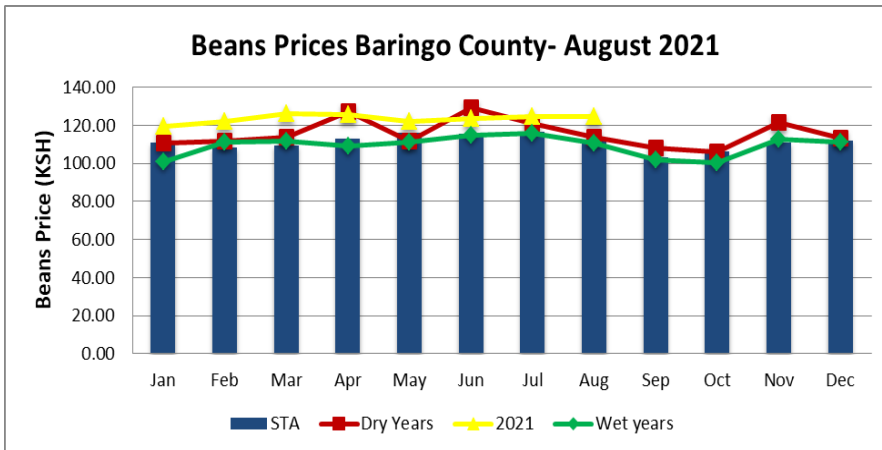


Figure 16: Beans prices

The average price per kilogram of beans has remained fairly stable at Ksh 124 compared to the previous month (Figure 16). The current prices are above the short-term average by seven percent. The pastoral livelihood zone recorded the highest average prices of Ksh.129 while the Irrigated livelihood zone recorded the least prices of Ksh.100. The stability in prices was attributed to stable supplies in the local markets.

#### 4. 3 Terms of Trade

The terms of trade was at 58.8 which was steady in comparison to the previous month whereby a sale of one goat was able to fetch 58.6 kgs of maize (Figure 17). This has been attributed to relatively stable maize prices and 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 84.8 while Agro pastoral livelihood zone had the least at 46.7.

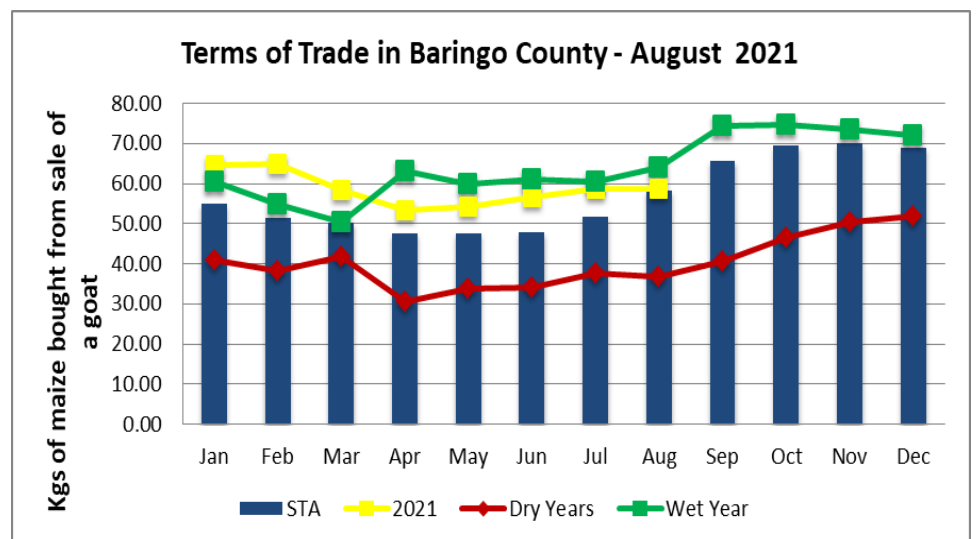


Figure17:Terms of trade



## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 Milk Consumption

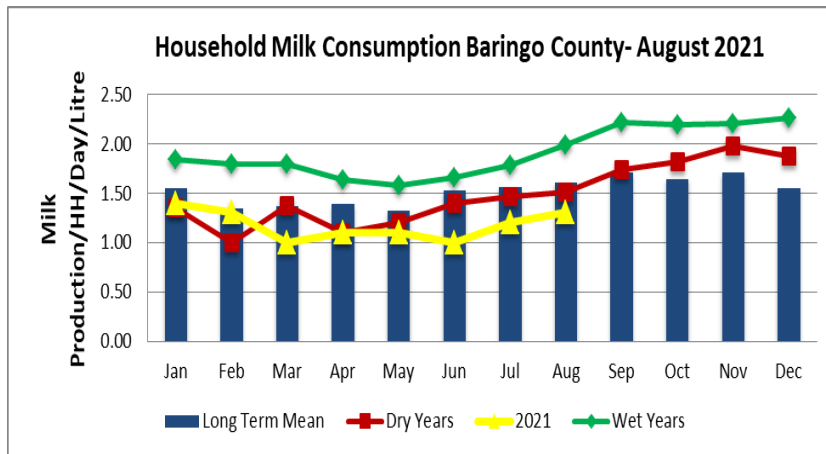


Figure18: Milk consumption

The average milk consumption per household per day was at 1.3 litres, which was below the long term average by 25 percent (Figure 18). The milk consumption was highest in the Agro pastoral livelihood zone at 1.7 litres and lowest in Fishing livelihood zone at one litre.

### Food Consumption Score

Generally, the county had an Acceptable Food Consumption Score of 48.25 which was a minimal rise as compared to 46 for the previous month. A proportion of two, 26 and 72 percent of the households across the livelihood zones have poor, borderline and acceptable food consumption scores respectively. The Pastoral, Fishing, Irrigated and Agro pastoral livelihood zones had 45,49,50 and 66 average food consumption Score respectively (Figure 19). About 39 percent of the households in the Pastoral livelihood zone do not have acceptable food consumption score and this could be due to low purchasing power for accessing adequate nutritious food.

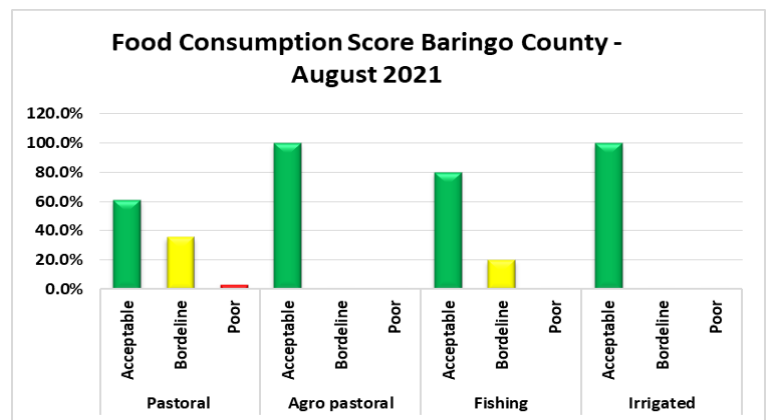


Figure19: Food consumption score

## 5.3. Health and Nutrition Status

### 5.3.1 Nutrition status

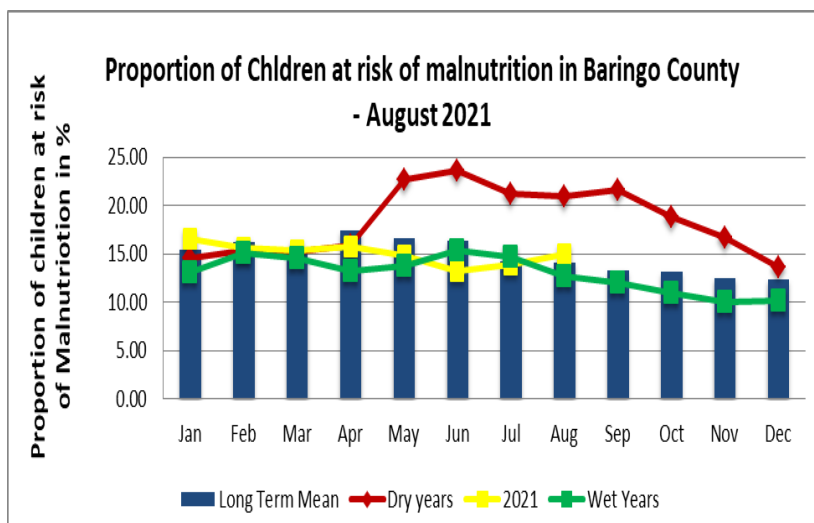


Figure 20: proportion of children at risk of malnutrition

The proportion of children sampled who are at the risk of malnutrition during the month was 15 percent. This was an increase of eight percent as compared to the previous month. The current proportion is above the LTA by six percent and this is being contributed by poor food consumption at household level especially in the Pastoral areas.

By family MUAC, the proportion of children malnourished was 9.9 percent; this was a minimal increase as compared to the previous month at 9.5 percent. (Figure 21).

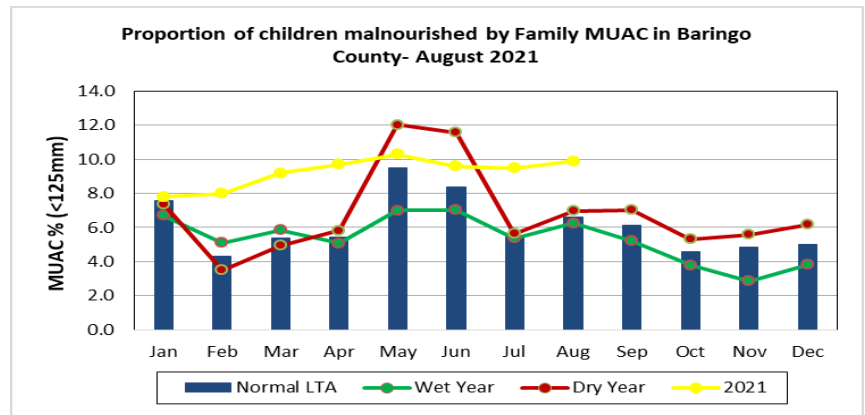


Figure 21: Children at risk of malnourished by family MUAC

### 5.3.2 Health

- During the reporting period, the illnesses that were reported were malaria and diarrhoea across livelihood zones. The diarrhoea cases were due to use of water from open sources and poor hygiene practices at household level. Water quality is poor mostly in Baringo South and Tiaty sub counties.
- Senzitation campaigns and Vaccination against COVID 19 pandemic are still ongoing across the county led by the County health teams.

## 5.4 Coping strategies

### 5.4.1 Coping Strategy Index

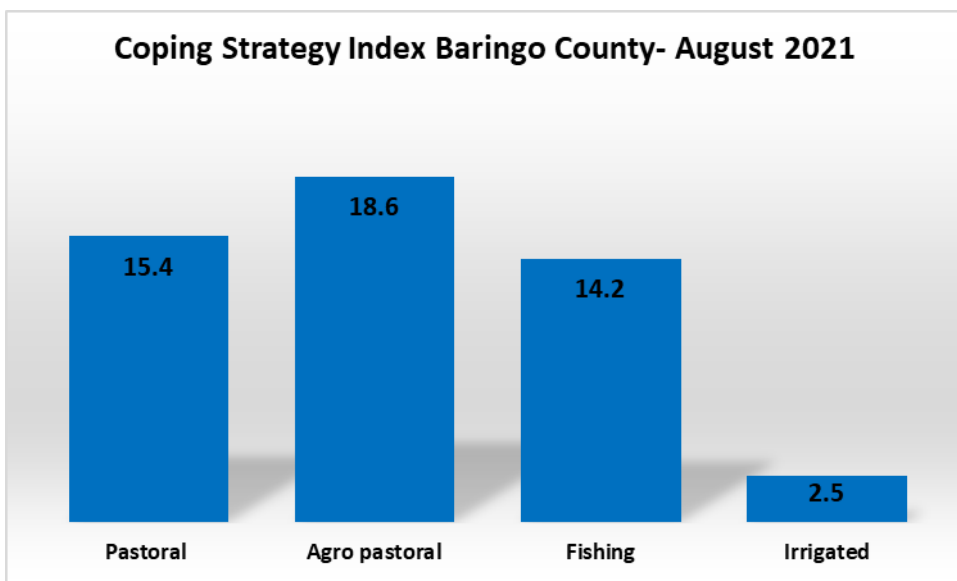


Figure 22: Coping strategy index

The current average coping strategy index was at 13.46 which was a decrease compared to the previous month at 14.19. Households in Agro pastoral livelihood zone employed more coping strategies at 17.8 followed by Pastoral livelihood zone at 14.6 while the Irrigated zone employed the least coping mechanisms at 2.6 (Figure 22). Overall, households in Agropastoral livelihood zone have recorded relatively higher CSI values for the past three months followed by those in Pastoral livelihood zone.

## **6.0 CURRENT INTERVENTION MEASURES.**

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

#### **Self Help Africa**

- They are supporting the revival of eight irrigation projects in the county. They are also supporting pasture harvesting and conservation whereby targeted beneficiaries are being supported with pasture seeds. The targeted beneficiaries are being supported with livestock breed improvement whereby they intend to offer some galla goats and Sahiwal cattle breeds. They are also supporting rangeland rehabilitation and development of four irrigation projects.
- Self Help Africa distributed two tons of green grams, 700 kg of sorghum and 400 kg of millet. About 400 lead farmers were also trained in different value chains

#### **Action Aid**

- There was a training for village agents for financial inclusion in Tngulbay ward. CMDRR trainings were done in Churo/Amaya ward
- **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

#### **Livestock sector**

- Livestock breed upgrading through use of galla goats and Sahiwal bulls is ongoing targeting over 400 groups in the county.
- Vaccination against CCPP disease is ongoing
- Range land reseeding is ongoing in Ilchamus ward, Baringo South sub county.
- There is rehabilitation of several boreholes and drilling of new ones in the county. Those undergoing rehabilitation include Chemorogion, Sibilo and Kagir while those being drilled include karimo, usonachun and Barameres

#### **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
- Capacity building of caregivers on child caring practices

#### **Agriculture Sector**

- Provision of certified affruitation seedlings in Baringo north, south and central, Mogotio, Eldama Ravine and Tiaty sub counties.
- Purchase by household orange sweet potato vines Baringo north, south and central, Mogotio, EldamaRavine and Tiaty sub counties.

#### **Livestock sector**

- Provision of Galla bucks and Sahiwal bulls to groups targeting 800 households across the county
- Provision of pasture seeds (2,500 kgs) and pasture harvesting tools in Baringo south, central, north, Tiaty and Mogotio targeting 200 households.
- Vaccination against CCPP, PPR and diseases surveillance in Baringo north, central and south targeting 2,000 households

#### **Water sector**

- Rehabilitation of broken boreholes in Tiaty, Baringo South and Baringo North sub counties.

## **7.0 EMERGING ISSUES**

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

#### **7.2 Migration**

- Minimal livestock migration towards Lake Baringo in search of water for livestock is being reported .

#### **7.3 Food security prognosis**

- Crop production is expected to be lower than normal due to poor rainfall distribution as at least 50 percent of the crop has failed following the cessation of the long rains season at the time when the crops were still at a tender age that required watering.
- The off season rains received during the month under review are expected to stimulate limited pasture and browse regeneration in some parts of the county
- Milk production and consumption is expected to improve marginally but remain below long term means. This is due to the expected forage improvement due to the impact of the off season rains.
- Following the reopening of livestock markets in Tiaty sub county, food access is expected to improve as the purchasing power of the pastoral households is expected to improve as a result of livestock sales.
- In the pastoral areas, cases of malnutrition will continue to persist due to poor dietary diversity as households will find it difficult to access nutritious food stuffs from the markets due to the existing low purchasing power and poor market functionality.
- The food consumption score will likely improve in the next one month due to improvement in household milk consumption while application of coping strategies are expected to be normal compared to the current month under review.

## **8.0 RECOMMENDATIONS**

### **8.1.0 Proposed Recommendations**

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

- Provision of water treatment drugs at water sources and household level to minimise outbreak of water borne diseases

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

- Prepositioning of supplies for the management of malnutrition cases should be undertaken especially in the pastoral areas that are witnessing rising cases of malnutrition.
- Support of intergrated outreaches where community travel long distance to get health services
- Improve resilience of the vulnerable groups through nutrition education to care givers
- Continuous health, Nutrition surveillance.
- Social behaviour changes and communication for improved dietary practices among children and women of reproductive health-.
- Training of care givers in the sentinel sites on how to use family MUAC tapes for monitoring of nutrition status of children in line with COVID-19 protocols.

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

- Vaccination against, CCPP, LSD and PPR should be enhanced
- Establishment of strategic livestock feed reserves is recommended mostly in the pastoral and agro pastoral areas.
- Sustained security survailance in the county with the aim of minimizing conflict that is resulting from livestock migration among pastoral communities
- Farmers to be educated on the type of animals that can survive during drought season in arid areas and continuous extension services among livestock farmers are needed
- Provision of pasture seeds for rangeland reseeding.
- Upgrading and improvement of local indigenous breeds of cattle, sheep and goats

#### **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.
- Support household with water harvesting skills which can be used for small scale food production