

# National Drought Management Authority SAMBURU COUNTY



A Vision 2030 Flagship Project



## DROUGHT EARLY WARNING BULLETIN FOR SEPTEMBER 2017

### SEPTEMBER 2017 EW PHASE

**Drought Status: ALERT**



**Maandalizi ya mapema**

#### Drought Situation & EW Phase Classification

##### Biophysical Indicators

- Cumulative rainfall averaging 4.3 mm and 2.1 mm was received in the 1<sup>st</sup> and 2<sup>nd</sup> dekad respectively which was fair but unevenly distributed.
- Rangeland cover for the county slightly deteriorated from 28 in August to 26.77 as measured by vegetation condition index (VCI).
- In agro pastoral, surface and underground water sources recharged half full while remained partially dry in pastoral livelihood.

##### Socio economic indicators details

- Concentration of livestock from Marsabit, Samburu North and Samburu East to Suiyan, Ngorishe and Marti plain in Samburu North was observed. Convergence to Samburu Central from Samburu East also witnessed
- Both livestock and household trekking distances increased.
- Milk production and consumption decreased compared to previous month but remained below long term average (LTA).
- Browsers and sheep body condition was good to fair while for cattle, it ranged between fair to poor which contributed to low prices for all species.
- Market prices for Posho (milled maize) stabilized at Ksh 54.
- A pastoralist fetched 36 kg of cereals from the sale of one goat.
- Proportion of children under-five years at risk of malnutrition increased from 22.3 percent to 25.9 percent recorded last month.

#### Early Warning Phase Classification

LIVELIHOOD ZONE	EW PHASE	TRENDS
Agro-pastoral	Normal	Improving
Pastoral (North)	Alert	Deteriorating
Pastoral (East)	Alarm	Deteriorating
County	Alert	Deteriorating

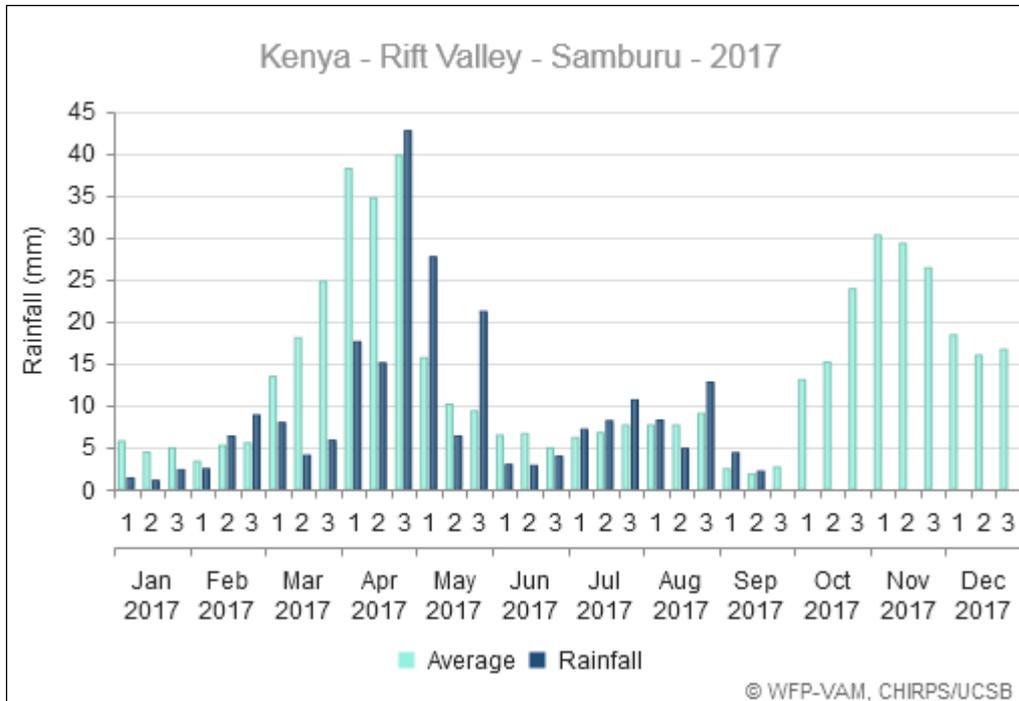
Biophysical Indicators	Value	Normal range/Value	
VCI-3month (Samburu County)	26.77	35-50	
VCI-3month -Samburu East	15.86	35-50	
VCI-3month -Samburu North	32.69	35-50	
VCI-3month-Samburu West	51.09	35-50	
Production indicators	Value	Normal ranges	
Livestock Migration Pattern	In & Inter Migration	No Migration	
Livestock Body Conditions	Moderate, neither fat or thin	Fat & Smooth appearance	
Milk Production	1.2	>1.9	
Livestock deaths due to drought	Minimal Deaths	No death	
Access Indicators	Value	Normal ranges	
Terms of Trade (TOT)	36	>58	
Milk Consumption	0.9	>1.7	
Return distance	Household	7.2	<5.0
	Livestock	16.8	<11.1
Acceptable FCS	Pastoral	33.1	100%
	Agro pastoral	51.7	100%
Utilization indicators	Value	Normal ranges	
MUAC	25.9	<18.01%	
Mean CSI	Pastoral	18.1	<56
	Agro pastoral	1	<56

<ul style="list-style-type: none"> <li>Short rains harvests</li> <li>Short dry spell</li> <li>Reduced milk yields</li> <li>Increased HH Food Stocks</li> <li>Land preparation</li> </ul>	<ul style="list-style-type: none"> <li>Planting/Weeding</li> <li>Long rains</li> <li>High Calving Rate</li> <li>Milk Yields Increase</li> </ul>	<ul style="list-style-type: none"> <li>Long rains harvests</li> <li>A long dry spell</li> <li>Land preparation</li> <li>Increased HH Food Stocks</li> <li>Kidding (Sept)</li> </ul>	<ul style="list-style-type: none"> <li>Short rains</li> <li>Planting/weeding</li> </ul>								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

## 1.0 CLIMATIC CONDITIONS

### 1.1 Rainfall Performance

- Rainfall received progressed in deteriorating trend from August into the first and second dekad of September respectively with most of it being more pronounced in agro pastoral livelihood zone. The cumulative amounts recorded were 4.3 mm as compared to LTA of 2.4 and 2.1 mm compared to LTA of 1.8 mm in the first and second dekads respectively. (**WFP-VAM, CHIRPS/UCSB**).



**Figure 1:** Graph Showing Rainfall Estimates (RFE) Trends for Samburu County  
(Source: WFP-VAM, CHIRPS/UCSB)

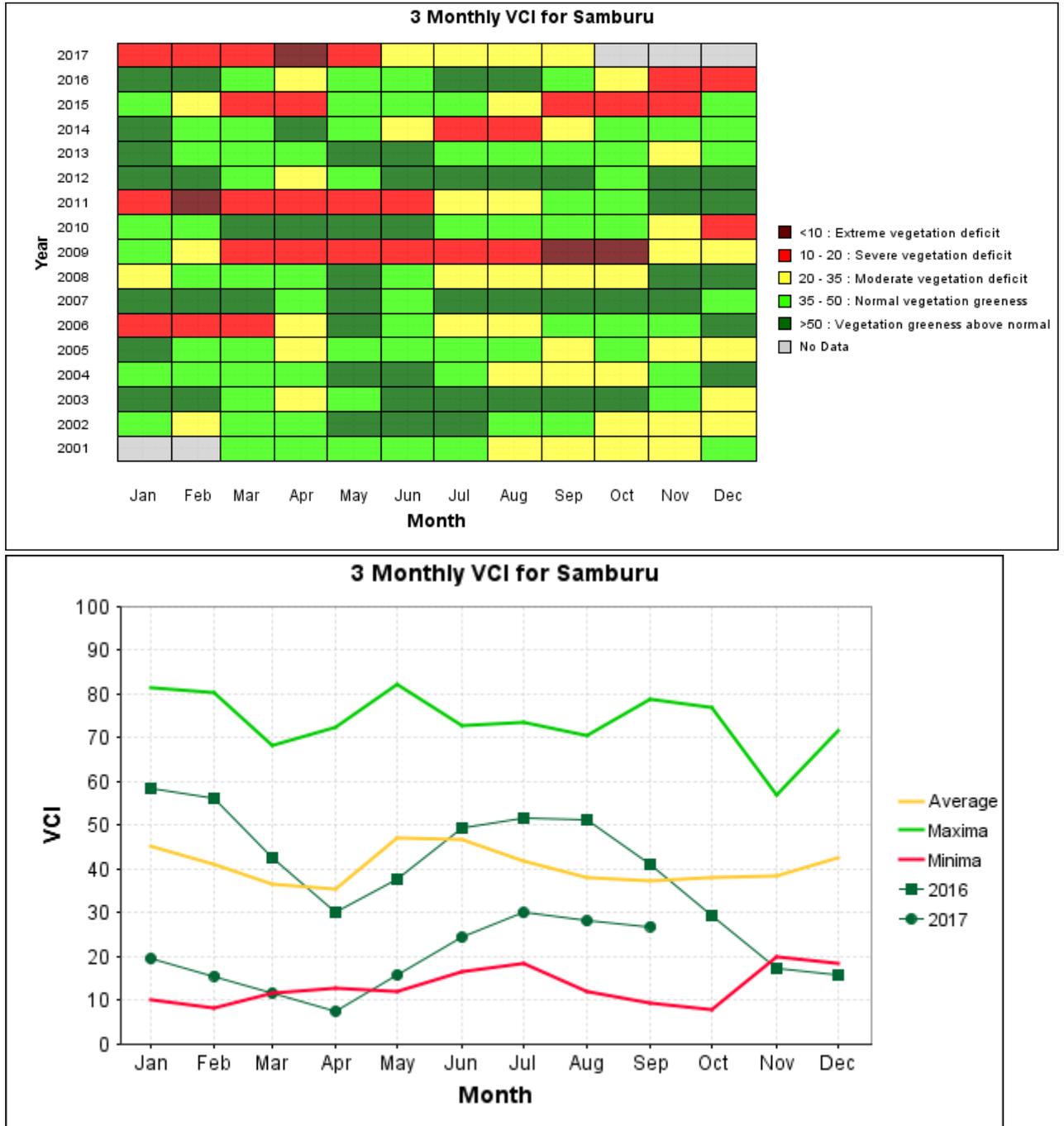
#### 1.1.1 Temporal and Spatial Distribution

- Enhanced and sporadic showers which were experienced during the first and second dekad were mostly in Samburu central and parts of Samburu North. Most of these showers was concentrated in agro pastoral livelihood of Samburu Central and lasted for about three to five days. Pockets of some pastoral livelihood of Samburu East and North received erratic showers for about 2 days which lasted less than half an hour with the remainder of the month remaining conspicuously dry.
- Generally temporal and spatial distribution was fair and even in agro pastoral livelihood whereas in pastoral zone, it was poor and uneven respectively.

## 2.0 IMPACTS ON VEGETATION AND WATER

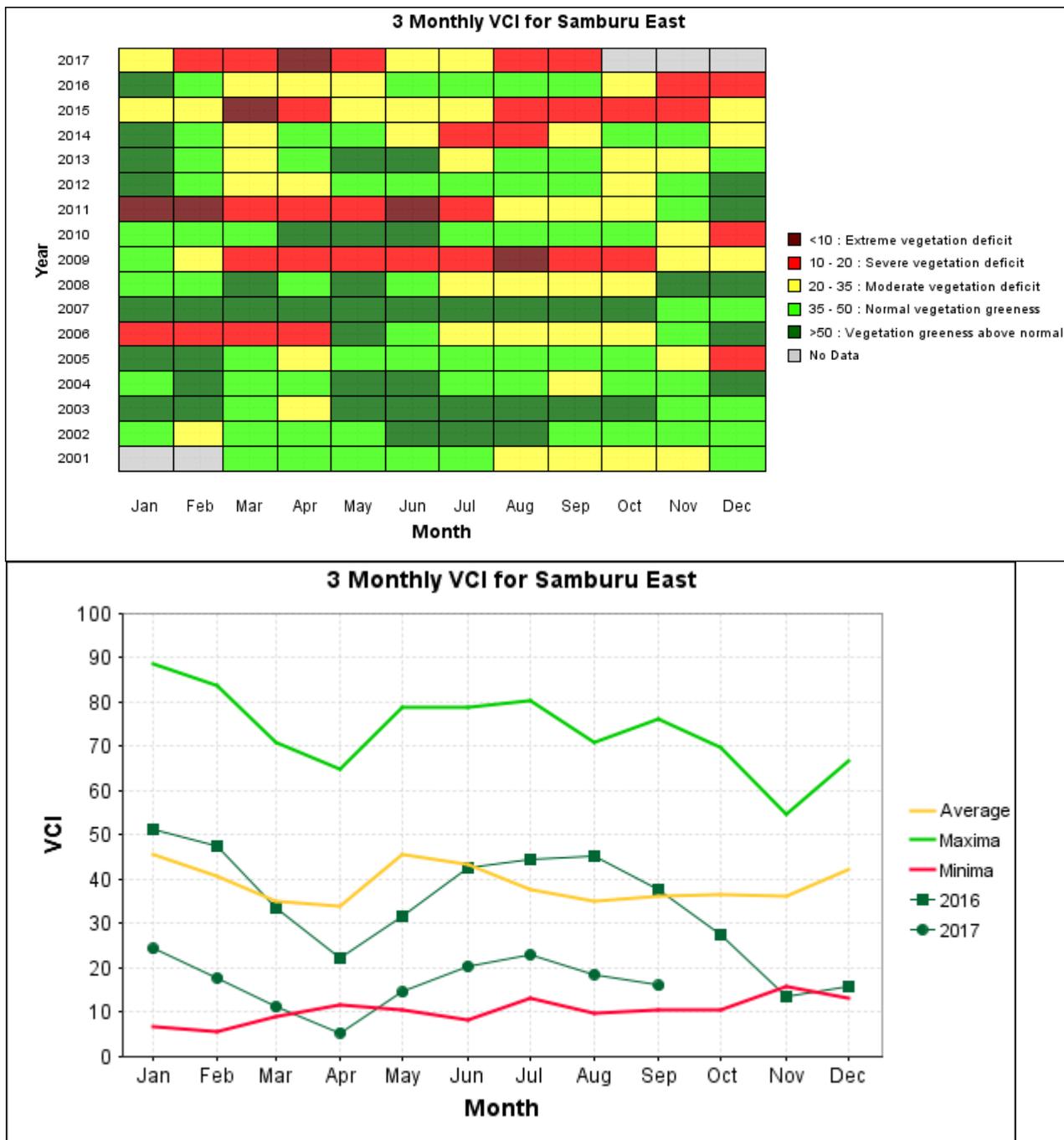
### 2.1 Vegetation Condition Index (VCI)

- Generally, slight deterioration was observed in vegetation cover in Samburu County in the last two months. The current 3 monthly average vegetation value for the county was 26.77, down from the previous 3 monthly average vegetation value of 28 as measured by VCI. The situation remained in moderate vegetation deficit band and below the LTA (Fig. 2).
- Deterioration in vegetation cover can be attributed to dry spell being experienced in Samburu East Sub County and in pockets of Ndoto ward in Samburu North Sub County.



**Figure 2: Matrix and Graph Showing VCI trends for Samburu County (Source: Boku University)**

- Significant deterioration in rangeland resources continued to be observed in Samburu East attributed to prolonged dry spell being experienced. The current 3 monthly VCI in Samburu East decreased to 15.86 from 18.46 recorded in last month. The situation remained in severe vegetation deficit in the sub county. The current 3 monthly average VCI remained below the long term value at this time of the year (Fig 3).



**Figure 3:** Graph Showing Historical VCI trends for Samburu East sub county (Source: Boku University)

- In Samburu north Sub County, the vegetation cover also decreased to 32.69 from 34.97 noted in last month while in Samburu central, the VCI remained in normal vegetation greenness increasing from 42.96 to 51.09 attributed to precipitation received in the beginning of the month.

### 2.1.1 Field Observations (Pasture and Browse Conditions)

#### Quality

- Quality of pasture in agro pastoral zone of Samburu central is good after being replenished by showers received in August and early September. Pasture in dry season areas of Suiyan and Marti in Samburu North is of fair quality however depleting faster while quality of pasture in the rest of Samburu North and Samburu East sub counties was poor.
- Browse quality was good in agro pastoral of Samburu Central, fair in pastoral North and poor in pastoral East.

#### Quantity

- Pasture and browse in terms of quantity in agro pastoral livelihood of Samburu Central ranges between good and fair attributed to showers received in the last two months that also progressed into the month during review.
- Conflict hotspots areas of Suiyan, Marti and Kawop plains in Samburu North also contain significant amount of pasture and browse attributed to limited access brought about by conflicts while the rest of the Sub County and Samburu East Sub County had depleted pastures due to current dry spell.

## 2.2. WATER RESOURCE

### 2.2.1 Sources

- Traditional river wells were the main source of water for households contributing approximately 35 percent followed by pans and dams at 23 percent.
- Other sources of water used by the community were boreholes at 18 percent and Natural River (Ewaso Nyiro) and springs in Ndoto and Nyiro both contributed 12 percent (Fig 4).

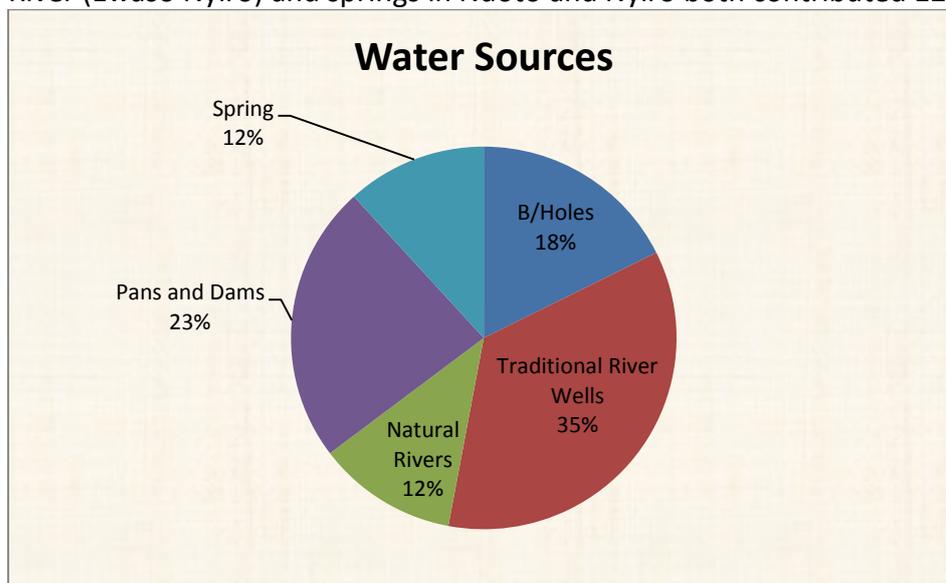
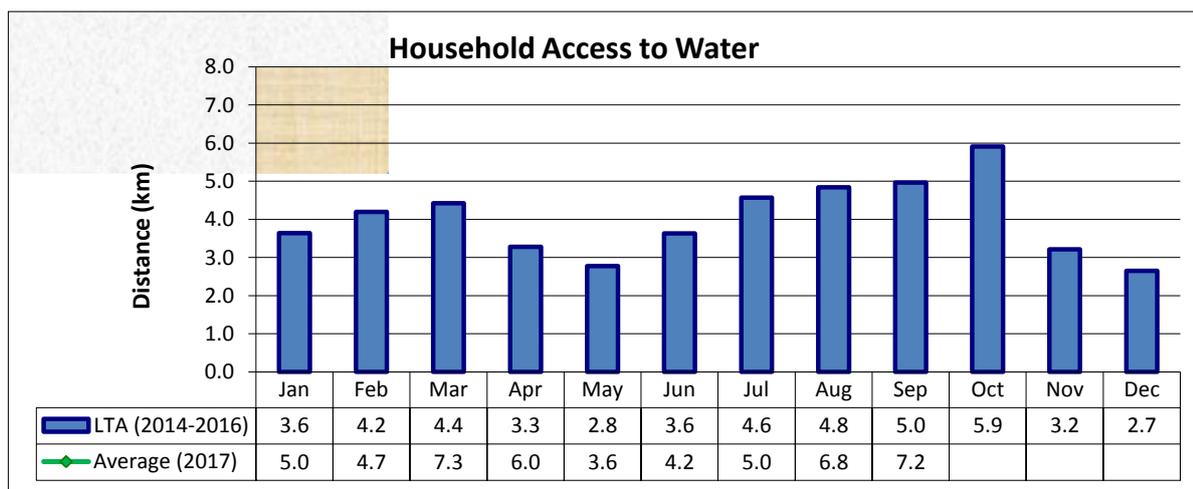


Figure 4: Common water sources

### 2.2.2 Household Access and Utilization

- The on-going dry spell in pastoral areas attributed to lack/inadequate rainfall has led to drying up of water sources especially pans and dams consequently forcing households to trek longer distances to access water with Samburu East and Samburu North being the worst affected sub counties.
- Households had to walk on average roughly 7.2 km which is an increase from last month's distance of 6.8 km. Households in sentinel sites of Kiltamany, Lpus and Nachola trekked for longer return distances of over 10 km.

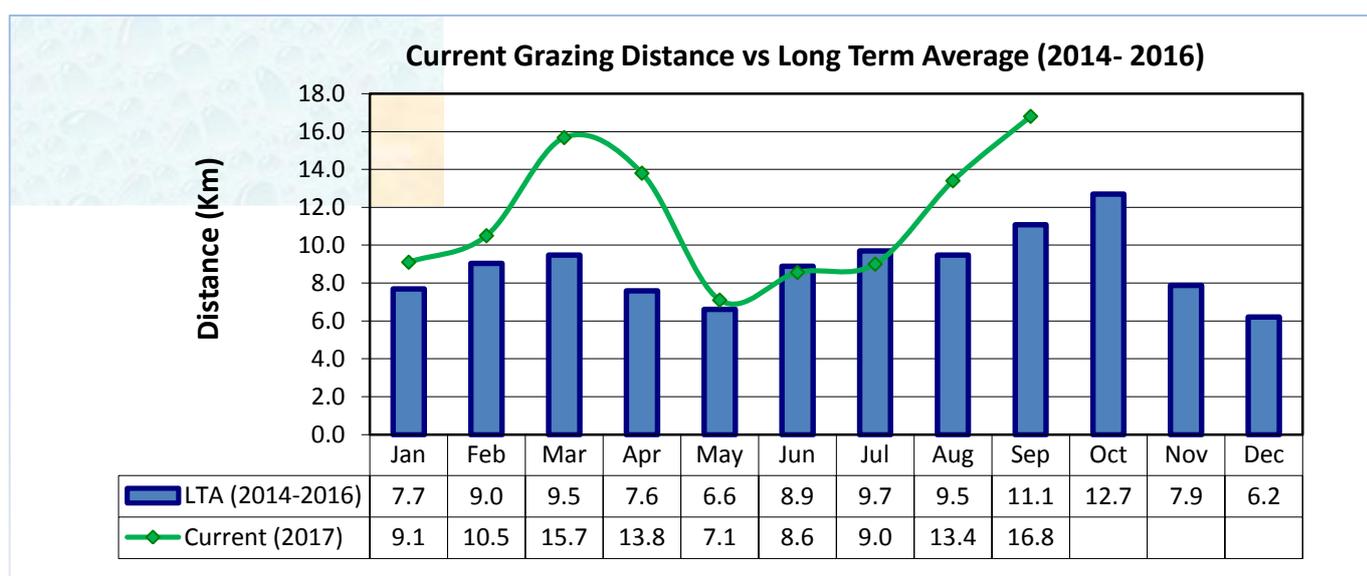
- The current average households return trekking distance remained above the long term value by 30 percent at this time of the year (Fig. 5).



**Figure 5:** Average Distance Travelled by Households in Search of Water

### 2.2.3 Grazing Distances to Water Points

- The influx of livestock in areas with little available forage has led to diminishing of rangeland resources at a fast rate. This necessitated livestock to trek longer for 20 km in search of pasture away from the watering points. This was of over 7 km compared to last month trekking distance.
- Most areas in Samburu East particularly Kiltamany and Nairimirimo and parts of Nachola and Ndotto wards in Samburu North recorded return distances of around 20 km. The grazing distances in pastoral areas are most likely to deteriorate till the anticipated short rains onset sets in.
- Compared to long term average, the current average return grazing distance remained above LTA by 33 percent at this time of the year (Fig. 6).



**Figure 6:** Distance Travelled from Grazing Areas to Water Points

## **PRODUCTION INDICATORS**

### **3.1 LIVESTOCK PRODUCTION**

#### **3.1.1 Livestock Migration Patterns**

- Livestock from Samburu East are still concentrated in Samburu Central which contains forage that has been resuscitated by showers received in July and August. Some livestock from Samburu East also crossed into Laikipia County through the Kirimun migratory route.
- In migration of livestock from North Horr in Marsabit are in Suiyan and Marti plains where majority of livestock from Samburu North and some from Samburu east are concentrated. Due to high tension in Suiyan, some livestock have migrated to areas of Poro, Loosuk and even Lolmolok wards in Samburu central.

#### **3.1.2 Livestock Body Condition**

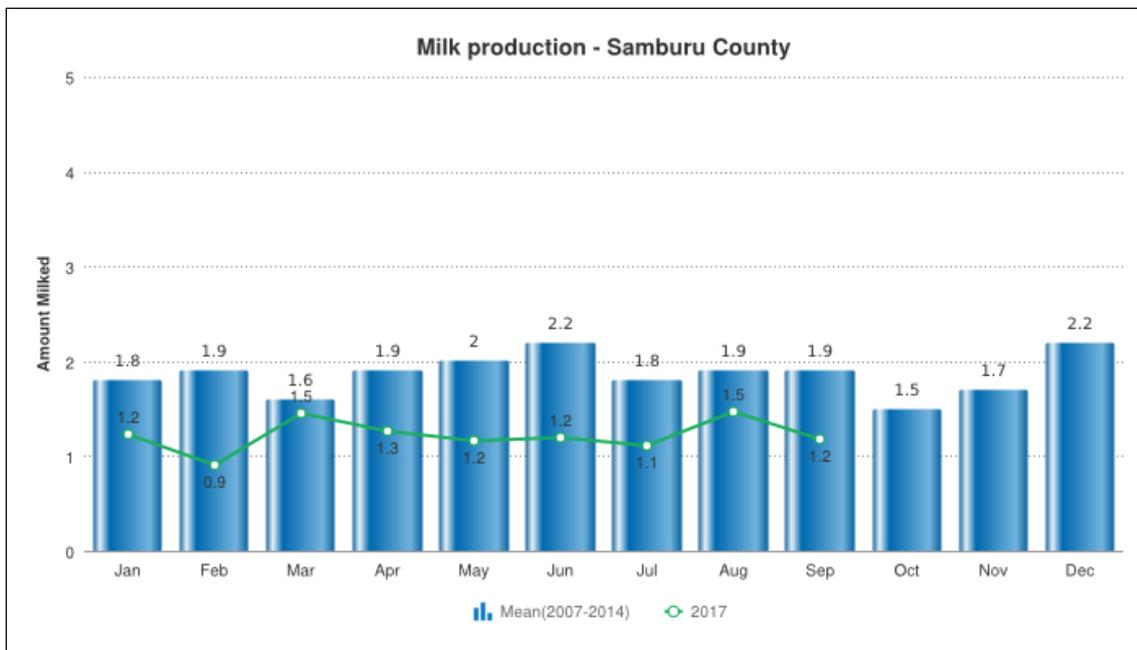
- Body condition for grazers in agro pastoral livelihood and pastoral North has moderately improved ranging between moderate, neither fat nor thin and Borderline fore-ribs not visible (12th & 13th ribs visible) attributed to availability of scarce pasture resources.
- However body condition for grazers in Samburu East was characterized by visibility of thin fore ribs as a result of lack of pasture. Browsers body condition was characterized by smooth good appearance since the showers received favoured rejuvenation of browse more than pasture. (*Refer to table 1 in annex*).

#### **3.1.3 Livestock Diseases**

- Clinical signs of Sheep and goat pox disease were reported across the county. Tick borne diseases have also been reported in Samburu central particularly in areas where cattle are concentrated.

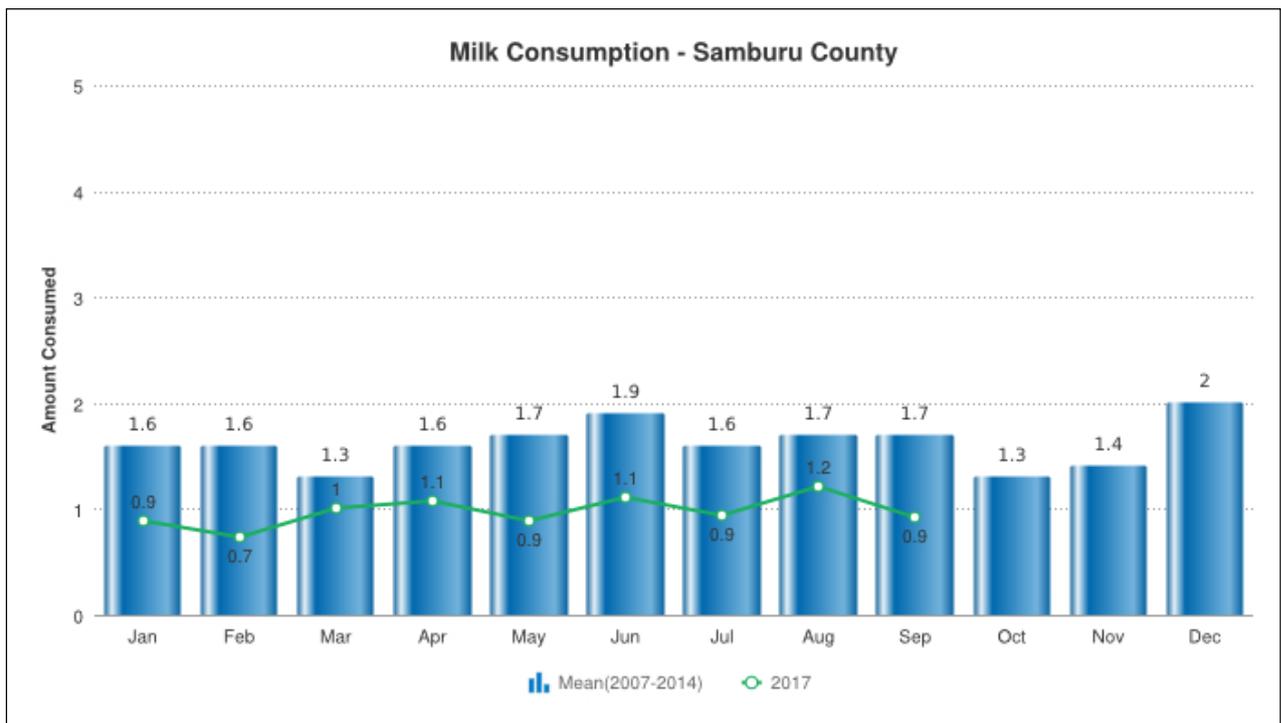
#### **3.1.4 Milk Production and Consumption**

- Milk remains unavailable to most households owing to consecutive dry spell seasons that affected livestock mating and birth rate cycle. For households with lactating animals, production decreased to 1.2 litres down from 1.5 litres recorded in August. The decrease was as a result of inadequate forage resulting into long grazing distances which eventually affected body condition of livestock.
- Generally, average milk production remained below the long term value by 37 percent at this time of the year and this can be attributed to disrupted calving and kidding season by the long dry spell and in some cases still births due to poor body condition particularly for cattle (Fig. 7).



**Figure 7:** Trends in Milk Production per Household

- Reduced milk production translated to reduction in milk consumption from 1.2 litres in August to 0.9 litres in September with the little remaining milk sold in nearby centres.
- Average milk consumption remained below the long term value by 47 percent at this time of the year (Fig. 8).



**Figure 8:** Trends in Milk Consumption per Household

### 3.1.5 Livestock Deaths

- Cases of livestock deaths due to starvation predominantly for sheep have been reported in Samburu East though to a minimal extent. Deaths attributed to predation by wild animals and diseases were also reported.

## **3.2 RAIN FED CROP PRODUCTION**

### **3.2.1 Stage and Condition of Food Crops**

- Maize crop is at grain filling stage and almost about to obtain the optimum harvest moisture for corns for efficient harvesting.
- The farmers are currently utilizing green maize and the anticipated production yields will probably be below normal owing to dry spell experienced after germination that discouraged most farmers from doing weeding and eventually allowed to feed on their crops.

### **3.2.2 Harvest of Crop**

- There are a few farmers in the lowlands of Baawa, Kisima and Maralal who are harvesting maize. Harvesting of beans has been concluded in agro pastoral areas.

## 4.0 MARKET PERFORMANCE

### 4.1 Livestock Prices

#### 4.1.1 Livestock Terms of Trade (TOT)

- A pastoralist fetched 36 kg of cereals from the sale of a mature goat as measured by the TOT value of 36.
- The unfavourable TOT was as a result of decreased livestock prices against stable prices
- The TOT declined compared to August and also remained below the LTA by 37 percent (Fig. 9).

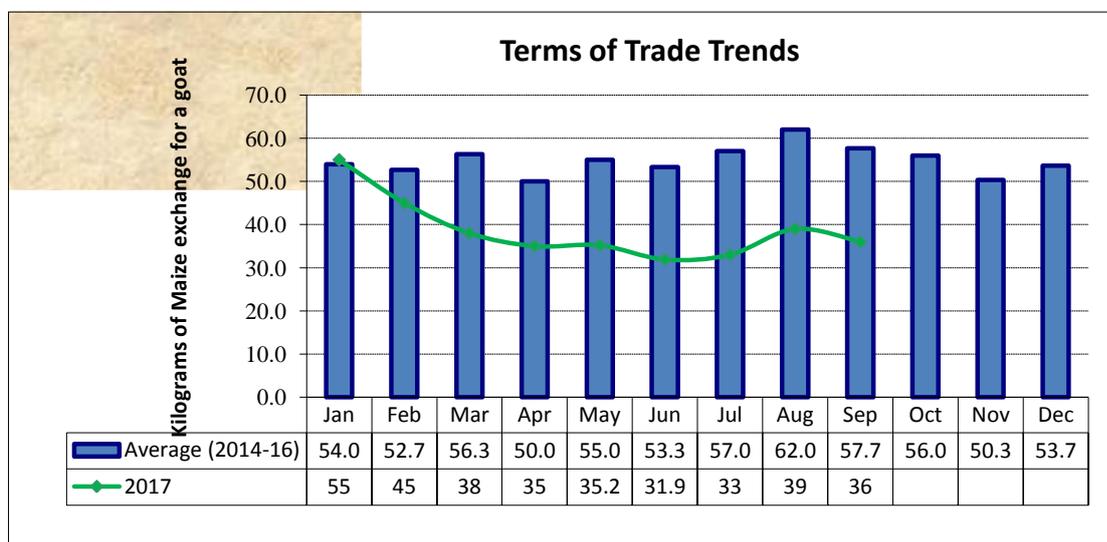


Figure 9: Trends in Terms of Trade (TOT)

#### 4.1.2 Cattle Prices

- Current cattle average market price decreased from Ksh 15,636 recorded in August to Ksh 10,570. Despite the improvement in body condition, effects of the prolonged drought which negatively affected livestock body condition and chased away traders from outside the county still remain to be felt as many pastoralists bring livestock but there are no buyers and so they are forced to sell at throw away prices or take them back home.
- The current average price remained above the LTA by 28 percent.

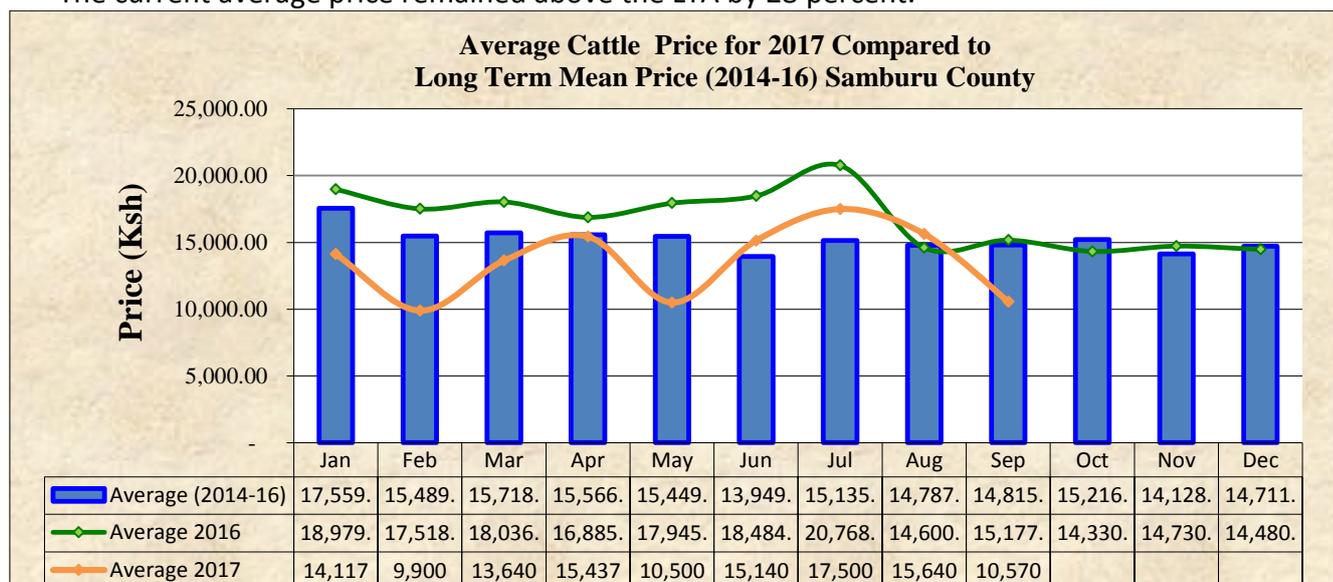


Figure 10: Graph Showing Cattle Selling Price Trends at Farm Gate and Market Level

### 4.1.3 Goat Prices

- Goat selling prices decreased to Ksh 1,960 down from Ksh 2,160 recorded last month. The decline is as a result of unfavourable market conditions caused by lack of buyers especially from other counties who are yet to return after being chased away by poor body condition during the prolonged drought. Pastoralists are forced to sell their goats at throw away prices or take them back home.
- The current average price remained below the LTA by 15 percent.

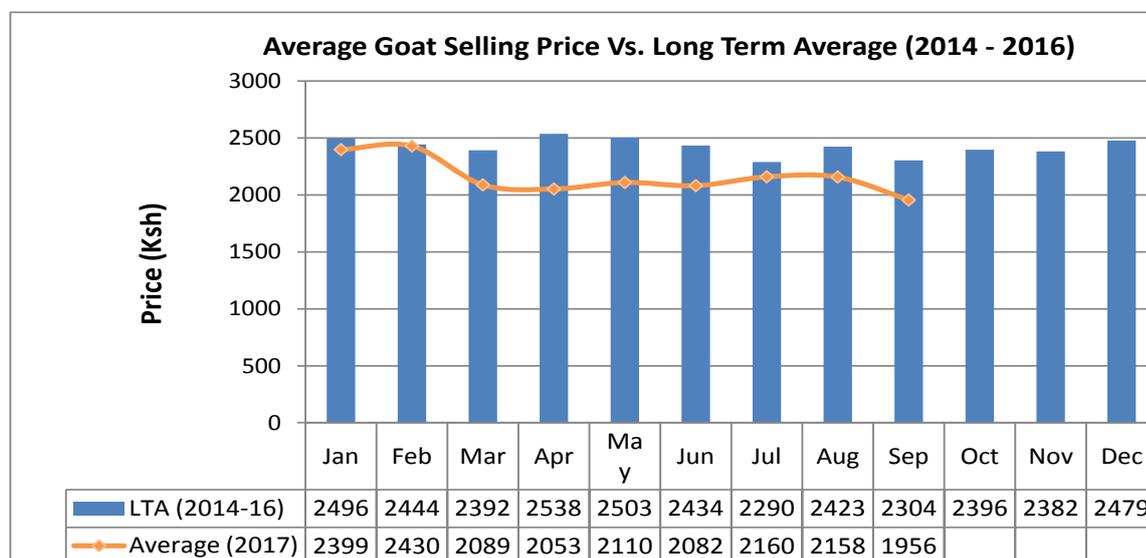


Figure 11: Graph Showing Goats’ Selling Price Trends at Farm Gate and market Level

### 4.1.4 Sheep Prices

- Sheep average prices also decreased to Ksh 1,560 down from Ksh 2,010 recorded in August attributed to the same factors mentioned for cattle and goat. Moreover, inaccessibility of Rumuruti market due to security operation in Laikipia also contributed to the decline since most of the sheep are sold there.
- The current average price is 26 percent below the long term value at the same time of the year (Fig. 12).

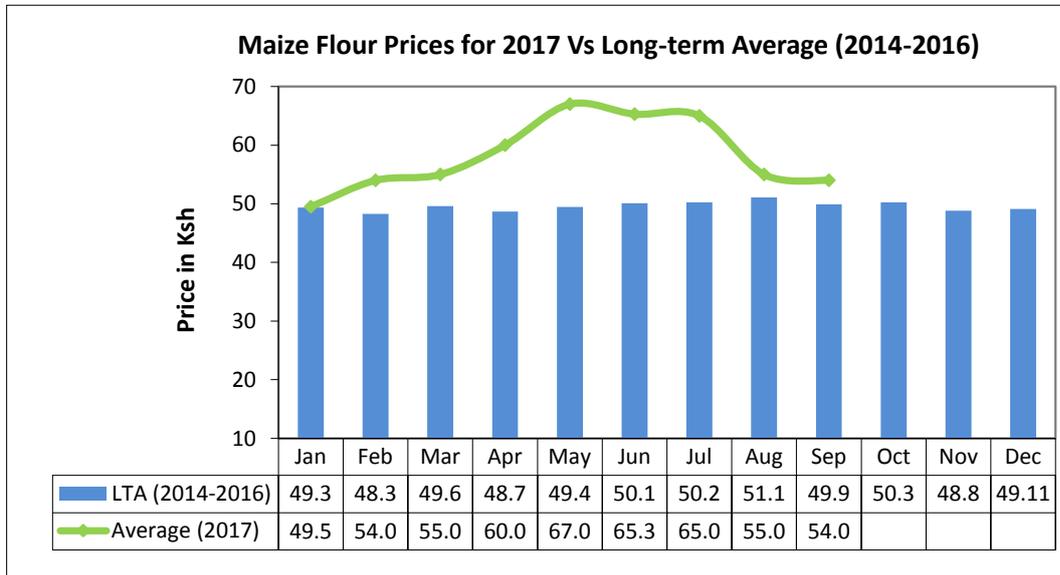


Figure 12: Graph Showing Sheep Selling Price Trends at Farm Gate and Market Level

## 4.2 CROP PRICES

### 4.2.1 Posho (Milled Maize)

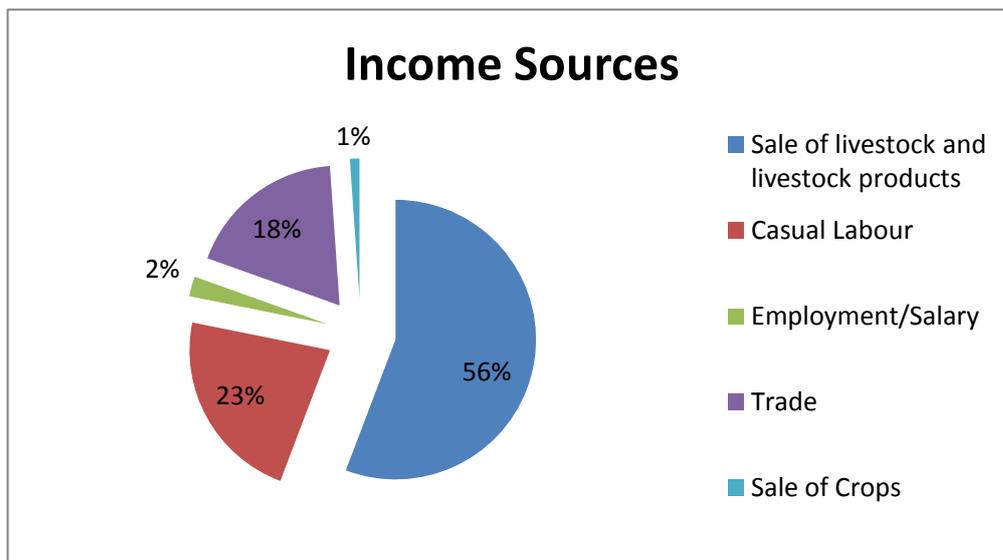
- Posho (Milled maize) market price stabilized at Ksh 54 compared to Ksh 55 for August. Traders managed to import maize from outside the county leading to reduction in prices.
- Markets in Lodungokwe and Nairimirimo sentinel sites recorded highest prices of Ksh 70 whereas Baragoi market recorded the least at Ksh 50.
- The current price remained above the long term mean by 7 percent (Fig 13).



**Figure 13:** Graph Showing Maize meal Price Trends

## 6.1 Source of Income

- Most households depended on selling livestock or its products at 56 percent as their source of income. 23 percent and 18 percent of some households generated their income from casual labour and trade respectively. The remaining households depended on Employment and sale of crops at 2 percent and 1 percent respectively.



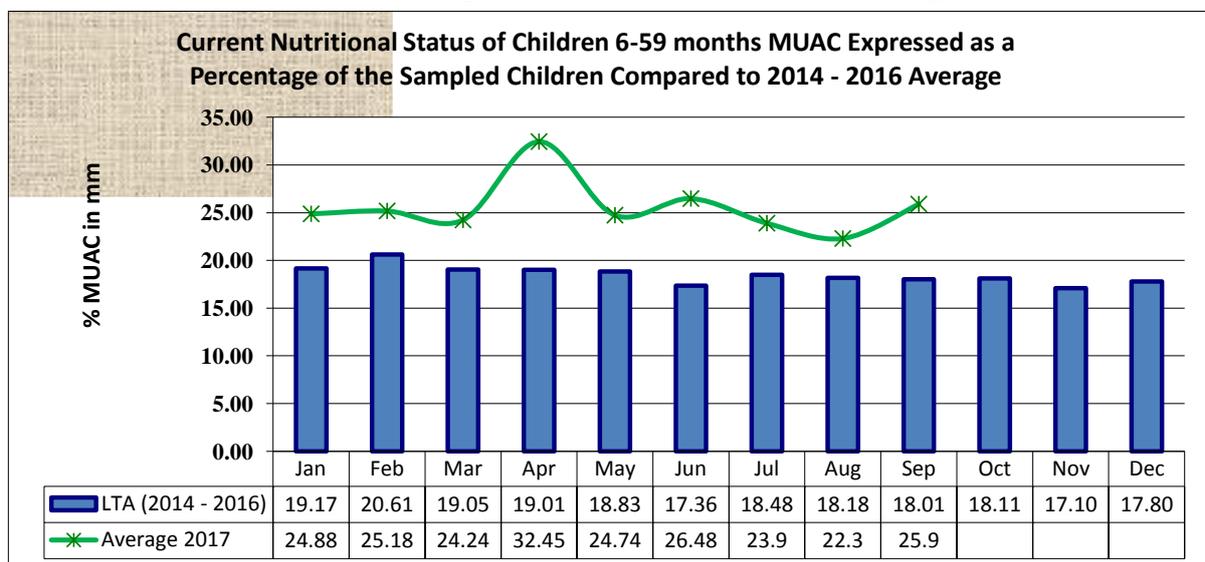
**Figure 14:** Households Common Sources of Income

## 5.0 UTILIZATION INDICATORS

### 5.1 Health and Nutrition Status

#### 5.1.1 MUAC (125-134 mm)

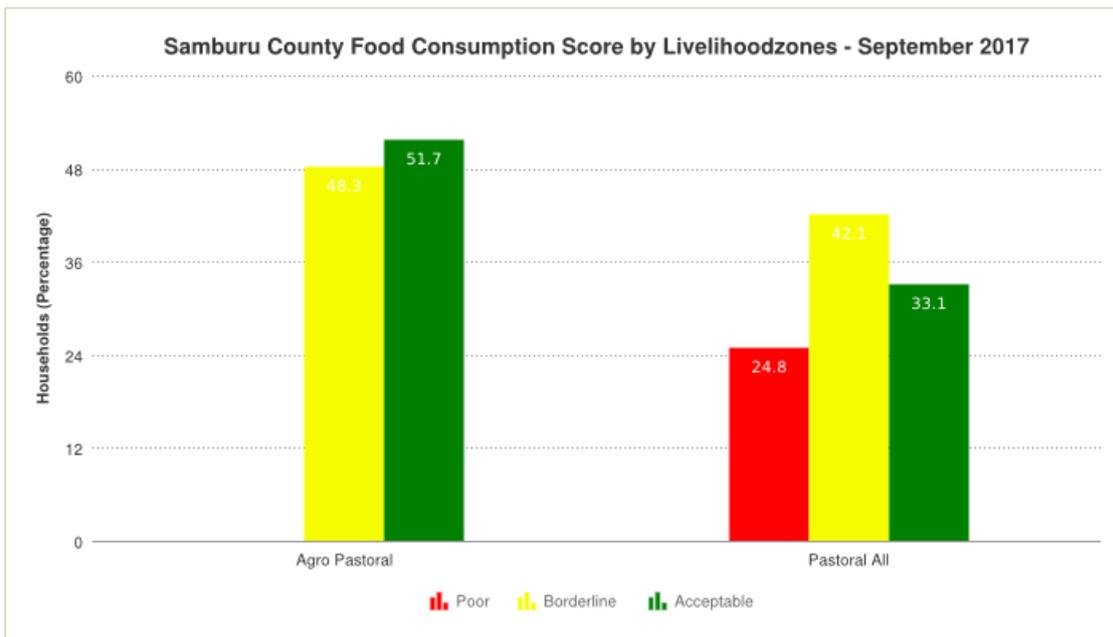
- The proportion of children under five years at risk of malnutrition increased from 22.3 in August to 25.9 in September based on mid upper arm circumference (MUAC 125 -134 mm). The increase can be attributed to unavailability of milk, poor child care practices and also inadequate or lack of nutritious meals due to high poverty levels. Lack of medical attention following the nurse’s strike also contributed to high malnutrition levels.
- Compared to LTA, the current figure is 30 percent above the LTA (Fig 15).



**Figure 15:** Graph showing average Nutritional status (MUAC)

#### 5.1.2 Food Consumption Score(FCS)

- More than half of the households sampled in agro pastoral livelihood i.e. 51 percent and 33.1 percent in Pastoral livelihood are able to consume food adequate food which is of high nutritious value. 48.3 percent and 42.1 percent had borderline FCS in agro pastoral and pastoral zone respectively implying they were neither consuming nutritious food nor adequate food or vice versa. 24.8 percent of households in Pastoral zone had poor FCS implying they were not consuming food adequately and neither was it nutritious.
- The low food consumption especially in pastoral areas can be attributed to high cost of food stocks which is not accessible with the majority of households due to poverty and lack of knowledge on importance of eating a balanced diet and also unavailability of livestock’s products at household level due livestock migrations.



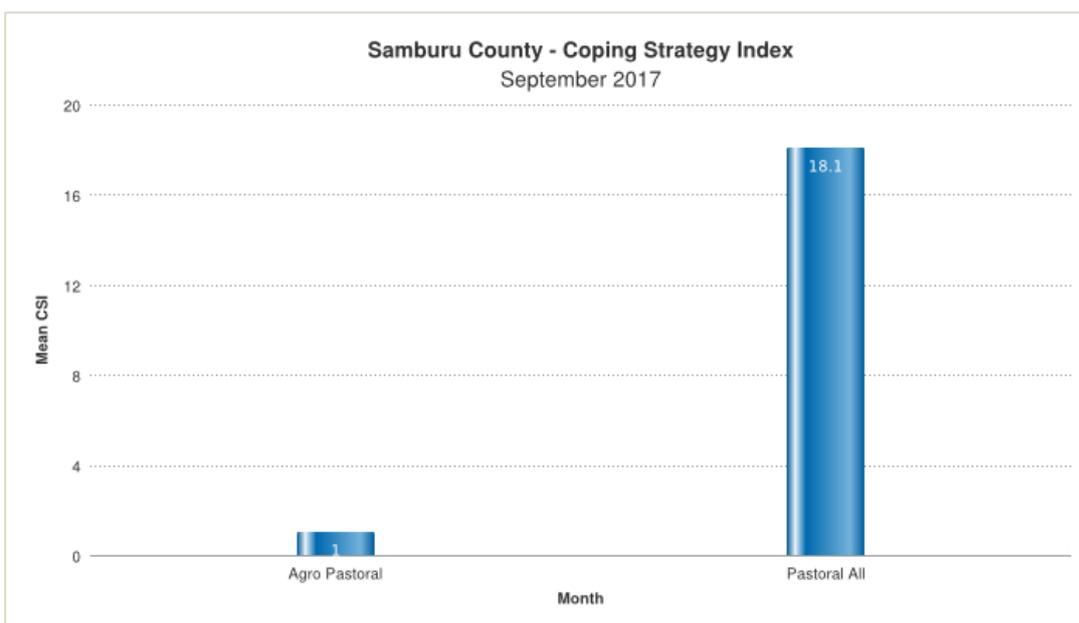
**Figure 16:** Bar chart showing FCS per Sub County

### 5.1.3 Health

- No epidemic disease outbreak was reported although normal cases of malaria, coughing, URTI and diarrhoea continued to be reported across the livelihoods.
- Most of the households pursued assistance for the ailments from public health centres/ dispensaries, private clinics and others used local herbs for treatment.

### 5.1.4 Coping Strategies Index(CSI)

- Households in agro pastoral zone employed few coping strategies at one percent compared to households in pastoral zone who employed 18.1 percent.
- The most commonly utilized consumption based coping strategies remained reduction in the number of meals eaten per day, reduction in the portion size of meals and relying on less preferred and/or less expensive food.



**Figure 17:** Bar chart showing CSI

## 6. CURRENT INTERVENTIONS AND RECOMMENDATIONS

### 6.1 Non-food On-going interventions

SECTOR	INTERVENTION	IMPLEMENTERS
<b>LIVESTOCK</b>	Vaccination of 5321 goats against CCP, 51,106 goats against PPR and 2413 Shoats against sheep and goat Pox in Samburu Central	County livestock department with support from KRCS, FAO and RPLRP
	Slaughter destocking of small stock in Samburu East and Central @ Ksh 2900	KRCS in partnership with FAO and County livestock department
	Provision of 5 Hay and 1200 bags of 50kg of pellets	CARITAS, NDMA
<b>Health</b>	On-going High Impact Nutritional Interventions (HINI) implemented by partners in collaboration with MOH in 47 health facilities across the County	MOH, IMC, NHP Plus and UNICEF
	15 Integrated medical outreaches	MOH supported by KRCS
<b>Water</b>	Water trucking in Wamba	County Water department
	Rehabilitation of Lengusaka and Laesoro boreholes, provision of plastic tanks to farmers in Nachola, construction of two sand dams in Ngilai Wamba and Milimani Wamba	CARITAS
<b>Social Protection</b>	Cash transfer to 3447 households each getting Ksh 3000 across the county	KRCS
	Food vouchers to 268 households with HIV in Samburu Central and North	CARITAS
<b>Peace</b>	Peace meeting in Samburu Central and North	CARITAS

### 6.2 Food Aid

- Provision of relief meat to vulnerable households in Samburu East and Central by Kenya Red Cross.

## 7.0 EMERGING ISSUES

### 7.1 Insecurity/Conflict/Human Displacement

- Tension remained high for the better part of the month in Samburu North following clashes between two communities leaving there fighting over pasture which led to the death of 4 people and other injured. The remainder of the other part of the county remained fairly calm save for a few incidences of highway banditry in Samburu East. Cases of isolated cattle theft were reported along the Baringo and Samburu border.

### 7.2 Food Security Prognosis

- The expected arrival of the short rains in October will lead to rejuvenation of forage across the county. Livestock will return to wet season grazing areas and consequently milk production and consumption will increase leading to reduced malnutrition.
- Farmers in agro pastoral livelihood will take advantage of the rains to plant early maturity crops thus increasing household food security.

## **8.0 RECOMMENDATIONS**

### **Nutrition and Health**

- Alternative methods to ensure malnourished children are able to access supplements and other treatment to be identified considering health facilities are closed due to the on-going strike.
- Mass screening in Samburu North and East should be carried out.
- Nutrition intervention programs in Arsim and Kawop to reduce the high level of malnutrition for under-five.

### **Livestock**

- Slaughter destocking exercise in Samburu East to reduce loss of livestock
- Provision of livestock feeds such as UMMB and Range pellets should be upscaled.
- Awareness creation on proper rangeland management practices such as paddocking to conserve pasture for dry periods.
- Disease surveillance to be enhanced confirm especially in convergence zones of livestock from Marsabit and Samburu.

### **Agriculture**

- Farmers to be advised to prepare their land in preparation for the short rains

### **Water**

- Water trucking in Samburu East to institutions.
- Fuel subsidy to boreholes in Samburu East also should be considered.
- Promotion of roof water harvesting in schools, dispensaries and at household level

### **Peace**

- Consultative meetings to be held between warring communities in Samburu North

## Annexes

**Table 1:** Livestock Body Condition Scoring Chart

Score	Body Condition	Warning Stage
1	Emaciated, little muscle left	Emergency
2	Very thin no fat, bones visible	
3	Thin fore ribs visible	Alert Worsening/Alarm
4	Borderline fore-ribs not visible. 12th & 13th ribs visible	Alert
5	Moderate. neither fat nor thin	Normal/Alert
6	Good smooth appearance	
7	Very Good Smooth with fat over back and tail head	Normal
8	Fat, Blocky. Bone over back not visible	
9	Very Fat Tail buried and in fat	