



# 1. CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

- The month of July was mostly dry across all livelihood zones with light showers realised around the Nyambene ranges. There were also occasional morning drizzles in most of the rain-fed cropping and the mixed farming livelihood zones.
- Land surface temperatures were generally low due to the prevailing cold conditions that also led to foggy conditions in the rain-fed cropping and mixed Farming livelihood zones.
- The absence of rains across most areas at this time is normal.

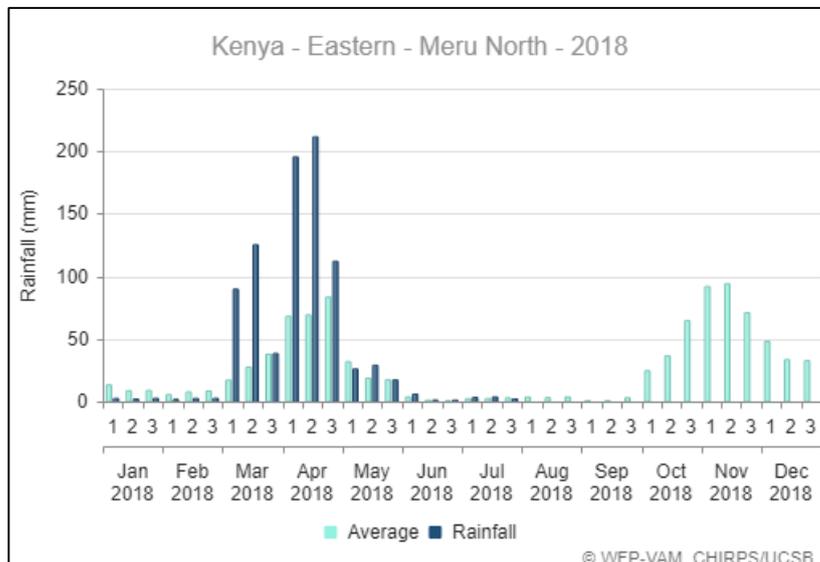


Figure 1a: Meru North: Rainfall totals for July 2018

# 2. IMPACTS ON VEGETATION AND WATER

## 2.1 VEGETATION CONDITION

### 2.1.1 Vegetation Condition Index (VCI – 3 month)

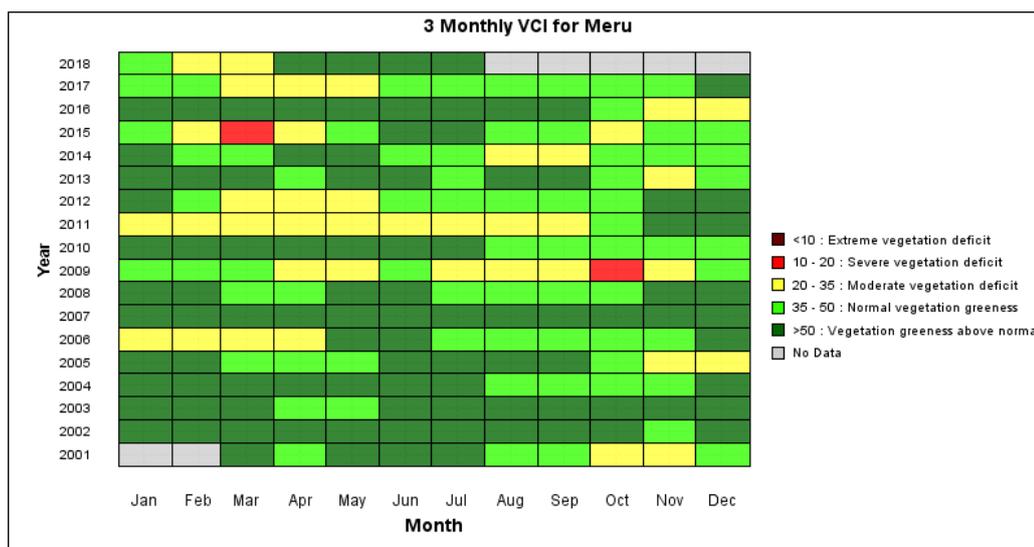


Figure 2: VCI matrix for Meru County, 2001 – 2018

- Natural vegetation conditions within the County have remained above average buoyed by the good rains received in March through to May. VCI (3-month) improved from 65.85 in July to 72.25 in July inching closer to the long-term maximum value for the month.

### 2.1.2 Pasture

- Pastures remained good especially in the grazing areas of the agro-pastoral livelihood zone following the good March to May rains that allowed for good regeneration. Further, cooler temperatures witnessed during the month reduced moisture losses by lowering evapotranspiration rates.
- Currently, pastures are likely to sustain livestock up to late September

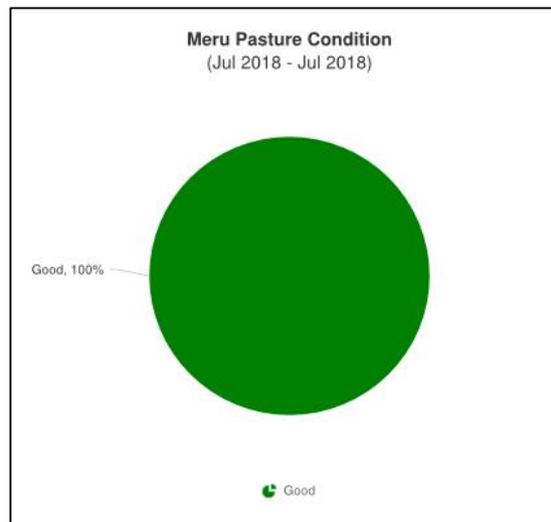


Figure 3: Pasture conditions

### 1.3 Browse

- The above average rains received from March to May that allowed for good browse regeneration, and the cooler temperatures that have prevailed in July, have maintained good browse conditions across all livelihood zones. All interviewed communities reported browse being of good conditions.
- Current browse quantity and quality is expected to sustain browsers for the next two to three months.

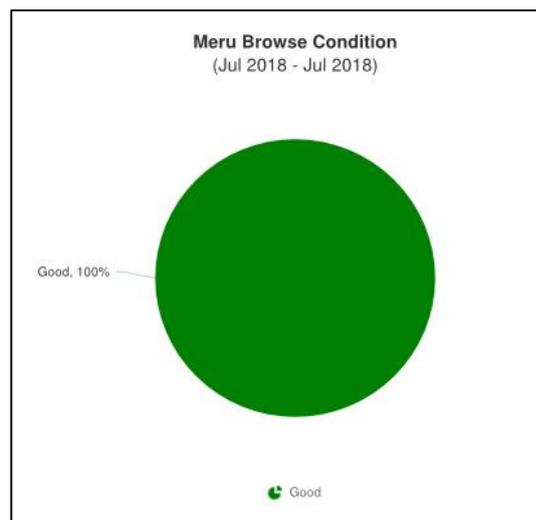


Figure 4: Browse conditions

## 2.2 WATER RESOURCE

### 2.2.1 Sources

- The main water sources for both households and livestock were boreholes, rivers, water pans, and to a notable extent, water vendors and piped water from community-based projects.
- Boreholes accounted for the highest number of users at 53.8 per cent compared to 25 per cent in July while rivers and water pans had an equal proportion of users. Majority of water pans in the grazing areas of the agro-pastoral livelihood zone such as Kachiuru, Ithata, and Njaruine have completely dried up leaving Makinya and Maranatha. Boreholes in this zone especially Kandebene, Inono, Ndumuru, and Mariara boreholes are currently the major water sources for both livestock and households. Commercial water vendors were also important sources, especially in Igembe North sub-county.
- Cost of water a 20-litre jerry can at source (borehole) ranged between Ksh. 2 to 5 and cost between Ksh. 15 – 20 upon delivery.
- Treatment of water at household levels still remained low with only 25 households noted to have employed water treatment techniques during the month. Major water treatment methods applied included boiling and filtration.

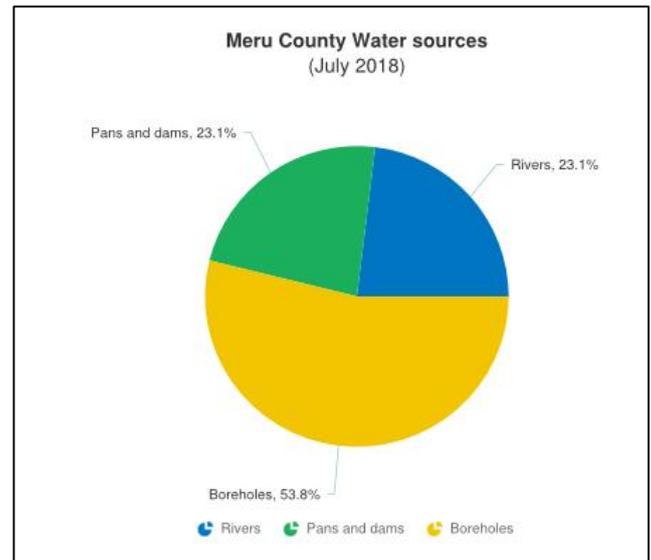


Figure 5: Major water sources

### 2.2.2 Household access and Utilization

- The dry spell that has prevailed from late May and most of June has led to a decline in the number of available water sources and has also led to increased trekking distance for households. Average trekking distance to watering points for households has increased to 8 km in July compared to 7 km in June.
- Water sources are likely to decline further with the dry conditions expected in August and September. This will likely lead to increased distances within the same period.

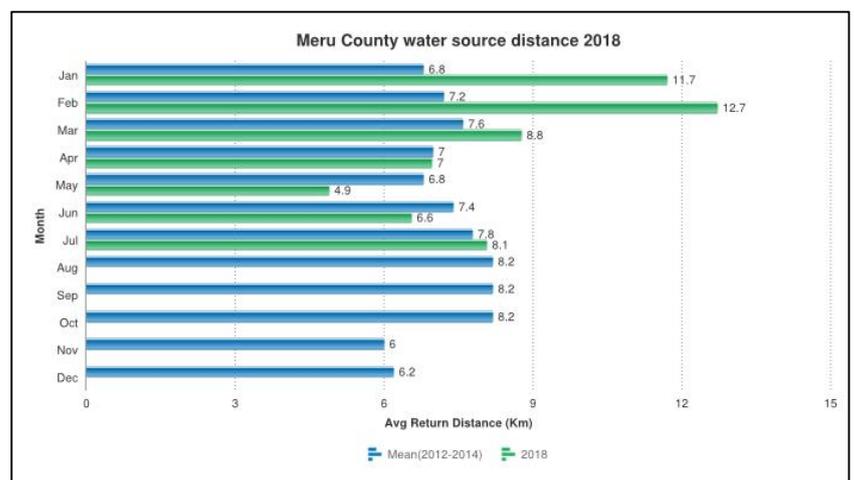


Figure 6: Household return distances to water sources.

### 2.2.3 Livestock access

- The average distances from grazing areas for livestock have increased from 9 km in June to 10 km in July. The reduction of water sources, particularly open sources, in the grazing areas of the agro-pastoral livelihood zone led to increased distances from grazing areas to watering points. Although boreholes provided an alternative, their low numbers and sparse distribution also contributed to increased distances.
- Distances are expected to increase further during the typically dry months of August through to early October.

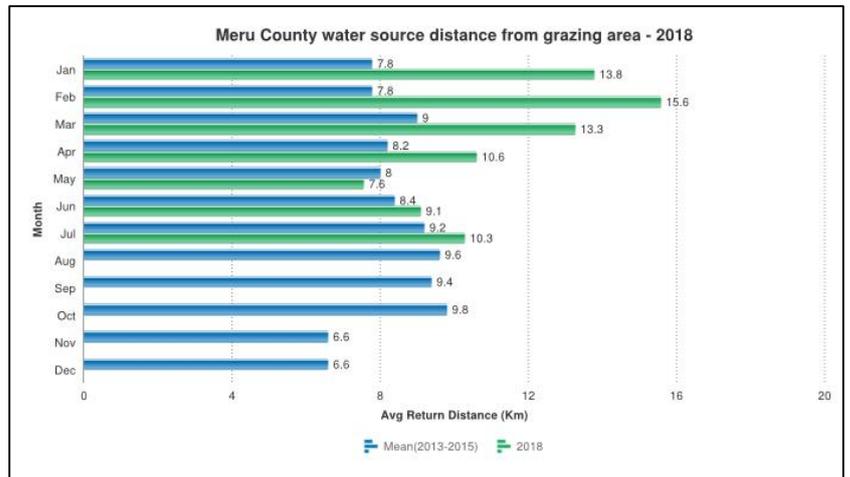


Figure 7: Livestock return watering distances from grazing areas

## 3.0 PRODUCTION INDICATORS

### 3.1 LIVESTOCK PRODUCTION

#### 3.1.1 Livestock Body Condition

- Livestock body conditions were good across all species and across all livelihood zones due to good pasture and browse quality. Current body conditions are normal for this time of the year and are likely to prevail throughout the month of August.

#### 3.1.2 Livestock Diseases

- The Rift Valley Fever disease alert issued by the Veterinary Department of Meru County in May following an outbreak in Marsabit, Wajir, Isiolo counties was lifted in late July. Nonetheless, active surveillance of stock routes and slaughterhouses is ongoing across the County.

#### 3.1.3 Milk Production

- Milk production has remained largely unchanged this month compared the last three months. Production still stood at an average of 1.9 litres per household per day obtained from cattle similar to last month.
- Production is expected to remain unchanged next month.

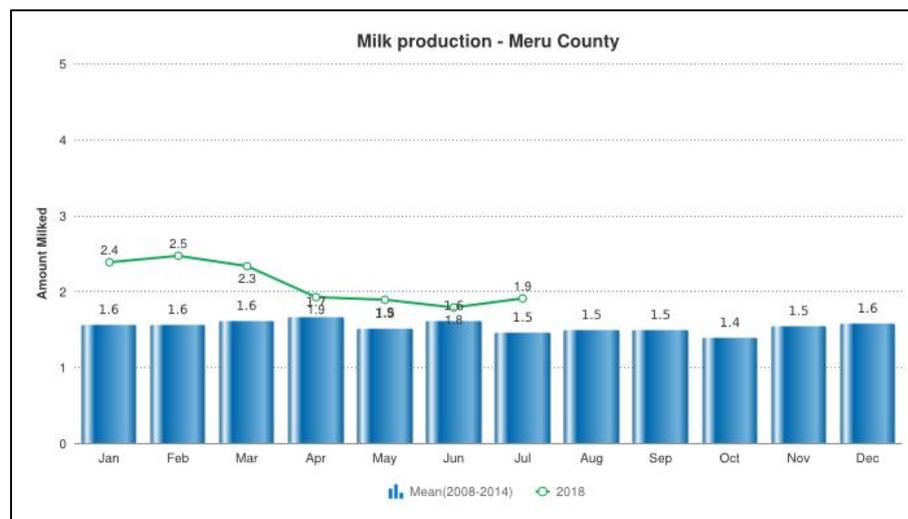


Figure 8: Milk production per household per day.

### 3.2 RAIN-FED CROP PRODUCTION

#### 3.2.1 Stage and Condition of Food Crops

- Maize harvesting commenced in most areas of the agro-pastoral livelihood zone while in the Rain-fed cropping and the mixed farming livelihood zones, harvesting is expected to commence early August. A near-normal to normal harvest of the crop is expected in all areas following the good rains received during the March to May period. Losses from Fall Armyworm (FAW) infestation reported across all livelihood zones during the growing period led to minimal losses compared to the October-November-December cropping season.
- The harvesting of beans and green grams concluded in late June with near-normal harvests realised. High leaching and waterlogging in poorly drained soils led to poor performance and reduced yields while the prevailing wet weather throughout the season led to high incidence of fungal diseases, especially in green grams. Harvesting of pigeon peas is expected to begin in early August through to September.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

- The average prices of cattle have been on a steady rise over the last two months due to reduced supply as livestock keepers preferred to hold on to their stocks to increase herd numbers and improve body conditions. The average price of a three-year-old bull rose to Ksh. 20,515 in July from Kshs 19,590 in June, a 4.7 per cent rise. Current prices were 27.9 per cent higher than the three year average for the month and are not normal for this time of the year.

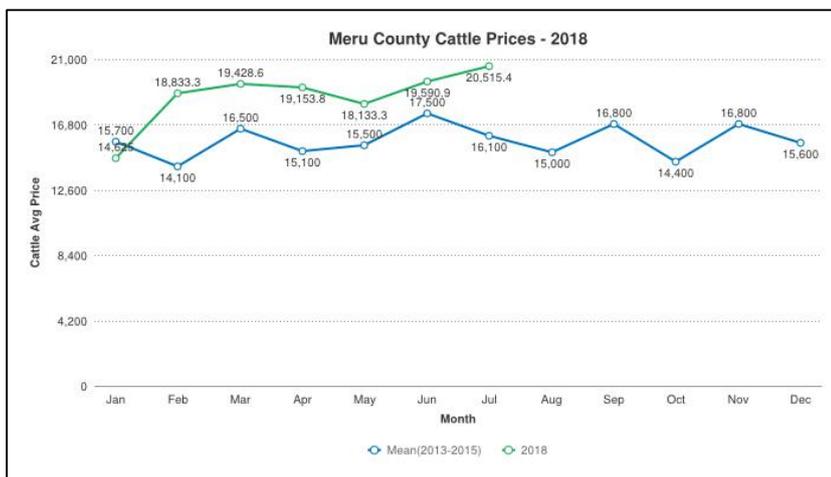


Figure 9: Average cattle market prices.

#### 4.1.2 Goat Prices

- The average price of a mature goat declined by 8.7 per cent from prices recorded in June to retail at Ksh. 4,239. The decline in prices could be attributed to an increase in supply as small stock are relatively easy to dispose to fund household and other related expenses.
- Current prices for the month are within the three-year averages for the month.
- The highest prices were recorded in the agro-pastoral livelihood zone with Mutuati market reporting the highest price of Kshs 5,000.

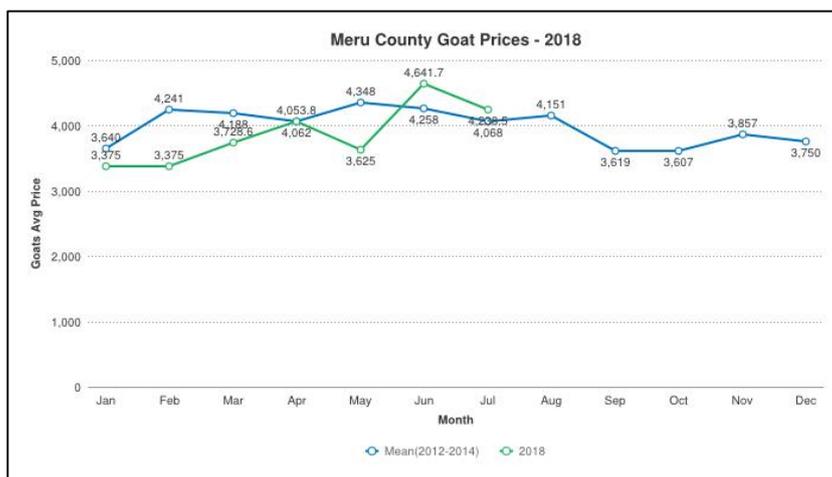


Figure 10: Average goat market prices.

## 4.2 CROP PRICES

### 4.2.1 Maize

- The price of a kilogram of maize grain has declined marginally this month to an average of Ksh. 26 compared to Ksh. 27 in June. The decline that has been witnessed since much was further augmented this month by the ongoing harvests in all parts of the County.
- Prices are expected to remain low in the coming months especially if normal harvests for the season are achieved by late August.

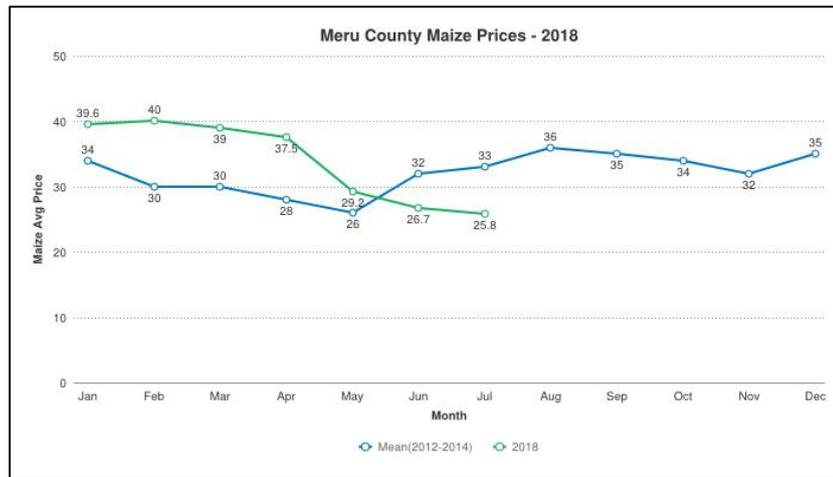


Figure 11: Average maize market prices.

### 4.2.3 Beans

- The price of a kilogram of beans declined marginally to an average of Ksh. 46 compared to Ksh. 47 in June due to the just concluded harvests. The prices for the month are 33 per cent below the three year average for the month.
- Prices are expected to remain low in the next two months as households have improved their stocks minimising their dependence on market supplies.

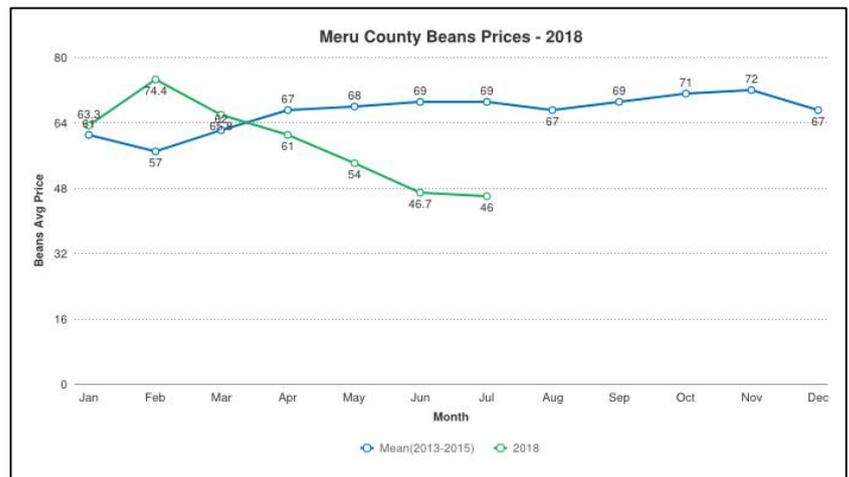


Figure 12: Average bean market prices

### 4.3 Terms of Trade (Goat/cereal price ratio)

- Terms of trade remained favourable this month although the amount of maize grain that could be purchased from the sale of one goat declined to 158 kgs compared to 174 kgs in June. This decline results from a decrease in the price of goats and a near stable maize price.
- Nonetheless, terms of trade are expected to remain favourable over the next two months.

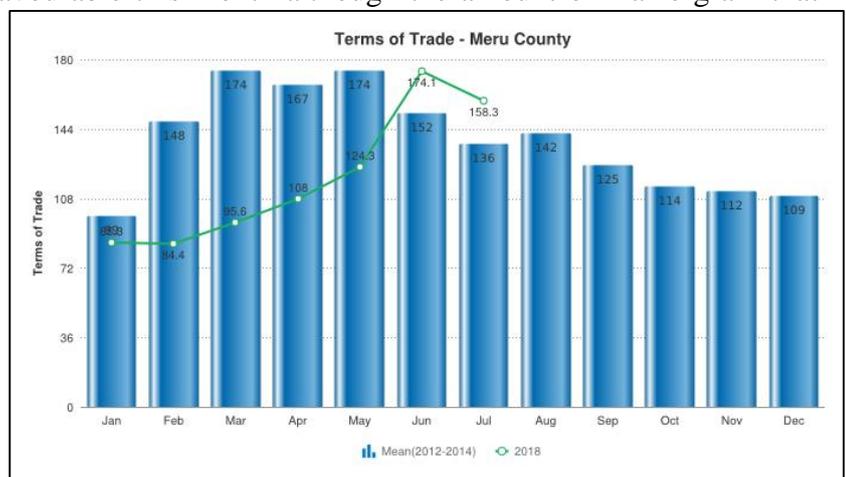


Figure 13: Terms of trade

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 FOOD CONSUMPTION SCORE

- In general, food consumption improved in July compared to June as the ongoing harvests and accompanying low prices improved food availability and access. The proportion of households with acceptable food consumption scores increased to 67.3 per cent of the sampled households in July compared to 63 per cent of a similar sample in June while those that had borderline consumption scores, on the other hand, reduced to 27.7 per cent from 32 per cent. Those with poor consumption scores remained the same at five per cent and were mainly in the agro-pastoral livelihood zone of Tigania West sub-county.

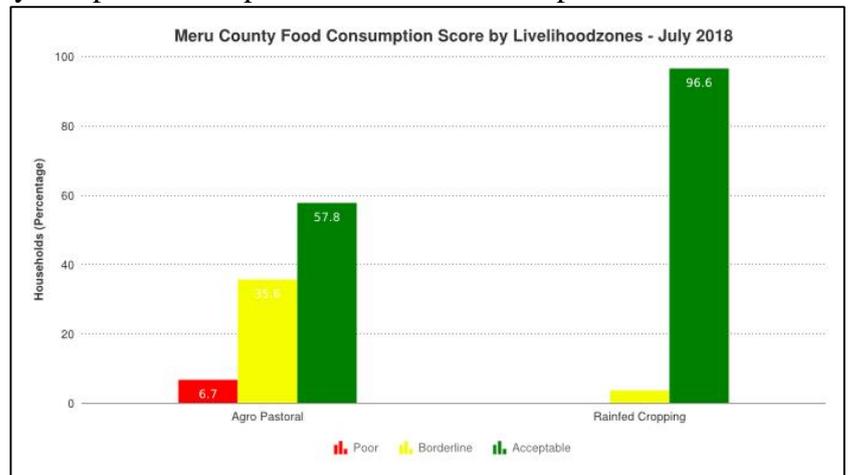


Figure 14: Food consumption scores per livelihood zone

## 5.2 HEALTH AND NUTRITION STATUS

### 5.2.1 Nutrition Status

- The proportion of children under the age of five years that were at risk of malnutrition (MUAC<135mm) slightly increased to 16 per cent in July compared to 14 per cent in June. This increase resulted from poor child care and feeding habits as the majority of parents were either involved in harvesting their own farms or were engaged as casual labourers.
- Nonetheless, those at risk are within the five year average for the month.

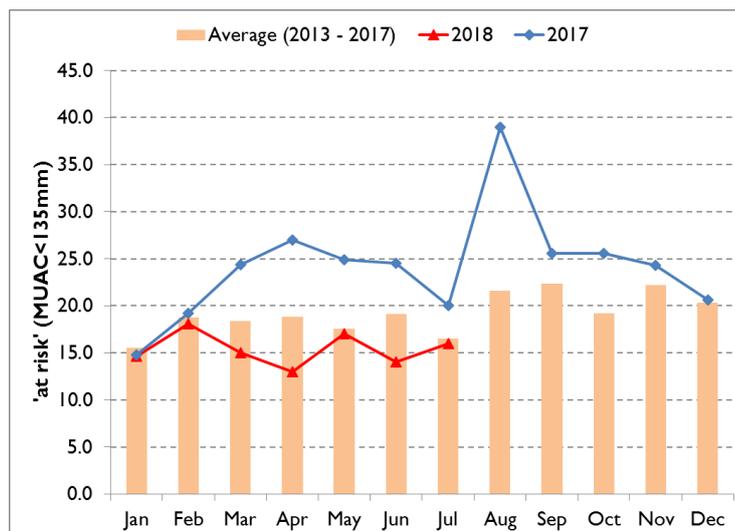


Figure 15: Percentage of children at risk of malnutrition

### 5.2.2 Health

- An increase in cases of upper respiratory tract infections have been reported across all livelihood zones.



## **CURRENT INTERVENTION MEASURES (ACTION)**

### **6.1 NON-FOOD INTERVENTIONS**

- There have been no non-food interventions reported during the month.

### **6.2 FOOD AID**

- 300 bags (50kg) of maize and 150 bags (50kg) of beans were distributed to schools, special (disability) groups, and the general public in Igembe South by the Deputy County Commissioner's office.

## **7. EMERGING ISSUES**

### **7.1 Insecurity/Conflict/Human Displacement**

- Relative peace prevailed throughout the month of July in the grazing areas of the agro-pastoral livelihood zone with the exception of an isolated case where 1,400 herds of cattle were stolen and later recovered. However, tensions are still high as the lean months of August to mid-October are typically associated with increased insecurity and banditry.

### **7.2 Food Security Prognosis**

- Light showers and relatively cool temperatures experienced during the month are expected to extend good pasture and browse conditions well into early September assuming that the same conditions will prevail throughout August. Given the expected pasture availability, livestock body conditions are likely to remain good throughout the month of August and fair from the beginning of the lean month of September onwards. However, the high likelihood of further reductions in the numbers of available water sources and the associated increases in watering distances from grazing areas, livestock body conditions are likely to deteriorate during the month of August. Distances to watering points for households are also expected to increase beginning August and peak in September to mid-October. The just-concluded pulse harvest (beans and green grams) and the ongoing maize harvests are likely to improve household food availability. Prices of cereals and legumes are likely to reduce further improving household purchasing power. Terms of trade are likely to remain favourable in August and September. Overall, the food security situation is likely to remain stable throughout August.

## **8. RECOMMENDATIONS**

- There is a need for the Department of Agriculture to sensitize farmers on proper post-harvest management techniques to avoid crop losses.
- The department of Veterinary and Livestock production needs to sensitize farmers of fodder conservation for use during the lean period of September through to mid-October.

## 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.
<b>Recovery:</b> 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 the 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 the 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, the 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 the 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 biophysical and production indicators are back to normal range.