

National Drought Management Authority
(Nyeri) COUNTY
DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2019



A Vision 2030 Flagship Project



JANUARY 2019 EWS PHASE

Drought Status: NORMAL



Drought Situation & EW Phase Classification

Biophysical Indicators

- The month of January was relatively dry. Offseason rains were received in some pockets in upper zones bordering the mountain.
- Pasture conditions were poor in low attitude zones and good to fair in high attitude areas.
- Access to water had deteriorated during the month compared to the previous month. The main sources of water for households in Kieni were; rivers at 48 %, Pans and dams at 44 % and traditional river wells at 8 %.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Crops are showing signs of water stress. In lower zones they have withered. Maize and beans were at tussling and ponding stage. Harvesting of potatoes was on-going although in small scale.
- Livestock body condition ranged from poor to fair for all species.
- Milk production was below normal threshold.

Access indicators

- Terms of trade were less favourable for livestock keepers.
- Milk consumption was within normal ranges.
- Distances to water sources were within normal ranges.

Utilization Indicators

- There were no reported cases of malnutrition for under-fives during the month under review.
- Coping strategy Index was below normal threshold.

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Normal	Deteriorating
Agro pastoral	Normal	Deteriorating
County	Normal	Deteriorating
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	51.6%	80%-120%
VCI-3Month	57.18	35-50
Forage	poor	fair
Production indicators	Value	Normal
Crop Condition (specify crop)	poor	Fair
Livestock Body Condition	Poor-fair	Fair
Milk Production	4.5 litres	5.2 litres
Livestock Migration Pattern	In migration	abnormal
Access Indicators	Value	Normal
Terms of Trade (ToT)	138.2	82.5
Milk Consumption	1.5	1.5
Distance to water sources	1.5	1.7
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	0	0.8
Coping Strategy Index (CSI)	4.10	<5.0

Seasonal Calendar

<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 month of January was generally dry. However, offseason rains were received for an average of two to three days in some pockets in upper zones. The areas that recorded rains were Gathiuru in Gakawa and Githungu in Thegu. Even in these areas the rains were poorly distributed in time and space. Lower regions received light showers for two to three days. However, the showers did not have any impact on crops and pasture production

□ Figure 1 shows the regions overall rainfall performance during the month under review, indicating it was below normal. In the first, second and third dekad the county received 10.2 mm, 9.4 mm and 6.2 mm compared to long term averages of 15.8 mm, 18.1 mm and 16.1mm as shown in figure 1(a).

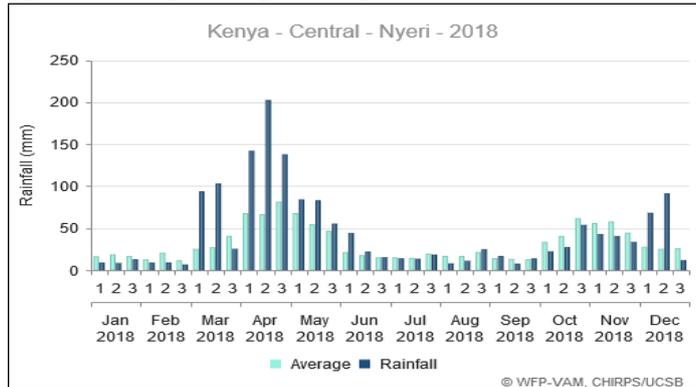


Figure 1(a): Presentation of the rainfall trend 2018

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

□ The vegetative greenness in Kieni sub counties varied for the different classes of vegetation covers. The shrubs which cover a big percentage of the graze land in Kieni west were at above normal greenness since they are drought resistant. However, they are not edible. Pasture and crops were of poor conditions due to lack of rains and frequent frost attacks. The current conditions declined compared to the previous month from 58.64 in December to 57.18 in January. Compared the same period last the current situation was similar and within the long term averages as shown in figure 2(a).

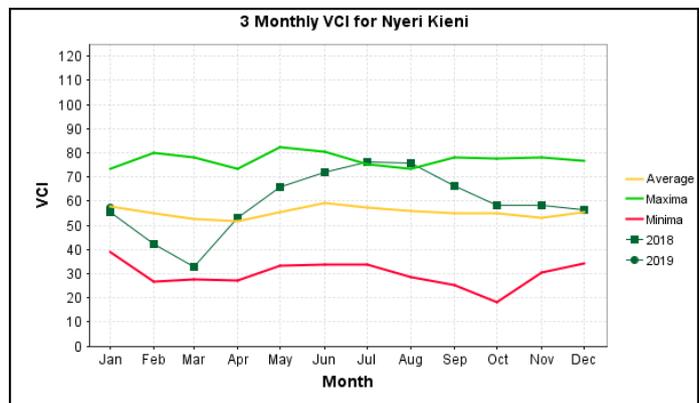


Figure 2(a) 1monthly VCI for Kieni

2.1.2 Pasture

□ The late onset and dismal performance of the OND rains led to inadequate replenishment of the grazing fields. Although in the month December, above normal amounts were received the improvement noted seems to have eroded due to the dry weather conditions experienced in January coupled with the frequent frost attacks. The worst hit areas are lower zones in agro pastoral livelihood zones that registered poor pasture conditions as shown in figure 3(a).

- However, in upper regions in mixed farming livelihood zones that have continued to receive offseason rains, pasture quality and quantity was good. The areas include Githugo in Thegu and Gathiuru in Gakawa ward.
- Harvesting of the improved pastures has been going on though performance was not very good.
- Available pasture was expected to last for one month in agro pastoral livelihood zones and two months in mixed farming livelihood zones. As compared to a normal year the current situation is below normal.

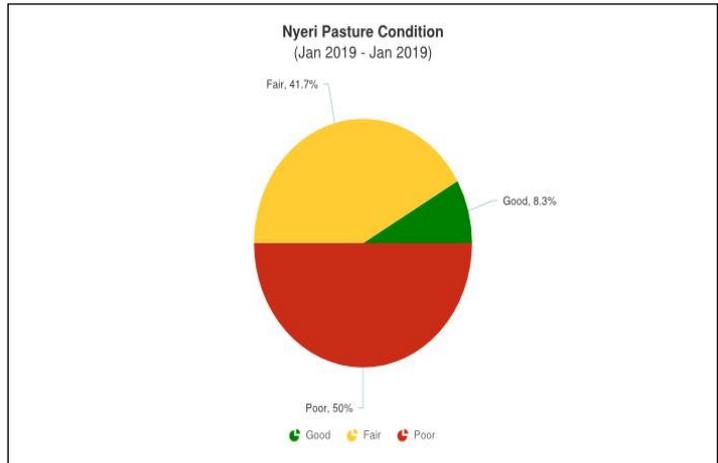
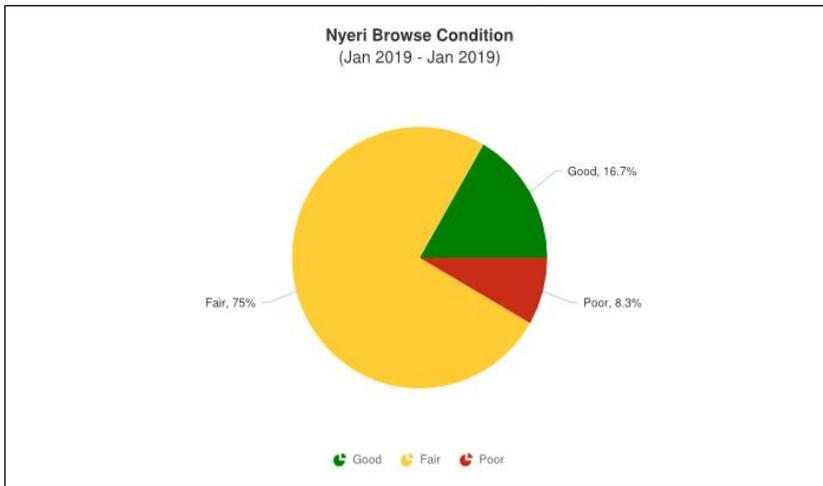


Figure 3(a): Nyeri county pasture condition

2.1.3 Browse

- The browse conditions had deteriorated in the month of January compared to the previous month. This is attributed to the dry weather conditions coupled with frequent frost attacks.
- Poor and fair browse conditions were reported in lower zones in both agro pastoral livelihood zones and mixed farming livelihood zones. The worst hit area is Thungari in Thegu river ward. As compared to a normal year the current situation is below normal.

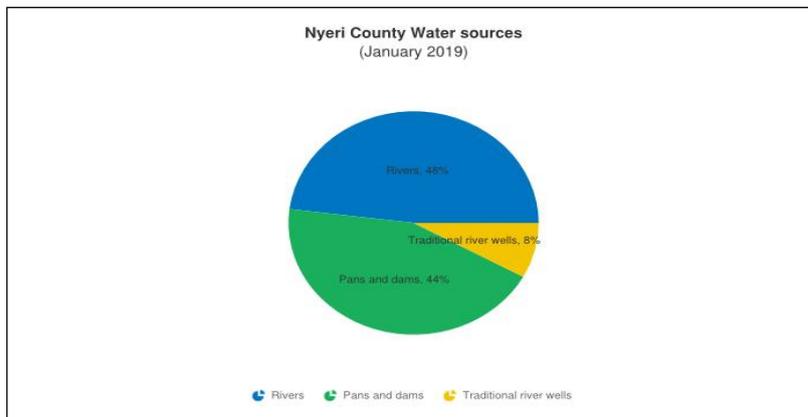


- Available browse was expected to last for 2 month in agro pastoral livelihood zones and 3months in mixed farming livelihood zones.

Figure 4(a): Nyeri county browse condition.

WATER RESOURCE

2.2.1 Sources



- Rivers were the main sources of water to majority of the households. 48 percent of the households relied on rivers while the rest depended on pans and dams and traditional river wells as shown in figure 3 below.

Figure 5: Nyeri county water sources

- Access to water had deteriorated during the month under review compared to the previous month. This attributed to the hot and dry weather conditions experienced in the month of January.
- Water holding structures are below 40 percent full due to evaporation and seepage. In the lower regions seasonal rivers have dried up, while permanent rivers are flowing at below base flow.
- Water rationing has intensified in Kieni with households receiving water three to four days in a week. The areas that are adversely affected are Kabati in Enderasha/Mwiyogo ward, Thungari in Thegu river ward and Burguret in Gakawa ward which are reported to be receiving water once per week.

2.2.2 Household access and Utilization

- Distances from the household to water sources increased by 6.7 percent from 1.4 Km in December to 1.5 Km in January. This could be attributed to drying up of water sources near homesteads coupled with lack of rains.
- In mixed farming livelihood zones and agro pastoral livelihood zones distances increased from 1.2 Km and 2.5 Km in December to 3.3 Km and 2.8 Km in January respectively.

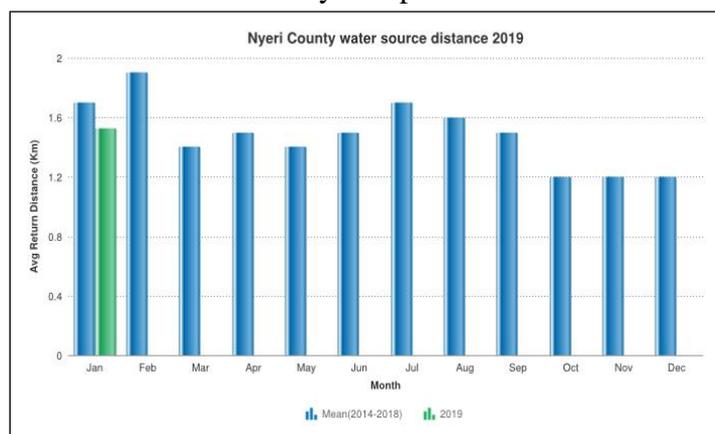
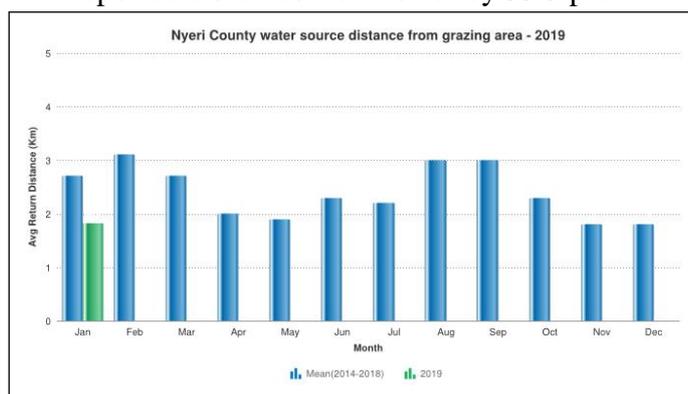


Figure 6: presentation of average distances to water

- Registered distances were lower by 11.8 percent compared to the 2014-2018 long term averages of 1.7 Km as shown in figure 6 above.

2.2.3 Livestock access

- Average distances from grazing field to watering points increased by 6 percent from 1.7 Km in December to 1.8 Km in January . Compared to 2014-2018 long term average of 2.7 Km, reported distances were lower by 33.3 percent as shown in figure 7.



- Current watering frequency for animals is twice daily which was normal in Kieni at this time of the year.

Figure 7: presentation of average grazing

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The livestock body conditions deteriorated during the month under review compared the previous month. Body condition ranged from fair to poor across livelihood zones attributed to poor pasture conditions and increased distances in search of pasture and water. Current body conditions are worse as compared to normal and a similar period last year.

3.1.2 Livestock Diseases

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

3.1.3 Milk Production

- Milk production increased slightly by 11 percent from 4.5 litres in December to 5 litres in January. Increased production was reported in high altitude areas that received offseason rains. In most households in lower zones production was on a decline.
- The month's production was lower by 3.9 percent compared to the 2014-2018 long term average of 5.2 litres as shown in figure 8.

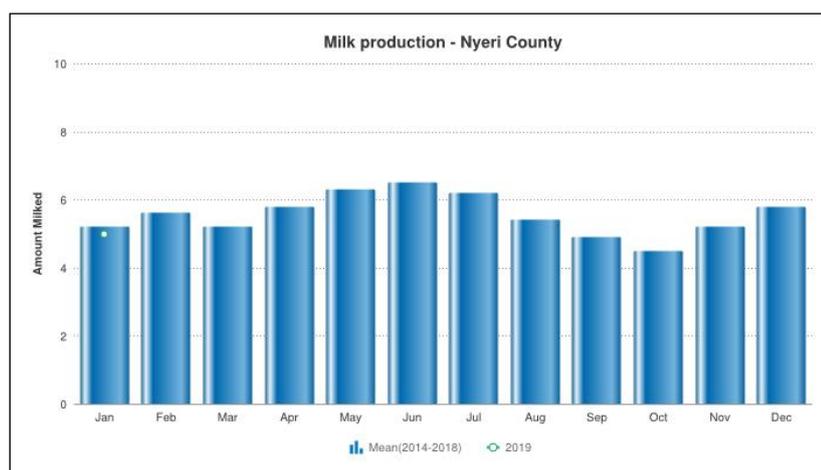


Figure 8: Presentation of average milk production

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

- Due to the dry weather conditions experienced in the month of January, crops at the farms have started showing signs of water stress. In lower zones, that are hard hit by the harsh weather conditions crops have withered. If the current situation persists farmers in Kieni could

experience a total crop failure. For the early planters maize and beans were at tussling and ponding stage respectively. Harvesting of potatoes was on-going. For those planted when the rains started maize and beans was at knee length and flowering stage respectively.

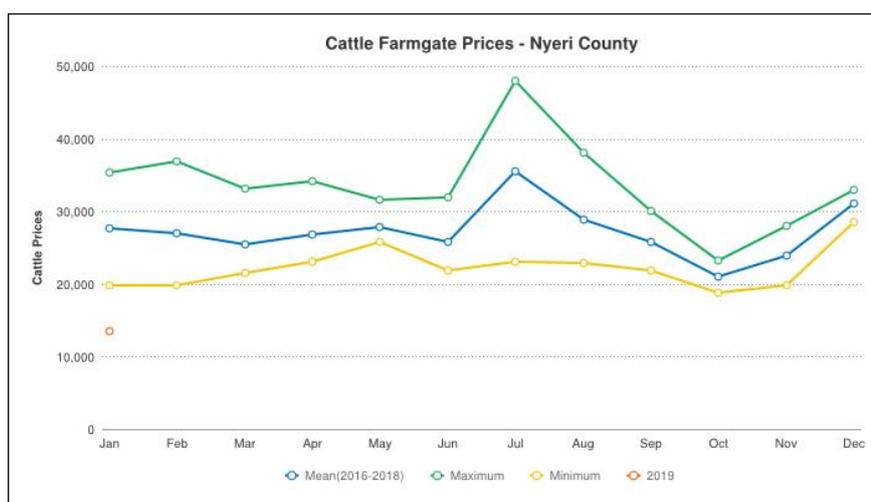
- Due to the delayed onset of the rains and its erratic performance crops were lost at the germination stage in at least ten to fifteen percent of the area planted. The worst hit areas were Thugari in Thegu ward and Mureru in Gakawa ward where crops were lost in at least 50 percent of the area planted. Only better off households, approximately five percent were able to replant due to the high cost of farm inputs leading to a decrease in the area put under crop production.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- Livestock prices dropped by 53 percent to retail for Ksh 13,500 in January from Ksh 28,417 in December.



Drop in prices could be attributed to the poor livestock body conditions.

- The month's prices were lower by 51 percent compared to the 2016-2018 short term average of Ksh 27,600 as outlined in figure 9.

Figure 9: Presentation of average cattle prices

4.1.2 Sheep prices

- Sheep prices dropped by 65 percent to sell at Ksh 4,417 in January from Ksh 7,000 in December. Drop in prices could be attributed to poor livestock body conditions coupled with a decrease in demand after the festive season.
- The registered prices were higher by 11.9 percent compared to the 2016-2018 short term averages of Ksh 3,948 as shown in figure 10.

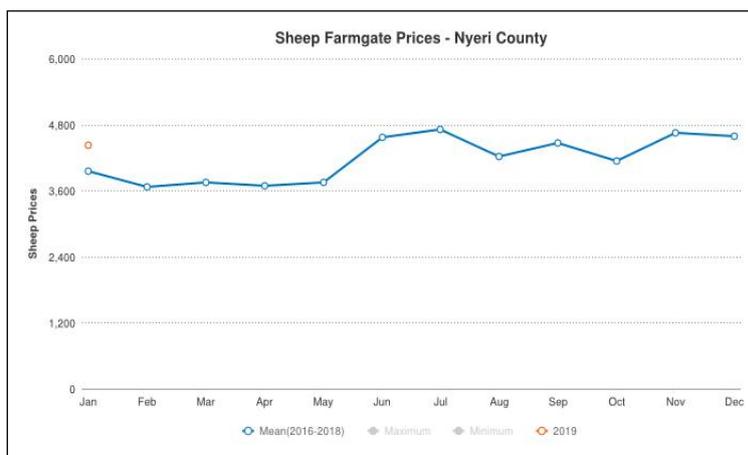
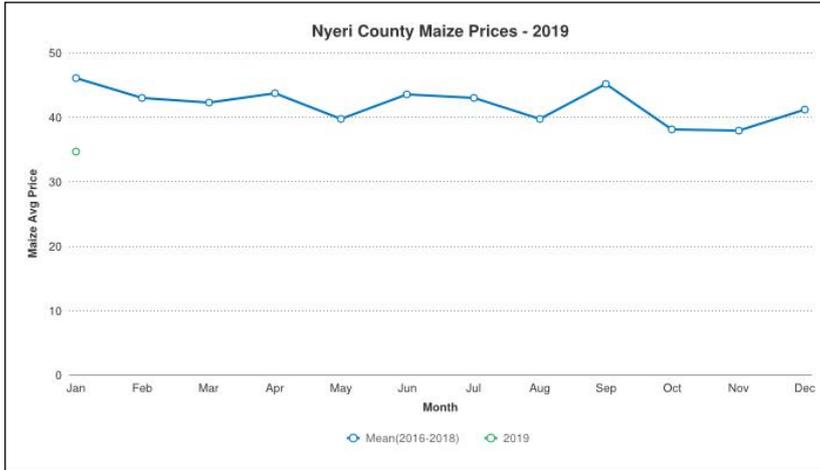


Figure 10: Presentation of average sheep prices

4.2 CROP PRICES

4.2.1 Maize



- Maize prices increased by 9.7 percent to retail at Ksh 35 in January 2019 from 31.9 in December. Increase in prices can be attributed to over reliance on markets for supply due to exhaustion of the commodity at the household level.
- Compared to the 2016-2018 short term averages of Ksh 35, current price were higher by 33.5 percent as shown in figure 11 below.

Figure 11: Outlines average price trends for maize

- Beans prices have been on an upward trend since September attributed to over reliance of markets for supply due to exhaustion at the households. During the month under review, prices increased by 6 percent to retail at Ksh 87.5 in January from Ksh 82.9 in December.
- The month's price was higher by 4 percent compared to the 2016-2018 short term average of Ksh 84.7 as shown in figure 12.

4.2.2 Beans

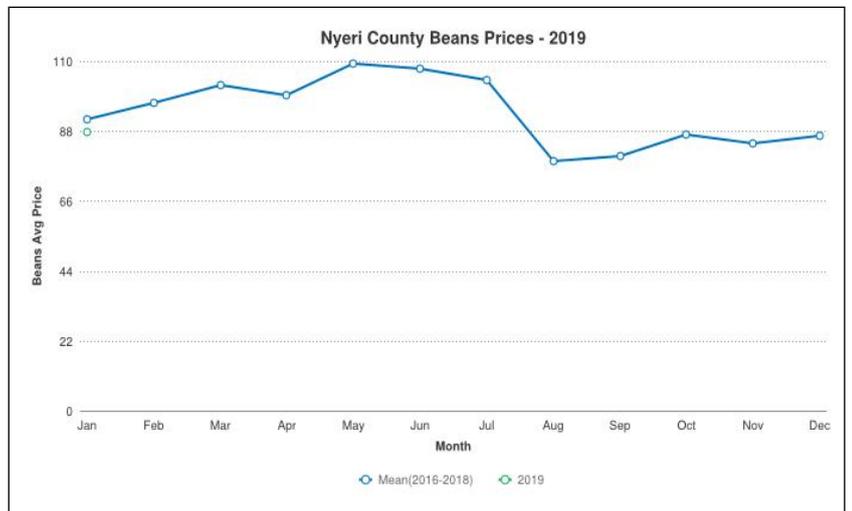


Figure 12: Outlines average price trends for beans

4.3 Livestock Price Ratio/Terms of Trade

- During the month of January a farmer would exchange a medium size goat for 138.2 Kg of maize. This was a decrease compared to last month as one would exchange a goat for 159 Kg of maize as shown in figure 13.
- Decrease in prices of livestock against increasing prices of food prices led to unfavourable terms of trade to livestock keepers. The month's TOT was higher compared to the long term average of 82.5 kg of maize for a goat.

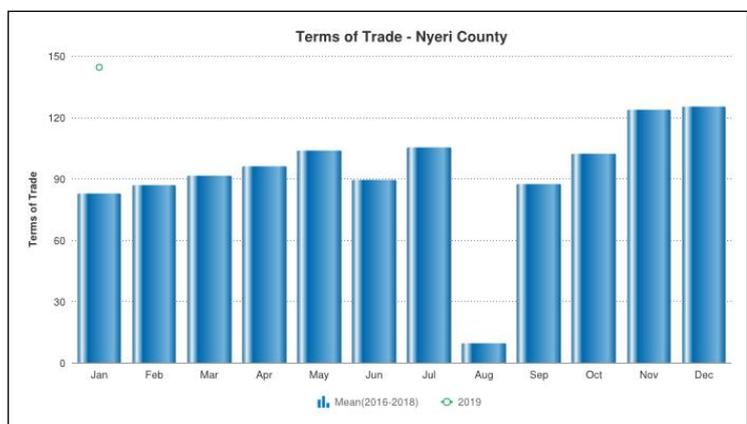
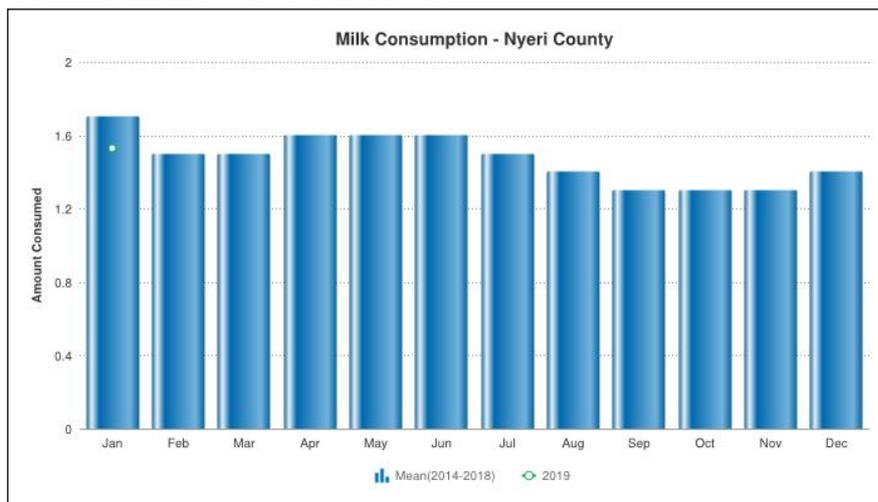


Figure 13: Outlines terms of trade

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION



□ Milk consumption remained same as was reported last month at 1.5 litres.

□ The month's milk consumption was lower by 12 percent, compared to the 2014-2018 long term average of 1.7 litres as shown in figure 14.

Figure 14: Outlines milk consumption for the county

5.2 FOOD CONSUMPTION SCORE

□ The food consumption score for Kieni deteriorated during the month of January compared to the previous month. Proportion of household at borderline and acceptable food consumption score was 38 percent and 59.5 percent compared to 28 percent and 72 percent in the previous month.

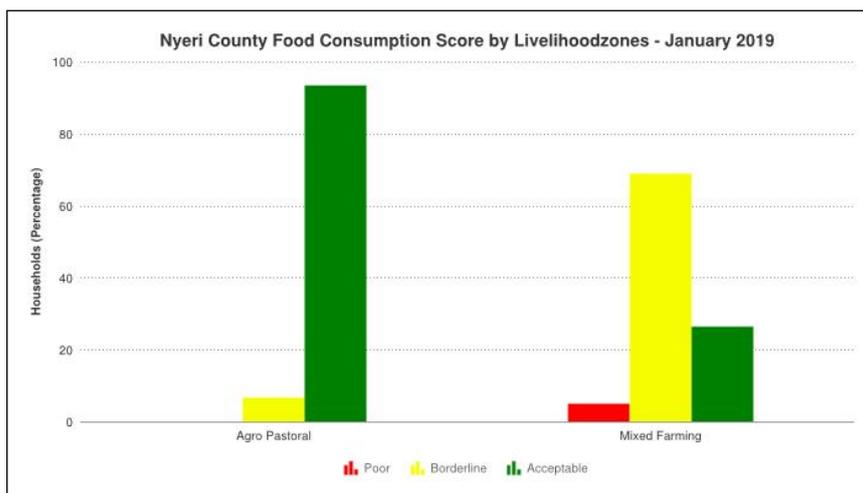


Figure 15: Outlines FCS by livelihood zones

□ During the month of January 2.5 percent of the households had a poor consumption score. There were variances in food consumption patterns at the livelihood zones with 93.3 percent of the households in agro pastoral livelihood zones registering acceptable food consumption levels compared to 26.2 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

5.3.1 Nutrition Status

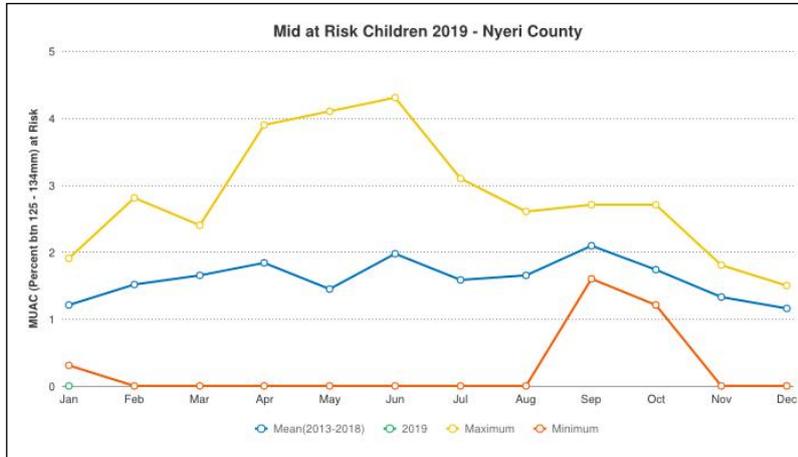


Figure 16: Presentation of nutrition status of children below the age of five

- There were no reported cases of malnutrition for under fives during the month under review as indicated in figure 16 below.

5.4 COPING STRATEGIES

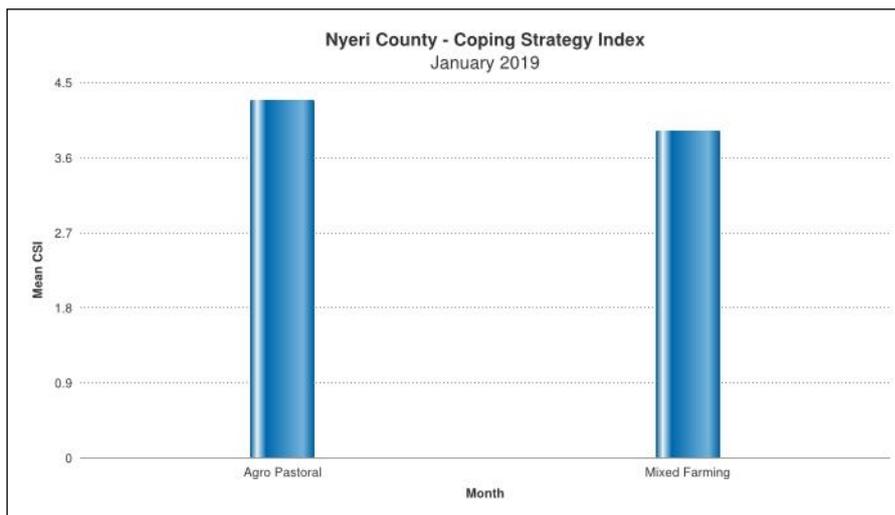


Figure 17: outlines the mean Coping Strategy Index

- Due to the decrease in agricultural labour opportunities, income at the household has decreased. Majority of the households have also exhausted food stock. This has forced most of the household to apply coping mechanism more frequently

during the month under review compared the previous month. The mean coping strategy increased by 5.7 percent from 3.88 in December to 4.10 in January.

- Agro pastoral farming livelihood zones registered a higher coping strategy index of 4.3 as compared to 3.9 in Mixed farming livelihood zones as indicated in figure 17 above.

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

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

7.0 EMERGING ISSUES

7.1 FOOD SECURITY PROGNOSIS

- From next month, forage and water sources are expected to become depleted due to the poor performance of the OND rains. Distances to grazing fields and from the grazing fields to water sources are expected to increase, leading to deterioration in livestock body conditions. Hence, a decline in access to milk at the household level.
- The household purchasing power will likely erode further given that majority of the households have exhausted their food stocks and will entirely depend on market purchases for staple food items.

7.2. LIVESTOCK AND MIGRATION.

- There has been in migration of livestock from the neighbouring counties. Two herds of about 100 heads of cattle were spotted grazing along the road in Naromoru/Kiamathaga ward.

8. RECOMMENDATIONS

- Activation of sectoral working groups to prepare for response plans (Action: NDMA)
- Rehabilitation of strategic water points and desiltation of pans and dams in preparation of MAM rainfall of e.g boreholes (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 with livestock drought pellets. (Action: NDMA)