



A Vision 2030 Flagship Project



National Drought Management Authority Baringo County Drought Early Warning Bulletin for August 2020

| AUGUST EW PHASE | Early Warning Phase Classification | | | |
|--|------------------------------------|------------------------------------|----------------------------|------------------------------|
| Drought Status: NORMAL Shughuli za kawaida | 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 month. The Vegetation greenness as depicted by the vegetation condition index (VCI) is above normal. The Water levels in most water sources are normal at 90%-100% capacity. <p>Socio Economic Indicators (Impact Indicators)</p> <p>Production indicators:</p> <ul style="list-style-type: none"> The forage condition is good in both quality and quantity and is expected to remain stable until the next rainfall season. Livestock body condition is good in all livelihood zones. Milk production is within the normal seasonal range. No drought related livestock deaths were reported during the reporting period.. <p>Access indicators</p> <ul style="list-style-type: none"> Terms of trade are stable and within the seasonal range. Distances to water sources for households are below normal seasonal ranges and stable due to recharge of most surface water sources. <p>Utilization indicators:</p> <ul style="list-style-type: none"> The number of under-five children at risk of malnutrition is minimal and stable. Copping strategy index (CSI) for households is within normal ranges. | 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 (%) | 101% | 112.4 | 80-120 |
| | VCI-3month | 98.09 | | 35-50 |
| | % Of water in the water pan | 90%-100% | | 50-60 |
| | Production indicators | | | |
| | | Value | Normal ranges | |
| | Livestock Migration Pattern | Normal | Normal | |
| | Livestock Body Condition | 4-5 | 3-4 | |
| | Milk Production (Ltr/HH/Month) | 1.7 | 1,76 | |
| | Livestock deaths (for drought) | No deaths | No death | |
| | Access Indicators | | | |
| | Value | Normal ranges | | |
| Terms of Trade (ToT) | 72.6 | >63 | | |
| Milk Consumption (Ltr) | 1.5 | ≥1.7 | | |
| Water for Households-trekking distance (km) | 2.8 | 0-4 | | |
| Crops area planted for the season | | | | |
| Utilization indicators | | | | |
| | Value | Normal ranges | | |
| Children at risk of malnutrition (MUAC %) | 11.67% | <15 | | |
| CSI | 10.27 | >19.0 | | |

| | | | | | | | | | | | |
|--|---|---|---|-----|-----|-----|-----|------|-----|-----|-----|
| <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

- During the month under review, the performance of the rains was above normal compared to the previous seasons during the first two decades. The rains have significantly declined in the third dekad compared to the previous month and most parts of the county have been experiencing dry and hot weather conditions.

1.2 Amount of rainfall and spatial distribution

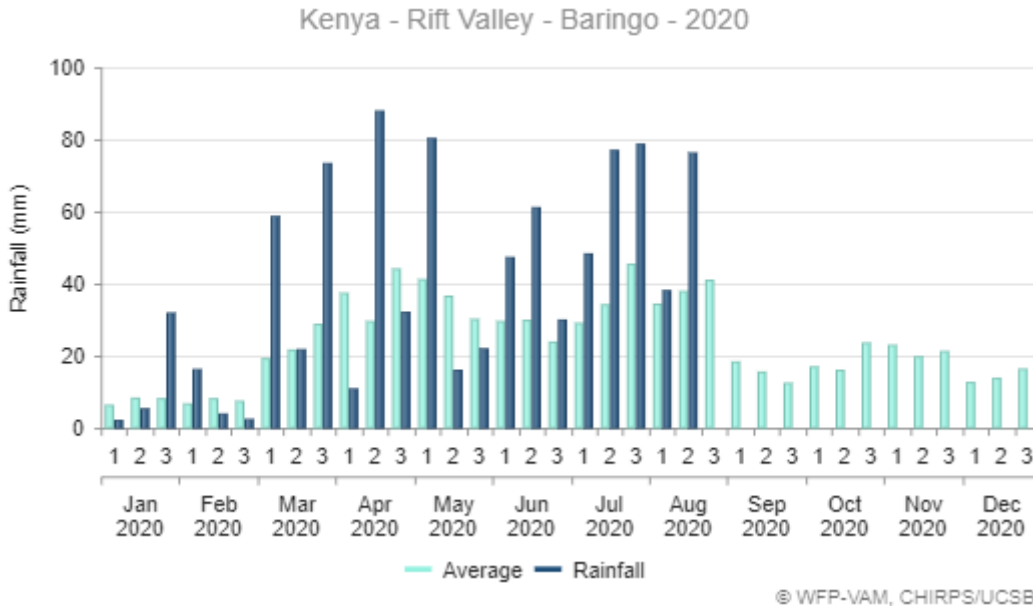


Figure. 1. Rainfall performance

- During the first two decades of the month under review, the county received enhanced rains averaging about 159 percent of the normal rains (Figure 1). The peak of the rains was observed in the second dekad where the county received an average of 76 mm of rainfall compared to a seasonal average of 38 mm for a similar period.

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 2).

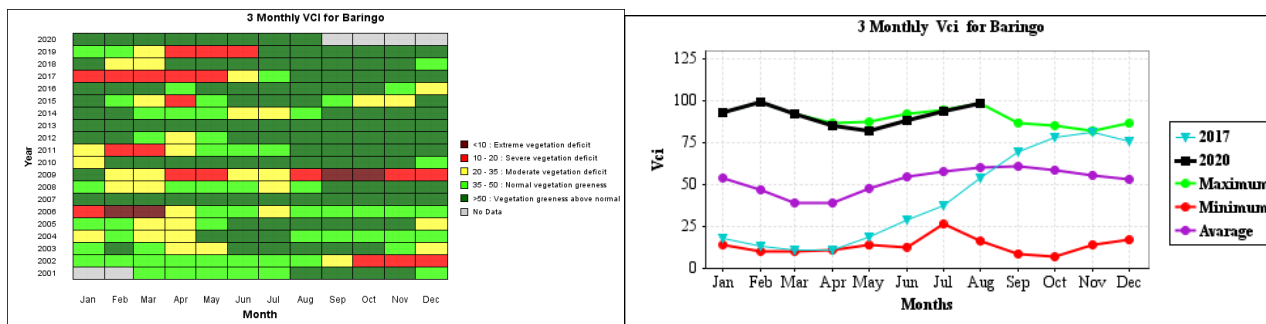
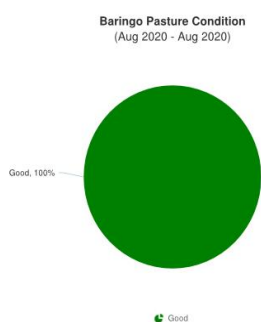


Figure 2. Vegetation Condition Index

The vegetation condition index for the county is 98.09. The current VCI corresponds to the maximum value ever recorded in the county. The above normal greenness has been attributed to the cumulative effects of good rainfall performance for the better part of this year. The performance of the long rains season has been above normal and has extended in to the June- July- August season. This has contributed to the good conditions of the natural vegetation. The current conditions of forage are likely to be sustained up to the next rainfall season.

2.1.1 Field observation

2.1.1.1 Pasture



- The pasture condition is good both in quantity and quality across all livelihood zones (Figure 3).
- 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.

Figure 3: Pasture Condition

2.1.1.2 Browse

- The browse condition is good both in quantity and quality across all livelihood zones (Figure 4). 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.

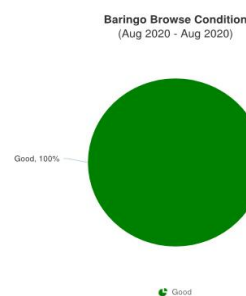


Figure 4: Browse Condition

2.2 WATER RESOURCE

2.2.1 Source

- The main water sources for both livestock and human consumption across all livelihoods were rivers, water pans and traditional river wells (Figure 5).
- Most water pans and dams were at 90 percent to 100 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.

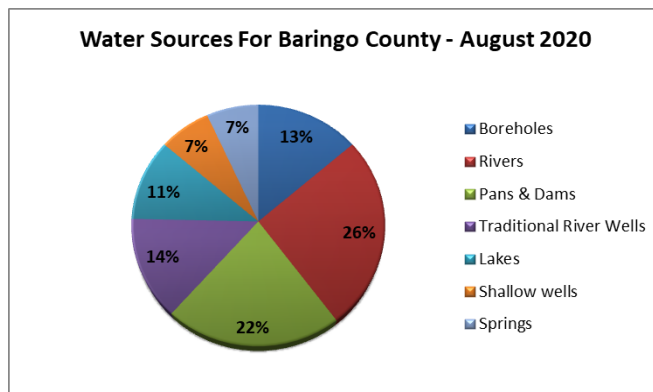


Figure 5: State of water Sources

2.2.2 Household access and Utilization

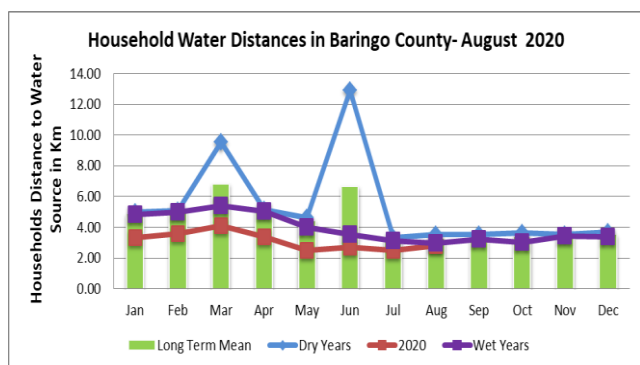


Figure 6: Water Source Trekking Distances

- The average household trekking distance to water sources has increased marginally to 2.8km from 2.5km in the subsequent month. (Figure 6).
- The distances are below the long term average (LTA) by 21 percent.
- Irrigated cropping zone recorded the least trekking distance of less than one kilometre while pastoral livelihood zone recorded the highest average of 2.7km. The stability in distances is attributed to the recharge of open water sources across all livelihood zones due to the extended long rains.

2.2.3 Livestock access

- The average return distance for livestock from grazing fields to water points was stable at 4.4km in comparison to the previous month at 4.5 km (Figure 7).
- The pastoral livelihood zone recorded the longest average distance of 5 km while irrigated livelihood zone recorded the shortest average distance of 1.4 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.

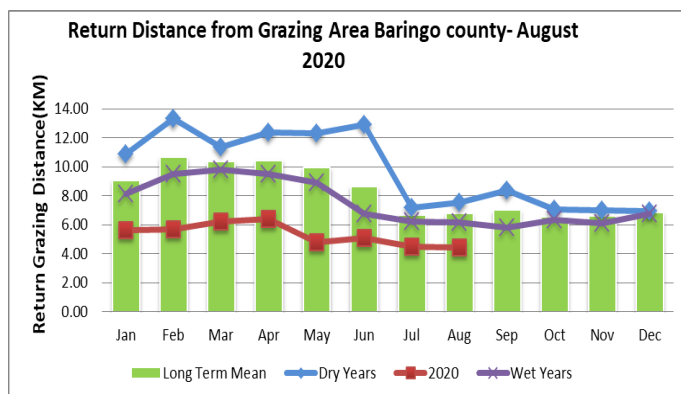


Figure.7. Water Source Grazing Distance

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 as a result of the impact of the extended long rains season that has just ended.
- 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

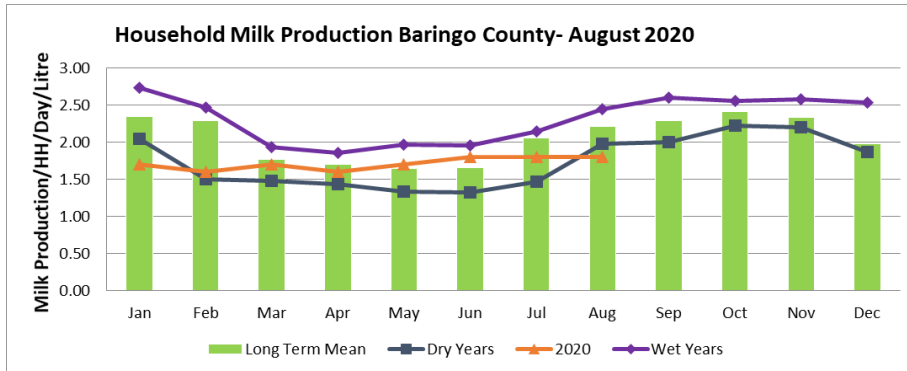


Figure 8: Milk Production

- Milk production has remained stable at 1.8 litres per household per day compared with the previous month (Figure 8).
- The milk was mainly from cattle and goats.
- Agro pastoral livelihood zone had an average production of 3.2 litres

while pastoral had the least at 1.7 litres. The current milk production is below the LTAs by 17 percent.

3.2 Rain fed crop production

3.2.1 Stage and Condition of food Crops

- Currently the maize is at harvesting stage in the irrigated and agro pastoral livelihood zones. Harvesting of beans and green grams is ongoing.

4.0.0 MARKET PERFORMANCE

4.1.0 Livestock marketing

4.1.1 Cattle prices.

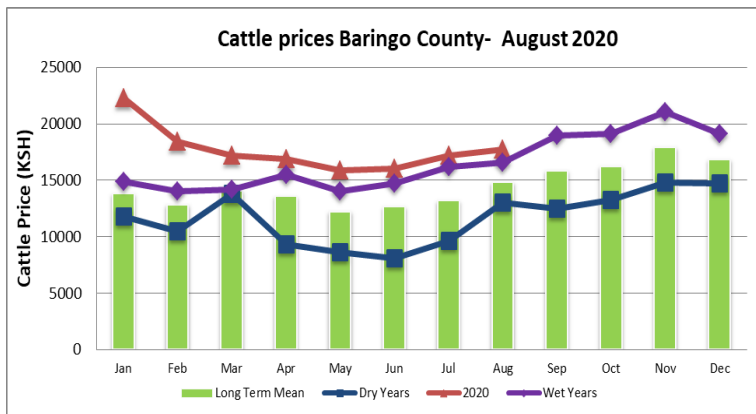


Figure 9: Cattle Prices

4.1.2 Goat Prices.

- The average price of a medium sized goat was at Ksh.2,906, a slight increase compared to the previous month at Ksh. 2,787 (Figure 10). The price was above the LTA by 11 percent.
- The prices were highest in irrigated cropping livelihood zone at Ksh. 3,483 and lowest in agro pastoral livelihood zone at Ksh.2,450. The price increment is as a result of prevailing good body condition.

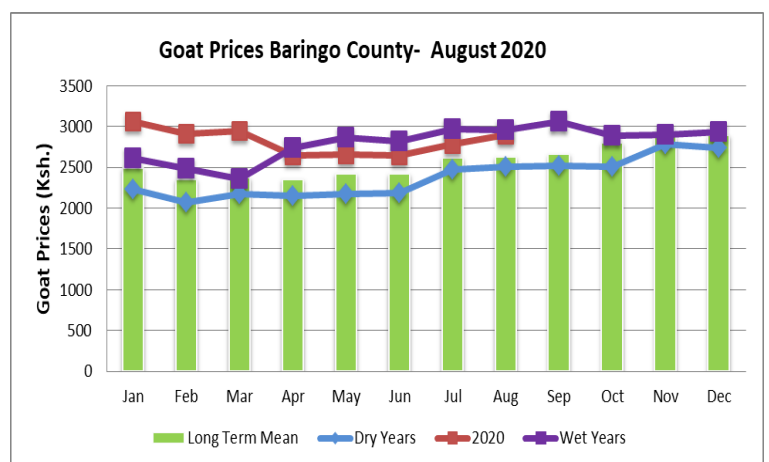


Figure.10: Goat Prices

4.2.0. Crop prices

4.2.1 Maize

The current average price for a kilogram of maize reduced by 15 percent from Ksh. 47 to Ksh. 41, as compared to the previous month. (Figure 11). The current prices are below the long-term average at this time of the year by 15 percent. The drop in price can be attributed to the ongoing maize harvesting both within and outside the county.

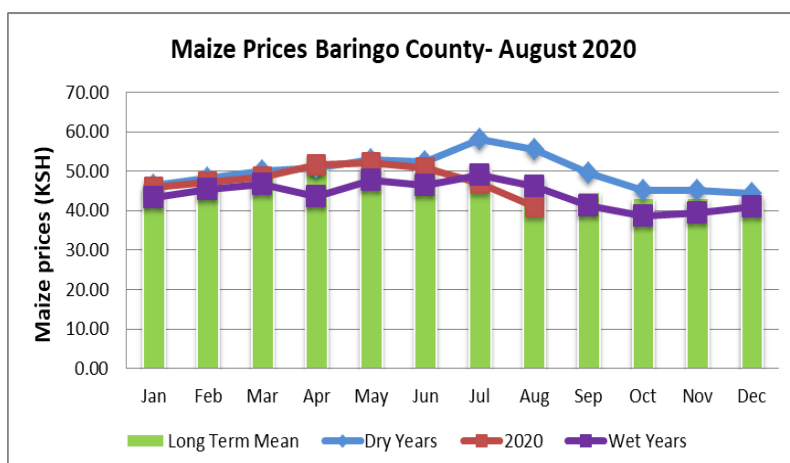


Figure.11: Maize Prices

- The average price for medium-sized cattle was at Ksh. 17,759 which was an increase of three percent compared to the previous month of Ksh. 17,167.
- The price was above the long-term average by 20 percent. Irrigated livelihood zone posted the highest prices of Ksh.23,667 while pastoral livelihood zone recorded the least average price of Ksh.16,056. The improved prices was partly due to partial reopening of markets.

4.2.2 Posho (Maize meal)

- The price per kilogram of posho was at Ksh.49, a reduction of nine percent as compared to the previous month at Ksh.54. (Figure 12).
- The price was below the long-term average by 11 percent.
- The decrease in prices was attributed to increased maize stocks both at household level and traders.

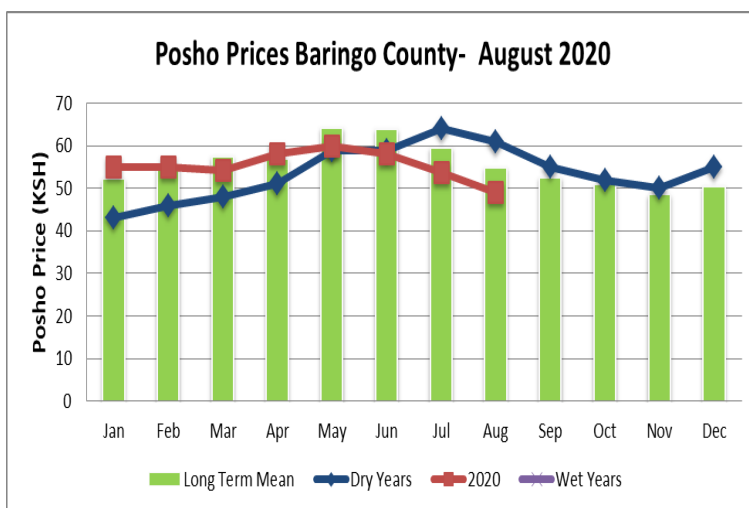


Figure 12: Posho prices

4.2.3 Beans Prices

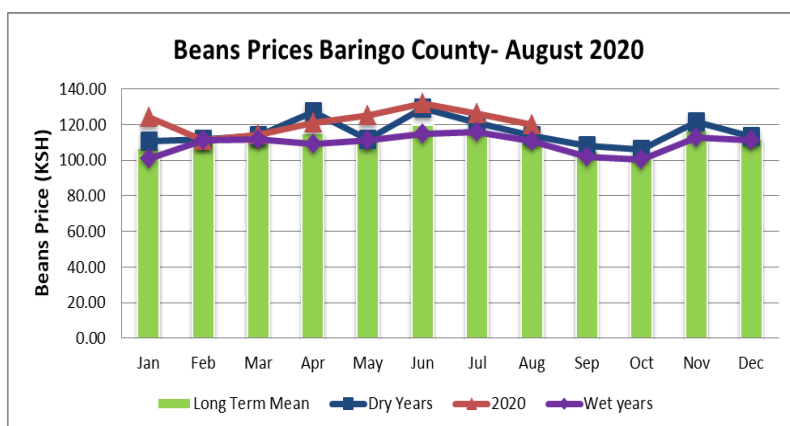


Figure 13: Beans Prices

- The average price per kilogram for beans decreased marginally by five percent from Kshs.126 to Ksh. 120 currently (Figure 13). The price decrease was attributed to harvesting of the commodity in the county.
- The current prices are similar to the long-term average
- Pastoral livelihood zone recorded the highest average prices of Ksh.129 while the irrigated livelihood zone recorded the least prices of Ksh.100.

4. 3 Livestock Price Ratio/Terms of Trade

- The terms of trade improved in comparison to the previous month. On average, a sale of one goat is able to fetch 59kg of maize compared to 51kg in the previous month (Figure 14). This was attributed to increasing goat prices and decreasing maize 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 75 while pastoral livelihood zone had the least at 51.

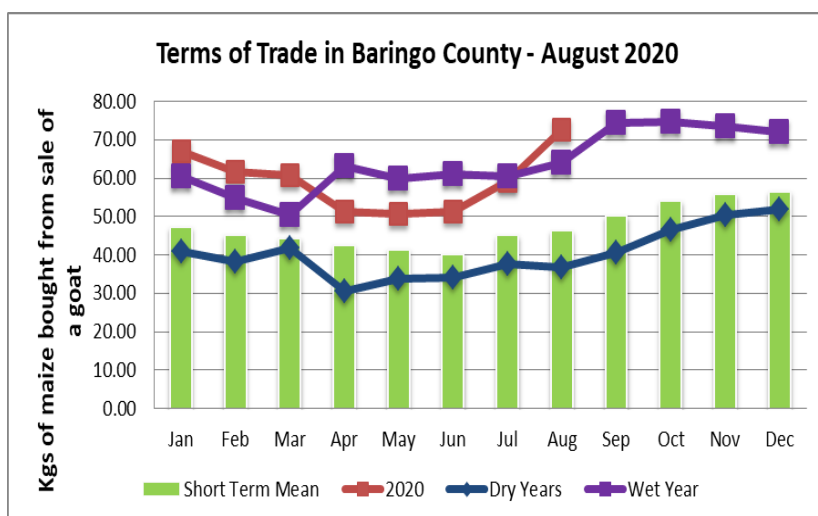


Figure 14: Terms of Trade

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

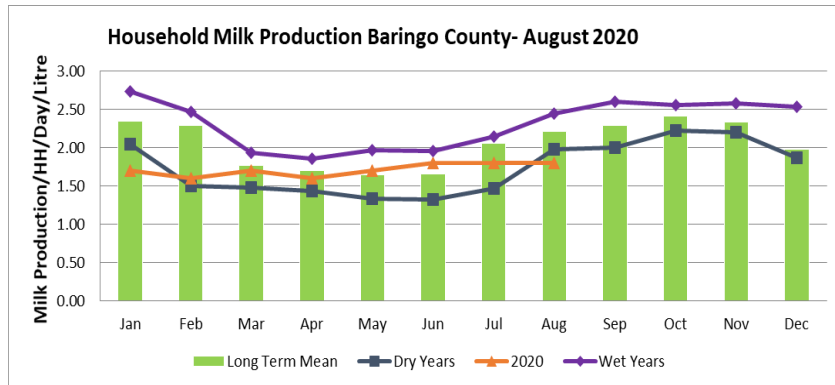


Figure 15: Milk Consumption

long-term.

- The average milk consumption per household per day has remained stable at 1.6 litres compared to the previous month (Figure 15).
- Milk consumption was highest in the agro pastoral livelihood zone at 1.7 litres and lowest in irrigated livelihood zone at 1.2 litres.
- The amount consumed was below the

5.2 Food Consumption Score

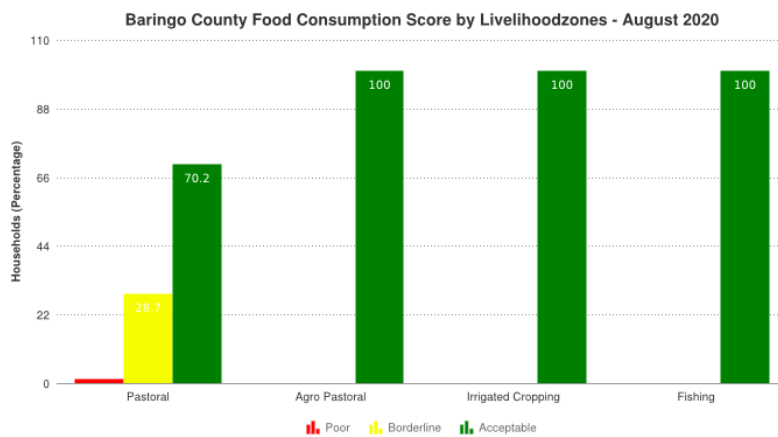


Figure 16: Food Consumption Score

nutritious food stuffs mostly animal proteins like meat, fish and milk.

- Generally, a proportion of 0.7, 19.6 and 79.7 percent of the households across the livelihoods have poor, borderline and acceptable food consumption scores respectively.
- In the pastoral livelihood zone, about 30 percent of the households do not have acceptable food consumption (Figure 16). This implies that they are skipping some

5.3. Health and Nutrition Status

5.3.1 Nutriion status by mid upper arm circumference (MUAC)

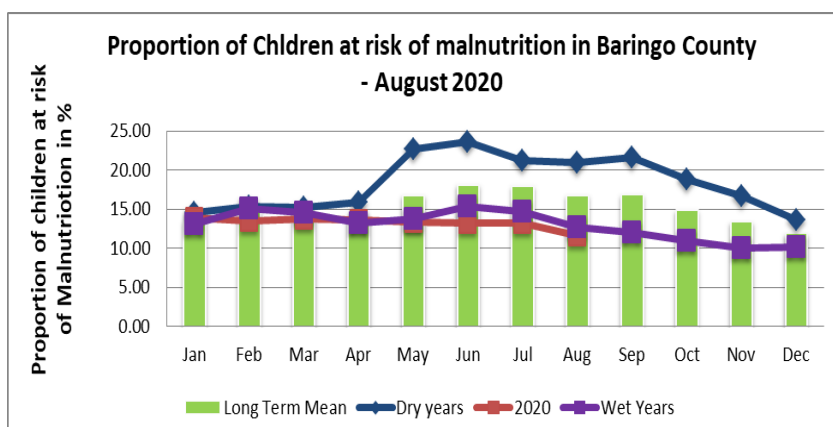


Figure 17: Nutrition status

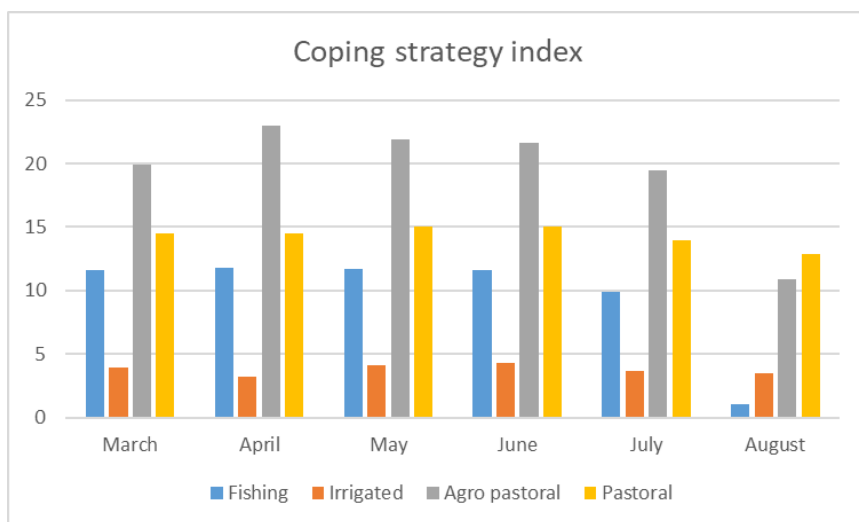
- The nutrition status of the sampled children under five years of age is stable at 13.20 compared to the previous month at 13.17 (Figure 17).
- Kolowa and Ribko wards in the pastoral livelihood zone recorded highest levels of malnutrition at 23.33% and 21.98% respectively.

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 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.
- Senzitization campaigns against COVID 19 pandemic are ongoing across the county. By the end of August 2020, about 40 cases had been confirmed and are in isolation centres.

5.4 Coping strategies

5.4.1 Coping Strategy Index



The average coping strategy index was at 11.67 by August, this was an improvement as compared to the previous month. Households in pastoral livelihood zone employed more coping strategies at 12.9 followed by agro pastoral livelihood zone at 10.9. 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).

Figure 18: Coping Strategy Index

6.0 CURRENT INTERVENTION MEASURES.

6.1 Food interventions

- About 650 households that were affected by floods around Lake Baringo have benefited from 15,000 tonnes of assorted food items donated by Spread Truth in collaboration with the National Youth Council.

6.2 Non food interventions

National Drought Management Authority(NDMA)

- Due to effects of covid 19 pandemic, NDMA has initiated a new approach in taking of MUAC measurements which minimizes direct contact between the Field Monitors and the child. Use of family MUAC tapes has been rolled out whereby caregivers will be incharge of taking the measurements themselves.

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

No major issues related to insecurity were reported during the month under review.

7.3 Food security prognosis

Household food stocks are expected to be near normal to above normal following a favourable crop season that has just ended. Household are expected to replenish their stocks from the ongoing harvest. The stocks should be able to sustain households and extend into the next rainfall season. Milk production will be sustained within normal range due to the prevailing good livestock body condition.

Household incomes mostly in pastoral areas are expected to decline due to market disruptions following imposition of Covid 19 restrictions. Income from livestock sales will be the most affected as over 90 percent of livestock markets are likely to remain closed or operate below capacity. Maize prices will continue to decline as households in mixed farming and irrigated livelihood zones resort to consuming own production. Terms of trade are likely to be favourable to pastoral and agro pastoral livelihoods due to expected low maize prices. Household milk utilization will be normal to above normal following an improvement in milk production. Consumption rate of household stocks will be above normal as students are expected to stay at home due to the existing Covid 19 restrictions. Some pockets in Baringo South and Tiaty sub counties are expected to have challenges with regard to sanitation and hygiene due to floods that have resulted in displacement of households, sinking of latrines and contamination of water sources. Malnutrition cases are expected to remain low and stable.

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's like water purifiers, Pur, Aqua tabs is needed especially for the displaced populations 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.

8.1.3. Livestock and Veterinary sector

- Equipping of livestock markets with proper sanitation and hygiene facilities for the control of covid 19. This will enable the authorities to reopen the markets gradually and ensure the safety of all market Actors.
- Hay harvesting, baling 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

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 are harvesting their crops from farms. Farmers are advised to invest in proper storage facilities as the expected yield is expected to be above normal.

REFERENCE TABLES

Table 1: Drought Phase Classification

| Normal | Alert | Alarm | Emergency |
|---|--|--|--|
| All environmental Agricultural and pastoral indicators are within the seasonal ranges | Meteorological drought indicators move outside seasonal ranges | Environmental and at least two production indicators are outside Long term seasonal ranges | All Environmental, Metrological and Production indicators are outside normal ranges. |
| Recovery: | | | |
| The drought phase must have reached at least Alarm stage. Recovery starts after the end of drought as signaled by the environmental indicators returning to seasonal norms; local economies starting to recover | | | |

Table 2: Standardized Precipitation Index (SPI)

| Color | SPI Values | Metrological Drought Category |
|-------|---------------|-------------------------------|
| | > +1.5or more | Wet Conditions |
| | 0 to +1.5 | No drought |
| | -0.1 to -0.99 | Mild drought |
| | -1 to -1.99 | Severe drought |
| | <-2 and less | Extreme drought |

Table 3: Vegetation Condition Index Values (VCI)

| Color | VCI values 3-monthly average | Agricultural Drought Category |
|-------|---------------------------------|-------------------------------|
| | ≥50 | Wet |
| | 35 to 50 | No agricultural drought |
| | 21 to 34 | Moderate agricultural drought |
| | 10 to 20 | Severe agricultural drought |
| | <10 | Extreme agricultural drought |

Table 4: Livestock Body Condition

| Level | Classification | Characteristics (this describes majority of the herd and not individual isolated Stock) |
|-------|----------------|---|
| 1 | Normal | Very Fat Tail buried and in fat |
| | | Fat, Blocky. Bone over back not visible |
| | | Very Good Smooth with fat over back and tail head |
| | | Good smooth appearance |
| 2 | Moderate | Moderate. Neither fat nor thin |
| 3 | Stressed | Borderline fore-ribs not visible. 12th & 13th ribs visible |
| 4 | Critical | Thin fore ribs visible |
| 5 | Emerciated | Very thin no fat, bones visible |
| | | Emaciated, little muscle left |

Definition of Early Warning Phases

The EW phases are defined as follow:

NORMAL: The normal phase occurs when **biophysical drought indicators (VCI and SPI) show no unusual fluctuations** hence remain within the expected ranges for the time of the year in a given livelihood zone, division or county

ALERT: The alert phase is when either the **vegetation condition index or the standard precipitation index (biophysical indicators) show unusual fluctuations below expected seasonal ranges** within the whole

county/sub-county or livelihood zones.

ALARM: The alarm phase occurs when both **biophysical and at least three production indicators fluctuate outside expected seasonal ranges** affecting the local economy. The production indicators to be considered are livestock body condition, crop condition, milk production, and livestock migration and livestock mortality rate.

If **access indicators** (impact on market, access to food and water) move outside the normal range, the status remains at “alarm” but with a worsening trend. Proposed access indicators include ToT, price of cereals, availability of cereals and legumes, and milk consumption. The trend will be further worsening when also welfare indicators (MUAC and CSI) start moving outside the normal ranges.

EMERGENCY: In the emergency phase, **all indicators are outside of normal ranges**; local production systems have collapsed within the dominant economy. The emergency phase affects asset status and purchasing power to extent that seriously threatens food security. As a result, coping strategy index, malnutrition (MUAC) and livestock mortality rates move above emergency thresholds

RECOVERY: Environmental indicators returning to seasonal norms. The drought phase must have reached at least Alarm stage. Recovery starts after the end of drought as signaled by the environmental indicators returning to seasonal norms while production indicators are still outside the normal seasonal range but local economies start to recover. The status changes to normal once the bio physical and production indicators are back to normal range.