

1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- December was characterised by below average rainfall amounts that were poorly distributed across space and time in addition to a premature cessation across all livelihood zones during the first and second dekads. Of the three major livelihood zones, the Agro-pastoral livelihood zone, which is the largest in total land area, received the least amounts and also recorded the earliest cessation during the first week of December.
- Rainfall performance during the month was not normal for this time of the year.

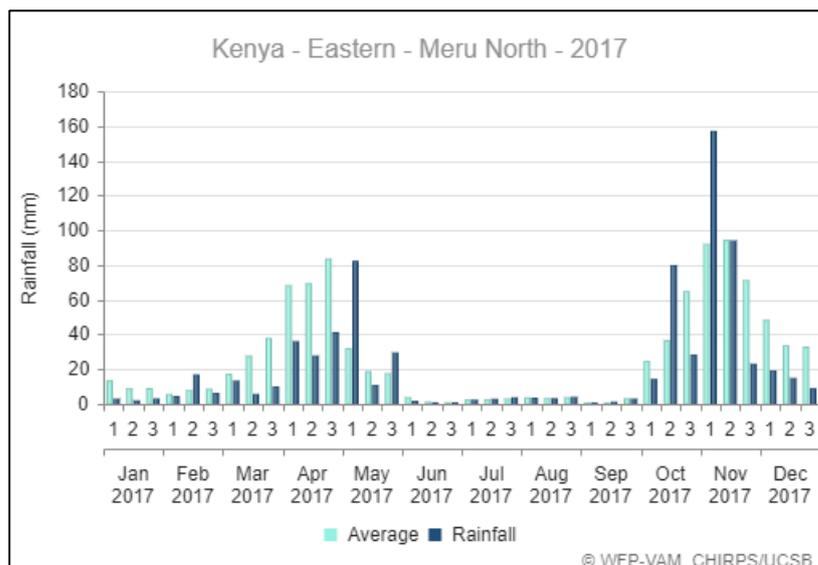


Figure 1a: MERU North: Rainfall performance in December 2017

2. IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- Despite poor rainfall performance and an early cessation, considerable rains received during the month of November were able to maintain normal to above normal vegetation greenness throughout the month in all the sub-counties as illustrated by the Vegetation Condition Index matrices below:

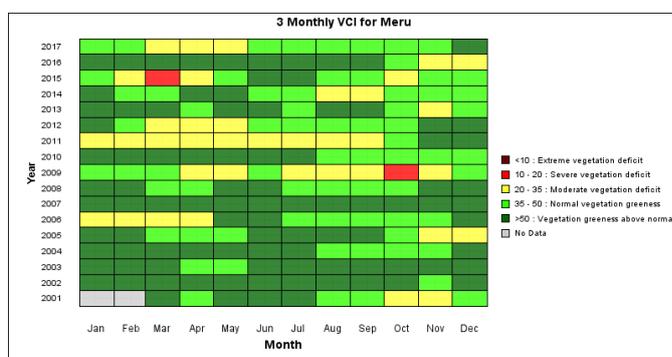


Figure 2a: VCI matrix for Meru County, 2001 – 2017

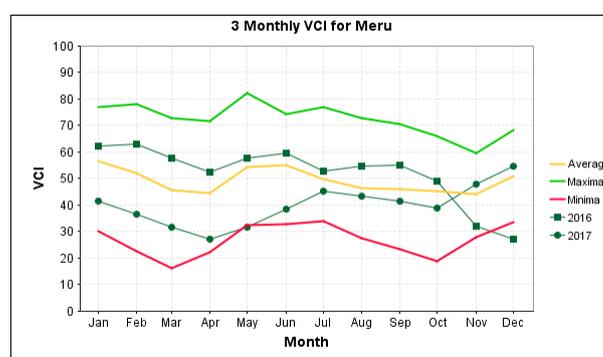


Figure 2b: VCI graph for Meru County, December 2017

2.1.2 Pasture

- Slight improvements in pasture regeneration were noted during the month across all livelihood zones following good rains that were received in November. However, a few pockets in the Agro-pastoral livelihood zone where pastures had been completely exhausted registered below average pasture regeneration. These areas include lower areas of Amwathi, Kangeta, Akithi, Muthara and Karama wards.
- Of the interviewed communities, 58 per cent of them reported pastures being of good conditions; particularly in the Rain-fed cropping livelihood zone. The rest reported pastures as being of fair conditions.
- Nonetheless, current pasture amounts will not sustain livestock for the next four months unless supplemented by crop residues from farms.

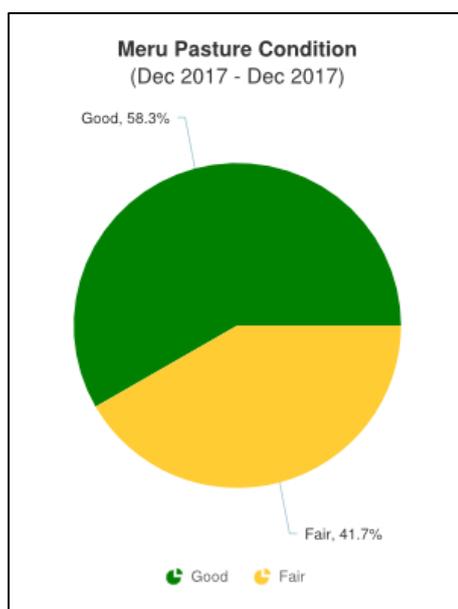


Figure 3: Meru County Pasture conditions. December, 2017

2.1.3 Browse

- Browse conditions improved further this month across all livelihood zones compared to the previous month. 50 percent of the interviewed communities reported browse being of good conditions compared to 25 percent the previous month. The rest reported browse being of fair conditions compared to 75 percent the previous month.
- The positive trend is normal for this time of the year although amounts are still below normal.

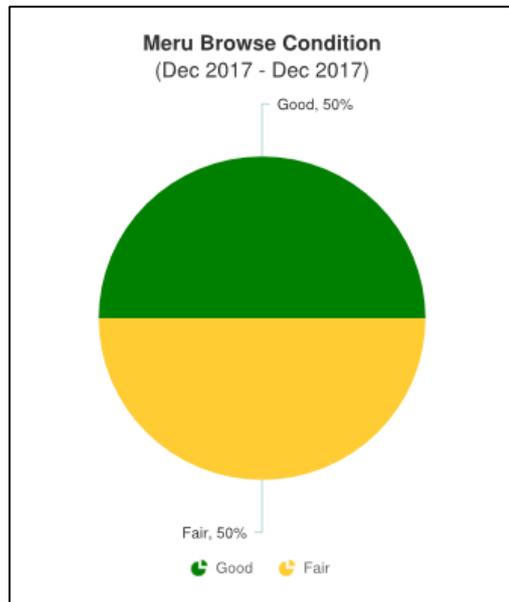


Figure 4: Meru County Browse conditions, December 2017

2.2 WATER RESOURCE

2.2.1 Sources

- Overall water situation during the month was fair across all livelihood zones. Rivers were the most relied upon source for both domestic use and for livestock across all livelihood zones accounting for 56 percent of all interviewed communities. However, volumes in seasonal rivers flowing into the Agro-pastoral livelihood zone declined significantly towards the end of the month. Water pans and dams that recharged during the month of November were significant sources for livestock in the grazing areas of the Agro-pastoral livelihood zone which in turn reduced pressure on the existing boreholes in these areas. Springs and community based piped water projects were also important sources during the month.
- Roof catchments for households, natural ponds and other natural water collection points in the grazing areas were unavailable this month as there was no sufficient rains.
- Despite the current water situation being fair for this time of the year, scarcity and shortages are expected in January 2018; earlier than normal.

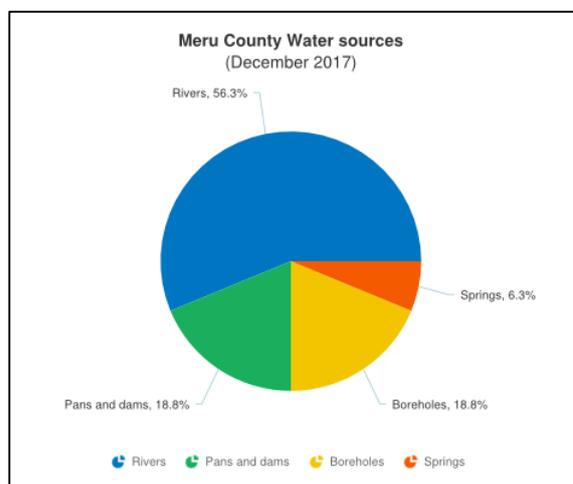


Figure 5: Meru County major water sources, December 2017

2.2.2 Household access and Utilization

- Trekking distance for households increased slightly this month to an average of 9.9 km compared to 8.1 km the previous month. This increase could have resulted from the unavailability certain sources such as roof catchments, broken/damaged water intakes and pipes in the case of community projects, and reduced flows in the seasonal rivers and streams.
- Current distances are not normal for this time of the year and are expected to increase further next month with the expected water shortages.

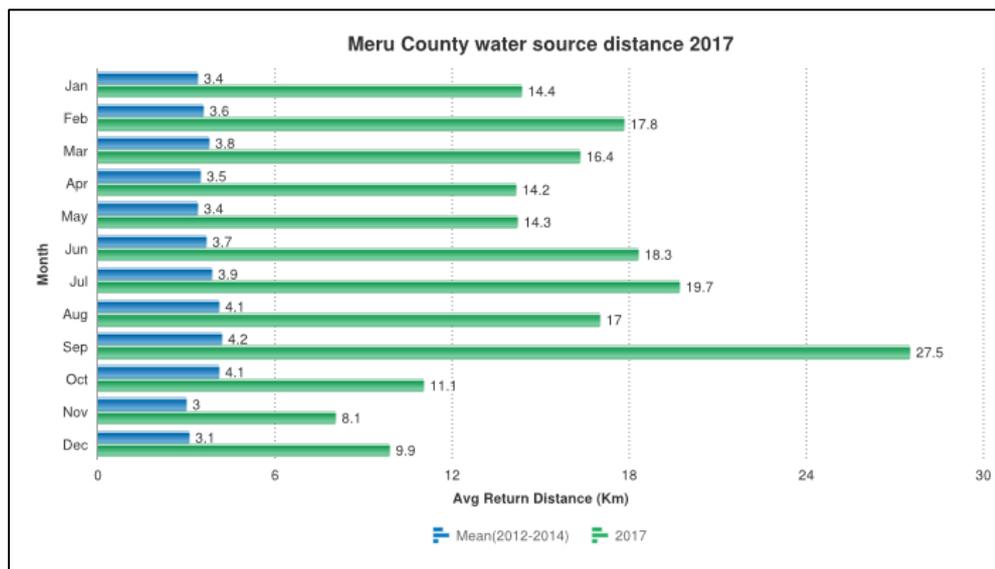


Figure 6: Meru County Household distances to water sources. December, 2017

2.2.3 Livestock access

- Distances to watering points from grazing areas increased to an average of 14.7 km this month compared to 10 km the previous month. This increase was mainly noted in the grazing areas of the Agro-pastoral livelihood zone. Limited volumes in the seasonal rivers feeding the zone, absence of other natural water collection points due to long dry spell, long distances between grazing areas and available pans, dams, and boreholes, and insecurity in the grazing and some watering points contributed to the noted increase.
- Given that the current dry weather conditions are likely to persist until late March 2018, distances are expected to increase further from next month.

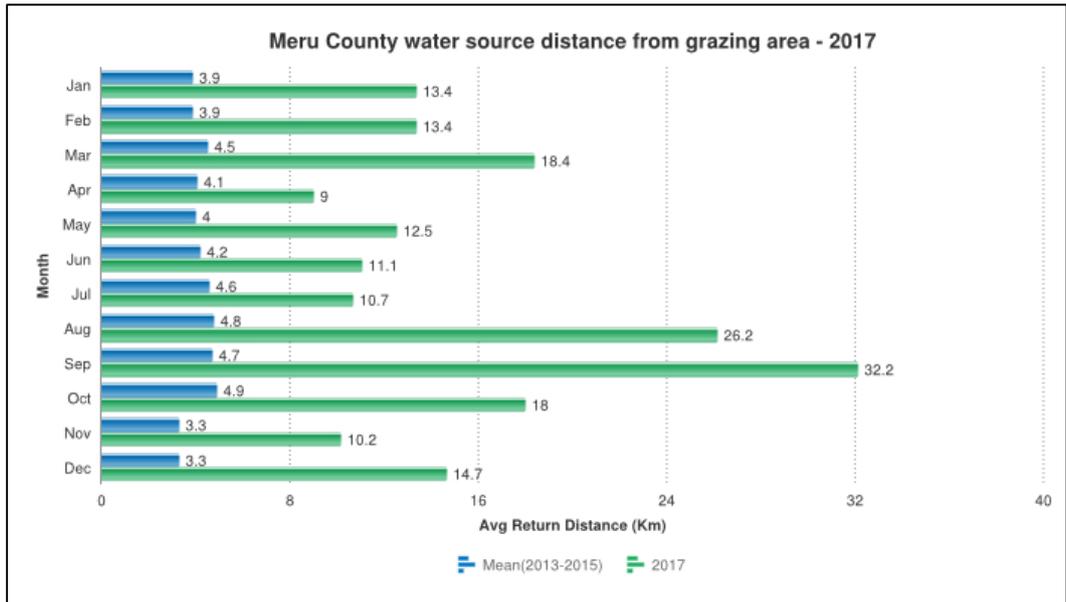


Figure 7: Meru County Livestock watering distances from grazing areas, December 2017

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body conditions varied across livelihood zones. Cattle were of fair body conditions in the Agro-pastoral livelihood zone and of fair to good conditions in the Rain-fed cropping and Mixed Farming livelihood zones. Other species (mainly goats and sheep) were of fair to good body conditions across all livelihood zones.
- Current body conditions are slightly below average for this time of the year.

3.1.2 Livestock Diseases

- Suspected cases of Lumpy skin disease and Contagious Bovine Pleuro-pneumonia were reported in sheep and cattle in Kangeta ward of Igembe Central Sub-County while Newcastle disease was reported in poultry across the County.

3.1.3 Milk Production

- Milk production increased to an average of 13 litres this month compared to 7 litres last month. This increase results from improved body conditions compared to the previous month. Current production figures are higher than the long term average for the month and are likely to remain high next month.

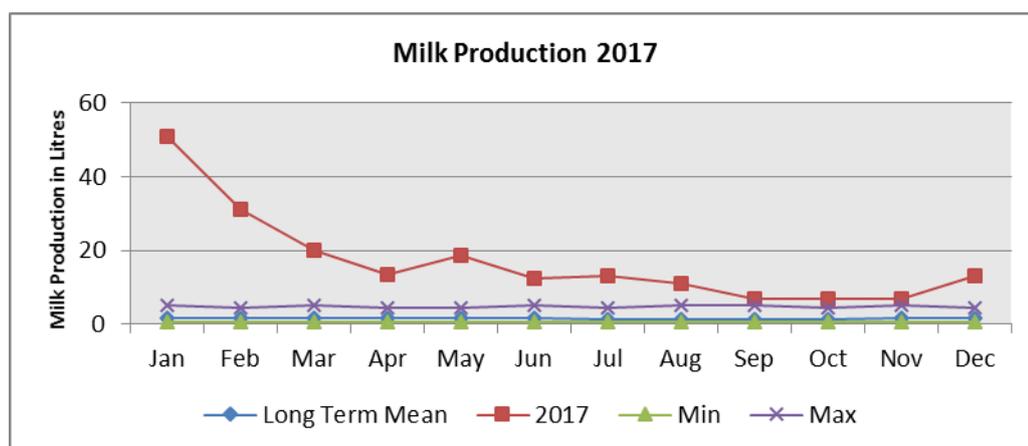


Figure 8: Meru County Milk production, December 2017.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

- Crop performance this season has been below average in most areas as a result of poor spatial and temporal distribution of rainfall in addition to a premature cessation during the month, and presence of stubborn pests especially the fall army worm (FAW) and the stalk borers. FAW is reported to have infested approximately 23 percent of cropped area and is likely to lead to almost 8 percent losses in maize yield this season (Min. Agriculture, Meru County).
- Currently, maize is at varying growth stages across the livelihood zones. In the Rain-fed cropping and Mixed Farming livelihood zones majority are at tussling, ear/cob formation, and grain filling stages. At least 30 percent of the long term average yield is expected. In the Agro-pastoral livelihood zone, maize crop is generally moisture stressed with majority in the lower areas drying up. Most farmers in this zone covering lower Igembe North, Igembe Central,

Tigania East, Tigania West and Buuri Sub-counties are now using the crop as fodder for livestock. No harvests are expected in this belt.

- Beans are at early maturity stages with consumption of green crop reported across all livelihood zones. However floral abortion and early drying was noted in vast areas of the Agro-pastoral livelihood zone. Fair harvests are expected next month.
- Cowpeas, dolichos, and green grams are at flowering, pod formation and early maturity stages. Consumption of green cowpeas was noted in the Rain-fed cropping livelihood zone.
- In sum, while a considerable harvest of pulses (including the consumed green crop) is expected this season, below average maize harvest is expected across all livelihood zones. This is not normal for this time of the year.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- The average price of a mature bull increased by 30 percent this month to an average of Kshs. 15,327 compared to Kshs. 11,766 the previous month. Current prices are a mere 1.75 percent below the 3 year average for the month.
- The increase in prices was anticipated as body conditions were better than those of the previous month. Prices are expected to remain fairly high over the coming two months provided there are no disruptions of the markets.

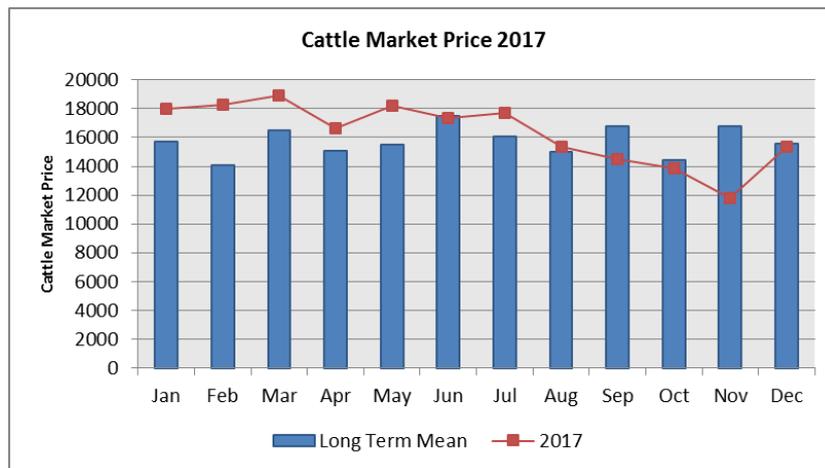


Figure 9: Meru County average cattle market prices, December 2017.

4.1.2 Goat Prices

- An increased demand for goat meat during the festive month of December coupled by a low supply in the markets saw the price of a mature goat increase by 19.1 percent to Kshs 3,716 compared to Kshs 3,120 the previous month.
- Current prices are within the 3 year average for the month and are expected to maintain an upward trend over the coming two months.



Figure 10: Meru County average goat market prices, December 2017.

4.2 CROP PRICES

4.2.1 Maize

- Continued offloading of stocks previously held by traders and imports from other regions led to a further 4.4 percent decline in maize prices compared to last month's prices. Currently, a kilo of maize grain retailed at an average of Kshs 43 compared to Kshs 45 the previous month.
- Maize prices are expected to remain above the three year average over the coming two months until the upcoming harvest period in late February and early March 2018.

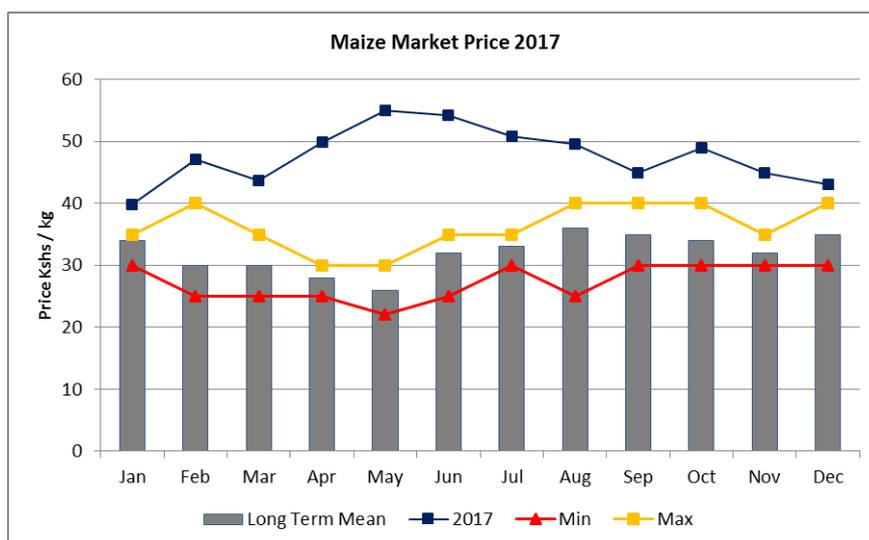


Figure 11: Meru County average maize market prices. December, 2017

4.2.3 Beans

- Ongoing consumption of green beans, a prospect of good bean harvests, and increased offloading of previous stocks held by traders led to a 14 percent decline in bean prices this month compared to last month. However, the current price of a kilo of beans, which stood at Kshs 80 compared to Kshs 93 the previous month, was 19 percent above the 3 year average for the month.
- Prices are expected to remain relatively low as harvests commence next month.

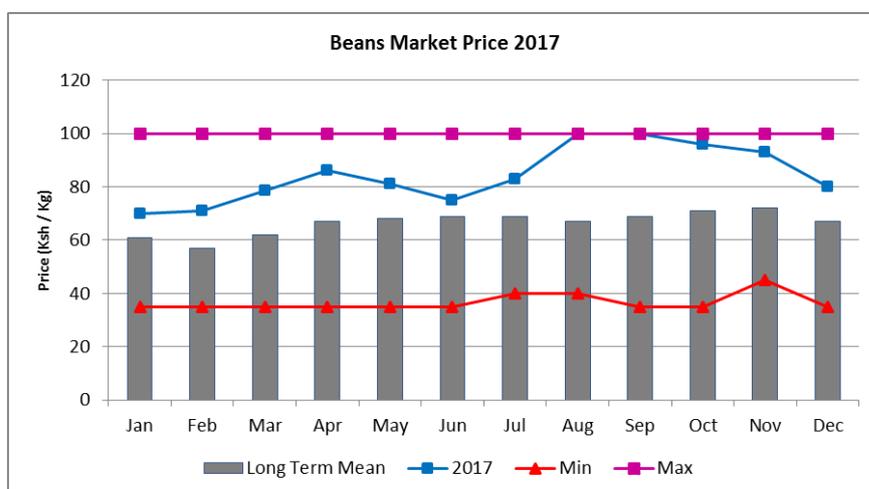


Figure 12: Meru County average bean market prices. December, 2017

4.3 Terms of Trade (Goat/cereal price ratio)

- Lowly stagnated cereal prices and appreciating goat prices over the last three months have continually improved terms of trade. Currently, the sale of a mature goat is enough to purchase 87 kgs of maize compared to 70 kgs the previous month and 60 kgs in October. However, current terms of trade are still below the three year average for the month.
- Agro-pastoral livelihood zone recorded poorest terms of trade with only 63 kgs of maize purchased from the sale of a mature goat in Igembe Central Sub-county. Rain-fed cropping livelihood zone had the best terms of trade with proceeds from the sale of one goat purchasing 124 kgs of maize.

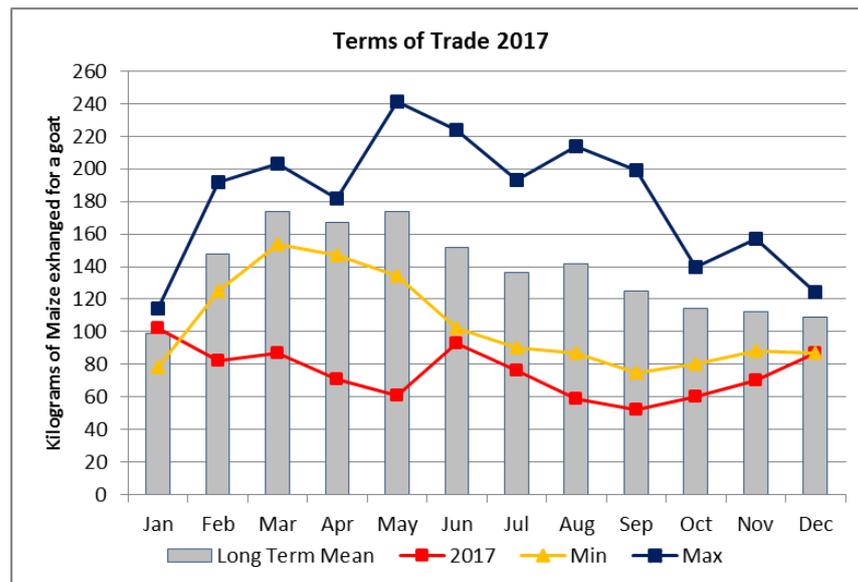


Figure 13: Meru County terms of trade. December, 2017

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 FOOD CONSUMPTION SCORE

- Food consumption behaviour improved further this month compared to last month. As such, the proportion of households that had poor food consumption scores declined to a mere 7 percent compared to 35.6 percent the previous month while those with borderline increased to 43.43 percent compared to 31.7 percent the previous month.
- Tigania East Sub-County had the highest number of households with acceptable food consumption scores while Tigania West and Igembe Central had the highest number of households with poor food consumption scores.

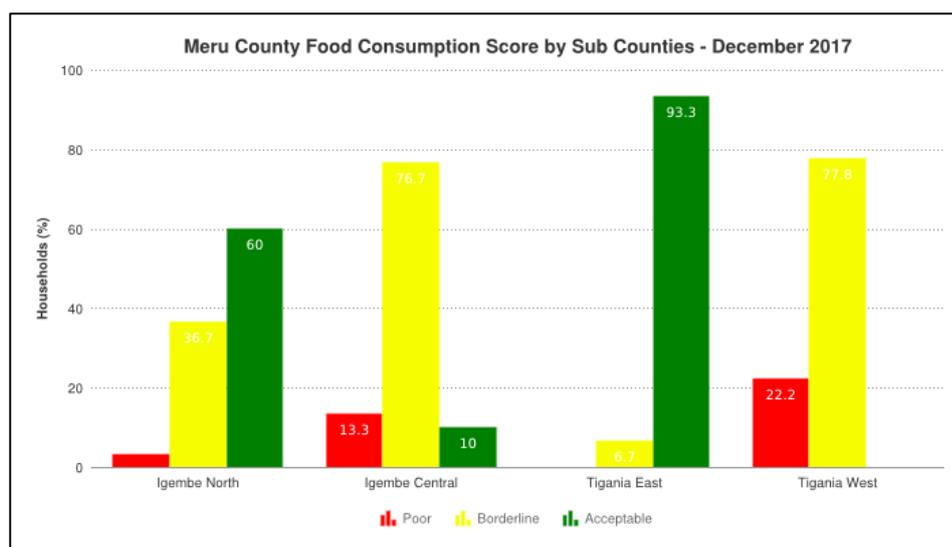


Figure 14: Meru County food consumption, December, 2017

5.2 HEALTH AND NUTRITION STATUS

5.2.1 Nutrition Status

- Nutrition status of children under the age of five years improved slightly this month compared to last month. Of sampled children, 20.6 percent of them were at risk of malnutrition compared to 24.3 percent the previous month. Of all the children at risk, none of them was moderately (MUAC 115 - 124mm) or severely malnourished (MUAC<115mm) similar to last month.

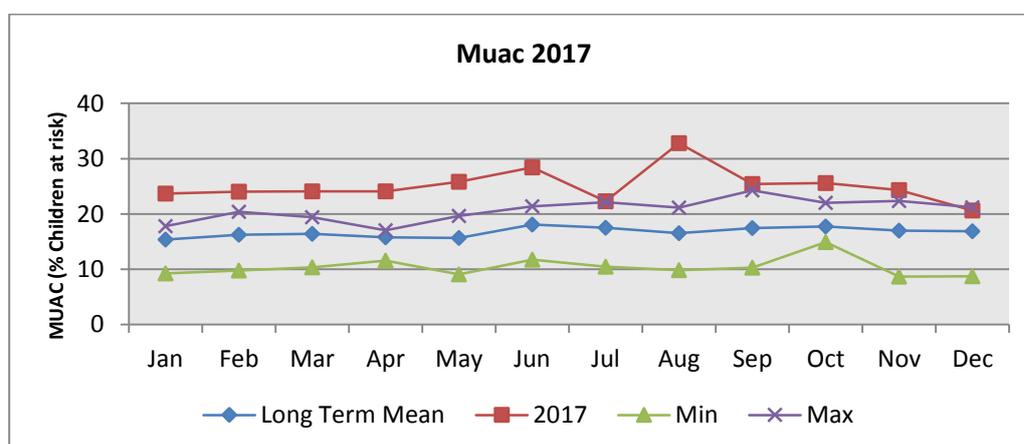


Figure 15: Meru County MUAC status, December, 2017

5.2.2 Health

- A severe outbreak of *Amoebiasis* was reported in Tigania East and Tigania West Sub-counties towards the end of the month. One person is reported to have died and at least 30 hospitalised. The disease is characterised by severe diarrhoea and vomiting.

CURRENT INTERVENTION MEASURES (ACTION)

6.1 NON-FOOD INTERVENTIONS

- No none food aid interventions were noted this month

6.2 FOOD AID

- No food aid distribution was reported during the month.

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Tensions are still high in Igembe Central and Igembe North due to insecurity and cattle rustling in the area. A number of farmers have been unable to access their farms in the lower areas of Kangeta ward in Igembe Central Sub-county due to insecurity and banditry.

8. RECOMMENDATIONS

- With the upcoming harvests, Ministry of Agriculture and the County Government of Meru need to sensitize farmers of proper post-harvest management techniques to avoid crop losses.
- Public health and sanitation department needs to take an active role in sensitizing residents on the importance of water treatment to avoid waterborne diseases such as the cases witnessed this month.

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 signalled 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
	> +1.5 or 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	Agricultural Drought Category
	3-monthly average	
	≥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	Emaciated	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, 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 signalled 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.