



A Vision 2030 Flagship Project



## National Drought Management Authority Baringo County Drought Early Warning Bulletin for November 2020

NOVEMBER EW PHASE	Early Warning Phase Classification			
Drought Status: <b>NORMAL</b>  Shughuli za kawaida	<b>LIVELIHOOD ZONE</b>	<b>EW PHASE</b>	<b>TRENDS</b>	
<b>SDrought Situation &amp; EW Phase Classification</b> <b>Drought Phase: Normal- Stable</b> <b>Biophysical Indicators</b> <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.</li> <li>The water levels in most water sources are normal at 90%-100% capacity.</li> </ul> <b>Socio Economic Indicators (Impact Indicators)</b> <b>Production indicators:</b> <ul style="list-style-type: none"> <li>The forage condition is good in both quality and quantity and is expected to remain stable during the short rains season.</li> <li>Livestock body condition is good in all livelihood zones.</li> <li>Milk production is within the normal seasonal range apart from the irrigated livelihood zone.</li> <li>No drought related livestock deaths were reported during the reporting period..</li> </ul> <b>Access indicators</b> <ul style="list-style-type: none"> <li>Terms of trade are stable and within the seasonal range.</li> <li>Distances to water sources for households are below normal seasonal ranges but stable.</li> </ul> <b>Utilization indicators:</b> <ul style="list-style-type: none"> <li>The number of under-five children at risk of malnutrition is minimal and stable.</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	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 (%)	81%	54.6	80-120
	VCI-3month	90.44		35-50
	% Of water in the water pan	90%-100%		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)	1.8	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)	77.6	>63	
Milk Consumption (Ltr)	1.6	≥1.7		
Water for Households-trekking distance (km)	3.4	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 %)	12.39%	<15		
CSI	12.02	>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 under review, the performance of the rains was poor to fair. In the highland areas, rainfall performance was fair while in the low land areas which are mostly pastoral and agropastoral livelihood zones, rainfall performance was poor.

## 1.2 Amount of rainfall and spatial distribution

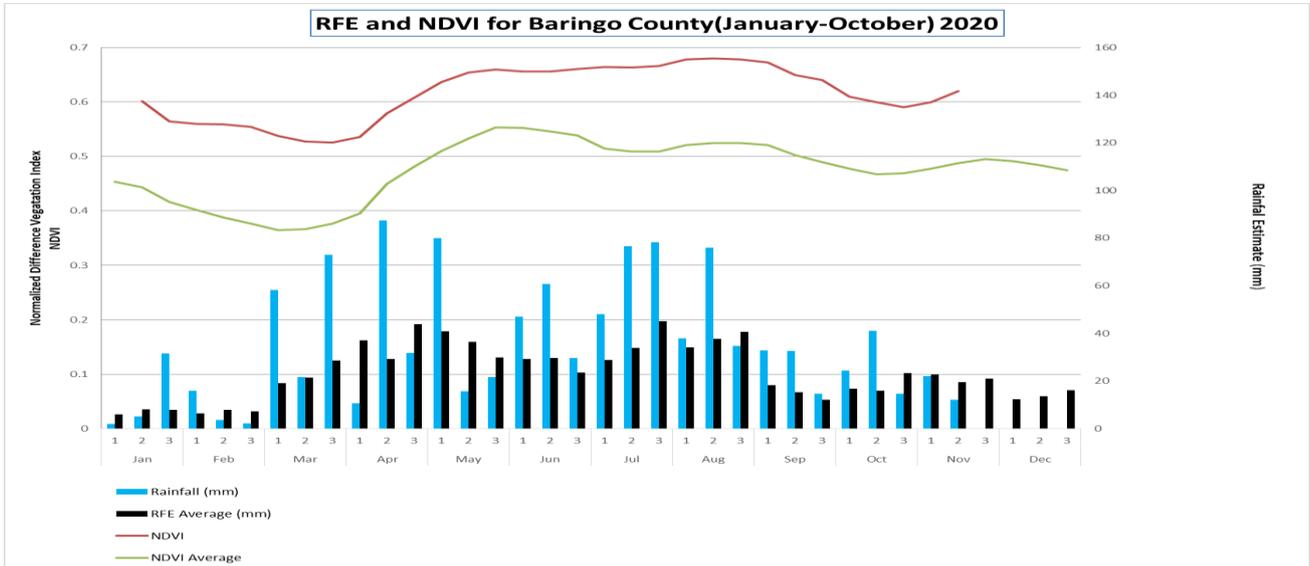


Figure 1. Rainfall performance

- The county received below normal rains during the first two decades of the month translating into 80 percent of the normal rains (Figure 1). Both spatial and temporal distribution was good across the livelihood zones. The vegetation greenness according to normalized differential vegetation index (NDVI) is above long term means for the month under review.

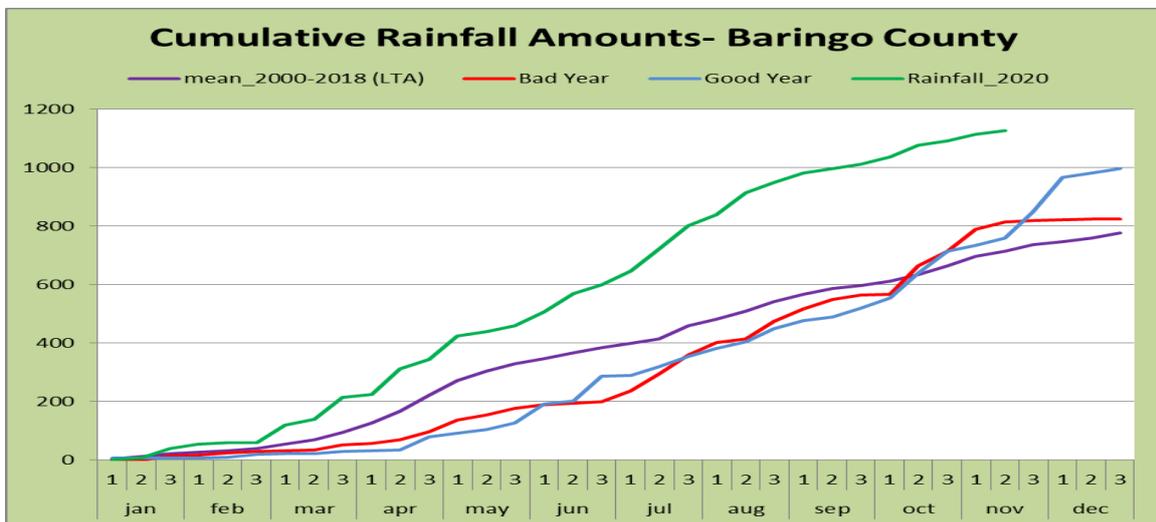
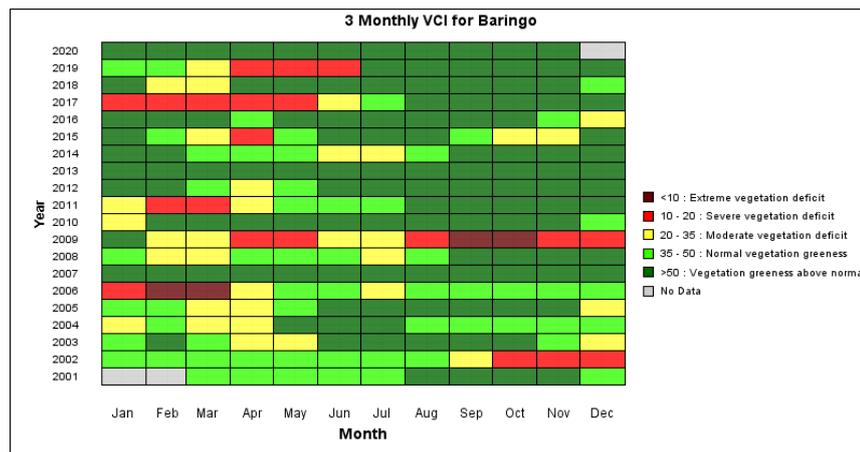


Figure 2: Cummulative rainfall

- The cumulative rainfall received for the month under review is above the long term means as shown in Figure 2. This implies that the cumulative total amount of rainfall received by November 2020 is much higher than the long term mean.

## 2.0 IMPACTS ON VEGETATION AND WATER

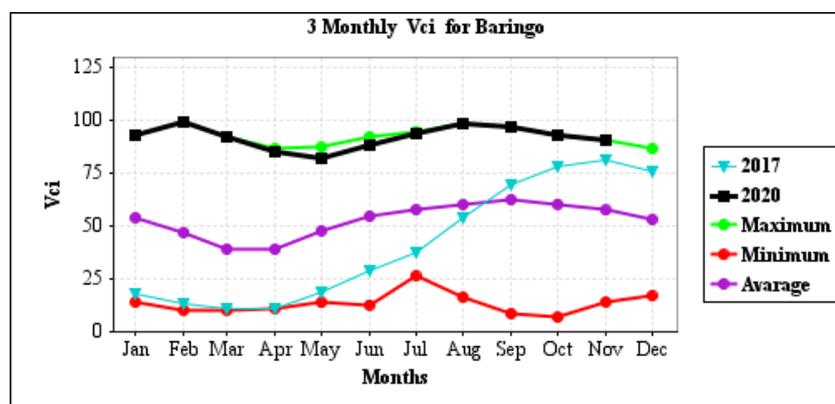
### 2.1 Vegetation condition index (VCI)



The vegetation greenness as depicted by the vegetation condition index (VCI) is above normal in all the sub counties (Figure 3). This has been contributed by the above normal rains the county has been receiving for the whole of this year.

**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, signifying that vegetation conditions are very good (Figure 4).



**Figure 4:Vegetation condition index trend**

#### 2.1.1 Field observation

##### 2.1.1.1 Pasture

- The pasture condition is good to fair both in quantity and quality across all livelihood zones. These conditions are normal at this time of the year.
- The current pasture is expected to last for three months in the pastoral and agro pastoral livelihood zones and four months in irrigated livelihood zone given the prevailing conditions.

##### 2.1.1.2 Browse

- The browse condition is good both in quantity and quality across all livelihood zones .The condition is normal as compared to seasonal range for this time of the year.
- The available browse is expected to last for three months in pastoral and agro pastoral livelihood zones and four months in irrigated cropping livelihood zone.

## 2.2 WATER RESOURCE

### 2.2.1 Source

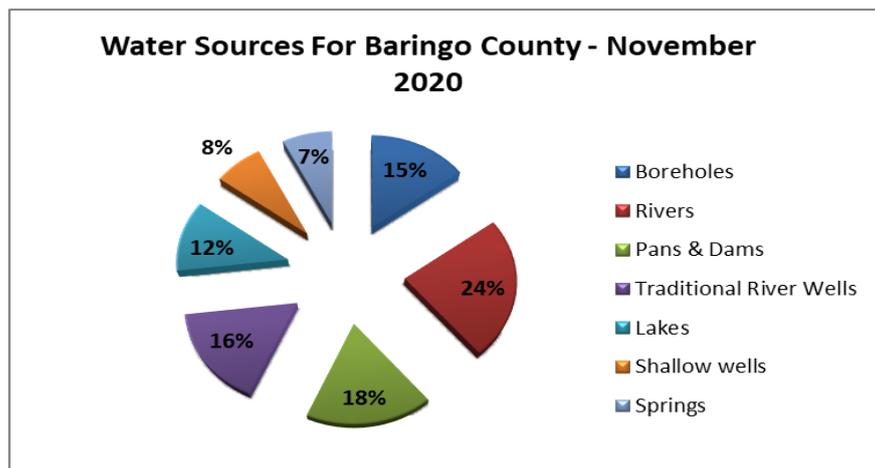


Figure 5: State of water sources

The main water sources for both livestock and human consumption across all livelihood zones were rivers, water pans and traditional river wells (Figure 5). Most water pans and dams were at 70 percent to 80 percent of their full capacity. Water quality and quantity across pastoral and agro-pastoral livelihood zones is good, which is normal at this time of the year. The current water sources are expected to last for over five months in all livelihood zones due to the ongoing rains.

### 2.2.2 Household access and Utilization

The average household trekking distance to water sources was 3.4 km an increased of 13% as compared to the previous month at three km (Figure 6). The distances are similar to the long term average (LTA). Irrigated cropping zone recorded the least trekking distance of less than one kilometre while agro pastoral livelihood zone recorded the highest average of 4.3 km. The stability in distances is attributed to the recharge of open water sources across all livelihood zones due to the impact of the previous rains.

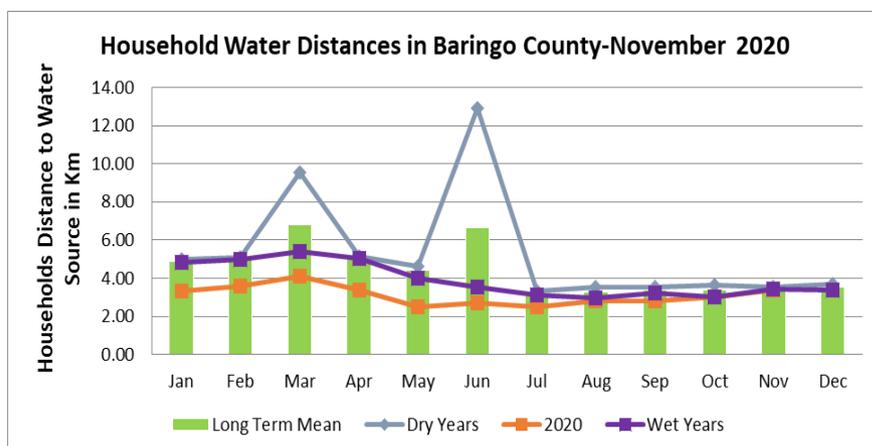


Figure 6: Water access

### 2.2.3 Livestock access

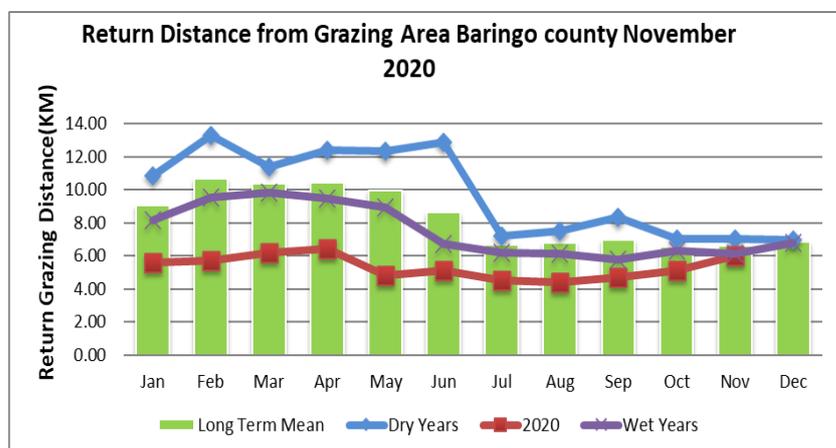


Figure 7 Grazing distances

The average return distance for livestock from grazing fields increased by 18 percent at 6 km in comparison to the previous month at 5.1 km (Figure 7). The pastoral livelihood zone recorded the longest average distance of 5.8 km while irrigated livelihood zone recorded the shortest average distance of 1.6 kilometres. The return distances are still below the long term average and this is attributed to availability of pastures and water at the traditional grazing sites across all livelihood zones.

### 3.0 PRODUCTION INDICATORS

#### 3.1 Livestock Production

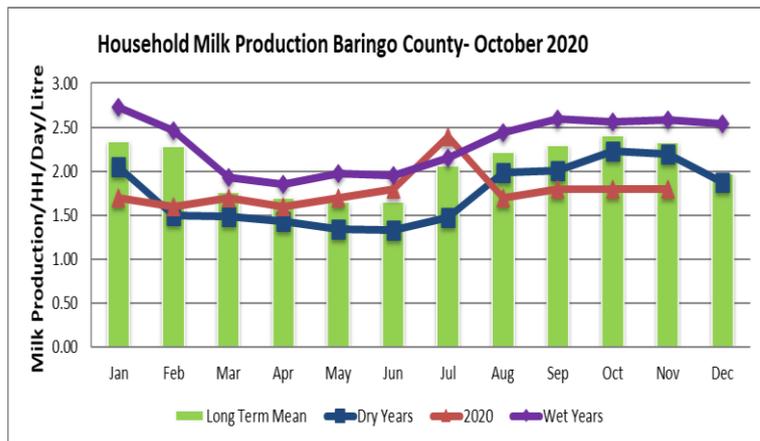
##### 3.1.1 Livestock Body Condition

- The livestock body condition is good across all livelihood zones for all the livestock species. This has been occasioned by availability of enough pasture, browse and water across the livelihood zones. The current livestock body condition is expected to remain stable for at least three months from now.

##### 3.1.2 Livestock Diseases

- Minimal CCP and CBP diseases were reported in all livelihoods, which is normal.

##### 3.1.3 Milk Production



The average milk produced per household per day was at 1.8 litres, which was similar to the previous month (Figure 8). The milk was mainly from cattle and goats. Agro Pastoral livelihood zone had the highest average of milk produced of 4 litres while pastoral had the least at 2.1 litres. The current milk production is below LTAs by 22 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.

Figure 8: Milk production

#### 3.2 Rain fed crop production

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

- Currently farmers have harvested their maize in the irrigated and agro pastoral livelihood zones. Some farmers have prepared their farms for planting even though the season has not been favourable for rain fed agriculture.

## 4.0.0 MARKET PERFORMANCE

### 4.1.0 Livestock marketing

#### 4.1.1 Cattle prices.

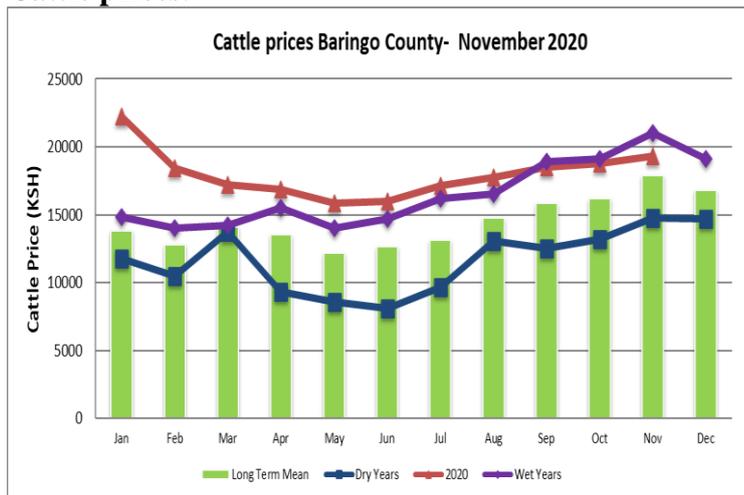


Figure 9: Cattle prices

There was a minimal increase in average price for medium-sized cattle as compared to the previous month at Ksh.19,333 (Figure 9). The price was above the long-term average by 18 percent. Irrigated livelihood zone posted the highest prices of Ksh.26,167 while pastoral livelihood zone recorded the least average price of Ksh.16,683. The improved prices was partly due to partial reopening of markets, coupled by the prevailing good livestock body condition.

#### 4.1.2 Goat Prices.

The average price of a medium sized goat was stable at Ksh.3,075, as compared to the previous month at Ksh. 3,026 (Figure 10). The price was above the LTA by eight percent. The prices were highest in fishing livelihood zone at Ksh. 4,000 and lowest in agro pastoral livelihood zone at Ksh.2,583. The price stability is as a result of the prevailing good livestock body condition.

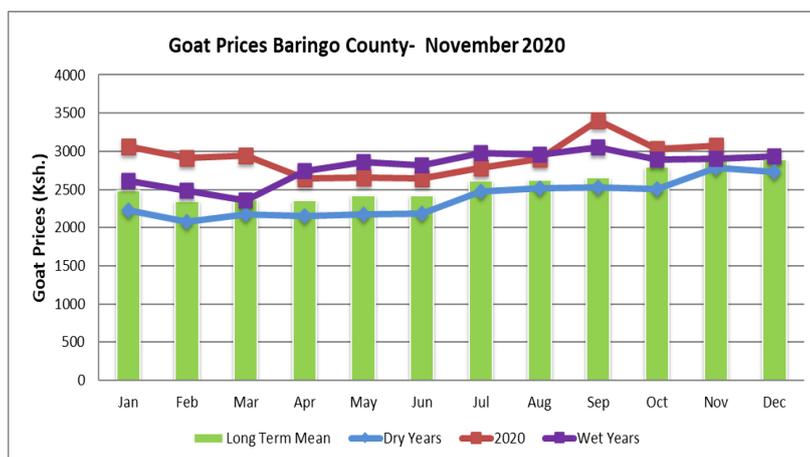


Figure 10: Goat prices

### 4.2.0. Crop prices

#### 4.2.1 Maize

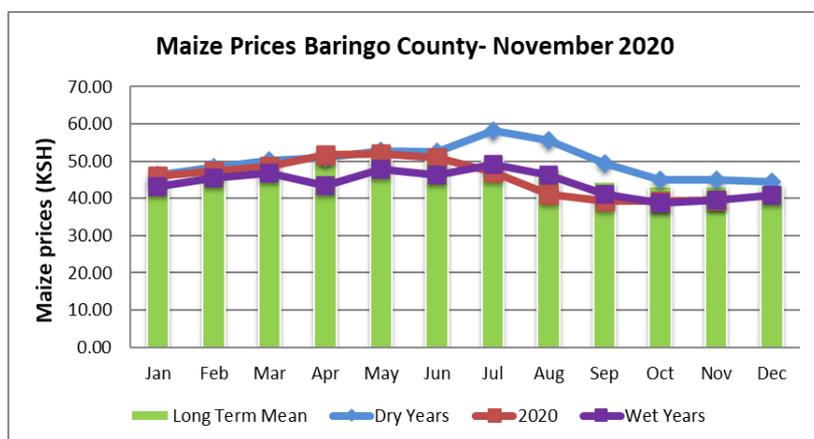


Figure 11: Maize prices

The current average price for a kilogram of maize was stable at Ksh. 39, as compared to the previous month (Figure 11). The current prices are below the long-term average at this time of the year by eight percent. The stability in prices can be attributed to the ongoing maize harvesting both within and outside the county.

Pastoral livelihood zone recorded the highest price of Ksh.41 per kg while irrigated livelihood zone recorded the lowest at Ksh.32 per kg.

### 4.2.2 Posho (Maize meal)

The price per kilogram of posho was at Ksh.47, similar as compared to the previous month. (Figure 12). The price was below the long-term average by eight percent. The decrease in prices was attributed to increased maize stocks both at household level and trader’s stores.

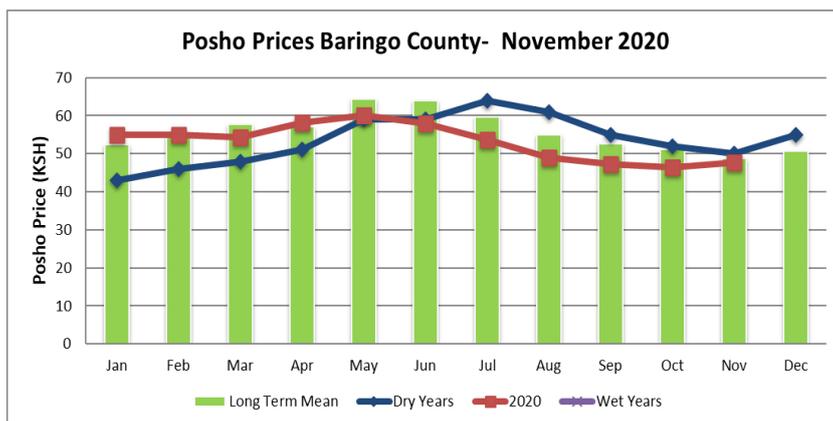


Figure 12: Posho prices

### 4.2.3 Beans Prices

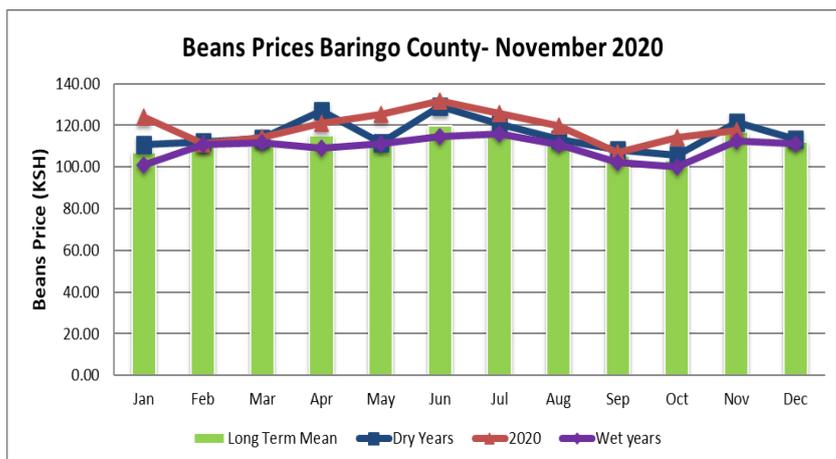


Figure 13: Beans prices

The average price per kilogram of beans increased slightly by three percent from Kshs.114 to Ksh. 118 currently (Figure 13). The price increase was attributed to purchasing of the planting materials in the county. The current prices are relatively similar to the long-term average.

Agro Pastoral livelihood zone recorded the highest average prices of Ksh.123 while the irrigated livelihood zone recorded the least prices of Ksh.80.

### 4.3 Terms of Trade

The terms of trade increased slightly in comparison to the previous month. A sale of one goat is able to fetch 77.6 kgs of maize currently compared to 74.6 kgs the previous month (Figure 14). This has been attributed to by declining maize prices in comparison to 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 93.6 while agro pastoral livelihood zone had the least at 73.

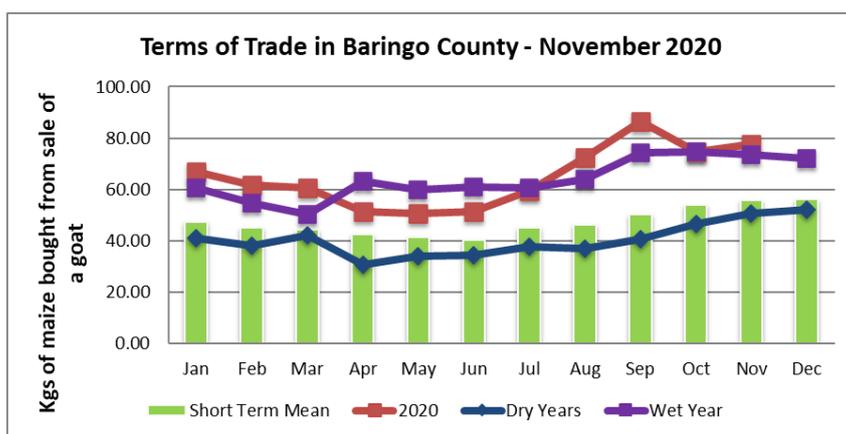


Figure 14: Terms of trade

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 Milk Consumption

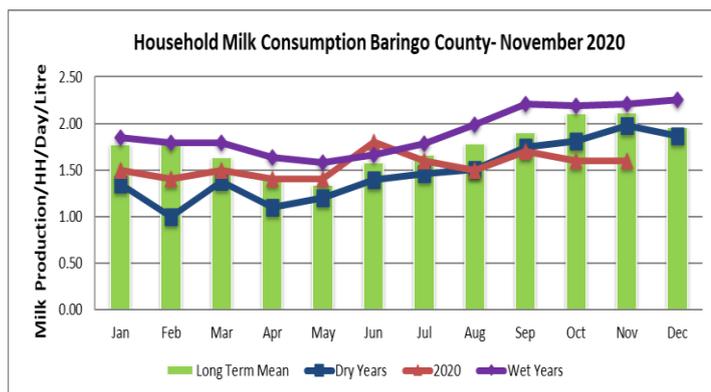


Figure 15: Milk consumption

The average milk consumption per household per day was at 1.6 litres, which was stable as compared to the previous month (Figure 15). The 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 partly due to reduced milk production in the irrigated livelihood zone.

### 5.2 Food Consumption Score

Generally, the county has an Acceptable Food Consumption Score at 42.38. The proportion of 1.9, 23.4 and 74.6 percent of the households across the livelihood zones have poor, borderline and acceptable food consumption scores respectively. In the pastoral livelihood zone, about 34.6 percent of the households do not have acceptable food consumption (Figure 16). This implies that they are skipping some nutritious food stuffs mostly animal proteins like meat, fish and milk.

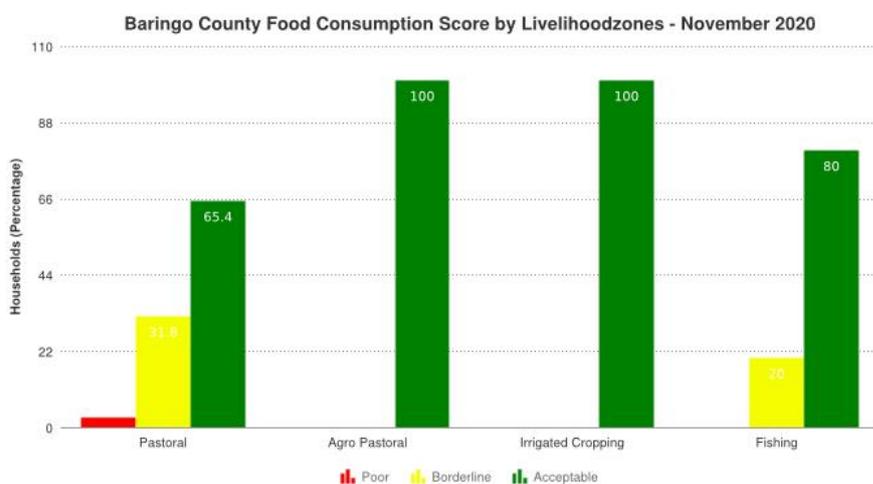


Figure 16: Food consumption score

#### 5.3.1 Health and Nutrition Status

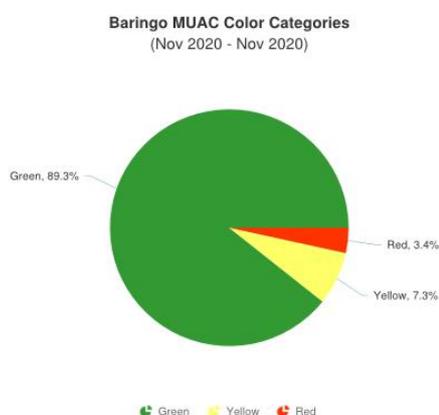


Figure 17: Nutrition status

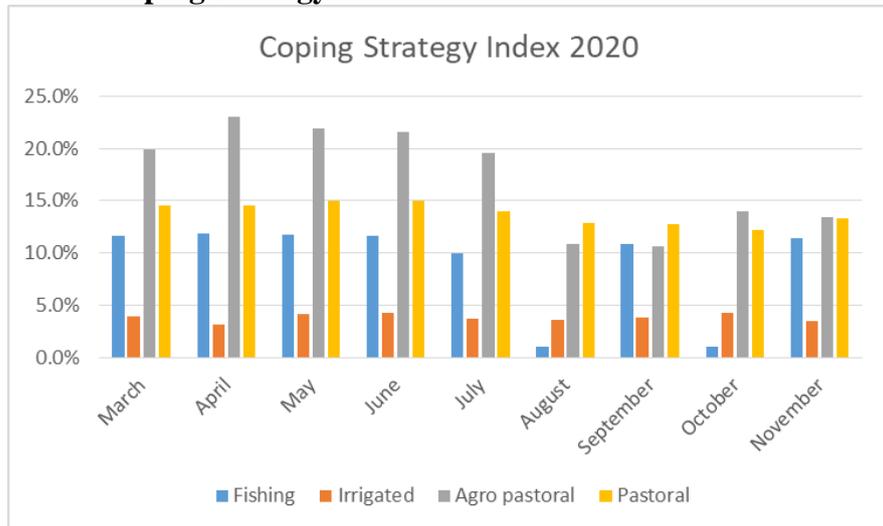
The nutrition status of the sampled children under five years of age is stable. About 89.3 percent of the sampled children were not malnourished while 7.3 and 3.4 percent were moderately and severely malnourished respectively (Figure 17). The situation was attributed to availability of milk and food 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.
- Senzitation 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 average coping strategy index was at 12.02 by November, the situation is stable as compared to the previous month (Figure 18). Households in agro pastoral livelihood zone employed more coping strategies at 13.4 followed by pastoral livelihood zone at 13.3. The irrigated zone employed the least coping mechanisms at 3.5. Overall, households in agropastoral livelihood zone have recorded relatively higher CSI values for the past five months followed by those in pastoral livelihood zone.

Figure 18: Coping strategy index

## **6.0 CURRENT INTERVENTION MEASURES.**

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

#### **Kenya Red Cross (KRCS)**

- Conducted community managed disaster risk reduction (CMDRR) training for 16 county Government and GoK staff in Baringo county in conjunction with NDMA & DRM on CMDRR approach
- Conducted training to 16 county government and National Government on Kenya Inter- Agency Rapid Assessment (KIRA)
- Conducted Community Engagement (CEA) to communities we are working with, eg pasture committee & CMDRR committee
- Conducted Knowledge Attitude Practice (KAP) assessment survey on livestock extension services in Baringo county
- Conducted CLTS follow ups in 8 villages in Baringo South, North, Tiaty West and Mogotio
- Rehabilitation of Kagir borehole in Saimosoi Ward

#### **County government**

- There was a sensitization workshop for county technical staff on desert locust monitoring, control and reporting.
- On matters of Covid-19 management, Contact tracing with testing and follow up of contacts is ongoing while purchasing of additional PPEs for healthcare providers is being done. Follow up of patients on home based care, risk communication and public health awareness creation, enforcement of Covid-19 regulations and requirements are being done concurrently.

## **7.0 EMERGING ISSUES**

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

- About 21 schools in Baringo South sub county ave been affected by the rising water levels of Lake Baringo. Both teachers and students have been displaced thus necessitating looking for alternative arrangements to accommodate them.
- Insecurity issues were reported in kapedo along the Baringo Turkana Border.

### **7.3 Food security prognosis**

- Household food stocks are expected to remain stable and above long term means for the next one month due to the concluded harvesting of crops in the county. Trader's stocks will also remain stable and above long term means due to stable supplies of cereals both within and without the county.
- Forage conditions are expected to remain above normal conditions for the next one month due to the cumulative impacts of the rains and therefore stabilising livestock body conditions. This is therefore expected to sustain near normal milk production with the exemption of the irrigated livelihood zone whose milk production will continue to be below long term means due to impact of floods that has resulted in the migration of animals to safer grounds.
- The water availability and access is expected to start deteriorating due to poor performance of the short rains season. Access distances are likely to increase especially in pastoral areas.
- Livestock prices are expected to be above long term means while cereal prices are expected to be below seasonal range, resulting in better terms of trade mostly for pastoral and agro pastoral households.
- With the exemption of irrigated livelihood zone, milk consumption is expected to remain near normal, thus stabilising nutrition status of household members particularly the children.
- Nutritio status is expected to remain stable due to availability of food and milk at the household level.

## **8.0 RECOMMENDATIONS**

### **8.1.0 Proposed Recommendations**

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

- Capacity Strengthening on WASH / Water Management and Catchment protection across the county should be enhanced.
- Supply of Water treatment equipment like water purifiers, Pur, Aqua tabs is needed especially for the displaced populations around the lakes due to the impact of floods.

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

- Continuous engagement with caregivers on how best to make use of family muac tapes is needed so as to improve the quality of nutrition data.
- Residents should continue to strictly adhere to Covid-19 protocols in order for the health personnel to be able to control a second wave of infection.

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

- Hay harvesting, bailing and storage should be promoted given that there is a possibility of the county having drought next year following the prediction of a depressed short rains season by the meteorological department. Farmers should take advantage of the existing surplus forage in preparing for the lean period ahead.
- Improvement of marketing infrastructure together with provision of sanitation facilities in the markets. This will enhance smooth market operations with minimal risk of spread of covid 19 pandemic.

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

- Equipping of farmers with proper knowledge and skills on how to minimize post harvest losses at this time when they have concluded harvesting of their crops from farms. Farmers are advised to invest in proper storage facilities to minimize grain losses.