

# National Drought Management Authority SAMBURU COUNTY



A Vision 2030 Flagship Project



## DROUGHT EARLY WARNING BULLETIN FOR MARCH 2018

### MARCH 2018 EW PHASE

**Drought Status: ALERT**



**Maandalizi ya mapema**

#### Drought Situation & EW Phase Classification

##### Biophysical Indicators

- Enhanced rainfall was received across the two livelihood zones.
- Following the enhanced rainfall, rangeland resources improved in several parts of the county.
- Significant recharge was observed particularly for open water sources although some pans in Samburu east have low volumes due to depressed rains and percolation resulting from porous soils.

##### Socio Economic Indicators Details

- Household and livestock trekking distances to water points slightly reduced from last month.
- Majority of cattle from Samburu central and north returned back to wet season grazing areas as forage regenerate due to realized rains.
- Milk production and consumption is within the long term average.
- Livestock body conditions ranged between good to fair for both browsers and grazers.
- Maize/*posho* prices remained stable with a kilogram going for Ksh 48.
- Terms of trade were favourable and by selling one goat, household can purchase 63 kilograms of cereals which is an increase from 55.4 kilograms in last month.
- MUAC rates are still high although it is comparable to long term average at this time of the year.

#### Early Warning Phase Classification

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

Biophysical Indicators	Value	Normal range/Value	
VCI-3month (County)	27.16	35-50	
VCI-3month -Samburu East	21.15	35-50	
VCI-3month -Samburu North	33.17	35-50	
VCI-3month-Samburu West	30.88	35-50	
Production indicators	Value	Normal ranges	
Livestock Migration Pattern	Intra Migration	No Migration	
Livestock Body Conditions	Cattle: 12 <sup>th</sup> & 13 <sup>th</sup> ribs visible Goats: Good appearance	Fat & Smooth appearance	
Milk Production	1.5	>1.6	
Livestock deaths due to drought	No Deaths	No death	
Access Indicators	Value	Normal ranges	
Terms of Trade (TOT)	63	>51.7	
Milk Consumption	1.3	>1.6	
Return distance (km)	Household	5.1	<5.7
	Livestock	11.3	<11.7
Acceptable FCS (percent)	Pastoral	51	100
	Agro pastoral	90	100
Utilization indicators	Value	Normal ranges	
MUAC (percent)	19.6	<19.87	
Mean CSI	Pastoral	13.8	<56
	Agro pastoral	1.4	<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

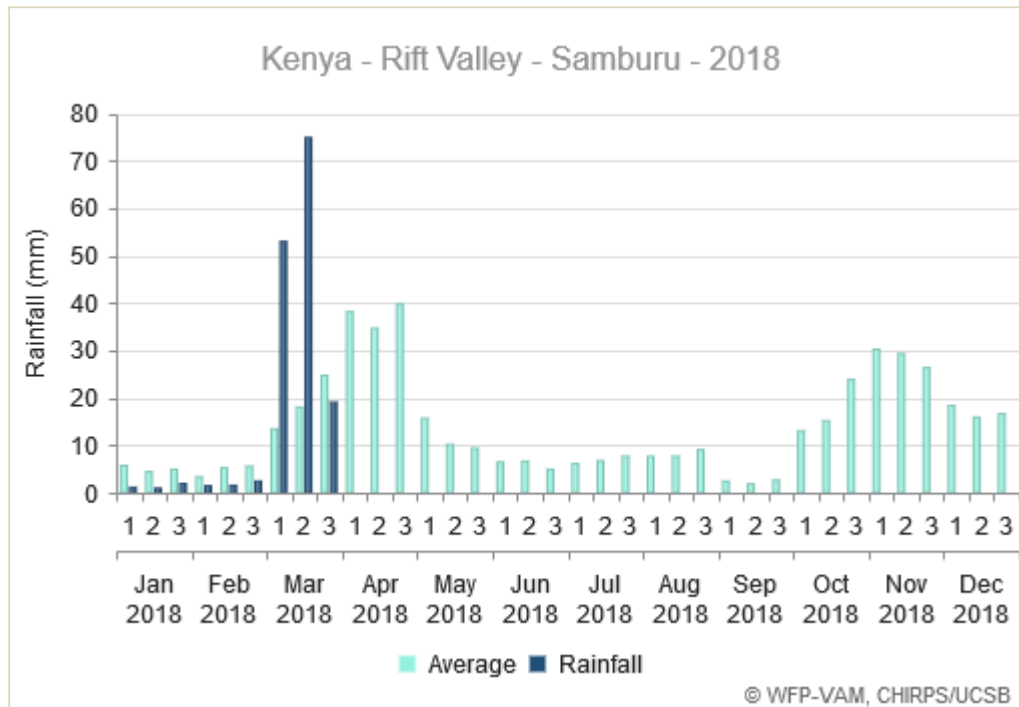
## 1.0 CLIMATIC CONDITIONS

### 1.1 Rainfall Performance

- The county experienced enhanced rainfall in the first week of the month. Compared to long term average (LTA), the season onset was on time. However due to climate change, the season has been delaying starting on third or first week of April.
- Most parts of the county received considerable rains for the first two dekads of the month which slightly decreased in the third dekad. Areas around Maralal experienced 11 rainy days as per the rain gauge stationed within county Meteorology Office compound. Some areas received around 16 days rainfall according to sentinel sites key informants.

### 1.2 Amount of Rainfall and Spatial Distribution

- Enhanced rainfall was recorded during the month which was 295 percent and 316 percent of the LTA in the first and second dekad respectively. The amount decreased and the average amount was 23 percent below the LTA in the third dekad of the month (Figure 1).
- Spatial distribution was evenly distributed across the three sub counties with varying intensities.



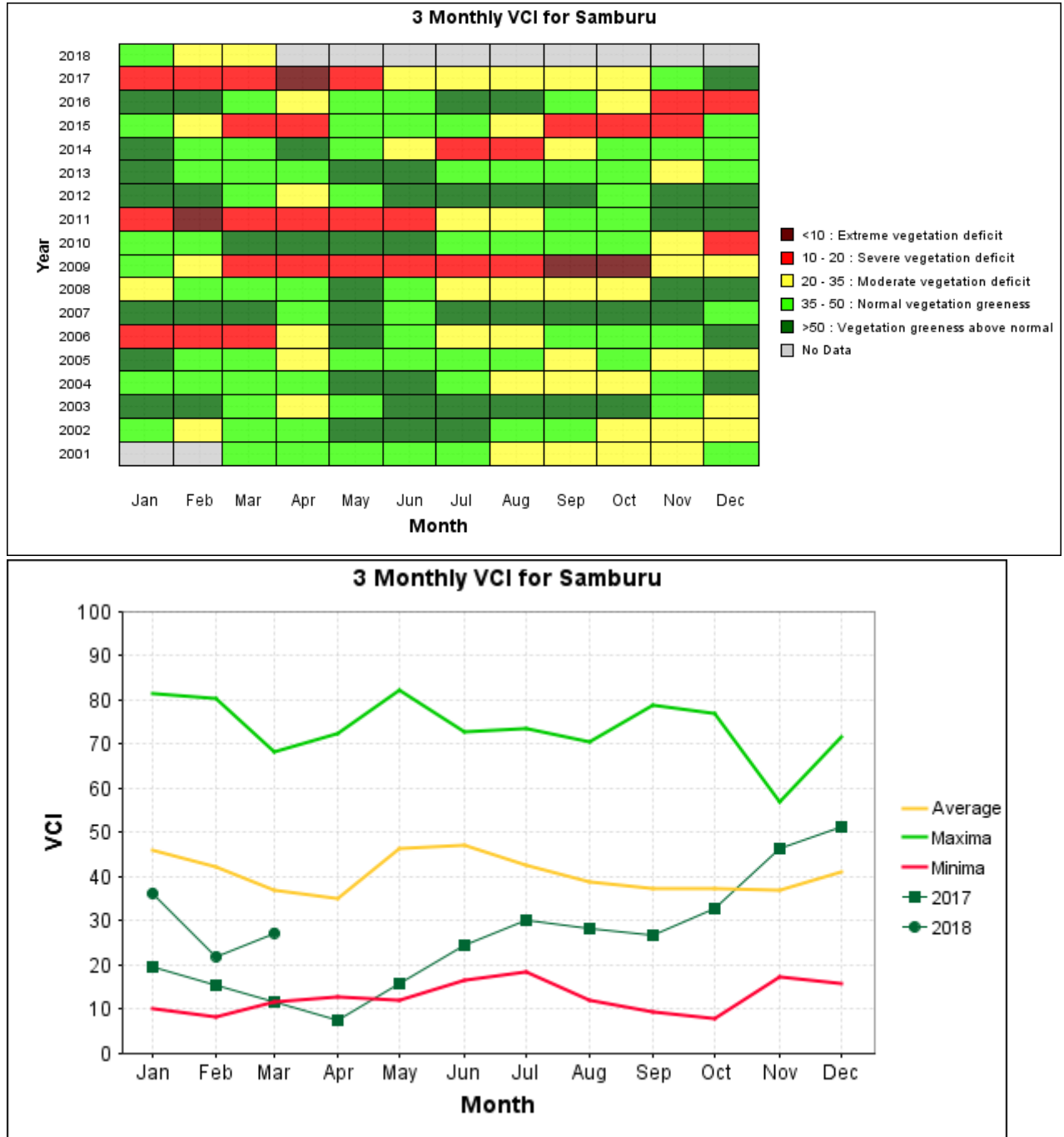
**Figure 1:** Graph Showing Rainfall Estimates (RFE) Trends for Samburu County  
(Source: WFP-VAM, CHIRPS/UCSB)

## IMPACTS ON VEGETATION AND WATER

### 2.0 Vegetation Condition

#### 2.1.1 Vegetation Condition Index (VCI)

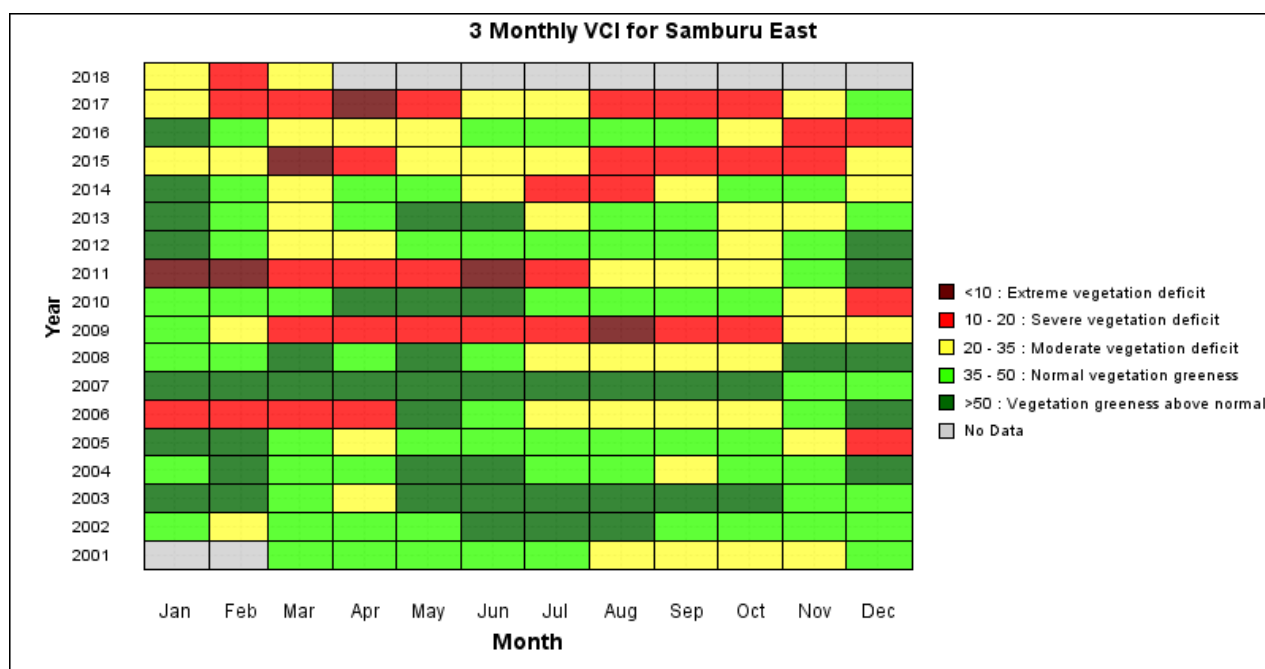
- Following the early onset of the rains, rangeland resources improved across the county. Based on the Vegetation Condition Index (VCI), the overall 3-month average VCI improved by 25 percent from last month. In addition, the 1-moth VCI value was 46.36 indicating high ground wetness and lush pastures. In comparison to last 17 years, the situation is below normal except in 2017, 2011 and 2006 in the same period of the year (Figure 2).



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

- Significant improved in pasture and browse rejuvenation was noticed in Samburu east Sub County resulting into VCI improvement by 50 percent from the previous month. The high wet conditions will likely result in vegetation improvement in the next month in the area. Despite

VCI improvement, the current situation still remained below the normal vegetation greenness at this time of the year (Figure 3).



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

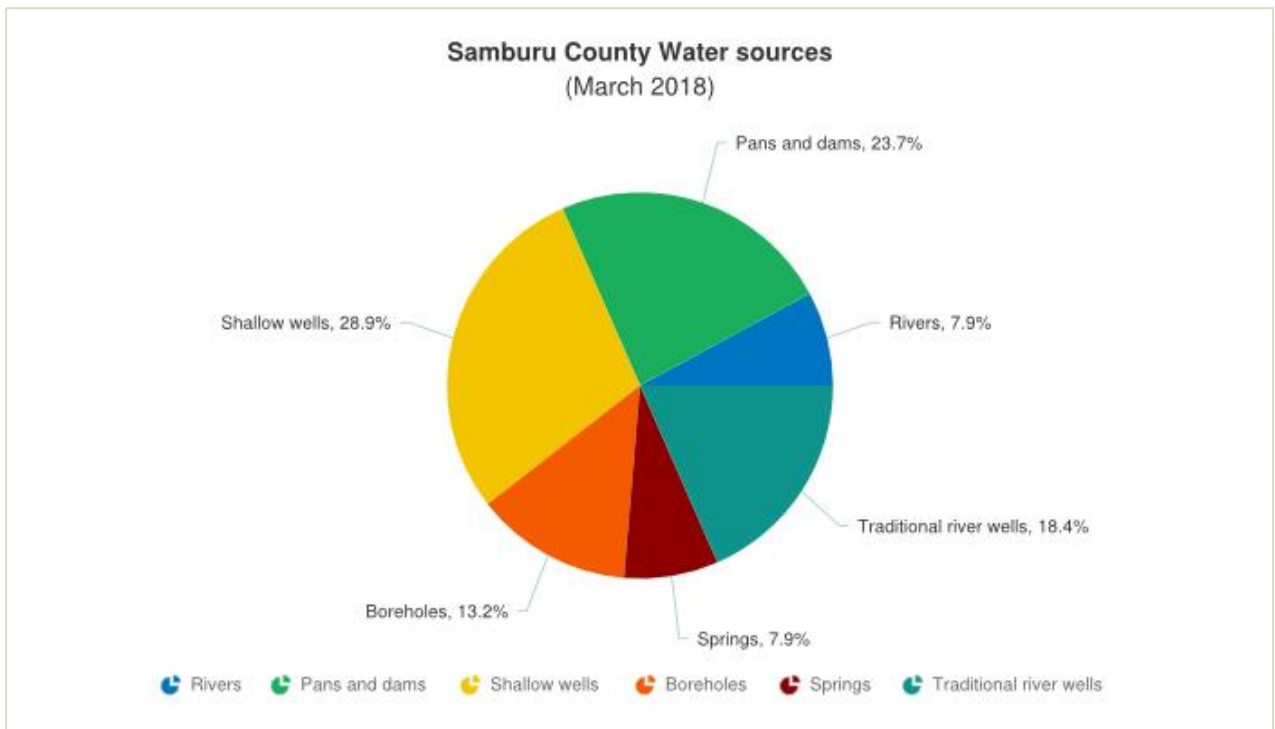
### 2.1.2 Field Observations (Pasture and Browse Conditions) Quality and Quantity

- Most parts of the county received rains that resulted into regeneration of lush pastures and fair to good browse across the livelihood zones. Substantial amount of pasture was observed in conflict hotspots areas of Angata Sikira, Marti and Kawop plains in Samburu North attributed to limited access due to cattle rustling. Marginal pockets of Illaut in Ndoto ward, Nkaroni in Wamba West ward and areas of Waso ward had poor to fair pastures due to land degradation.
- According to sampled community key informants, a proportion of 82.4 percent reported that pasture was fair to good while 17.6 percent reported pasture being poor. Additionally, 47.1 stated that browse was good and 52.9 responded that available browse was fair.

## 2.2. Water Resource

### 2.2.1 Sources

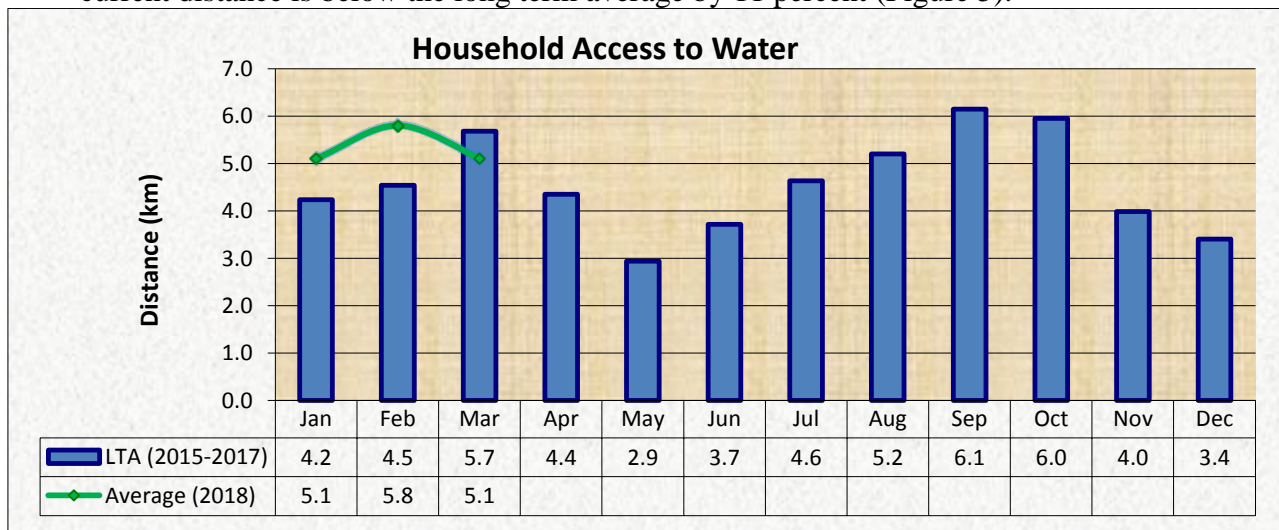
- Significant improvement was noted in recharge of surface water points across the livelihood zone attributed to rainfall received during the month. The main water sources in use during the period under review were Shallow wells, Pans and dams and Traditional river wells.
- Shallow wells and pans and dams usage increased 13.7 percent and 4.8 percent. However boreholes and traditional river wells usage declined by 13.8 percent and 11.3 percent respectively indication of rain water availability and accessibility.
- Other water sources include Waso River and Springs each contributing 7.9 percent of available water both for domestic and livestock use.
- Water turbidity is high in surface water sources due to rain runoff resulting from soil erosion as a result of degraded environment (Figure 4).



**Figure 4:** Common water sources

### 2.2.2 Household Access and Utilization

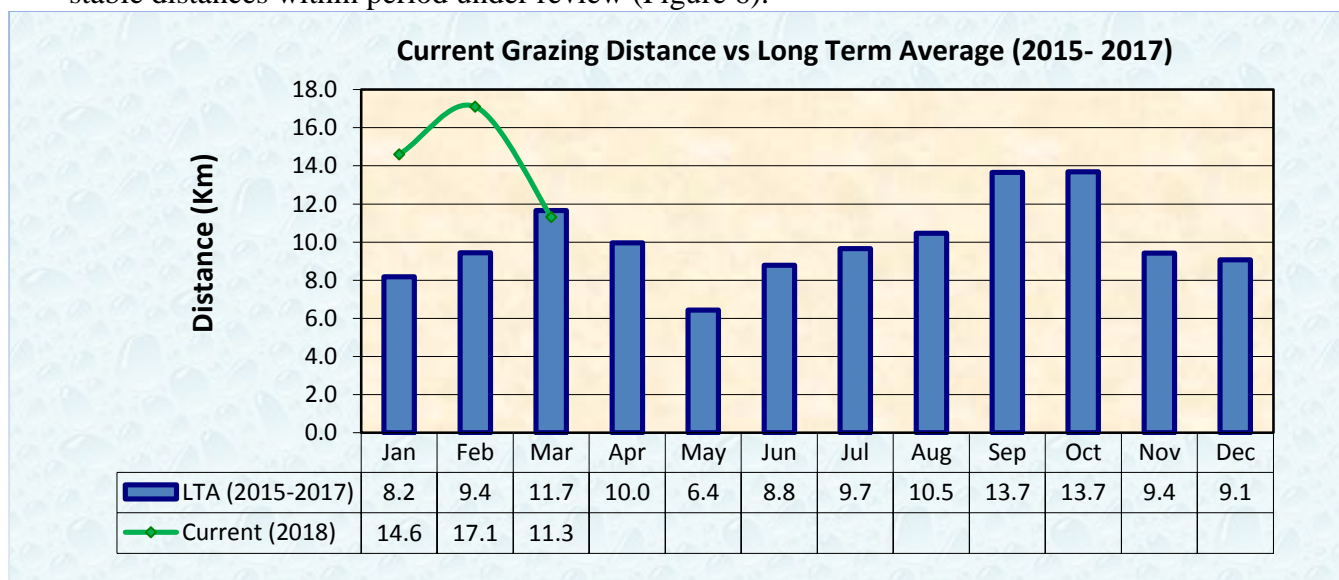
- The rains experienced during the period under review brought a sigh of relief for household from the long distances they witnessed since January. Distance trekked by households to access water decreased by 12 percent compared to February with distances decreasing from 5.8 to 5.1 km. As noted above households made use of open water sources near their homesteads hence the decline.
- Highest household trekking distance were recorded in Waso ward with an average of 8 km follow by Nachola ward at 6 km while shortest distances witnessed in Ndoto due to available springs within the Ndoto hills.
- Households’ fetched water from the sources and majority consumed it without any treatment. Women and young girls the main responsible for fetching water for the household use. The current distance is below the long term average by 11 percent (Figure 5).



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

### 2.2.3 Livestock Access (Grazing Distances to Water Points)

- Like households, livestock trekking distances from grazing areas to water points also decreased as compared to last month. The decrease was attributed to recharge of open water sources across the livelihoods following the enhance rainfall received within the month.
- Current livestock walking distances decrease by 34 percent compared to average distance recorded in February.
- Livestock from Nachola and Waso wards trekked the longest distances from grazing fields to water points at 15.3 km and 15 km respectively. Waso received depressed rains while conflicts restricted livestock mobility in areas of Nachola and Elbarta thus limited access to available pastures and water points.
- The current average distance of 11.3 km is within the long term average thus signifying stable distances within period under review (Figure 6).



**Figure 7:** Distance Travelled from Grazing Areas to Water Points

### 3.0 PRODUCTION INDICATORS

#### 3.1 Livestock Production

##### 3.1.1 Livestock Body Condition

- Body condition for small stock and camels was good with smooth appearance with majority exhibiting fat, blocky appearance with bone over the back not visible, attributed to fair browses which favored the browsers and the stunted pasture which was comfortably consumed by sheep.
- On the other hand, body condition for cattle was fair to good with most of them exhibiting moderate conditions (neither fat nor thin) (*Refer to table 1 in annex*).
- Lush pastures are causing bloating in cattle thus resulting to distended left abdomen and appear distress.

##### 3.1.2 Livestock Diseases and Deaths

- No disease outbreak reported within the count. However clinical signs of foot rot for goats were reported in agro pastoral livelihood zone. Other endemic diseases reported across the livelihood zones include Contagious Caprine Pleuro Pneumonia (CCPP) and diarrhoea in sheep.
- No livestock deaths as a result of drought were reported. Incidences of livestock predation by wild animals were reported across the livelihood zones.

##### 3.1.3 Milk Production

- Stable trend for milk production continued to be noted remaining at 1.5 litres per household per day for the last three months.
- The low production levels can be attributed to weaning in goats and sheep (Figure 8).

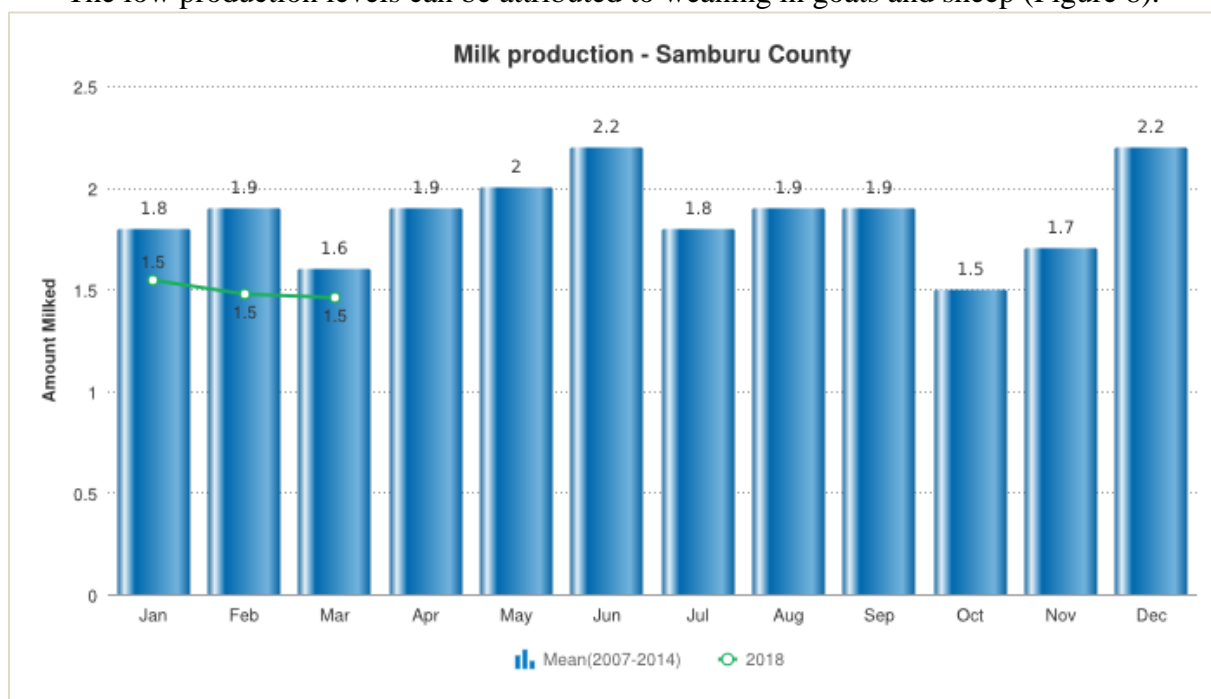


Figure 8: Trends in Milk Production per Household

#### 3.2 Rain Fed Crop Production

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

- Most crop farmers in agro pastoral livelihood have planted their farms while some are still doing land preparation.

##### 3.2.2 Harvest of Crop

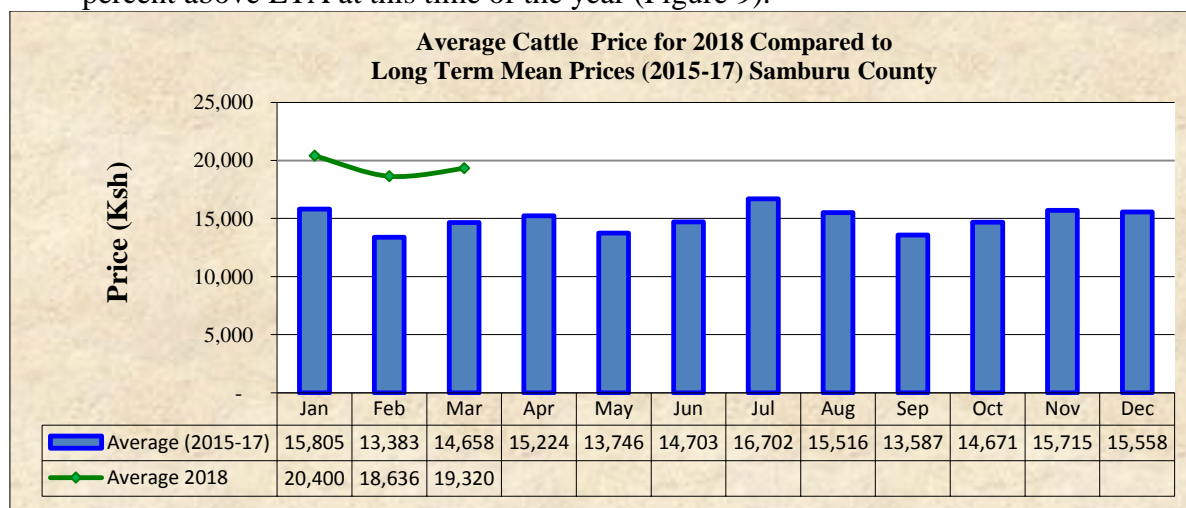
- No harvest experienced within the month.

## 4.0 MARKET PERFORMANCE

### 4.1 Livestock Prices

#### 4.1.1 Cattle Prices

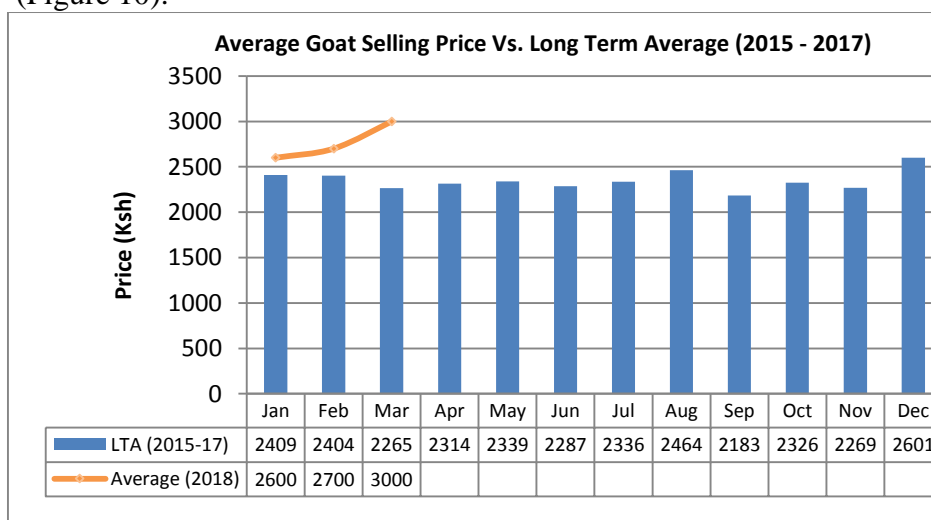
- Stable cattle prices were noted across the livelihood zones. The average price for the month was Ksh 19,320 which almost comparable to Ksh 18,640 recorded in February.
- All markets were operation across the livelihood save for the new Baragoi market that has not been progressing due to conflicts within the area.
- Highest price was recorded in Archers post market at Ksh 25,000 followed by Lolkuniani at Ksh 24,170 while Illaut and Lekeru markets recorded low prices at Ksh 18,000 and Ksh 12,000 respectively.
- Since January, cattle average price have been above LTA with this month price being 32 percent above LTA at this time of the year (Figure 9).



**Figure 9:** Graph Showing Cattle Selling Price Trends at Market Level

#### 4.1.2 Goat Prices

- Upward trend have been recorded for goats prices due to availability of browse and *Acacia* pods that resulted into good to fair body conditions thus attracting better prices.
- Current goat selling price in the market slightly increased to Ksh 3,000 from Ksh 2,700 recorded in the previous month. Lolkuniani market in pastoral livelihood recorded the highest goat selling price of Ksh 3,670 while Illaut recorded the least price at Ksh 2,000. Lolkuniani market is strategic market feeding to terminal markets such as Rumuruti, Isiolo and even Meru county Markets.
- The average price remained above the LTA by 32 percent at the similar time of the year (Figure 10).

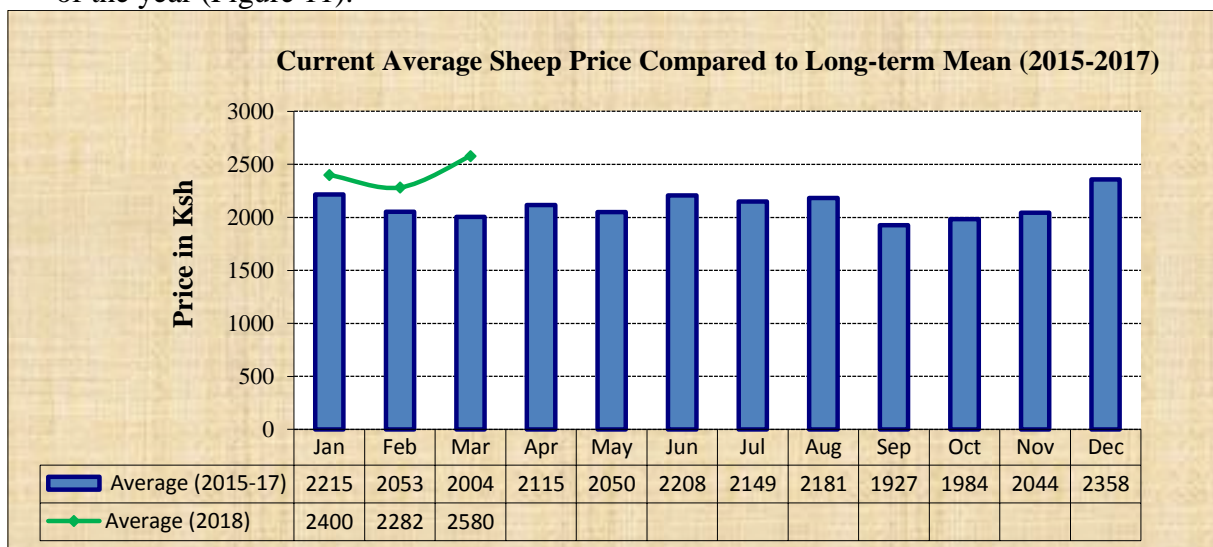




**Figure 10:** Graph Showing Goats' Selling Price Trends at market Level

### 4.1.3 Sheep Prices

- Like goat selling price, sheep market price also increased during the month. The current price increased from Ksh 2,280 to Ksh 2,580 which an increase of about 13 percent.
- The current average selling price for sheep remained above the LTA by 29 percent at this time of the year (Figure 11).

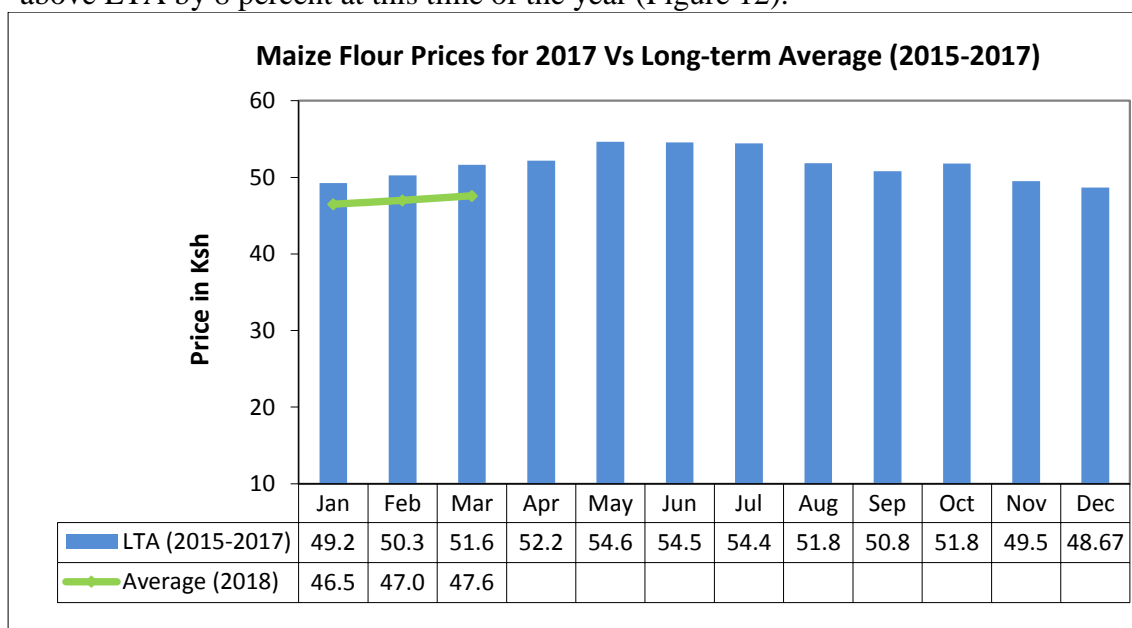


**Figure 11:** Graph Showing Sheep Selling Price Trends at Market Level

## 4.2 Crop Prices

### 4.2.1 *Posho* (Milled Maize)

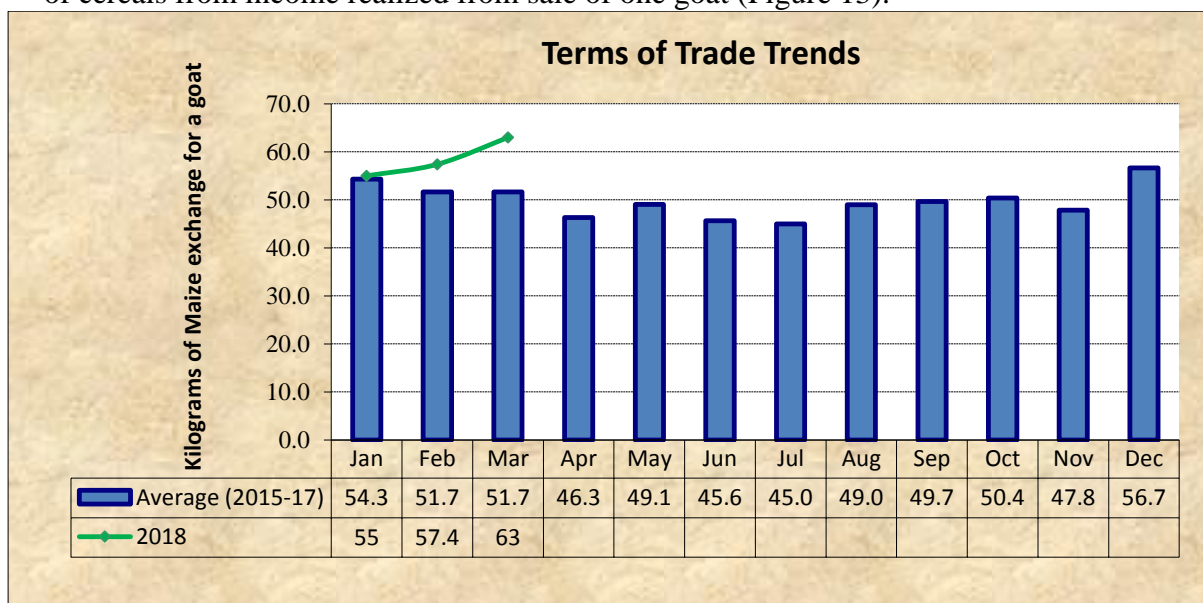
- Maize/*posho* price stabilized compared to the last three months. Importation of maize by traders from Uasin Gishu and Busia Counties has attributed to stable market prices.
- Current *posho* average price was Ksh 48 per kilo which is almost proportionate to last month price of Ksh 47 per kilo.
- Most sampled markets recorded *posho* price of Ksh 50 per kilogram except Archers post and Lpus that recorded Ksh 45 and Ksh 40 per kilo respectively.
- *Posho* prices continued to be below the LTA with the current price of Ksh 48 per kilo being above LTA by 8 percent at this time of the year (Figure 12).



**Figure 12:** Graph Showing Maize meal Price Trends

### 4.3 Livestock Terms of Trade (TOT)

- Upward trend was also observed in TOT with current TOT increasing 11 percent from last month and remained above LTA by 21 percent at similar time of the year. The increase in TOT was attributed to increase in goat price and stable maize prices.
- The TOT was favourable to pastoralists with households fetching approximately 63 kilograms of cereals from income realized from sale of one goat (Figure 13).

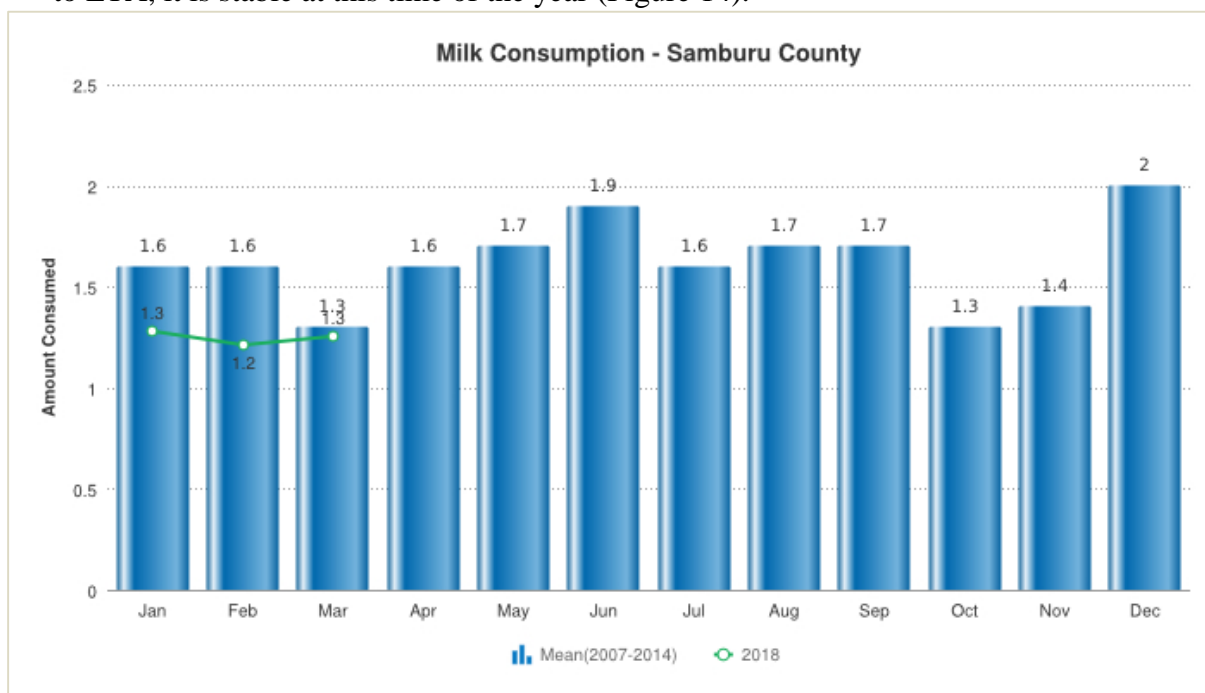


**Figure 13:** Trends in Terms of Trade (TOT)

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 Milk Consumption

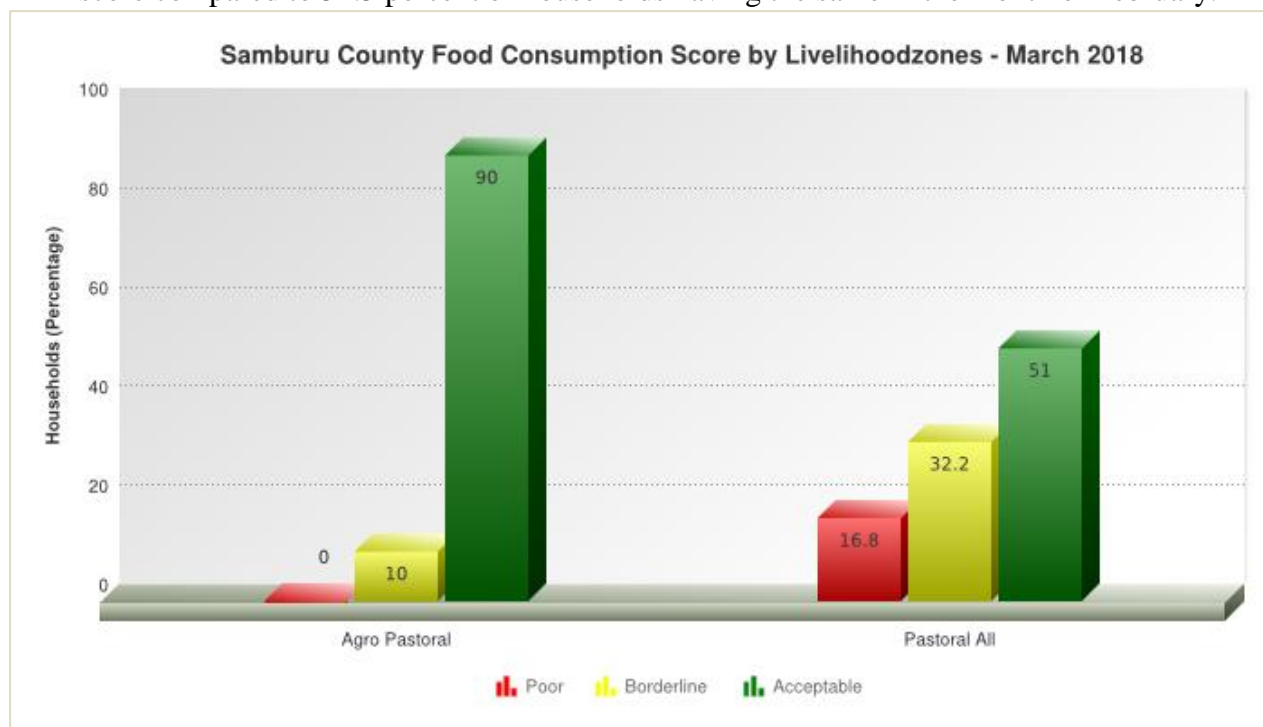
- Milk consumption slightly declined by 8 percent compared to last month. However compared to LTA, it is stable at this time of the year (Figure 14).



**Figure 14:** Trends in Milk Consumption per Household

### 5.2 Food Consumption Score (FCS)

- Larger proportion of sampled households in agro pastoral, approximately 90 percent were in acceptable food consumption score.
- The proportion of households in pastoral livelihood with poor and borderline remained stable. Out of the sampled households, 49 percent reported poor and borderline food consumption score compared to 51.5 percent of households having the same in the month of February.

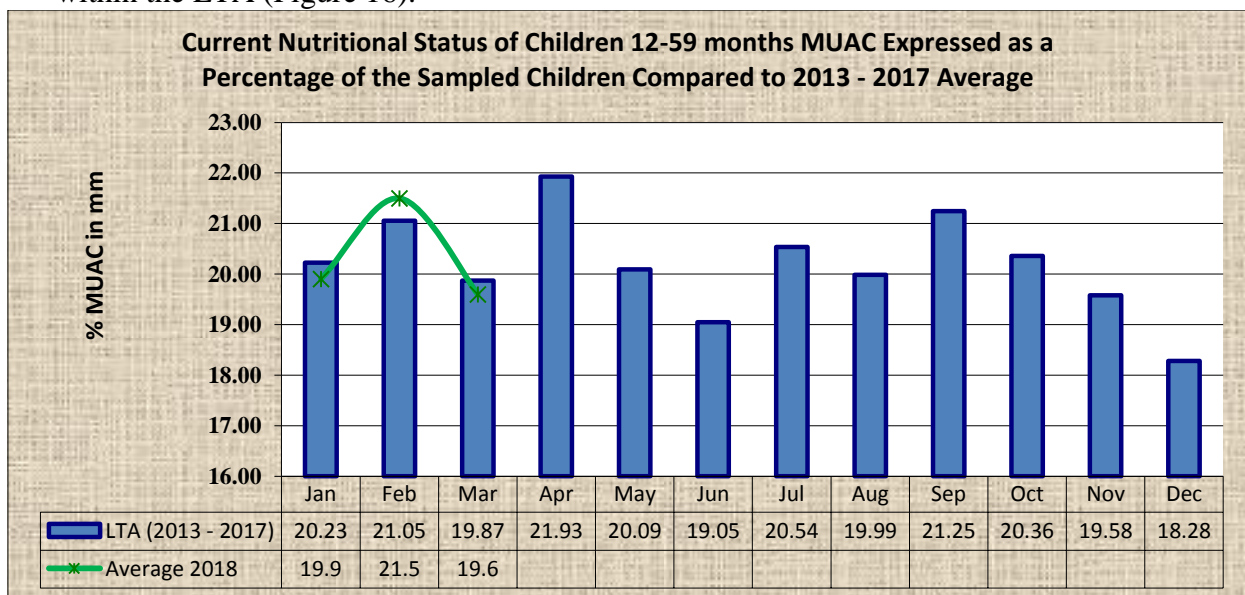


**Figure 15:** Bar chart showing FCS per Sub County

### 5.3 Health and Nutrition Status

### 5.3.1 Mid Upper-Arm Circumference (MUAC 125-134 mm)

- Significant improvement of about 9 percent was noticed in children under-fives from last month. The improvement can be attributed to advocacy and supplementary feeding support by county nutrition department and partners.
- High proportion of children at risk of malnutrition were reported in Samburu central sub county at 29.3 percent followed by Samburu north sub county at 22.1 percent and Samburu east at 17.4 percent.
- Compared to similar time of the year, the proportion of under-five at risk of malnutrition was within the LTA (Figure 16).



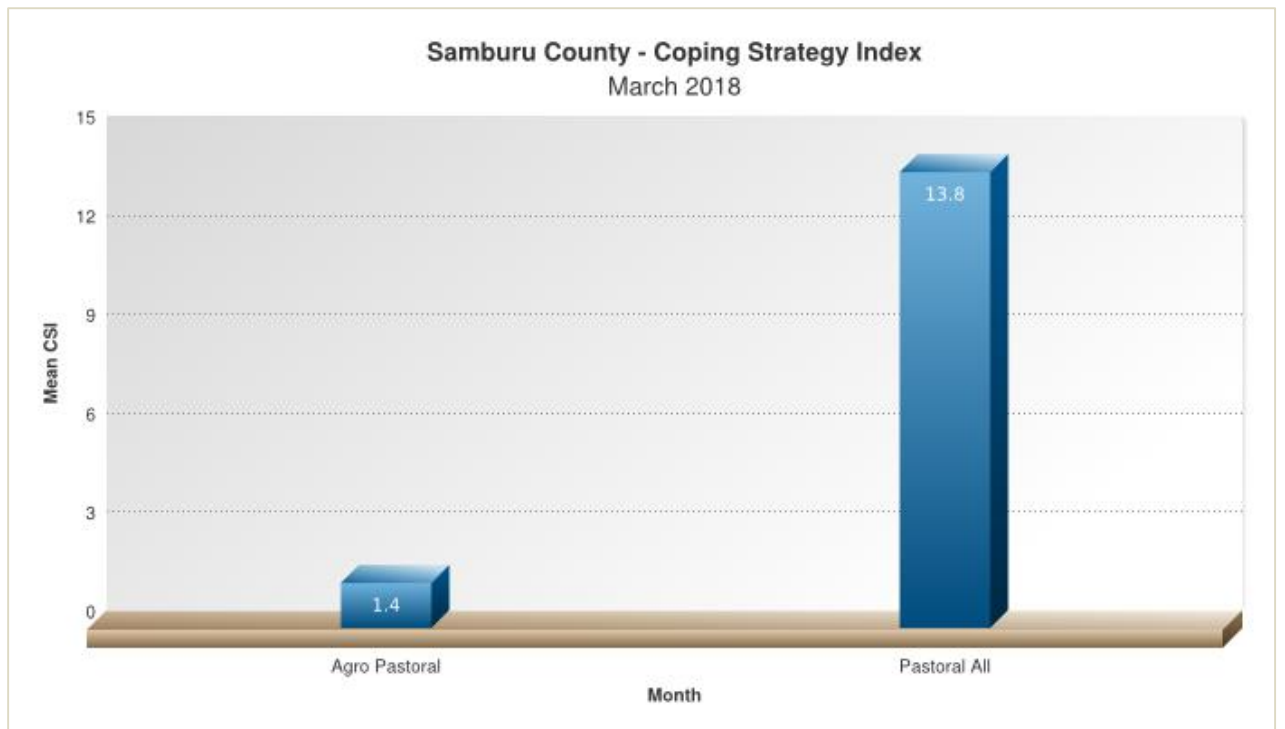
**Figure 16:** Graph showing average Nutritional status (MUAC)

### 5.3.2 Health

- Out of sampled children, 12 percent reported suffered fever with chills like malaria while diarrhoea and fever with breathing difficulties each accounting two percent each of suffered illness.
- Other reported diseases include Malaria, Pneumonia and URTI for both under-fives and general population with the households seeking help from public health centres/ dispensaries, private clinics while others used local herbs for treatment.

### 5.4 Coping Strategies Index(CSI)

- Current mean reduced (rCSI) decreased to 11.68 from was 12.83 recorded in the month of February. Pastoral households continued employ more strategies than households in agro-pastoral in order to cope with lack of food or money to purchase food.
- In the pastoral livelihood the CSI was 13.8 while agro pastoral CSI was 1.4. The variation in coping mechanisms could be attributed to availability of crops commodities and close proximity to market centres in agro pastoral areas than in pastoral livelihood.
- More commonly employed strategies include 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

## 6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

### 6.1 Non-Food On-going Interventions

Table 1: Non-food On-going Interventions

SECTOR	INTERVENTION	IMPLEMENTERS
Livestock	Vaccination of 110,000 sheep and goats against sheep and goat pox and 564 dogs against rabies	CARITAS, County Veterinary department
	Provision of 4,200 bags of livestock feeds (pellets) to weak cattle in Samburu east	NDMA
	Provision of livestock feeds (pellets) to weak cattle in Samburu east	CARITAS
Health	On-going High Impact Nutritional Interventions (HINI) implemented by partners in collaboration with MOH in 47 health facilities across the County	MOH , NHP Plus and UNICEF
	Completion of Legarde borehole equipped with solar panels	RPLRP
Social Inclusion	On-going cash transfer and business mentorship to women	BOMA Project

### 6.2 Food Aid

- Provision and distribution of Sorghum to 3,333 households in Samburu central sub county under the Asset Creation Program (ACP) supported by WFP, Ramati D.I and NDMA.
- The county government purchased 720MT of maize and logistical facilitation supported by WFP through Ramati D.I and distributed to beneficiaries in Samburu east and north sub counties.

## 7.0 EMERGING ISSUES

### 7.1 Insecurity/Conflict/Human Displacement

- Cases of livestock theft were reported in Samburu east while in Samburu north, the situation is calm however tension is high in fear of retaliatory attacks aggravated by cattle rustling that took place at Suiyan in the month of February.

### 7.2 Migration

- Most cattle from Samburu central and Samburu north that were in *foras* return back to wet grazing seasonal while cattle in Samburu east are in Nasuinyai, Sarara, Sunya and around Mathew hills.

### 7.3 Food Security Prognosis

According to Kenya meteorological month forecast, near normal to normal rainfall is expected in several parts of the country that is likely to result into:

- Pasture for livestock is likely to improve further across the livelihood zones subsequently likely to lead to good body livestock body condition.
- Good crop performance is expected especially in agro pastoral livelihood zone.
- Stagnant water in natural ponds is likely to increase water borne diseases and create conducive environment for mosquito breeding thus high chances of malaria outbreaks.
- With possible good livestock body condition, there is likely of improved milk production. Additional, green traditional vegetables are expected to be available for households thus likelihood of improved under-fives and general population health.

## 8.0 RECOMMENDATIONS

**Table 2:** Proposed Interventions per Sector

<b>SECTOR</b>	<b>INTERVENTION</b>
<b>Livestock</b>	<ul style="list-style-type: none"><li>• Enhance livestock disease surveillance across the livelihood zones</li><li>• Provision of pasture establishment to</li></ul>
<b>Health</b>	<ul style="list-style-type: none"><li>• Mapping out possible areas for water borne and malaria outbreak and to intensify surveillance of such diseases.</li></ul>
	<ul style="list-style-type: none"><li>• Provision of water treatment chemicals for households getting water from open water sources</li></ul>
	<ul style="list-style-type: none"><li>• Upscaling of integrated disease surveillance and response</li></ul>
<b>Water</b>	<ul style="list-style-type: none"><li>• Roof water catchment promotion in schools and at household level</li></ul>
<b>Peace and Coordination</b>	<ul style="list-style-type: none"><li>• Support dialogue between warring communities in Samburu north</li></ul>
<b>Agriculture</b>	<ul style="list-style-type: none"><li>• Certified seeds distribution and advocacy on proper planting procedures</li></ul>

## Annexes

**Table 3:** 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	