



A Vision 2030 Flagship Project



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

DECEMBER 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: 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 under review.</li> <li>The County vegetation greenness as depicted by the VCI is above normal</li> <li>The Water levels in open water sources are below normal at 20-30% 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</li> <li>Livestock body condition is fair to poor in Pastoral and Agropastoral 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 below the long term trade and on declining trend.</li> <li>Distances to water sources for households are above normal seasonal ranges and on increasing trend.</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 above the the long term mean and on an increasing trend.</li> <li>Copping strategy index (CSI) for households is on an increasing trend and above LTA.</li> <li>The bulk of the households have acceptable food consumption score</li> </ul>	PASTORAL	ALERT	WORSENING		
	AGRO PASTORAL	ALERT	WORSENING		
	IRRIGATED CROP	NORMAL	WORSENING		
	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 (%)	40%	45.3	80-120	
	VCI-3month	52.34		35-50	
	% Of water in the water pan	20%-30%		>60%	
	<b>Production indicators</b>		<b>Value</b>	<b>Normal ranges</b>	
	Livestock Migration Pattern		Unusual	Normal	
	Livestock Body Condition		4-5	3-4	
	Milk Production (Ltr /HH/day)		1.3	1.90	
	Livestock deaths (for drought)		No death	No death	
	<b>Access Indicators</b>		<b>Value</b>	<b>Normal ranges</b>	
	Terms of Trade (ToT)		53.8	>68.84	
Milk Consumption (Ltr)		0.9	≥1.54		
Water for Households-trekking distance (km)		4.4	≥4.3		
<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)		16.06%	<12.51		
Nutrition status of malnourished children 6-59 months by family MUAC		10.5	<5		
CSI		14.36	<13		
FCS		45.15	>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

- The onset of the short rains season was normal in the first dekad of October. Thereafter, the rains disappeared and the county has experienced dry spells for the better part of the last three months.

## 1.2 Amount of rainfall and spatial distribution

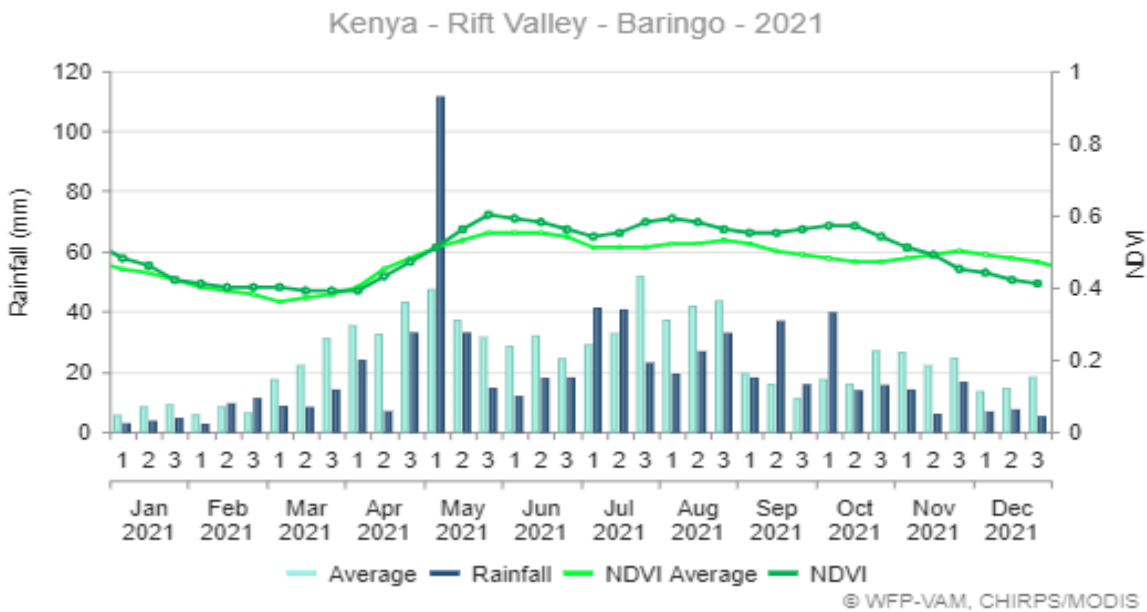


Figure 1. Rainfall performance

- The county received below normal rains during the month under review translating to 40 percent of the normal rains in December (Figure 1).
- In terms of distribution, both temporal and spatial distribution was very poor. In the high land areas, moderate rains were received for less than three days during the first dekad while in the Pastoral and Agro pastoral livelihood zones, light erratic showers were observed for less than three days.
- The vegetation greenness according to normalized differential vegetation index (NDVI) is below normal and on a declining trend.

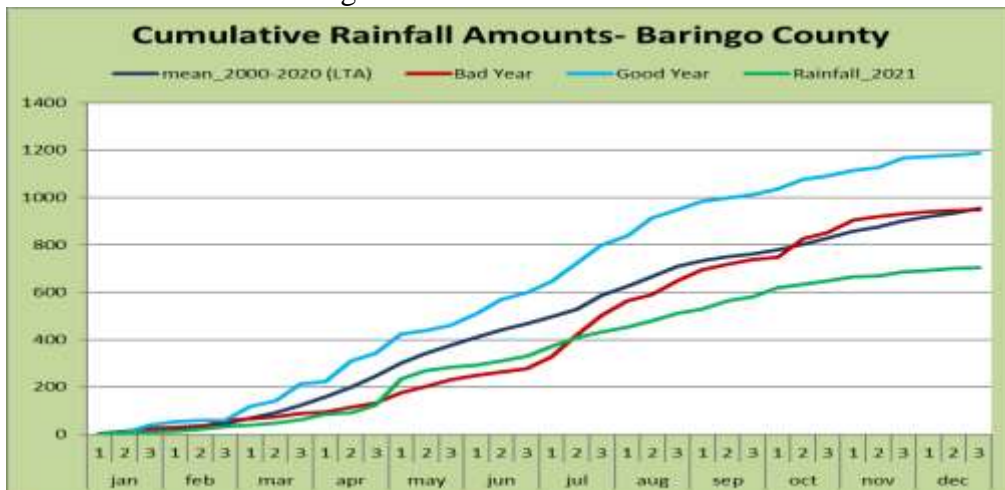


Figure 2: Cumulative rainfall

- The cumulative rainfall received for the month under review is below the long term average (LTA) as shown in Figure 2.

## 2.0 IMPACTS ON VEGETATION AND WATER

### 2.1 Vegetation condition index (VCI)

- The entire county and three of its sub counties recorded above normal vegetation greenness which was a stable trend during the month of December. The rest of the sub-counties deteriorated from above normal to normal vegetation greenness as compared to the previous month of November.
- However, despite the fact that the VCI is above normal, forage conditions on the ground mostly in the Pastoral and Agro pastoral livelihood zones are in poor conditions and rapidly deteriorating due to poor rainfall performance. This has been compounded by the presence of invasive species such as prosopis which have suppressed regeneration of undergrowth

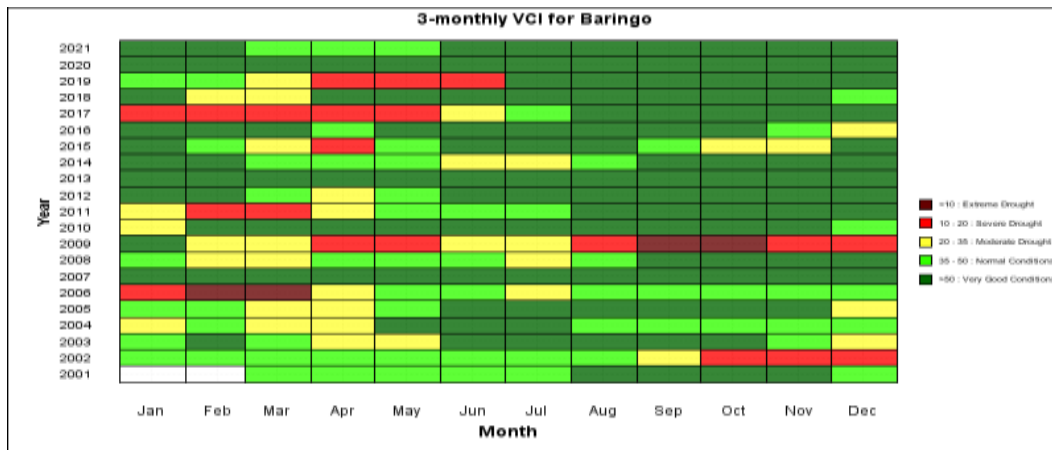


Figure 3. Vegetation Condition Index

The sub-counties of Tiaty and Baringo South deteriorated from above normal to normal vegetation greenness as compared to the previous month of November (Figure 4).

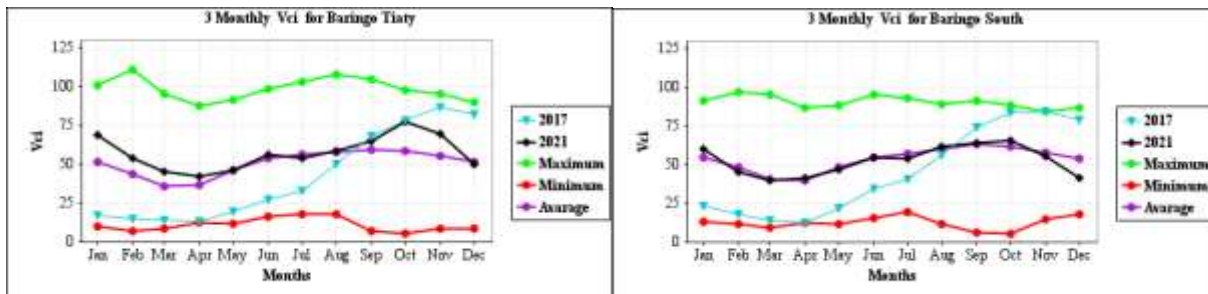


Figure 4: Vegetation condition index trend

## 2.1.1 Field observation

### 2.1.1.1 Pasture

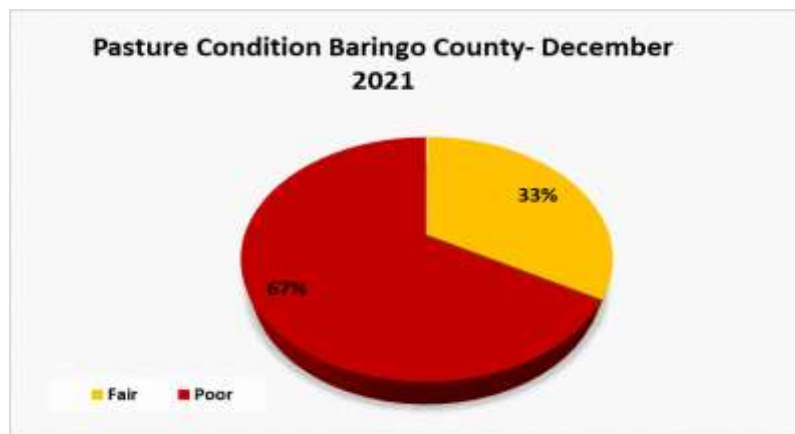


Figure 5: pasture conditions

The pastures in Pastoral and Agropastoral livelihood zones are mostly in poor condition with the rest being in fair condition as shown in Figure 5. This has been caused by poor rainfall performance and presence of invasive species that have suppressed the growth of pastures. In the Irrigated livelihood zone the pastures are in fair to poor conditions and on a deteriorating trend.. The current pastures are expected to last for less than one month in Pastoral and Agro pastoral livelihood zones and one month in the

Irrigated livelihood zone.

### 2.1.1.2 Brows

The browse conditions during the month under review was mostly in fair to poor both in quantity and quality in Pastoral and Agropastoral livelihood zones (Figure 6) while in the Irrigated livelihood zone, browse condition was good to fair. The condition is below normal as compared to seasonal range at this time of the year. The available browse is expected to last for one to two months in Pastoral and Agro pastoral livelihood zones and three months in Irrigated cropping livelihood zone.

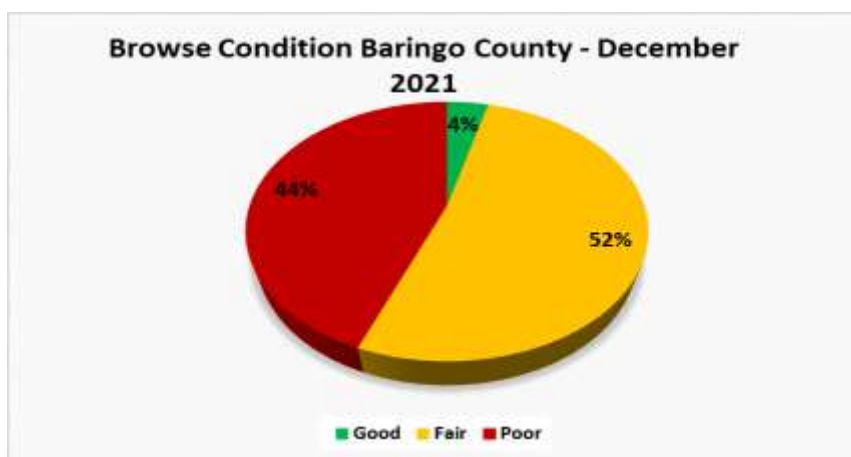


Figure 6: Browse conditions

## 2.2 Water resources

### 2.2.1 Source

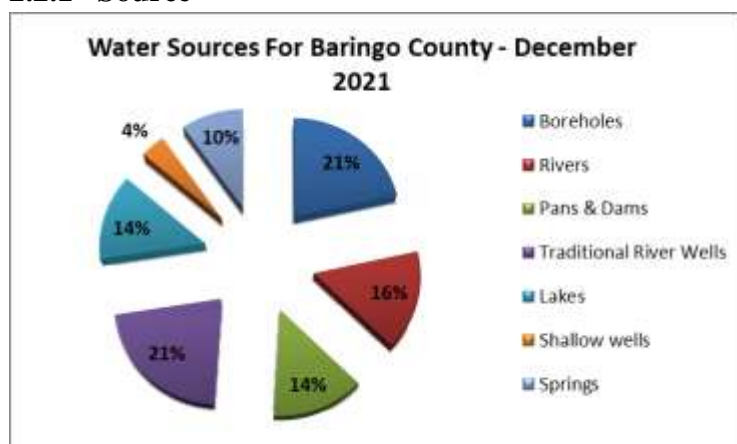


Figure 7: State of water sources

The major water sources for both livestock and human consumption across all livelihood zones were boreholes, traditional river wells and water pans, (Figure 7). Most water pans and dams were at 20 to 30 percent of their full capacity in the Pastoral livelihood zone due to siltation, poor recharge and high day time temperatures. 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 open water sources are expected to last for less than one month in Pastoral and Agro pastoral livelihood zones and one month in Irrigated

livelihood zone.

### 2.2.2 Household access and Utilization

The average household trekking distance to water sources was 4.4km, an increase of five percent as compared to the previous month (Figure 8). The distances are above the LTA by two percent. Irrigated cropping livelihood zone recorded the least trekking distance of two kilometres while Pastoral livelihood zone recorded the highest average of six kilometres. The increase in distances are attributed to drying up of water sources as a result of poor recharge.

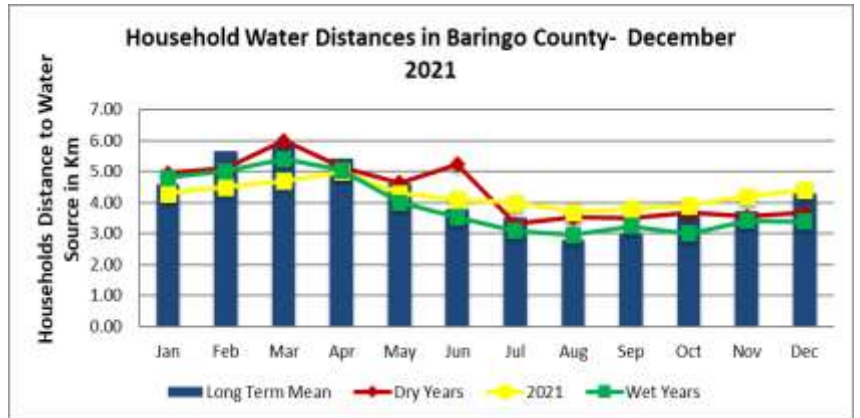


Figure 8: Water access

### 2.2.3 Livestock access

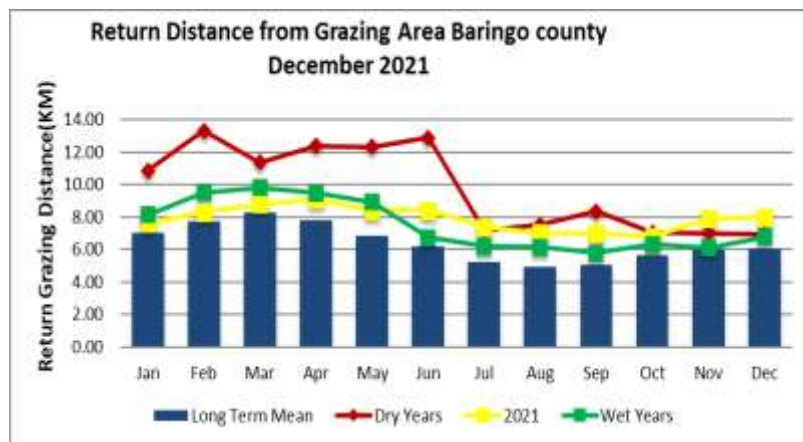


Figure 9: Grazing distances

The average return distance for livestock from grazing fields increased marginally by one percent compared to the previous month whereby the distance was at eight kilometres (Figure 9). The current distances are above the LTA by 32 percent. The Pastoral livelihood zone recorded the longest average distance of 8.8 km while Irrigated livelihood zone recorded the shortest average distance of two kilometres. The increase in return distances are attributed to the diminishing pastures and water sources in the county.

### 3.0 PRODUCTION INDICATORS

#### 3.1 Livestock Production

##### 3.1.1 Livestock Body Condition

The livestock body condition is generally thin with foreribs visible in the Pastoral and Agro pastoral livelihood zones for the cattle species. About 27 percent of the cattle are in poor livestock body condition mostly in the Pastoral and Agropastoral livelihood zones. This has been occasioned by poor regeneration of pasture, browse and increased distances to water sources across the livelihood zones. The body condition is likely to continue deteriorating due to worsening drought conditions.

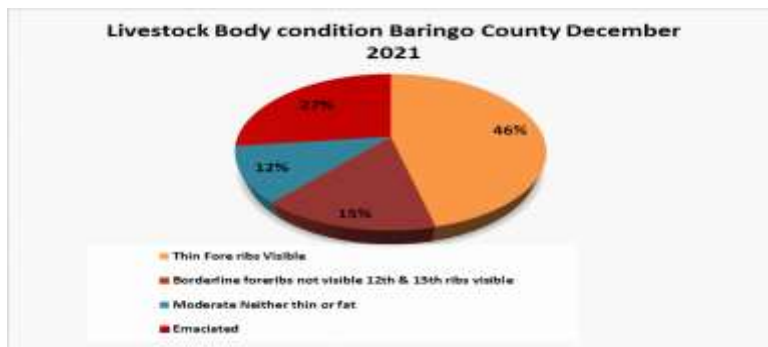


Figure 10: Livestock Body Condition

##### 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) in Kampi wakulima, Ngoswe, Logumgum, Longewan and kapkuikui while lumpy skin disease has been reported in Kabarnet, Kapropita ward, Tartar, Sosion, Kituro and Sesia areas. Death cases of about 3-4 percent of goats in the sampled households were reported in Baringo North and Tiaty sub counties and this is suspected to be due to CCPP disease.

##### 3.1.3 Milk Production

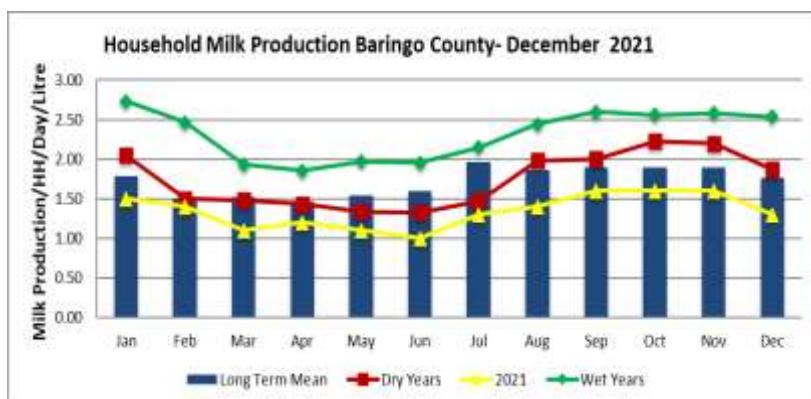


Figure 11: Milk production

The average milk produced per household per day during the month under review was 1.3 litres, translating in to a decrease of 26 percent as compared to the previous month (Figure 11). The decrease has been contributed by deteriorating livestock body conditions. Agro pastoral livelihood zone had the highest average of two litres while Irrigated cropping had the least average of 0.5 litres.

The current milk production is below LTAs by 19 percent.

### 3.2 Rain fed crop production

#### 3.2.1 Stage and Condition of food Crops

- Currently most farmers have finished harvesting the short term crops planted during the short rains that performed poorly. The yields are below the long term average

## 4.0.0 MARKET PERFORMANCE

### 4.1.0 Livestock marketing

#### 4.1.1 Cattle prices.

The current average price for medium-sized cattle was Ksh.17,214 an increase of four percent in relation to the previous month at Ksh. 16,561. (Figure 12). The marginal increase in prices is due to the festive season .The price was relatively above the short-term average by six percent. Irrigated livelihood zone posted the highest prices of Ksh.27,833 while Pastoral livelihood zone recorded the least average price of Ksh.15,334. The low prices in the Pastoral livelihood zone is due to poor livestock body condition.

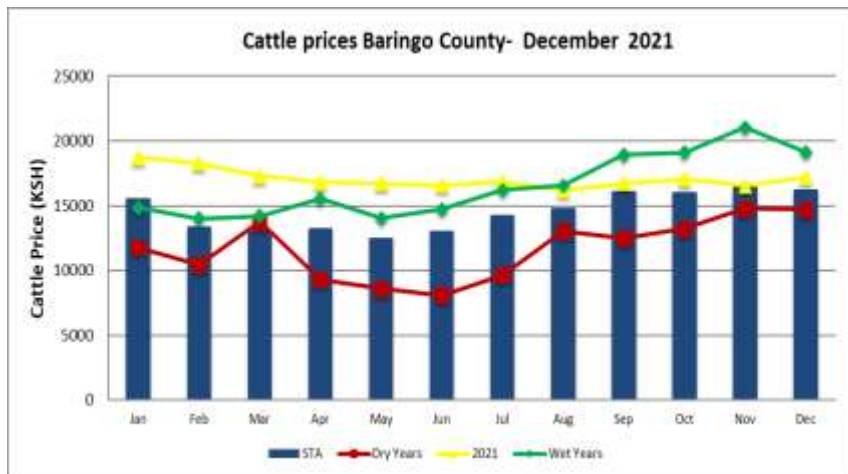


Figure 12: Cattle prices

#### 4.1.2 Goat Prices

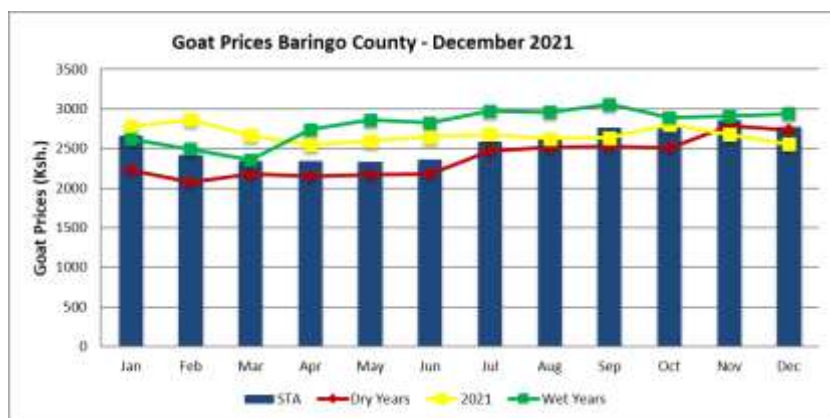


Figure 13: Goat prices

The average price of a medium sized goat decreased by four percent from the previous month of Ksh. 2,676, to Ksh.2,556 currently (Figure 13). The price was below the short term average (STA) by eight percent. The prices were highest in Irrigated livelihood zone at Ksh. 3,833 and lowest in Agro pastoral livelihood zone at Ksh.2,040. The low prices are partly being contributed by livestock diseases.

### 4.2.0. Crop prices

#### 4.2.1 Maize

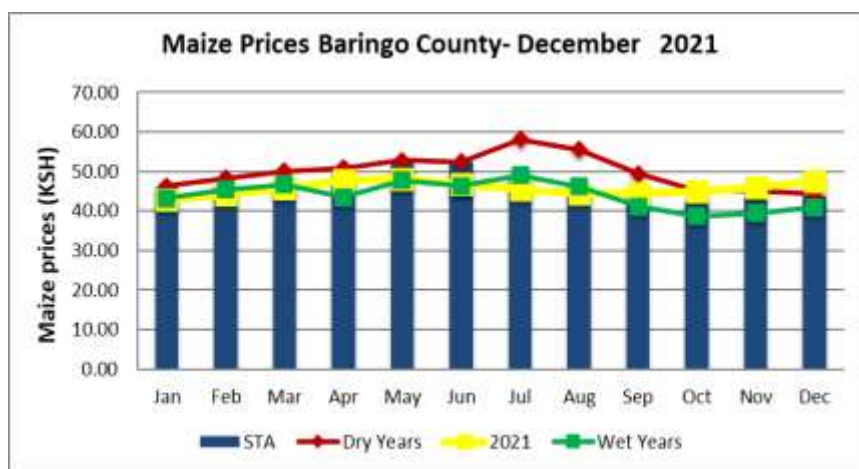


Figure 14: Maize prices

There was an increase of three percent in the current maize prices in relation to the previous month at Ksh 47.5/kg (Figure 14). The current prices are higher than the long-term average at this time of the year by nine percent. The increase in maize prices can be attributed to scarcity of the commodity in the Pastoral livelihood zones. Pastoral livelihood zone recorded the highest average price of Ksh.48 per kg due to insecurities along the kerio Valley that resulted in disruption of kolla market, 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 55/kg compared to the previous month at Ksh 54/kg (Figure 15). The increase in prices was attributed to insecurities along the Kerio Valley that resulted in disruption of kollowa market as well as increase in maize prices. The price was above the short-term average by eight percent. The Pastoral livelihood zone recorded the highest average price of Ksh. 55 while the Irrigated cropping zone had the least average price of Ksh. 50.

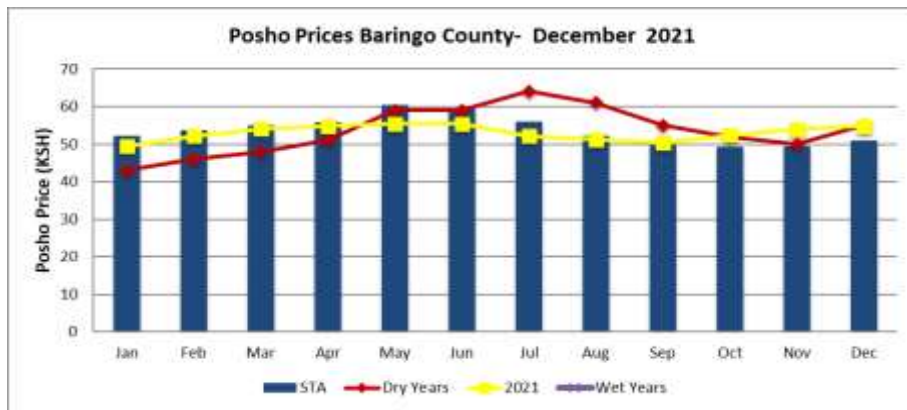


Figure15: Posho prices

#### 4.2.3 Beans Prices

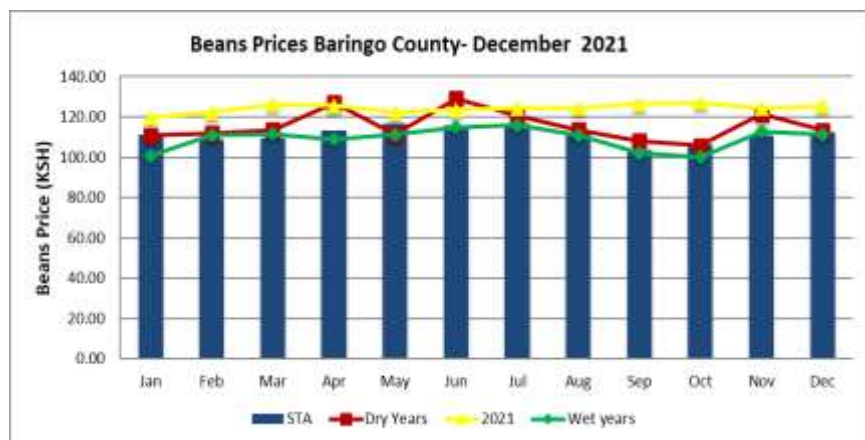


Figure 16: Beans prices

The average price per kilogram of beans retailed at Kshs.125 (Figure 16). The current prices are above the short-term average by 12 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 high prices are attributed to scarcity of the commodity and market disruptions caused by insecurity in parts of the Pastoral livelihood zone.

#### 4.3 Terms of Trade

The terms of trade was at 54, implying that a sale of one goat is likely to fetch 54kg of maize which was a decrease in comparison to the previous month at 58 (Figure 17). This has been attributed to by decreasing goat prices and increasing maize prices. The current terms of trade are below the long-term average by 22 percent. Irrigated cropping livelihood zone had the highest terms of trade of 96 while Agro pastoral livelihood zone had the least at 43.

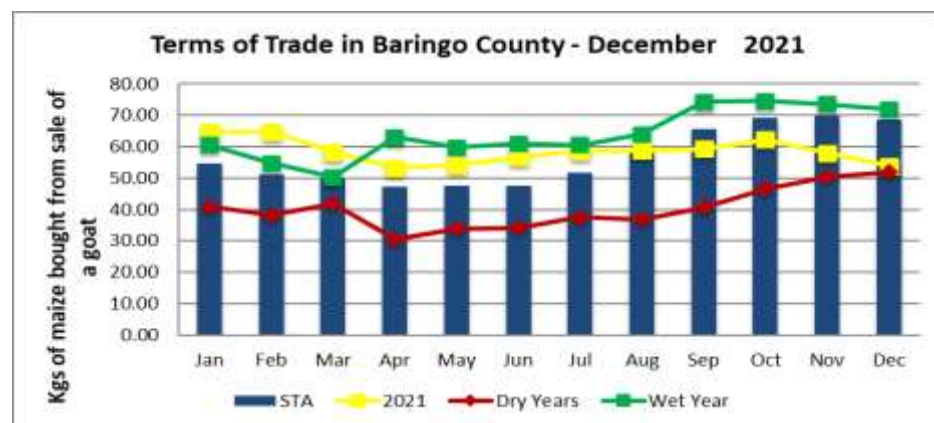
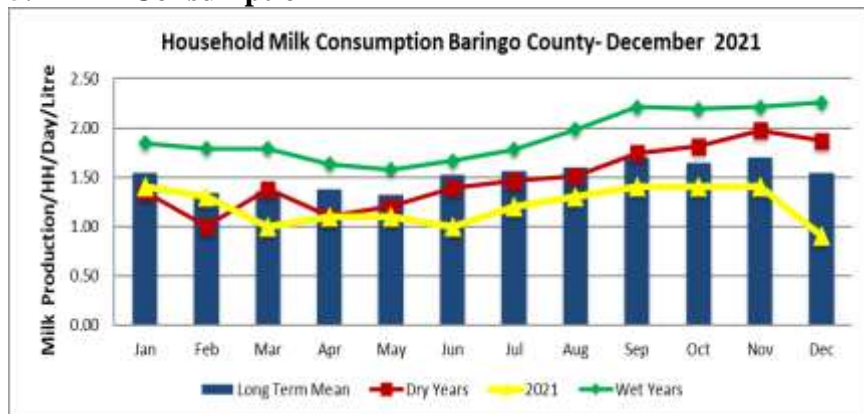


Figure17:Terms of trade



## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 Milk Consumption



The average milk consumption per household per day was at 0.9 litres as compared to the previous month at 1.4 litres representing a decrease of 36 percent. The current milk consumption was below the long term average by 42 percent (Figure 18). Milk consumption was highest in the Agro pastoral livelihood zones at 1.5 litres and lowest in Irrigated livelihood zone at 0.5 litre. The decline in milk production is due to reduced milk production in the county.

Figure 18: Milk consumption

### 5.2 Food Consumption Score

Generally, the county had an acceptable food consumption score of 45.1 which was stable as compared to the previous month at 45.7.

A proportion of 5.6, 27.1 and 67.3 percent of the sampled households across the livelihood zones have poor, borderline and acceptable food consumption scores respectively which was relatively similar to the previous month. The Pastoral, Irrigated, and Agro pastoral livelihood zones had 42.4, 49.7 and 59.6 average food consumption Score respectively (Figure 19). Food consumption is on a worsening trend as more households are shifting to poor and borderline consumption scores especially in the Pastoral livelihood zone. This is attributed to difficulties in accessing food at household level as a result of increasing prices.

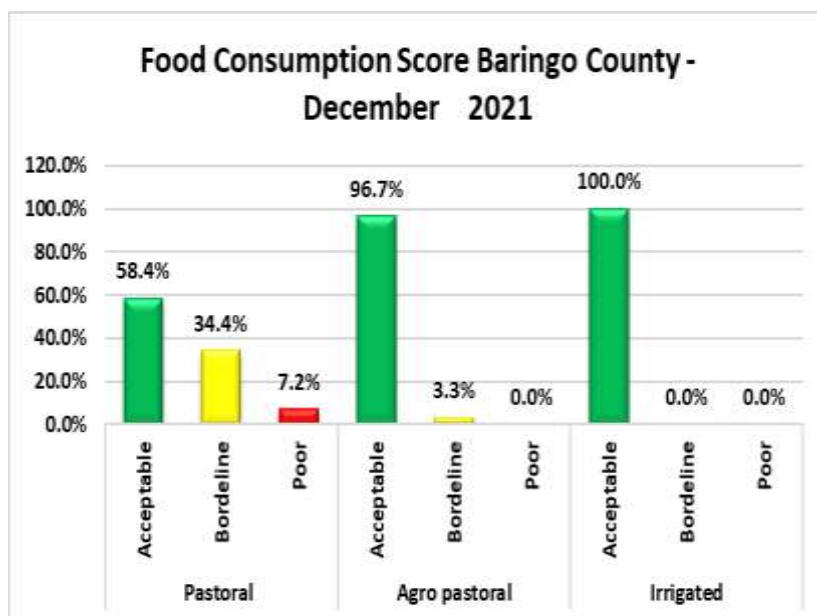


Figure19: Food consumption score

### 5.3. Health and Nutrition Status

#### 5.3.1 Nutrition status

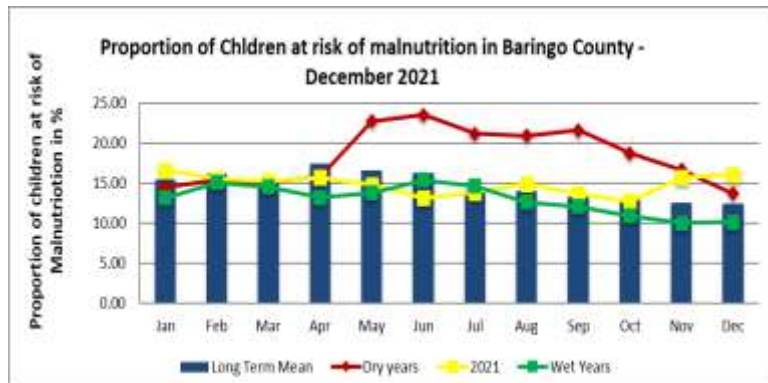
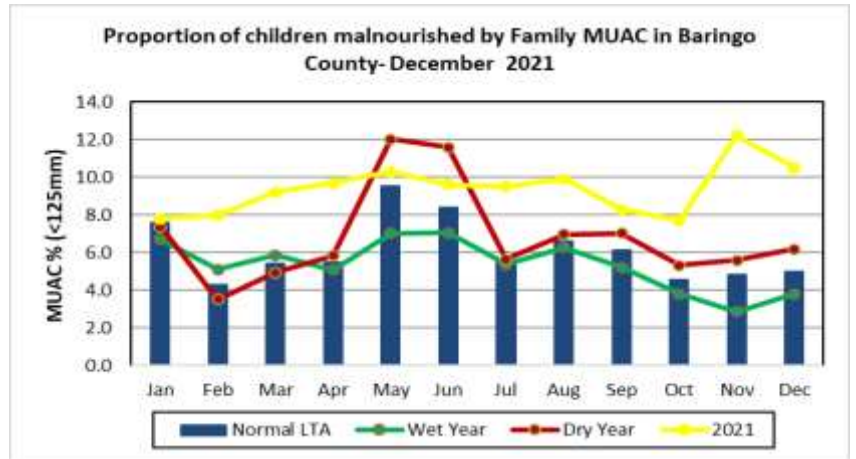


Figure 20: proportion of children at risk of malnutrition

The proportion of children sampled who are at the risk of malnutrition during the month was 16 percent. This was an increase as compared to the previous month. The current proportion is above the LTA by 29 percent. The worsening nutrition status is contributed by minimal milk consumption at household level especially in the Pastoral areas.

By family MUAC, the proportion of children malnourished was 10.5 percent; this was a decrease of 1.7 percent as compared to the previous month at 12.2 percent. (Figure 21) although it is still above the LTA, indicating that nutrition status is not normal at this time of the year. The current proportion is above the long term average by 5.5 percent.



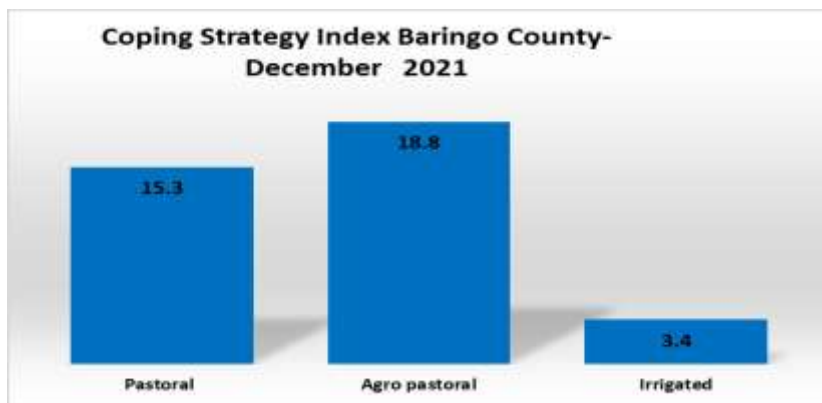
**Figure 21: proportion of malnourished Children by family MUAC**

### 5.3.2 Health

- During the reporting period, the illnesses that were reported were URTI 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.

## 5.4 Coping strategies

### 5.4.1 Coping Strategy Index



**Figure 22: Coping strategy index**

The current average coping strategy index was at 14.36 which was a surge compared to the previous month at 13.79. Households in Agro pastoral livelihood zone employed more coping strategies at 18.8 followed by Pastoral livelihood zone at 15.3 while the Irrigated zone employed the least coping mechanisms at 3.4 (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 Food interventions**

- The office of Interior and Coordination through the office of the County Commissioner distributed 3,000 bags (50kg bag) of rice and 3,000 bags beans (50kg bag) in beneficiaries spread in Mogotio, Baringo South, Baringo North, Baringo Central and Tiaty sub counties.
- The World Food Program (WFP) made a cash transfer targeting 4, 488 households spread in Tiaty, Baringo North, Mogotio, Baringo Central and Baringo South sub counties whereby each recipient received Ksh 5,000 under the WFP Assistance Program.
- The Kenya Red Cross society assisted 3, 036 households with cash transfer whereby each beneficiary received Ksh 5,000 under USAID/BHA Drought Response Program- CVA. The beneficiaries were spread in Baringo North, Baringo Central, Baringo South, Eldama Ravine, Mogotio and Tiaty sub counties.

### **6.2 Non-food interventions**

#### **NDMA**

- Implementation of the Laikipia-Baringo Inter-County Integrated Drought Preparedness and Resilience Project has started though it has been bogged down by insecurity challenges in the project area. The project objective is to contribute to increased household income and the reduction of resource-based conflicts along the volatile Baringo/Laikipia border (Sosian/Churo-Amaya). The Project Duration is five years.

#### **Kenya Red Cross**

- Livestock off take program is currently underway whereby about 4,141 cattle that are in poor body condition will be purchased from the identified farmers across the county and the meat will be distributed to needy vulnerabe households.
- The Sky Bird Regional Micro Project aims at improving sanitation status of households at risk of floods in Baringo South sub county. It will start in November 2021 to October 2022.
- Another program is Strengthening Disaster Risk Reduction and Emergency Response -by USAID/BHA (Bureau for Humanitarian Assistance) which is a Response Program- CVA and its key intervention is to contribute to improved food security and resilience of drought affected communities in Baringo County.
- The other upcoming health projects in the county includes ECHO COVID- 19 vaccination roll out across the county.

#### **Self Help Africa**

- They have carried out promotion of sorghum, cassava and green grams. On livestock breeding, they have distributed galla bucks in October and they are planning to procure doper and Sahiwal bulls. They have done trainings on kitchen gardens to various women groups and also did the Lishe bora initiatives and mother to mother support group. Rehabilitation of water sources in Baringo North and Tiaty was done and have distributed 30 water tanks.

#### **Action Aid**

- They have carried out a capacity building for 100 women groups, purchased pasture seeds, trained the women groups on kitchen gardens (10 groups in Tangulbei ward and 10 in Churo/Amaya ward).

#### **Agriculture Sector**

- Restoration of livelihoods destroyed by hazards- Done by Programs and development partners through provision of assorted relief seeds
- Support to Nutrition sensitive interventions through capacity Building and provision of planting materials for kitchen gardening and household water harvesting by County Government of Baringo, National Government, FAO, WFP, Red Cross, ACTED, WVK and NCKK.

### **Livestock sector**

- Livestock breed upgrading through use of galla goats and Sahiwal bulls is on-going targeting over 400 groups in the county
- With the support of FAO, the department is distributing 4,500 bags of range cubes (50kg bag) targeting 1,125 beneficiary households spread in Tiaty, Baringo South, Baringo North and Mogotio sub counties.
- Vaccination against CCPP disease is ongoing • Range land reseeding is on-going in Ilchamus ward, Baringo South sub county
- Provision of improved chicken and Galla bucks to targeted groups in Baringo North, Baringo South, Mogotio and Tiaty courtesy of SHA/SAII/FSK
- Participatory Integrated Community Development for Baringo North, Baringo South, Mogotio and Tiaty through ERLP(Desert Locust) Project.
- Training of groups on Livestock Upgrading through Self HelpAfrica/Farming Systems Kenya/Sustainable Agriculture Information Initiatives(SHA/FSK/SAII)
- Training of Women and Youth in Groups on Beekeeping and Meat goat value chain development through Agriculture Sector Development Support Programme II(ASDSP II)

### **Water sector**

- The Central Rift Valley Water Services Board boreholes is targeting to repair 30 boreholes in Tiaty sub county and will be in two phases whereby the first phase is on-going. They are planning to distribute water tanks to schools whose details were shared by NDMA. They are also planning to undertake water tracking to selected health and education facilities.

### **Health and Nutrition**

- Vaccination against COVID 19
- Community sensitization on hand washing practices and nutrition messages (wash-CLTS and nutrition at community level is ongoing
- Implementation of agri-nutrition activities to boost the resilience of the vulnerable groups and improve nutrition education knowledge
- School health and nutrition clubs in 10 schools-Tiaty west
- IMAM program in 120 health facilities across the county
- Routine Vitamin A supplementation and deworming in health facilities
- IMAM surge monitoring ongoing in 18 out of 26 health facilities in Tiaty west and East sub counties
- CLTS plus trachoma elimination in Tiaty and parts of Baringo South and Baringo North sub counties
- Coordination activities ongoing both at sub county and county level

## **7.0 EMERGING ISSUES**

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

#### **7.2 Migration**

- There were livestock migration during the month. In Tiaty sub county, the livestock were reported to be moving to West Pokot county and Uganda in search of pasture. The livestock that migrated to Komolion in Tiaty sub county and those from Kiserian areas to Loruk area surrounding Lake Baringo are still there. There has been an influx of camels in Mogotio sub county from Laikipia county searching for pastures and water.
- Tension is rising between the communities living on the border between Marakwet East and Tiaty sub counties following an incident in which four Marakwets were shot dead by bandits and about one hundred herds of cattle stolen on Friday 26<sup>th</sup> November 2021. This incident is likely to affect food supply between the Pokots and the Marakwets communities.
- Insecurity incidents emanating from Laikipia County is being felt in Tiaty areas whereby Amaya market, which is the main source of food supply for the local communities living within Churo ward, was adversely affected. Until now, the basic food commodities that were mainly supplied by the traders from Ol Moran area in Laikipia County are not available.
- The Makutano-Mukutani conflict at the border between Baringo South (Marigat) and Tiaty East Sub-Counties is yet to be resolved. Because of the conflict, trade between the neighbouring communities has been affected adversely.

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

- Water access challenges will be experienced across the county due to the poor performance of the short rains season. In the Pastoral areas, the performance of the rains was very poor and any little waters that were captured by the water pans are likely to be lost through evaporation due to the prevailing high temperatures. Trekking distances to water points are expected to rise further as the available water is getting depleted.
- Forage conditions are expected to deteriorate further especially in the Pastoral and Agro pastoral livelihood zones due to moisture stress. Livestock migration is therefore expected to pick up in Pastoral livelihood zone as the traditional dry season grazing grounds are not available due to insecurity challenges that are being experienced both within and in the neighbouring counties.
- Livestock body condition for cattle is likely to worsen in the Pastoral and Agro pastoral livelihood zones and therefore affecting livestock productivity in terms of milk production.
- The current insecurity challenges in Laikipia and Elgeyo Marakwet counties are expected to continue being felt in parts of Tiaty and Baringo South sub counties and consequently affecting livestock access to pastures and water. This is therefore likely to affect market operations leading to a decline in livestock prices in the Pastoral livelihood zone. The conflict will also affect market operations thus disrupting free flow of goods between the three counties.
- 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.

## **8.0 RECOMMENDATIONS**

### **8.1.0 Proposed Recommendations**

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

- Undertake water trucking in the most affected schools and health facilities for the purpose of maintaining service delivery.
- Provision of water treatment drugs at water sources and household level to minimise outbreak of water borne diseases
- To rehabilitate broken down boreholes and shallow wells within the pastoral and agro-pastoral livelihood zones.
- To Equip the already drilled boreholes
- Purchase new water boozers and to repair and service the old ones
- To purchase more plastic tanks (10,000ltrs) to be installed for some institutions for rain water harvesting and also for storage

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

- Support coordination meetings
- Trained more CHV's and caregivers on family MUAC
- Support mass screening in hotspot sites
- Health facilities to be supplied with essential drugs and water treatment chemicals
- Health facilities closed due to lack of staff to be given staff
- 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-
- Promote community resilience interventions through organize support groups
- Promote school health and nutrition clubs in schools

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

- Vaccination against, CCPP, LSD and PPR should be enhanced
- Provision of relief livestock feed for the productive stocks in the areas hardest hit by drought.
- Establishment of strategic livestock feed reserves is recommended mostly in the pastoral and agro pastoral areas.
- Stockpiling of livestock feed supplements in readiness for any emerging drought condition
- Sustained security surveillance in the county with the aim of minimizing conflict that is resulting from livestock migration among pastoral communities
- Farmers to be educated the farmers the type of animals that can survive during drought season in arid areas - 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