



A Vision 2030 Flagship Project



National Drought Management Authority Baringo County Drought Early Warning Bulletin for May 2021

MAY EW PHASE	Early Warning Phase Classification			
	LIVELIHOOD ZONE	EW PHASE	TRENDS	
<p>Drought Situation & EW Phase Classification Drought Phase: Normal- Stable</p> <p>Biophysical Indicators</p> <ul style="list-style-type: none"> The county received above normal rains during the first two dekads of May but characterised by poor distribution. The Vegetation greenness as depicted by the VCI is normal across all sub counties The Water levels in most water sources are below normal at 40-50% capacity. <p>Socio Economic Indicators (Impact Indicators)</p> <p>Production indicators:</p> <ul style="list-style-type: none"> The forage condition is fair to good in both quality and quantity Livestock body condition is fair to good in all livelihood zones. Milk production is below the normal seasonal range across all livelihood zones. Some livestock death cases which are drought related have been reported in the pastoral areas. <p>Access indicators</p> <ul style="list-style-type: none"> Terms of trade are stable and above long term means Distances to water sources for households are below normal seasonal ranges and a declining trend due to rains received in May. <p>Utilization indicators:</p> <ul style="list-style-type: none"> The number of under-five children at risk of malnutrition is stable and below the long term mean Coping strategy index (CSI) for households is stable and within normal seasonal range. The bulk of the households have acceptable food consumption score 	PASTORAL	NORMAL	STABLE	
	AGRO PASTORAL	NORMAL	STABLE	
	IRRIGATED CROP	NORMAL	STABLE	
	COUNTY	NORMAL	STABLE	
	Biophysical Indicators	Value for the month Baringo	LTA-Monthly Baringo	Normal ranges Kenya %
	Average rainfall MM (%)	186 %	107.1	80-120
	VCI-3month	58.81		35-50
	% Of water in the water pan	40%-50%		50-60
	Production indicators	Value	Normal ranges	
	Livestock Migration Pattern	Unusual	Normal	
	Livestock Body Condition	4-5	3-4	
	Milk Production (Ltr/HH/Month)	1.1	1.46	
	Livestock deaths (for drought)	Numerous	No death	
	Access Indicators	Value	Normal ranges	
	Terms of Trade (ToT)	54.1	>47.54	
Milk Consumption (Ltr)	1.1	≥1.38		
Water for Households-trekking distance (km)	4.4	0-5.42		
Crops area planted for the season(Maize)	42%	>80%		
Utilization indicators	Value	Normal ranges		
Nutrition status of children 6-59 months at risk of malnutrition by numbered MUAC (% at risk)	14.8%	<16.62		
Nutrition status of malnourished children 6-59 months by family MUAC	10.3	<9.5		
CSI	13.23	>19.0		
FCS	46.6	>35		

<ul style="list-style-type: none"> Short rains harvests Short dry spell Reduced milk yields Increased HH Food Stocks Land preparation 	<ul style="list-style-type: none"> Planting/Weeding Long rains High Calving Rate Milk Yields Increase 	<ul style="list-style-type: none"> Long rains harvests A long dry spell Land preparation Increased HH Food Stocks Kidding (Sept) 	<ul style="list-style-type: none"> Short rains Planting/weeding 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1. CLIMATIC CONDITIONS

1.1 Rainfall performance

- The onset of the season was first observed in the high lands of the county on 23rd to 25th of April 2021 while in the low lands areas which are mostly found in the pastoral areas, the onset was observed in the first dekad of May 2021. In both cases, this was a late onset compared to the previous seasons. The cessation of the season was normal and happened in the last dekad of May
- During the month under review, high amount of rainfall was received during the first dekad of the month but declined towards the end of the month.

1.2 Amount of rainfall and spatial distribution

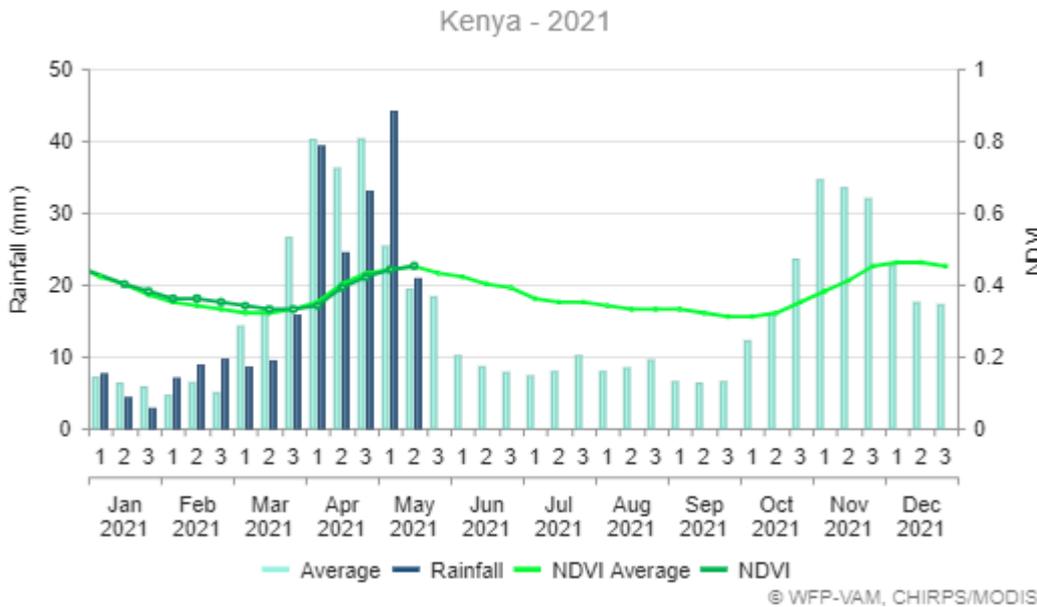


Figure 1. Rainfall performance

- The county received above normal rains during the first two dekads of the month translating into 186 percent of the normal rains (Figure 1). The rains were mostly concentrated in the high land areas that constitute mostly the mixed farming livelihood zone. In terms of distribution, both temporal and spatial distribution was poor. In the high land areas, rainfall was received for four to six days while in the low land areas of pastoral livelihood zone, rainfall was received for two to three days. The spatial distribution was poor with the bulk of the rains being received in the mixed farming livelihood zone.
- The vegetation greenness according to normalized differential vegetation index (NDVI) is normal.

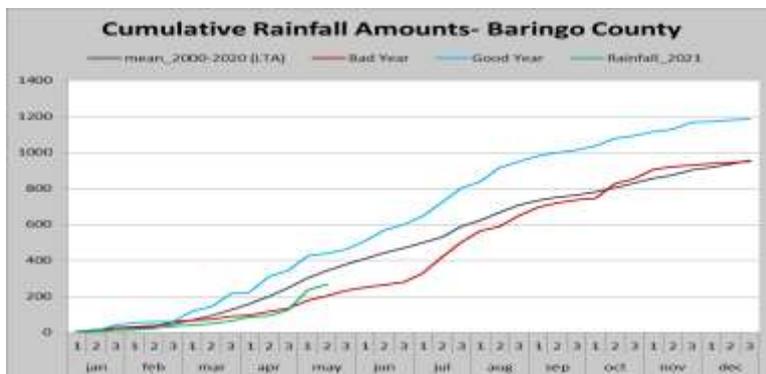


Figure 2: Cummulative rainfall

- The cumulative rainfall received for the month under review is below the long term means but has risen slightly above the bad year due to the large rains received in dekad one as shown in Figure 2.

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 58.81 and, an improvement compared to the previous month at 42.

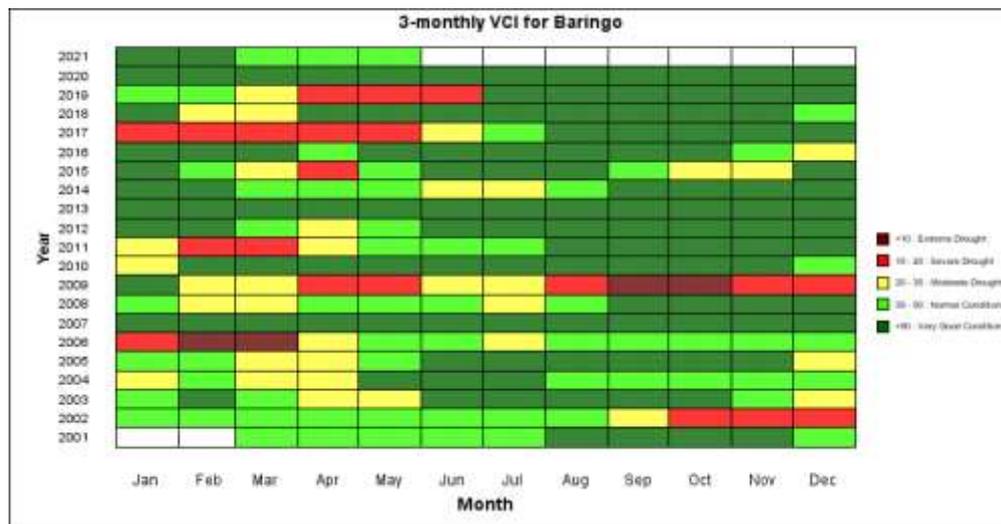


Figure 3. Vegetation Condition Index

The VCI trend for Mogotio and Baringo North sub counties have been slightly below the long term mean but have started to rise marginally following the rains received during the month (Figure 4).

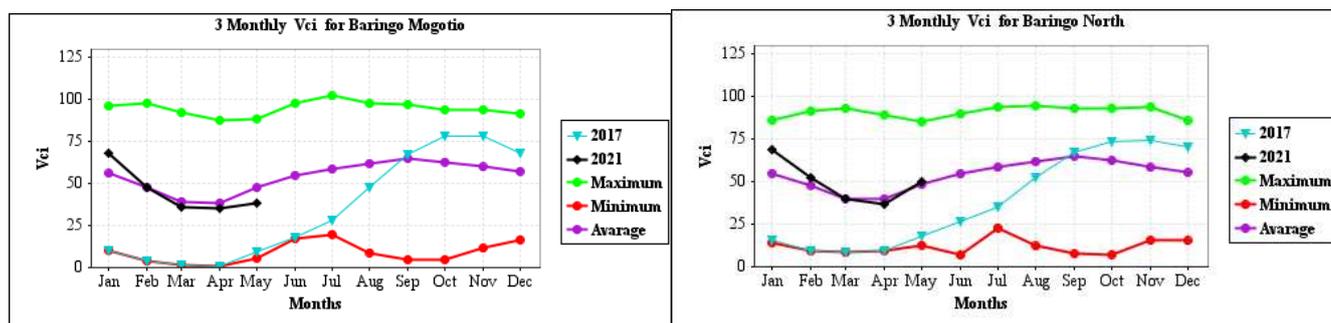


Figure 4: Vegetation condition index trend

2.1.1 Field observation

2.1.1.1 Pasture

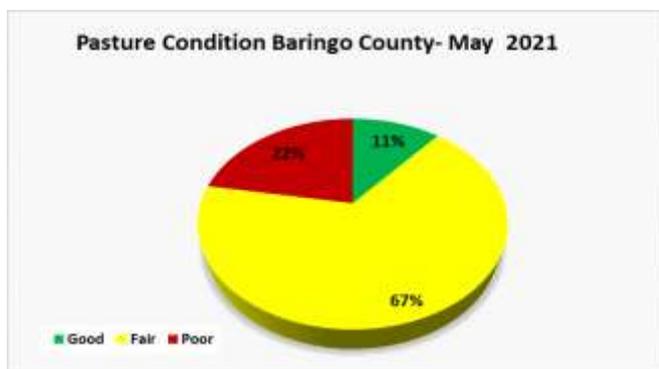


Figure 5: Pasture conditions

The pastures in pastoral and agropastoral livelihood zones are in poor to fair conditions (Figure 5). The most affected sub counties are Baringo South (Kiserian), kinyach in baringo North and Tiaty where the pastures are poor due to poor rainfall performance. In the Irrigated livelihood zone the pastures are in fair to good conditions. The current pastures are expected to last for one month across all livelihood zones given the prevailing conditions.

2.1.1.2 Browse

The browse condition during the month was fair to good both in quantity and quality across all livelihood zones except in some pockets of the pastoral livelihood zone (Figure 6). 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.

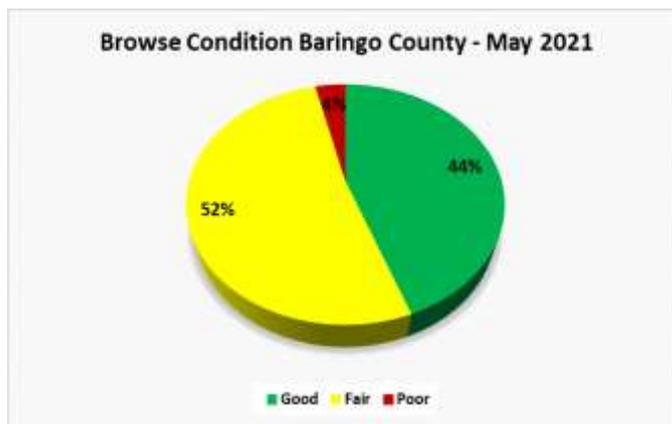
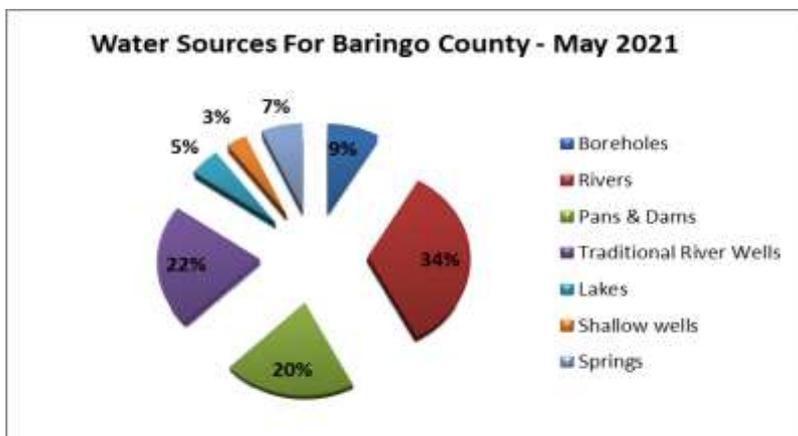


Figure 6: Browse conditions

2.2 Water resources

2.2.1 Source



The main water sources for both livestock and human consumption across all livelihood zones were rivers, traditional river wells and water pans, (Figure 7). Most water pans and dams were at 40 to 50 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 open water sources are expected to last for one month in pastoral and agro pastoral livelihood zones and two months in irrigated livelihood zone.

Figure 7: State of water sources

2.2.2 Household access and Utilization

The average household trekking distance to water sources was 4.4 km, a decrease of 12 percent in comparison to the previous month at five kilometres (Figure 8). The distances are below the long term average (LTA) by five percent. Irrigated cropping livelihood zone recorded the least trekking distance of two kilometres while pastoral livelihood zone recorded the highest average of 5.6km. The decrease

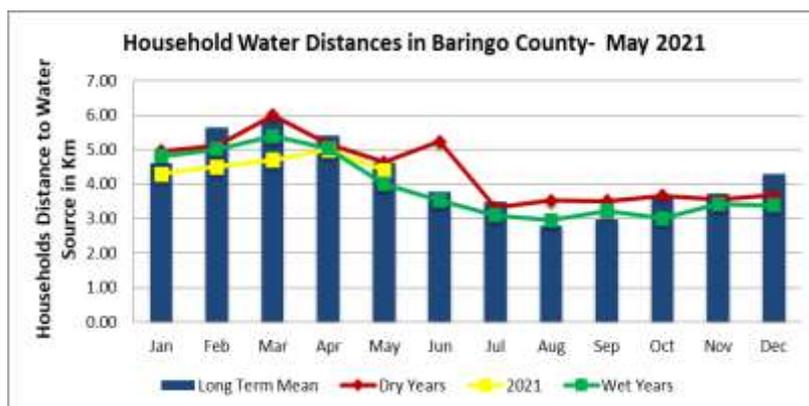


Figure 8: Water access

in distances is attributed to rains received during the month.

2.2.3 Livestock access

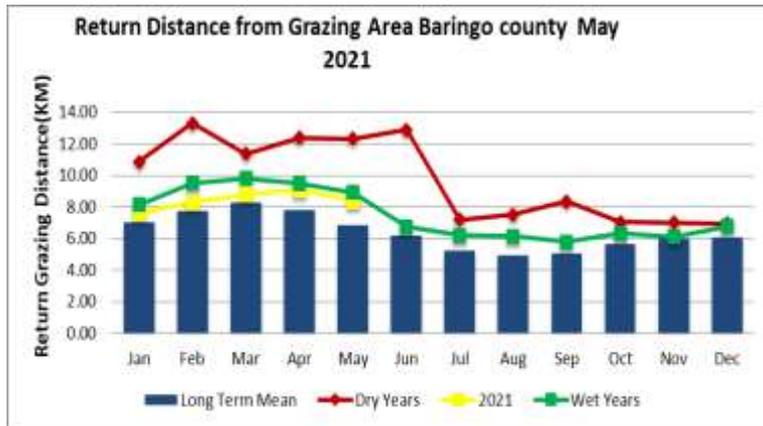


Figure 9: Grazing distances

The average return distance for livestock from grazing fields decreased to 8.4km, a decrease of eight percent in comparison to the previous month at 9.1 km (Figure 9). The current distances are above the long term mean by 23 percent. The pastoral livelihood zone recorded the longest average distance of 10.8 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 borderline, thin fore ribs visible and emaciated in pastoral and agro pastoral livelihood zones for all the livestock species, moderate neither thin nor fat and good smooth appearance in the irrigated livelihood zone and a few parts of agro pastoral livelihood zone. This has been occasioned by regeneration of pasture, browse and improved water availability across the livelihood zones. The body condition is likely to continue improving due to the anticipated rains.

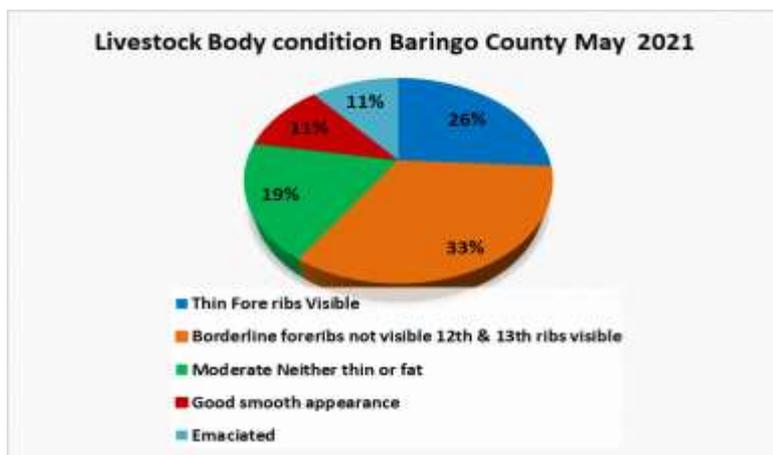


Figure 10: Livestock Body Condition

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. Vaccination against CCPP is ongoing across the county. The NDMA surveillance system has also picked up some cases of livestock death that can be attributed to drought and livestock diseases in the pastoral livelihood zone.

3.1.3 Milk Production

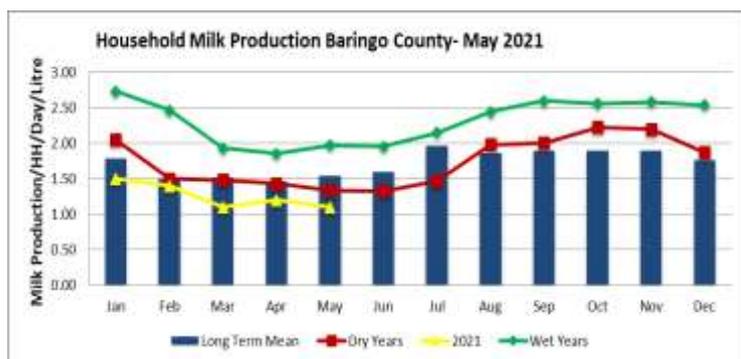


Figure 11: Milk production

The average milk produced per household per day was at 1.1 litres, this was a decrease of eight percent as compared to the previous month (Figure 11). The milk was mainly from cattle and goats.

The current milk production is below LTAs by 29 percent and this has been contributed by poor livestock body conditions.

3.2 Rain fed crop production

3.2.1 Stage and Condition of food Crops

- The poor performance of the rainfall season led to less than 50 percent of the acreage being put under cultivation for various crops compared to the long term means. The uneven moisture distribution in the soils has led to poor germination of crops and in some places like in the marginal mixed and the agro pastoral livelihood zones, crops are showing moisture stress symptoms.

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.16,729 as compared to the previous month at Ksh. 16,827 (Figure 12). The price was above the short-term average by 33 percent. Irrigated livelihood zone posted the highest prices of Ksh.26,667 while pastoral livelihood zone recorded the

least average price of Ksh.14,394. The reduction in prices was as a result of poor livestock body condition.

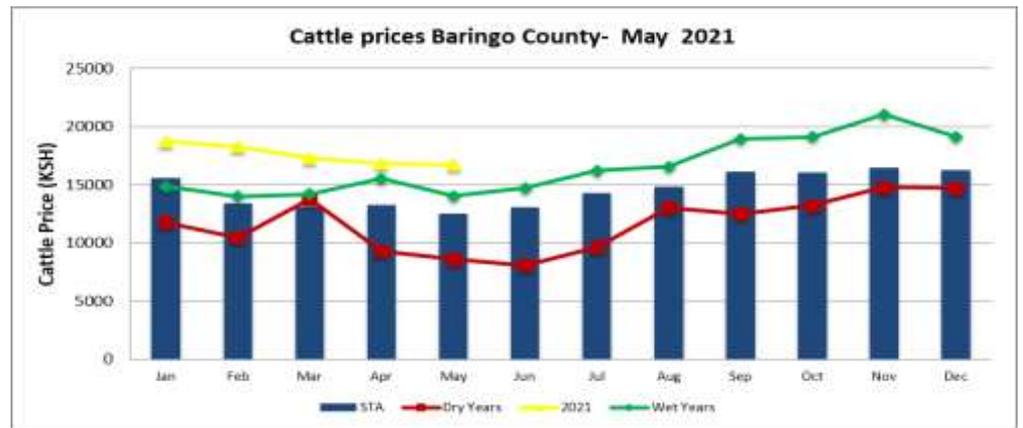


Figure 12: Cattle prices

4.1.2 Goat Prices.

The average price of a medium sized goat was stable at Ksh.2,596, as compared to the previous month at Ksh. 2,544 (Figure 13). The price was above the short term average (STA) by 11 percent. The prices were highest in irrigated cropping livelihood zone at Ksh. 3,700 and lowest in agro pastoral livelihood zone at Ksh.1,725. The decline in price is as a result of disruption of markets due to the ongoing security operations in the pastoral zones mostly in Tiaty areas.

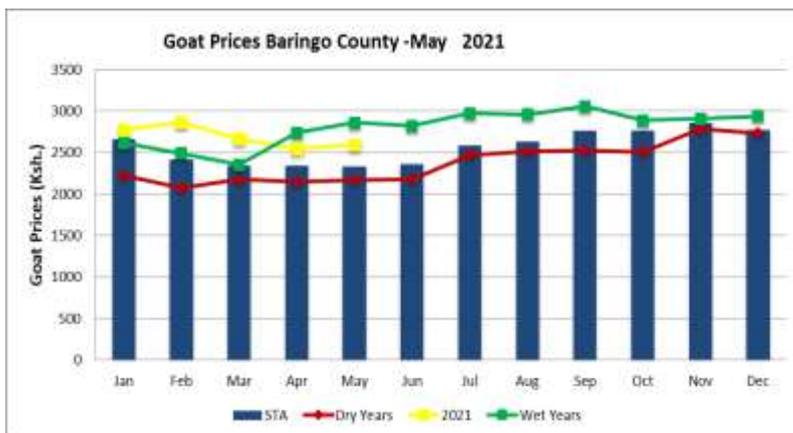


Figure 13: Goat prices

4.2.0. Crop prices

4.2.1 Maize

The current maize prices are stable compared to the previous month at Ksh 48/kg (Figure 14). The current prices are below the long-term average at this time of the year by nine 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. Pastoral livelihood zone recorded the highest average price of Ksh.50 per kg while irrigated livelihood zone recorded the lowest at Ksh.35 per kg.

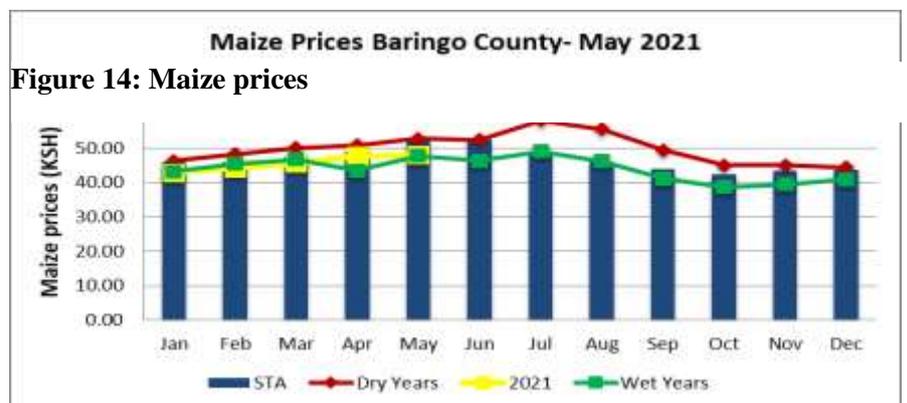


Figure 14: Maize prices

4.2.2 Posho (Maize meal)

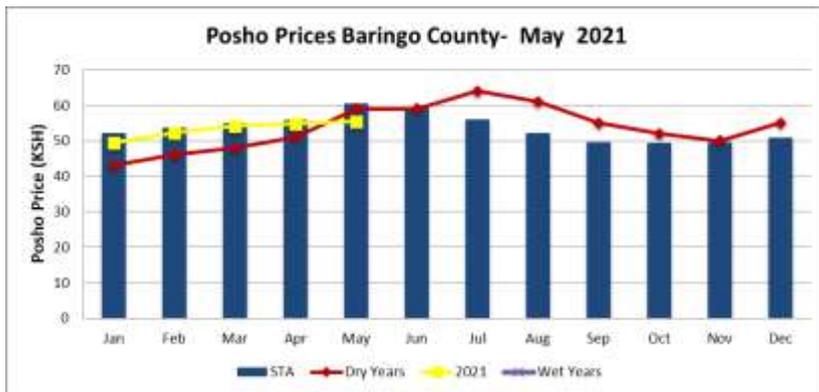


Figure15: Posho prices

The average household posho price was stable at Ksh 55/kg compared to the previous month (Figure 15). The price was marginally above the short-term average by eight percent. The increase in prices was attributed to increasing maize prices. The pastoral livelihood zone recorded the highest average price of Ksh. 58 while the irrigated cropping zone had the least average price of Ksh. 40.

4.2.3 Beans Prices

The average price per kilogram of beans declined by three percent compared to the previous month at Kshs.122.2 (Figure 16). The current prices are above the short-term average by five percent.

The pastoral livelihood zone recorded the highest average prices of Ksh.129 while the irrigated livelihood zone recorded the least prices of Ksh.90. The decrease in prices was attributed to completion of the planting thus less demand for the commodity.

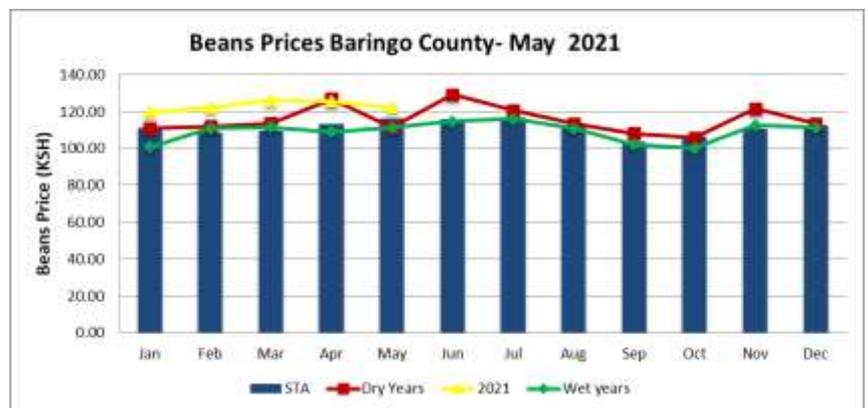


Figure 16: Beans prices

4.3 Terms of Trade

The terms of trade increased slightly by two percent for the month under review in comparison to the previous month whereby a sale of one goat was able to fetch 54 kgs of maize (Figure 17). This has been attributed to relatively stable maize prices and slight increase in 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 40.6

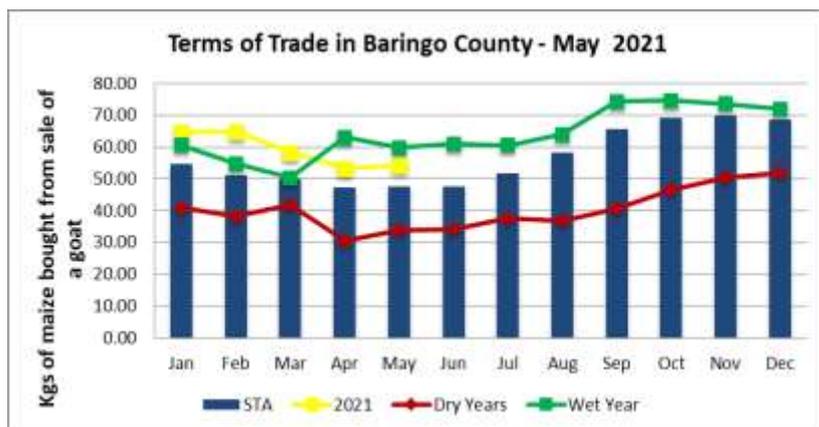


Figure17:Terms of trade

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

The average milk consumption per household per day was at 1.1 litre, which was below the long term average by 17 percent (Figure 18). The milk consumption was highest in the agro pastoral livelihood zone at two litres and lowest in fishing livelihood zone where there was no milk consumed by households. The amount consumed was below the long-term average partly due to reduced milk production in the irrigated and fishing livelihood zones.

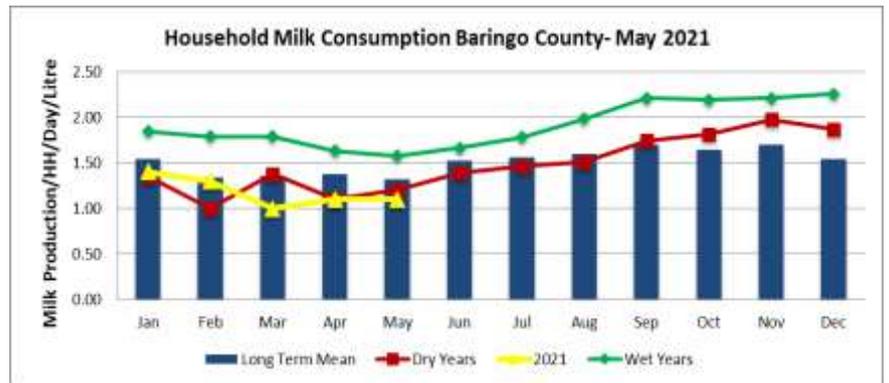


Figure18: Milk consumption

5.2 Food Consumption Score

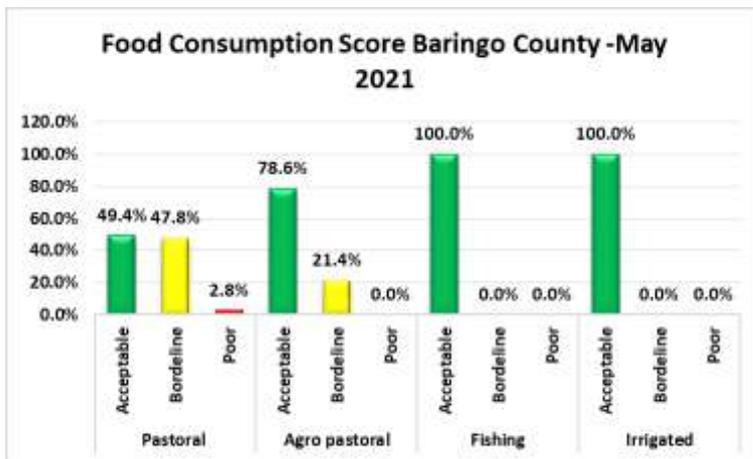


Figure19: Food consumption score

Generally, the county had an acceptable Food Consumption Score of 47 as compared to 44 for the previous month, an indication of slight improvement. A proportion of two, 34 and 64 percent of the households across the livelihood zones have poor, borderline and acceptable food consumption scores respectively. In the pastoral and agro pastoral livelihood zone, about 51 and 21 percent of the households do not have acceptable food consumption respectively (Figure 19). This has been contributed by inadequate access to nutritious food stuffs due to the existing low purchasing power of the households in these zones.

5.3. Health and Nutrition Status

5.3.1 Nutrition status

The proportion of children sampled who are at the risk of malnutrition during the month was 15 percent. This was almost similar as compared to the previous month and is being contributed by intake of inadequate dietary food stuffs at the household level especially in the pastoral areas.

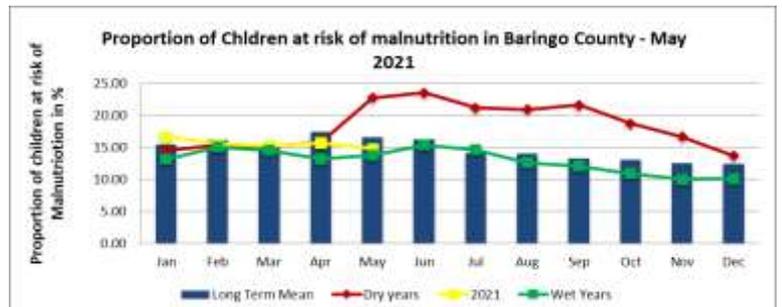


Figure 20: proportion of children at risk of malnutrition

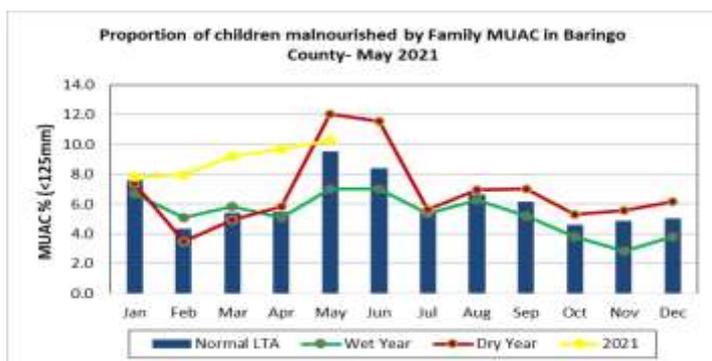


Figure 21: Children at risk of malnourished by family MUAC

By family MUAC, the proportion of children malnourished was 10.3 percent; this was an increase compared to the previous month at 9.7 percent. (Figure 21).

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.
- Sensitization campaigns and Vaccination 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 13.23 which was relatively similar to the previous month. Households in agro pastoral livelihood zone employed more coping strategies at 17.5 followed by pastoral livelihood zone at 14.5 while the irrigated zone employed the least coping mechanisms at 3.2 (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.

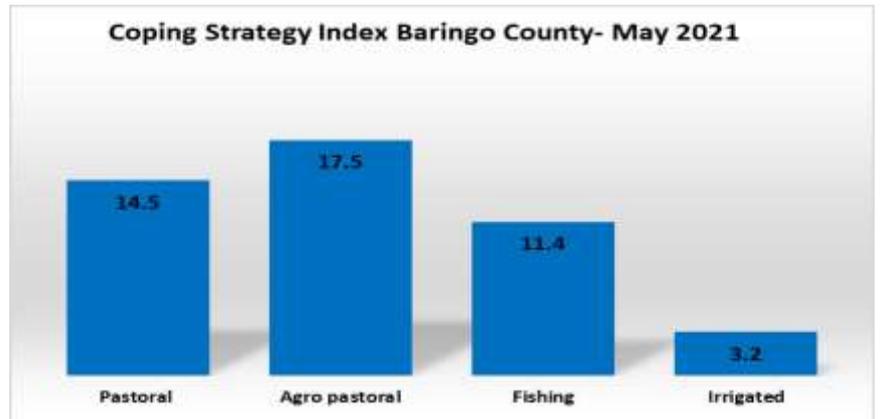


Figure 22: Coping strategy index

6.0 CURRENT INTERVENTION MEASURES.

6.1 Non-food interventions

Kenya Red Cross

- KRCS continue to participate at the coordination mechanisms; National Task force on vaccine roll out and its technical sub committees – Nationally and the counties.
- KRCS provided tents to some health facilities for the inoculation process at Kabarnet referral hospital.
- Distribution of relief food to 750 families in Mukutani (400 households) and Chemorong'ion (350 households)
- Distribution of family NFI kits to 14 families in Kapedo centre.

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

- Trained 6 trainer of trainers from the department of Agriculture and community representatives on two weeks permaculture design course in Makueni
- Supported 35 budget champions to review the county fiscal paper and presented submissions on key gaps identified during the process to the Economic planning team and assembly
- COVID Response and awareness on SGBV for community resource persons
- Train 200 community members on energy alternatives
- Support Tangelbei women network to push for establishment of Baringo climate change strategy and County climate change Fund law.
- Build the capacity of Tangelbei Disaster management committee on early warning and early action integrating NDMA monthly bulletins into community productive and livelihoods systems

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

Water sector

- 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
- Rehabilitation of Endao and Cheratike irrigation schemes is ongoing.
- Community sensitization on hand washing practices and nutrition messages (wash-CLTS and nutrition at community level is ongoing

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
- Carry out data quality audits

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

7.2 Migration

- There were minimal livestock migration towards Komolion in Tiaty sub county while in Baringo South sub county, livestock were being moved from Kiserian areas to Loruk area surrounding Lake Baringo. In Mukutani ward, the livestock that had moved to Arrabal areas have been forced to move back to their areas due to insecurity issues.

7.3 Food security prognosis

- Crop production is expected to be lower than normal due to poor rainfall distribution as there is a possibility of crop failure following the cessation of the long rains season at the time when the crops were still at a tender age that requires watering.
- Regeneration of forage resource is expected to take place mostly in the high land areas following the onset of the long rains leading to a reduction in grazing distances which in turn will lead to stabilization of livestock body condition. However, in the pastoral and agro pastoral areas, the delay in the onset of the long rains will continue to exert pressure on forage resource resulting in heightened internal livestock migrations.
- Milk production and consumption is expected to remain below long term means due to poor livestock body condition.
- Food access will continue to be a challenge in parts of Tiaty sub county due to the ongoing security operations which has rendered markets to operate below normal. Some markets like Nginyang have completely ceased operating thus affecting commodity flows.
- In the pastoral areas, cases of malnutrition are likely to continue rising due to poor dietary diversity as households will find it difficult to access nutritious food stuffs from the markets due to low purchasing power, poor market functionality and low milk consumption.
- The food consumption score will continue to deteriorate in the next three months due to poor dietary diversity with the most affected areas being in the pastoral livelihood zone.
- Households in the pastoral livelihood zone are likely to apply more coping strategies in accessing food in the next 3 months due to low incomes that are resulting from poor market operations.

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 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