

National Drought Management Authority

NYERI (Kieni) COUNTY

DROUGHT EARLY WARNING BULLETIN FOR MAY 2019



A Vision 2030 Flagship Project



MAY 2019 EWS PHASE

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The long rains progressed into the month of May. Amount received were poorly distributed in time and space. Areas of Karemno and Lamuria in Mugunda ward in Kieni west Sub County did not record any rains.
- Pasture and browse conditions improved during the month under review compared to the previous month. The vegetation condition was below the long term average.
- Access to water improved across all the livelihood zones. Distances to water sources from the household and grazing areas reduced.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Maize was at four leaf stage to Knee high, beans at flowering stage and potatoes at earthing up stage in mixed farming livelihood zones while in agro pastoral livelihood zones, maize and beans were at two leaf stages while potatoes were at vegetative stage.
- Livestock body condition was fair for all species.
- Milk production increased from 4.7 litres in April to 5 litres in May.
- In migration of livestock from the neighbouring counties was reported.

Access indicators

- Milk consumption was within the normal threshold
- Distances to water sources decreased from 1.6 Km in April to 0.8 Km in May.

Utilization Indicators

- Percentage of children under-five years of age who are at risk of malnutrition during the month under monitoring stood at 0.5 percent.
- Coping strategy Index was above the normal threshold.

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Alert	Improving
Agro pastoral	Alert	improving
County	Alert	Improving
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	96.4%	80%-120%
VCI-3Month	43.77	35-50
Forage	Fair-poor	Good
Production indicators	Value	Normal
Crop Condition (specify crop)	Fair	Good
Livestock Body Condition	Fair	Fair
Milk Production	5.0 litres	4.7 litres
Livestock Migration Pattern	In migration	No Migration
Access Indicators	Value	Normal
Milk Consumption	1.5	1.6
Distance to water sources	0.8	1.4
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	0.5	1.4
Coping Strategy Index (CSI)	6.26	<5.0

<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

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE.

- The long rains progressed into the month of May. Amount received were poorly distributed in time and space. On average Kieni received rains for three to ten days. Mixed farming livelihood zones registered better rains than the agro pastoral livelihood zones. However, Karemeno and Lamuria in Mugunda ward did not record any rains during the month under review.

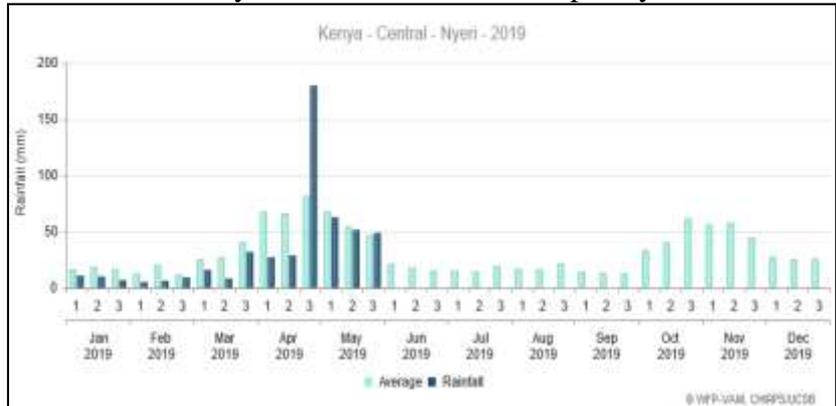


Figure 1: Presentation of the rainfall trend 2019

- Figure 1 above, shows the overall rainfall performance for Nyeri County during the month under review indicating it was near normal. In the first, second and third dekad the county received 161.2 mm compared to long term averages of 167.2 mm.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

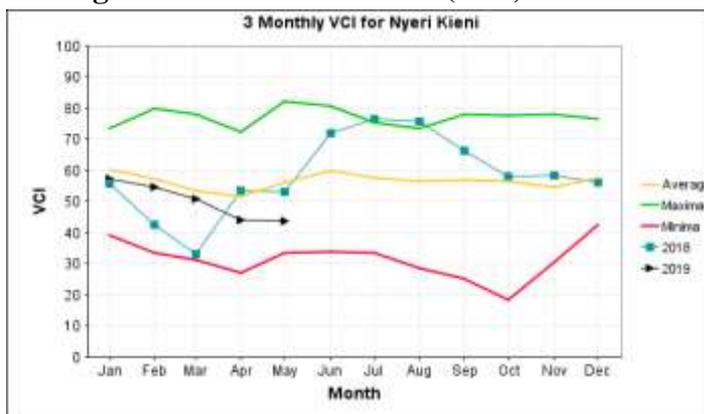


Figure 2: 3 monthly VCI for Nyeri County

- The 3 monthly Vegetation Condition Index (VCI) was below the long term average and worse compared to the same period last year as shown in figure 2. This could be attributed to the delay in the onset of the MAM rains and it's below normal performance. Influx of livestock from the neighbouring counties could have worsened the situation further. However, compared to the previous month the situation is relatively stable attributed to the

on-going rains. The month's VCI stood at 43.77 which was quite comparable to 43.9 in April. The situation is expected improve if the rains continue.

2.1.2 Pasture

- Pasture condition improved during the month under review compared to the previous month. Pasture regeneration was notable across the livelihood zones attributed to the on-going rains. The situation was fair to poor across the livelihood zones as shown in figure 3. Better situations were reported in mixed farming livelihood zone compared to agro pastoral livelihood zones.

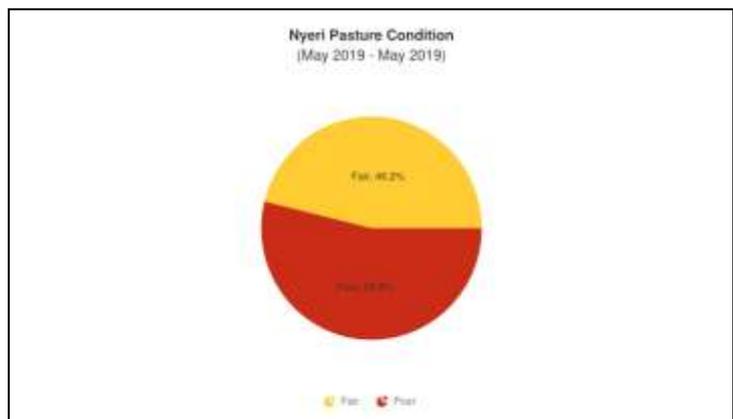


Figure 3: Pasture conditions for Nyeri County

- However, in the areas of Karemeno and Lamuria in Mugunda ward in Kieni West sub county pastures are highly depleted. This is attributed to the fact that these areas did not receive any rains. The grazing fields in these areas are bare and livestock are migrating to the neighbouring areas that have better pastures while some are feeding their livestock on tree branches and others are buying hay from ranches in Laikipia.
- The current condition in Kieni is below normal compared to a normal year and compared to the same period last year. This could be attributed to late onset of the MAM rains and it's below normal performance. The available pastures are expected to last for one and half months in mixed farming livelihood zones and less than a month in agro pastoral livelihood zones.

2.1.3 Browse

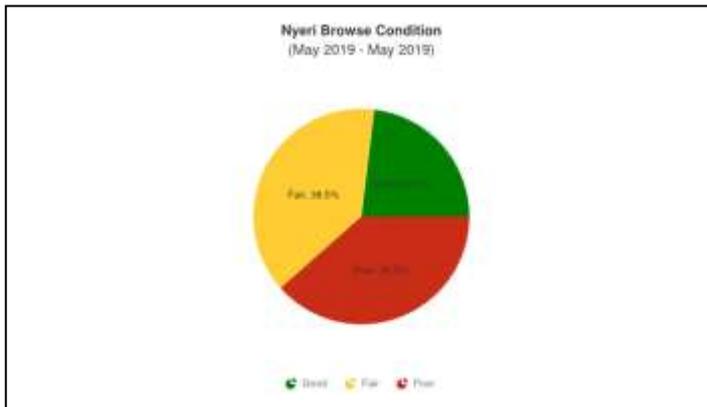


Chart 4: Browse condition for Nyeri County

- Browse conditions improved during the month under review compared to the previous month. This was attributed to the going MAM rains. In mixed farming livelihood zones browse conditions ranged from good to fair while in agro-pastoral livelihood zoned the situation ranged from fair to poor.
- However, in the areas of Karemeno and Lamuria in Mugunda ward browse deteriorated further during the

month under review compared to the previous month. This could be attributed to the fact that these areas have not received rains.

- The browse condition was below normal compared to a normal year and the same period last. This attributed to the late onset on the MAM rains and it poor performance.
- Available browse was expected to last for one month in agro pastoral livelihood zones and two months in mixed farming livelihood zones. The situation is expected to improve if the current situation persists.

2.2 WATER RESOURCE

2.2.1 Sources

- The main sources of water during the month under review were rivers, pans, dams and springs as shown in figure 5. Access to water had improved slightly during the month under review compared to the previous month. This is attributed to the on-going MAM rains. Rivers are flowing at near normal levels across all the livelihood zones. Open water sources are holding some water. However, in Mugunda sentinel sites most of the open water sources are dry. Water rationing has intensified and

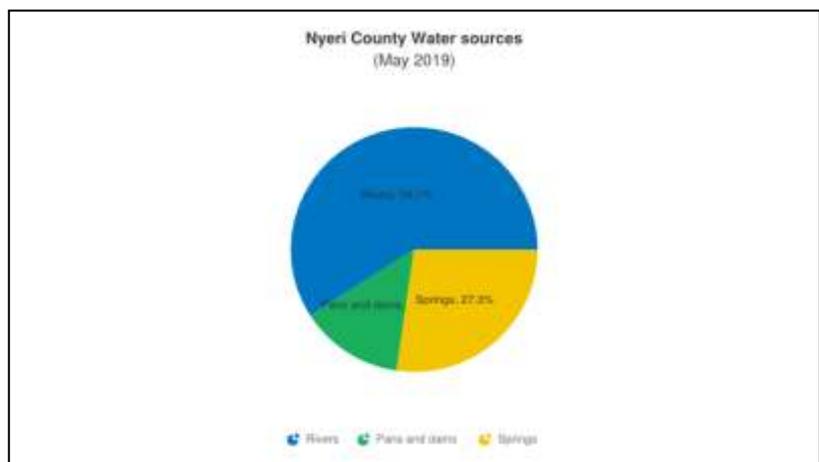


Chart 5: Nyeri (Kieni) water sources

households are receiving water once in a week. Distances to water sources in these pockets have increased and households are sourcing water from the neighbouring wards.

- Compared to a normal year and the same period last year the current situation in Kieni east and Kieni West Sub Counties is below normal. This is attributed to the delay in the onset of the MAM rains and the poor performance of the rains. The current situation is expected to improve further if the rains continue.

2.2.2 Household access and Utilization

- Distances from the household to water sources dropped by 50 percent from 1.6 Km in April

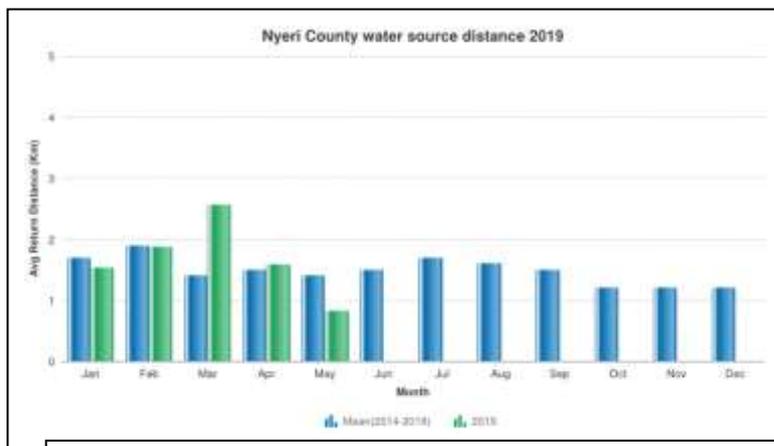


Figure 6: Presentation of average return distances to water sources

to 0.8 Km in May. The drop in distances could be attributed to the ongoing MAM rains. Distances to water sources reduced by 9.5 percent and 21 percent in agropastoral livelihood zones and mixed farming livelihood zones from 2.1 Km and 4.7 Km in April to 1.9 Km and 3.7 Km in May respectively.

- Registered distances were lower by 43 percent compared to the 2014-2018 long term averages of 1.4 Km as shown in figure 6.

2.2.3 Livestock access

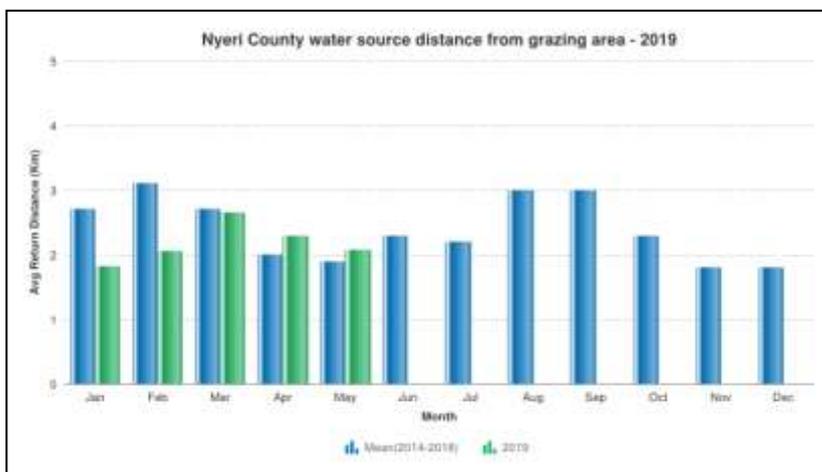


Figure 7: Presentation of average grazing distances to water sources

- Average distances from grazing field to watering points dropped by 8.7 percent from 2.3 Km in April to 2.1 Km in May. Compared to 2014-2018 long term average of 1.9 Km, reported distances were higher by 10 percent as shown in figure 7.

- Current watering frequency for animals is twice

daily in mixed farming livelihood zone and once in agro pastoral livelihood zones.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The livestock body condition improved during the month under review compared to the previous month. This attributed to the improved pastures conditions and reduced distances in search of water. The livestock body condition was fair across the livelihood zones.
- However, in Mugunda ward in Kieni west sub county livestock body conditions were poor. This is attributed to the poor pasture conditions and long distances in search of pasture and water as this area has not recorded any rains. recumbent

3.1.2 Livestock Diseases

- No contagious livestock disease outbreaks were reported in the region for the period of monitoring.

3.1.3 Milk Production

- Milk production increased slightly by six percent from 4.7 litres in April to 5 litres in May.

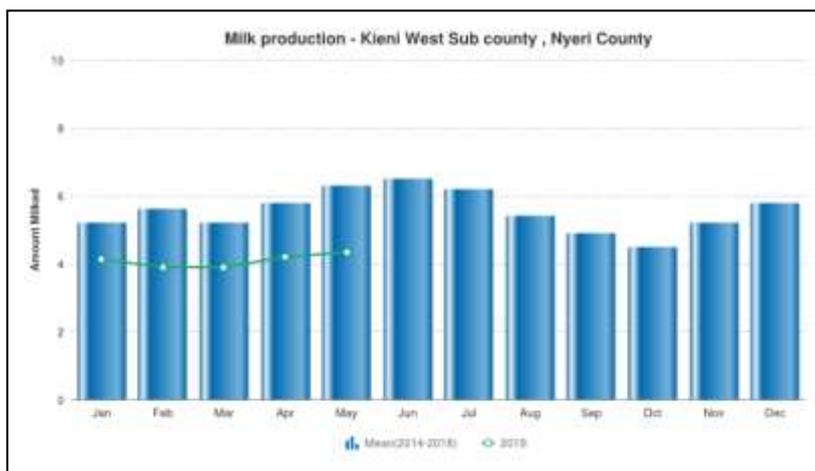


Figure 8: Presentation of average milk production

The rise in production could be attributed to improved pasture conditions and reduced distances in search of water and pastures.

- Household daily milk production was higher in mixed farming livelihood zones compared in agro pastoral livelihood zones. Production stood at 4.7 litres in mixed farming livelihood zones compared to 3.4 litres in agro pastoral livelihood

zones.

- The month's production was lower by 20.6 percent compared to the 2014-2018 long term average of 6.3 litres as shown in figure 7.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

- During the month of May crops at the farms were at different stages of development. In mixed farming livelihood zones maize was at four leaf stage to Knee high, beans at flowering stage and potatoes at earthing up stage. Some of the farmers in this zone were harvesting the premature tubers for consumption.
- In agro pastoral livelihood zones, maize and beans were at two leaf stages while potatoes were at vegetative stage. Farmers in this zone were undertaking first weeding.
- Harvesting of potatoes under the Plantation Establishment Livelihood Improvement System (PELIS) was on-going.
- In Mugunda ward in Kieni west Sub County, where no rains had been received, crops were yet to germinate and some of the farmers were replanting for the third time with the hope the rains would start.
- A notable observation is that acreage put under crop production has significantly reduced compared to the last cropping season. This is attributed to the poor performance of the OND seasonal rains that saw farmers experience little or no harvest and the delayed onset of the MAM rains.

1.0 MARKET PERFORMANCE

1.1 LIVESTOCK MARKETING

1.1.1 Cattle Prices

- Cattle prices remained relatively stable during the month under review compared to the previous month. A mature four year old bull sold for Ksh 24,400 in May which was quite comparable to Ksh 24,900 in April.
- The month's price was lower by 12 percent compared to the 2016-2018 short term average of Ksh 27,775 as shown in figure 9. The low prices could be attributed to the poor livestock body conditions.

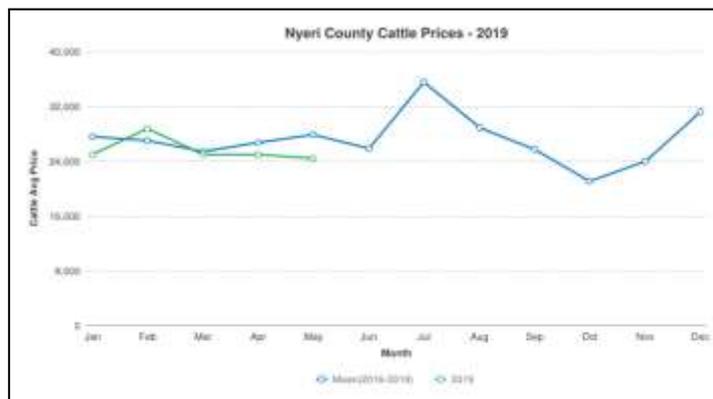


Figure 10: presentation of the cattle prices

4.1.2 Sheep prices

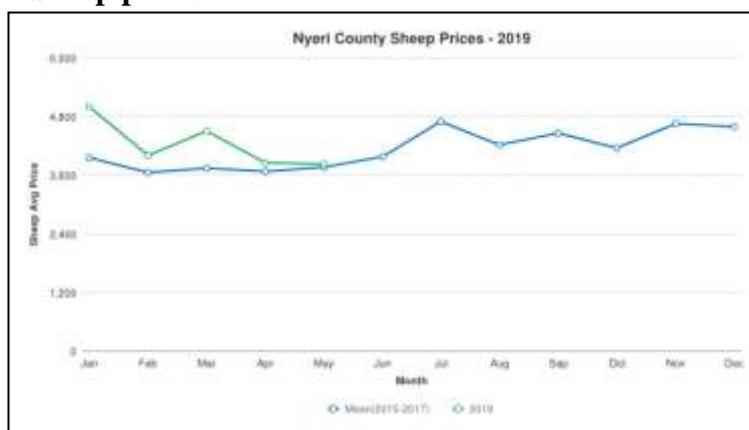


Figure 10: presentation of the sheep prices

- Sheep prices also remained relatively stable during the month under review compared to the previous month. A two year old medium size sheep sold for Ksh 3,833 in May which was relatively comparable to Ksh 3,850 in April.
- The registered prices were within the normal threshold compared to the 2016-2018 short term averages of Ksh 3,753 as shown in figure 10.

4.2 CROP PRICES

4.2.1 Maize prices

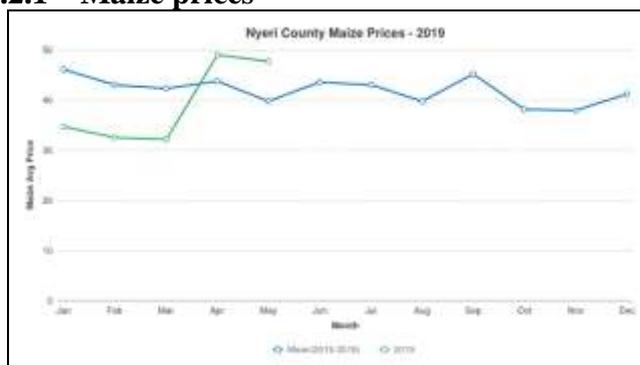


Figure 11: Presentation of the average maize prices for Nyeri County

- Maize prices remained relatively stable during the month under review compared to the previous month. A kilo of maize sold for Ksh 48 in May which was quite comparable to Ksh 49 in April.
- Compared to the 2016-2018 short term averages of Ksh 40, current price were higher by 20 percent as shown in figure 11.

4.2.2 Beans prices

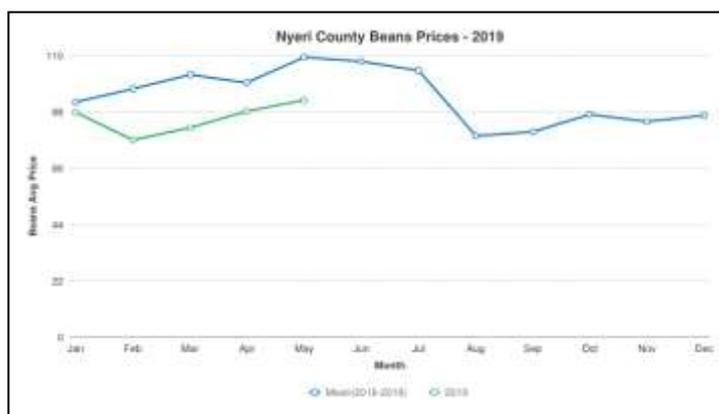


Figure 12: Presentation of the average beans prices for Nyeri County

- Beans prices increased by 5.7 percent to retail at Ksh 92.5 in May from Ksh 88 in April. The increase in prices could be attributed to overreliance of market for supply, since household have exhausted stock.
- The month's price was lower by 15 percent, compared to the 2016-2018 short term average of Ksh 109 as shown in figure 12.

4.3. Livestock price ratio/Terms of trade ratio

- During the month of May a farmer would exchange a medium size goat for 80.3 Kg of maize. This was a decrease compared to last month as one would exchange a goat for 74.9 Kg of maize as shown in figure 13.
- Decrease in goat prices against increasing prices of food prices led to unfavourable terms of trade to livestock keepers.
- The month's TOT was lower compared to the long term average of 82.5 kg of maize for a goat.

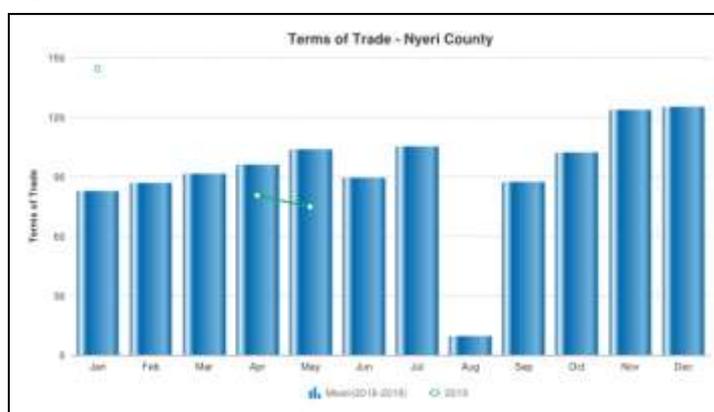


Figure 13: Outlines the terms of trade

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- Milk consumption at the household level remained same as was reported last month at 1.5 litres.
- The month's consumption was within the normal threshold, compared to the 2014-2018 long term average of 1.6 litres as shown in figure 14.

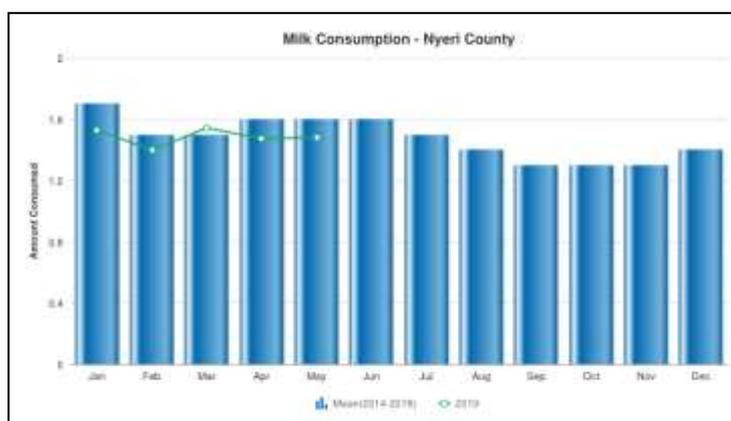


Figure 14: Presentation of the average milk consumption

5.2 FOOD CONSUMPTION SCORE

- The food consumption score for Kieni improved slightly during the month of May compared to the previous month. This could be attributed to availability of early maturing crops and stable milk consumption. Proportion of household at poor, borderline and acceptable food consumption score was 2 percent, 38 percent and 60 percent compared to 3.4 percent, 39 percent and 50 percent in the previous month.

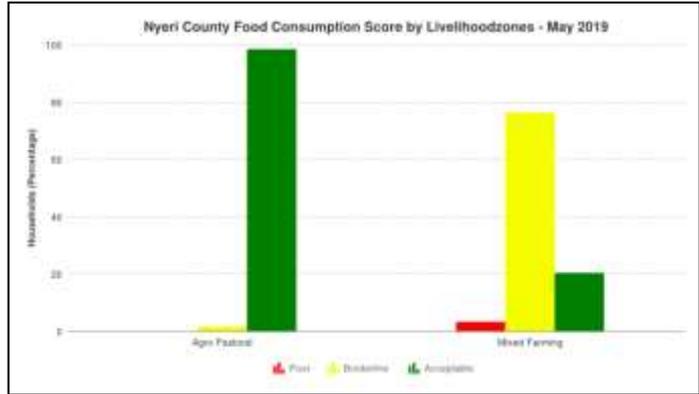


Figure 15: Outlines the FCS by livelihood zones

- There were discrepancies in food consumption patterns at the livelihood zones with at least three percent of the households in mixed farming livelihood zones having a poor consumption score compared to those in agropastoral livelihood zones where no household was reported to have a poor consumption score. 98.4 percent of the households in agropastoral livelihood zones had an acceptable food consumption score compared to 20.3 percent in mixed farming livelihood zones as shown in figure 15, indicating that households in agro pastoral livelihood zones had a better dietary diversity and consumption frequency.

5.3 HEALTH AND NUTRITION STATUS

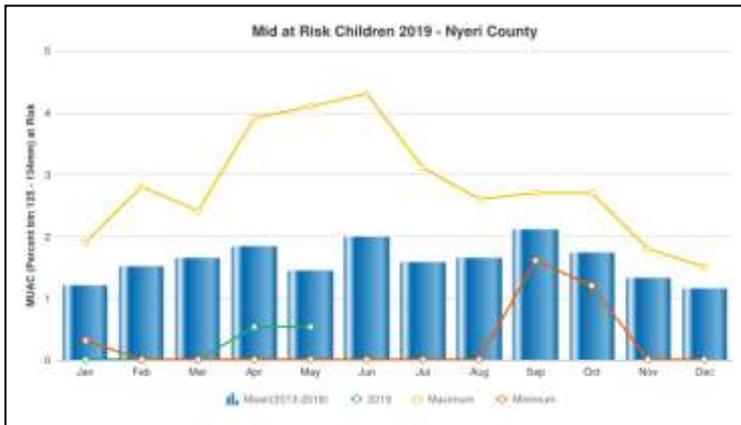


Figure 15: Percentage under-fives at risk of malnutrition in Nyeri

5.3.1 Nutrition Status

- The percentage of children under-five years of age who were at risk of malnutrition during the month under monitoring stood at 0.5 percent as shown in figure 15.
- Compared to the 2013-2018 long term average of 1.4 percent, the percent of children under the age of five years reported to be at risk of malnutrition were lower.

5.4 COPING STRATEGIES

- Due to the on-going MAM rains, majority of the households in mixed farming and some in agro pastoral livelihood zones have access to early maturing crops. Income from agricultural labour has also increased. These have led to decrease in the application of coping strategies at the household level.
- The mean CSI for Kieni decreased by 13.8 percent from 7.26 in April to 6.26 in May. In agro pastoral

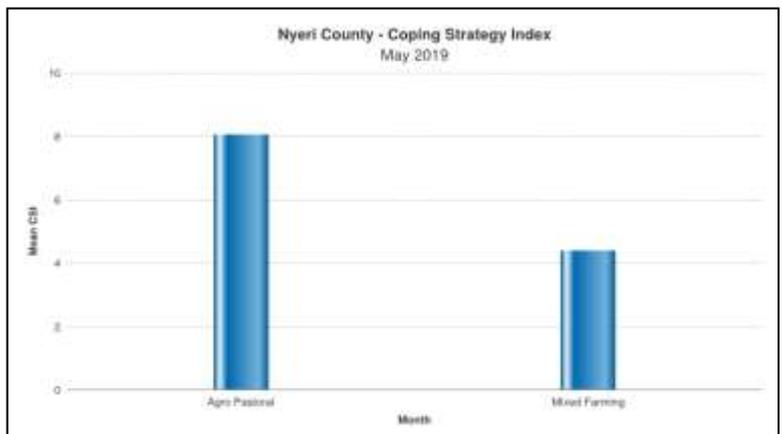


Figure 17: outlines the mean Coping

livelihood zones and mixed farming livelihood zone the mean CSI decreased by 35.7 percent and 4.4 percent from 12.6 and 4.6 in April to 8.1 and 4.4 in May respectively.

6.0 CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

- There were no non-food interventions during the month under review.

6.2 FOOD AID

- During the month under review, the national government through the department of special programmes distributed 300 (50Kg) bags of maize, 200(50Kg) bags of beans and 40 cartons of cooking oil in Kieni East to the vulnerable households.

7.0 EMERGING ISSUES.

7.1 FOOD SECURITY PROGNOSIS

- The on-going rains have assisted in the restoration of the grazing fields and water sources. Livestock body condition has improved leading to an increase in milk production. Households are making more milk sales while consumption was relatively stable. The situation is likely to improve further if the current situation continues.
- Due to the delay in the onset of the rains and its poor performance, farmers were forced to replant. Crops at the farms are in fair condition and if the current condition persists the farmers could harvest. However, if the rains cease farmers could be gearing up to a total crop failure.
- Market prices for main food crops in Kieni are high, the prices are expected to increase further given the next harvest is expected in July. Consequently, the household purchasing power at the household level is low and will most likely decrease further given that most of the households have exhausted food stocks will be relying on markets for supply.

7.2. LIVESTOCK AND MIGRATION.

- There has been an increment in the numbers of livestock migrating into Kieni from the neighbouring counties. At least 1000 heads of cattle and 500 heads of shoats were reported to have migrated into the sub county from Laikipia County through Lamuria and settled in Solio ranch and along Nyeri-Nyahururu highway.
- Currently, Kieni East and Kieni West sub counties are playing host to 6,000 heads of cattle and 4,800 shoats. In Kieni East the animals are settled in Gakawa and Naromoru/Kiamathanga wards.

7.3 CONFLICTS.

- Resource based conflict have been reported in areas of Gathiuru location in Gakawa ward, between pastoralist that had migrated from the neighbouring counties and residents of the area. The peace committee is arbitrating between the two warring parties.
- Human wildlife conflict was reported in Gathiuru and Kahurura locations in Gakawa ward in Kieni East sub county.

8. RECOMMENDATIONS

- Activation of sectoral working groups to prepare for response plans (Action: NDMA)
- Rehabilitation of strategic water points and de-siltation of pans and dams (Action: CGN)
- Encourage surface water harvesting (Action: CGN)
- Provision of supplementary feeds for livestock (Action: CGN)
- Activation of peace committees in anticipation of likely conflict arising from scarce of resources (Action: NDMA)
- Provision of relief food to needy households (Action: Department of special programmes)
- Undertake a rapid assessment (Action: NDMA)
- Support livestock with drought pellets. (Action: NDMA)

- Provision of water treatment tablets (aqua tabs) (Action: CGN NDMA NIB stakeholders).
- Supply of water using tankers for domestic and livestock at strategic points for pastoralist for temporary use. (Action: CGN NDMA NIB stakeholders).
- Up scaling on Preventive Vaccination against FMD, CCPP and NCD in livestock (Action: NDMA, DALF/County government).