

National Drought Management Authority SAMBURU COUNTY



A Vision 2030 Flagship Project



DROUGHT EARLY WARNING BULLETIN FOR FEBRUARY 2018

FEBRUARY 2018 EW PHASE

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- Generally, the county remained dry with high daytime temperatures.
- Forage condition has deteriorated below the threshold range across the county with only Samburu west remaining within normal range.
- Water levels for both open and underground sources have declined attributed to high daytime temperatures resulting to high evaporations and lack of rainfall for recharge.

Socio Economic Indicators Details

- Increase in proportion of livestock migrating within their sub counties was witnessed. Out migration to Kiromun plain in Laikipia north Sub County also noted
- Trekking distances to water points both livestock and household increased compared to previous month.
- Milk production and consumption remained below long term average compared similar period of previous years.
- Livestock body conditions ranged between good to fair for both browsers and grazers.
- Posho/maize prices stabilized as compared to previous month.
- Terms of Trade (TOT) remained stable compared to January.
- Proportion of children at risk of malnutrition increased compared to previous month.

Early Warning Phase Classification

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

Biophysical Indicators	Value	Normal range/Value	
VCI-3month (County)	21.8	35-50	
VCI-3month -Samburu East	14.12	35-50	
VCI-3month -Samburu North	26.94	35-50	
VCI-3month-Samburu West	35.47	35-50	
Production indicators	Value	Normal ranges	
Livestock Migration Pattern	Intra Migration	No Migration	
Livestock Body Conditions	Cattle: 12 th & 13 th ribs visible Goats: Good appearance	Fat & Smooth appearance	
Milk Production	1.5	>1.9	
Livestock deaths due to drought	No Deaths	No death	
Access Indicators	Value	Normal ranges	
Terms of Trade (TOT)	55.4	>51.7	
Milk Consumption	1.3	>1.6	
Return distance (km)	Household	5.8	<4.5
	Livestock	17.1	<9.4
Acceptable FCS (percent)	Pastoral	48.5	100
	Agro pastoral	93.1	100
Utilization indicators	Value	Normal ranges	
MUAC (percent)	21.5	<21.05	
Mean CSI	Pastoral	15.2	<56
	Agro pastoral	1.2	<56

<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 county generally remained dry save for some little rain during the first and second dekad which was inconsequential and had no significant impact. However on the last day of the month, heavy downpour characterized by thunderstorms and lightning was received in most parts of the county may be an indication of the impending rainfall onset which is usually expected in mid-March. The rains resulted in flash floods in Maralal town. Close monitoring of the performance of the rain to ascertain whether that was the actual onset or false onset needs to be done.

1.2 Amount of Rainfall and Spatial Distribution

- Depressed rainfall which was below Long Term Average (LTA) was received in parts of Kirisia hills and Baragoi for few minutes for about a day during the first and second dekad (Figure 1).
- Generally rainfall distribution for the period under review, both in space and time was poor and uneven across the livelihood zones.

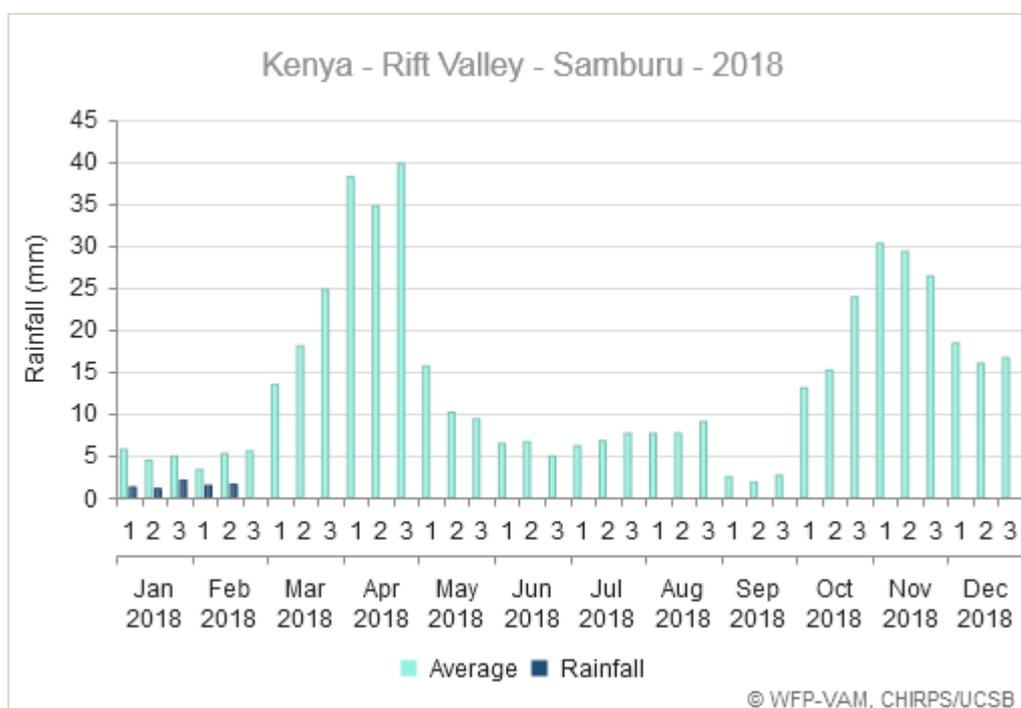


Figure 1: Graph Showing Rainfall Estimates (RFE) Trends for Samburu County (Source: WFP-VAM, CHIRPS/UCSB)

IMPACTS ON VEGETATION AND WATER

2.0 Vegetation Condition

2.1.1 Vegetation Condition Index (VCI)

- Forage condition within the county deteriorated remarkably in all the livelihood zones. The rapid rate of deterioration in vegetation cover was due to convergence of livestock in dry areas pilling pressure on pastures and browse coupled with warmer than usual temperatures experienced during the month. Based on the Vegetation Condition Index (VCI), the overall 3-month average VCI decreased by 40 percent from last month. Based on preliminary weather forecast, forage is likely to deteriorate through end of March in areas that depend on long rains projected to start in April. In comparison to previous years, the situation is below normal except in 2017, 2011 and 2006 in the same period of the year (Figure 2).

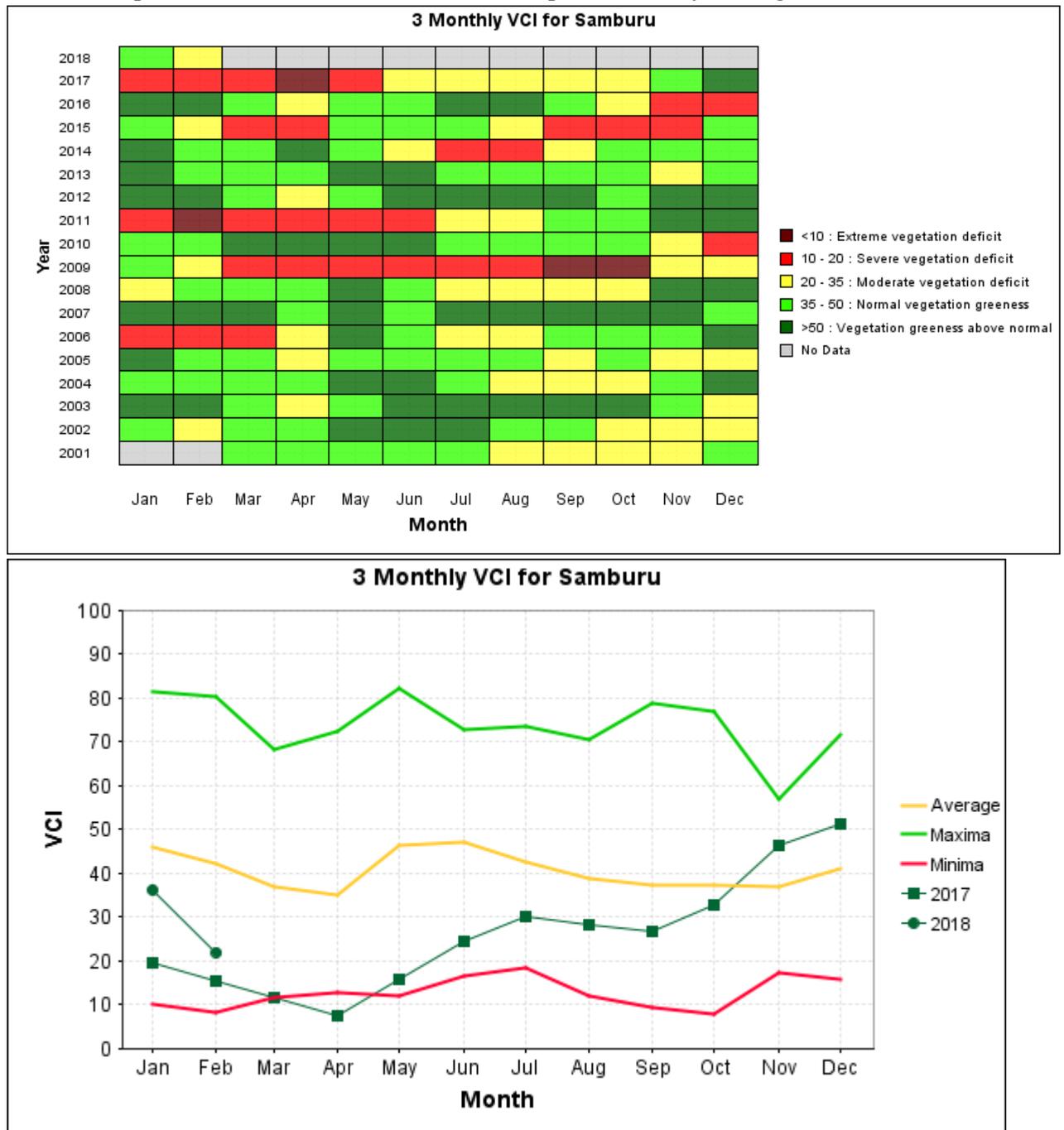


Figure 2: Matrix and Graph Showing VCI Trends for Samburu County
(Source: Boku University)

- Samburu east sub county vegetation particularly pasture is depleted in most areas with browsers majorly feeding on *Acacia* pods (*Sagaram*). Further deterioration is likely to continue in the area as the lean season for the sub county sets in. According to VCI, the 3-month VCI value dropped marginally by 74 percent from the value recorded in the month of January. The vegetation cover shifted from moderate vegetation deficit to severe vegetation deficit (Figure 3).

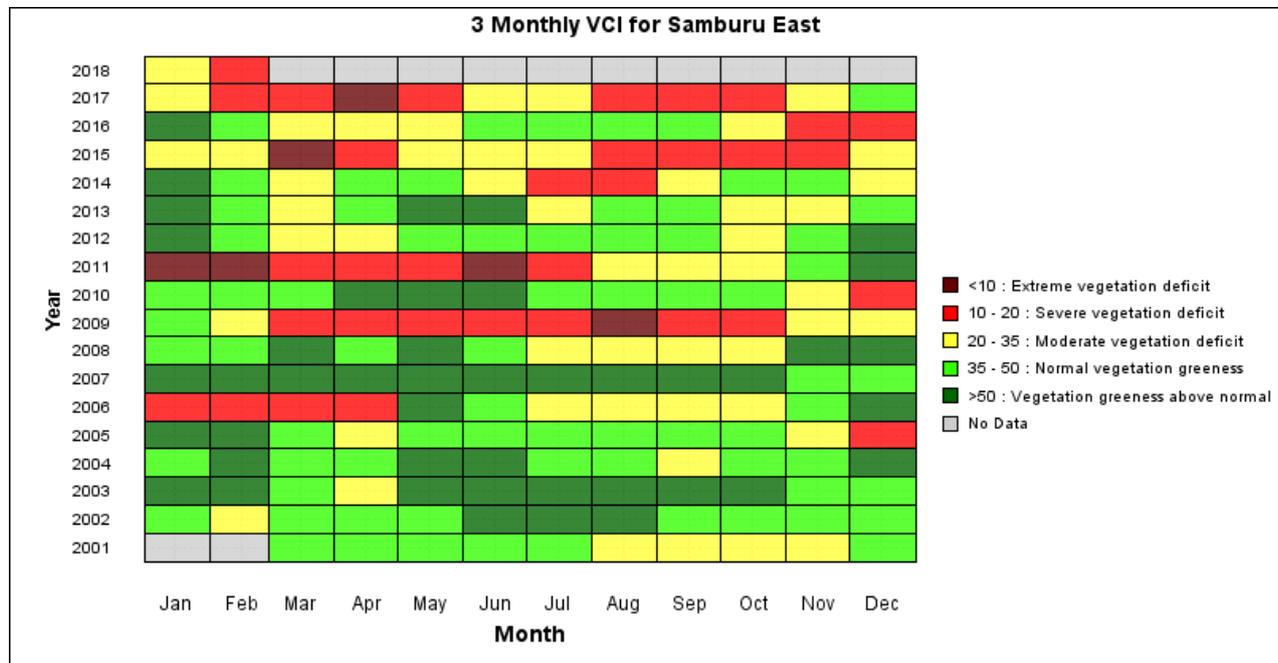


Figure 3: Matrix Showing Historical VCI trends for Samburu East sub county
(Source: Boku University)

2.1.2 Field Observations (Pasture and Browse Conditions)

Quality

- Hot scorching sunshine and lack of rain has resulted in poor forage conditions across both agro pastoral and pastoral livelihoods. The little pasture remaining is very dry and its palatability level is very low.

Quantity

- Large concentration of livestock has contributed to depletion of forage resulting to poor pasture and fair browse conditions across both livelihood zones. Conserved pasture in deferred enclosures of pastoral areas of Samburu east was invaded by livestock from other parts of the sub county rapidly depleting it whereas the rest of the sub county remained poor. In Pastoral North, significant pastures is still available in conflict hotspots areas of Angata Sikira, Marti and Kawop plains in Samburu North attributed to limited access due to resource based conflicts whereas the rest of the sub county also remained poor.
- According to community interviewed, 60 percent reported pastures being fair and 40 percent reported pastures were poor. A larger proportion of approximately 73.3 percent reported browse was fair while 26 percent reported that browse was poor.

2.2. Water Resource

2.2.1 Sources

- Lack of rainfall has resulted in drying up of open water sources and decline in water table for boreholes. Households are forced to wait longer than normal to fetch water due to reduced yield output.
- Traditional river wells were the most preferred source for majority of households at 29.7 percent followed by boreholes at 27 percent. Shallow wells, pans and dams contributed 16.2 percent and 18.9 percent respectively. Households in Arsim relied mostly on springs which contributed 8.1 percent.
- Water contamination in pans and dams due to sharing by both animals and humans were reported, luckily no cases of waterborne disease reported. (Fig 4).

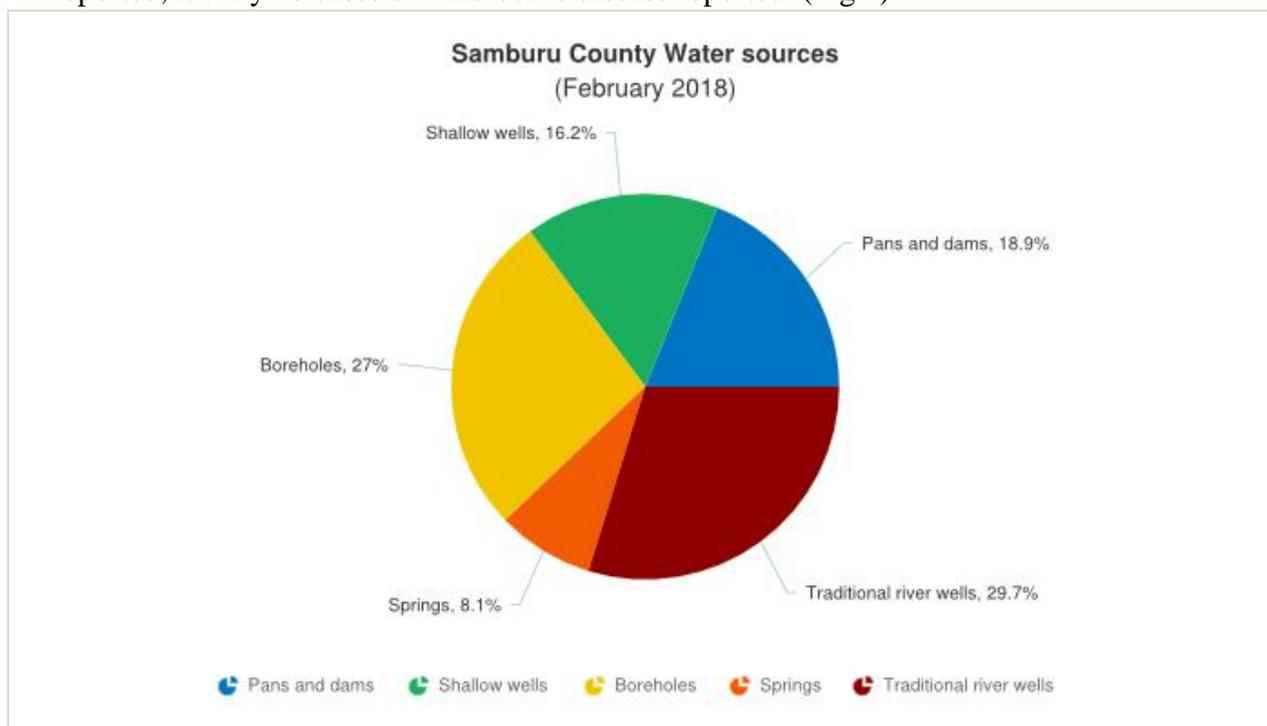


Figure 4: Common water sources

2.2.2 Household Access and Utilization

- Distance trekked by households to access water increased by 12 percent compared to January. The increase was attributed to drying up of pans and dams and also reduced yield output in boreholes due to lack of rainfall, thus the water was not sufficient to sustain the masses and households forced to seek alternative options elsewhere.
- Distance increased from 5.1 km in January to 5.8 km in February. The current distance is greater than the long term average by 22 percent (Figure 5).
- Sentinel site of Arsim (pastoral livelihood) and Longewan (agro-pastoral livelihood) recorded the least distance of 0.5-1 km probably due to close proximity of springs and boreholes respectively whereas Kiltamany (pastoral livelihood) recorded the highest at 8 km.
- Water consumption at household level was restricted for cooking, cleaning and drinking. Majority of the households consumed the water without treating it.

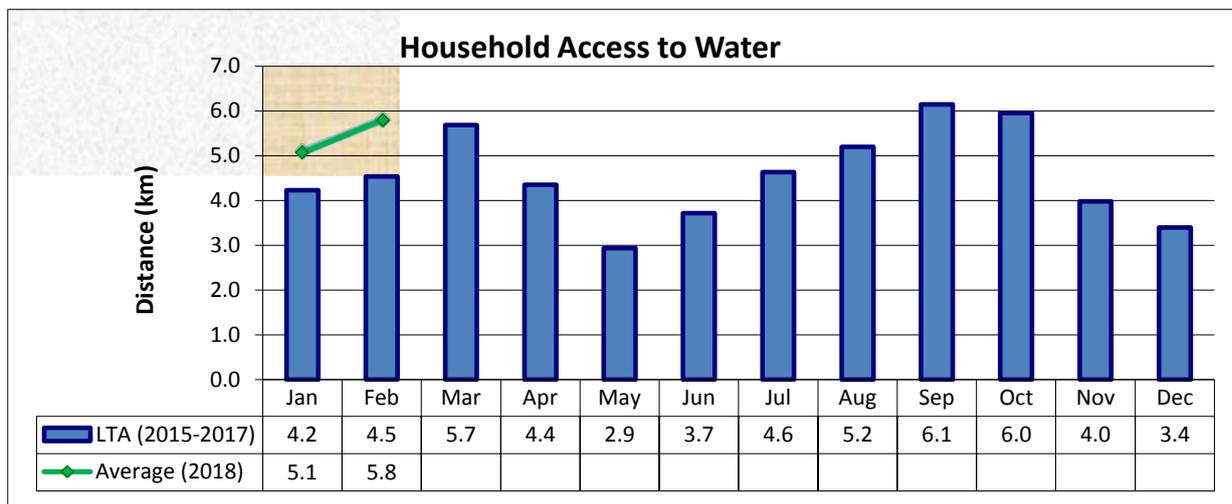


Figure 5: Average Distance Travelled by Households in Search of Water

2.2.3 Livestock Access (Grazing Distances to Water Points)

- Livestock also experienced an increase of 14 percent in trekking distance from January from the grazing fields to the water holes. As pasture becomes scarce, livestock are forced to scavenge further away from the water holes to deferred enclosures and dry season grazing fields which led to the increase.
- Livestock in pastoral livelihood of Nachola trekked longer at 18 km whereas livestock in agro-pastoral zone of Longewan trekked the least distance at 5 km attributed to close proximity of watering points such as boreholes. High trekking distance in Nachola are attributed to security concerns and not necessarily drought since pastoralists from warring communities tend to graze their animals far away from each other and far away from the water points.
- The current distance of 17.1 km was 14 percent above the long term average (Figure 6).

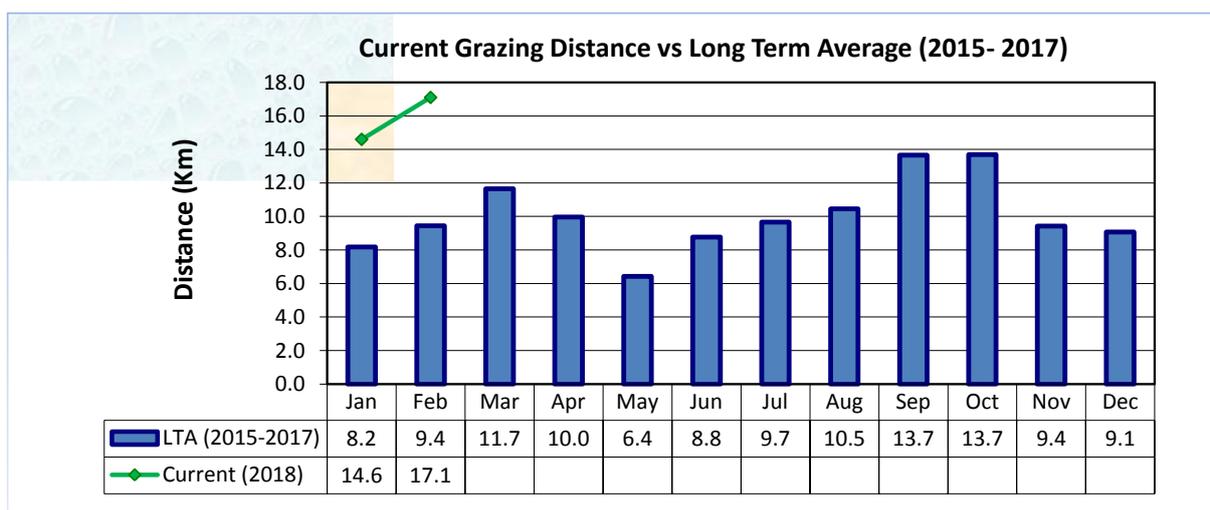


Figure 7: Distance Travelled from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- Despite deteriorating vegetation condition and increased trekking distance, cattle body condition was in borderline fore-ribs not visible (12th & 13th ribs visible) while browsers managed to hang on to maintain good smooth appearance attributed to *Acacia* pods. For instance, 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 (*Refer to table 1 in annex*).

3.1.2 Livestock Diseases and Deaths

- One secluded case of Foot and Mouth Disease (FMD) was Confirmed and quarantined in Samburu Central. Cases of Lumpy Skin Disease were reported in Lekamoru. Rabies affecting camels was confirmed in Logorate and vaccination done. Clinical signs of endemic diseases such as Contagious Caprine Pleuro Pneumonia (CCPP) and rumours of Peste des Petits Ruminants (PPR) in goats continued to be reported across the livelihood zones.
- 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

- Milk production at household level stagnated at 1.5 litres per day which was below the long term average by 21 percent.
- Agro pastoral produced 2.8 litres attributed to availability of cows being close to the homesteads whereas pastoral livelihood produced 1.7 litres which was mainly from goats and camels.
- The low production levels can be attributed to weaning in goats and sheep (Figure 8).

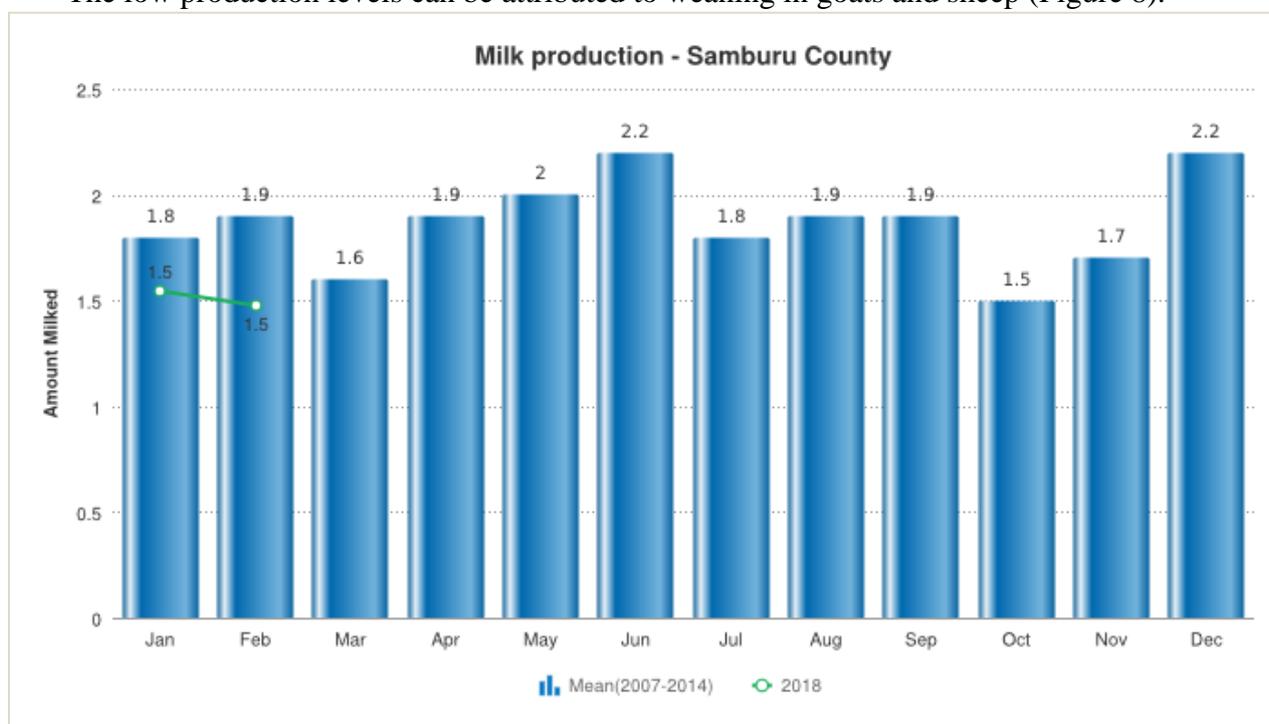


Figure 8: Trends in Milk Production per Household

3.2 Rain Fed Crop Production

3.2.1 Stage and Condition of Food Crops

- Land preparation is ongoing in Agro pastoral livelihood in anticipation of start of the long rains.

3.2.2 Harvest of Crop

- No harvest ongoing.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- Despite fair body condition of cattle, the market price decreased by 8 percent compared to January. The decrease was driven by market forces of supply and demand. Households availed more cattle in the market to raise money to purchase basic household items such as food.
- Cattle fetched between Ksh 15,000 which was the lowest as recorded by Lekuru and Lolkuniani markets up to Ksh 25,000 in Archers post market. Ease of access to Archers post from Isiolo and Meru might have contributed to high cattle prices.
- Compared to LTA, the current average price was above the LTA by 28 percent at the similar time of the year (Figure 9).

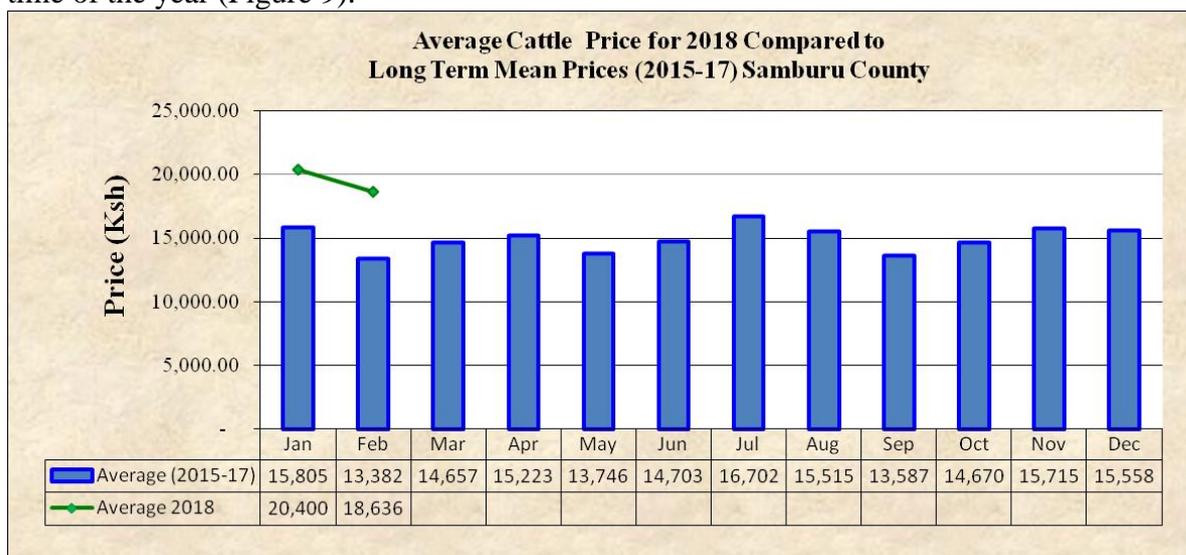


Figure 9: Graph Showing Cattle Selling Price Trends at Market Level

4.1.2 Goat Prices

- An increase of 3 percent in goat selling price was realised as compared to January across major market in the county. The increase was fuelled by high demand for the animal and also good body condition.
- Markets in both agro pastoral and pastoral livelihood fetched similar prices of between Ksh 2000 to Ksh 3000.
- Compared to LTA, the current average price was above the LTA by 10 percent at the similar time of the year (Figure 10).

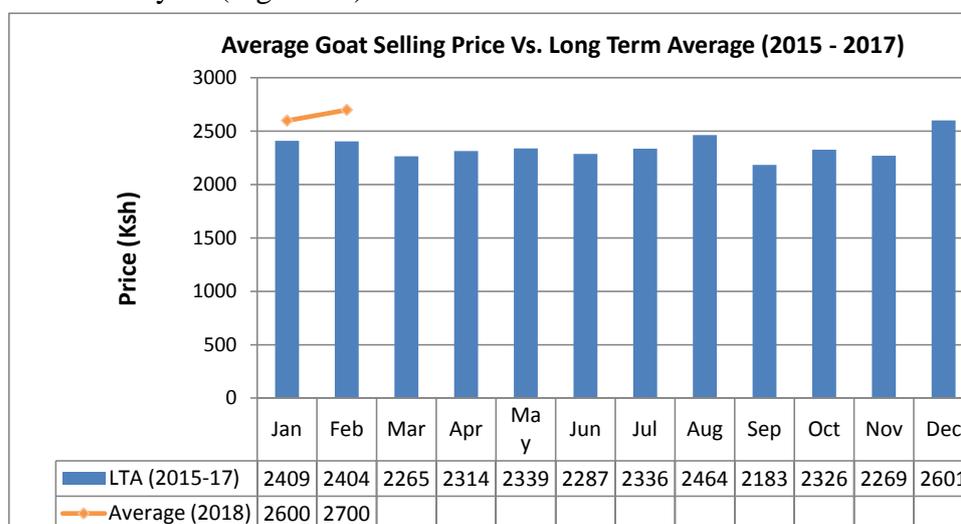


Figure 10: Graph Showing Goats' Selling Price Trends at market Level

4.1.3 Sheep Prices

- Sheep selling price at market level declined by 4 percent compared to January despite the animals having good body condition. Sheep meat is less preferred to goat's meat thus its demand is less. This may have pushed the price down. The need to also dispose off the animal to buy basic household commodities played a role in pushing down the price.
- Illaut market fetched the least price at Ksh 1500 whereas Lolkuniani markets fetched the highest at Ksh 3000. The rest of the markets across both agro pastoral and pastoral livelihood fetched similar prices of around Ksh 2500.
- Compared to LTA, the current average selling price for sheep was above the LTA by 10 percent at this time of the year (Figure 11).

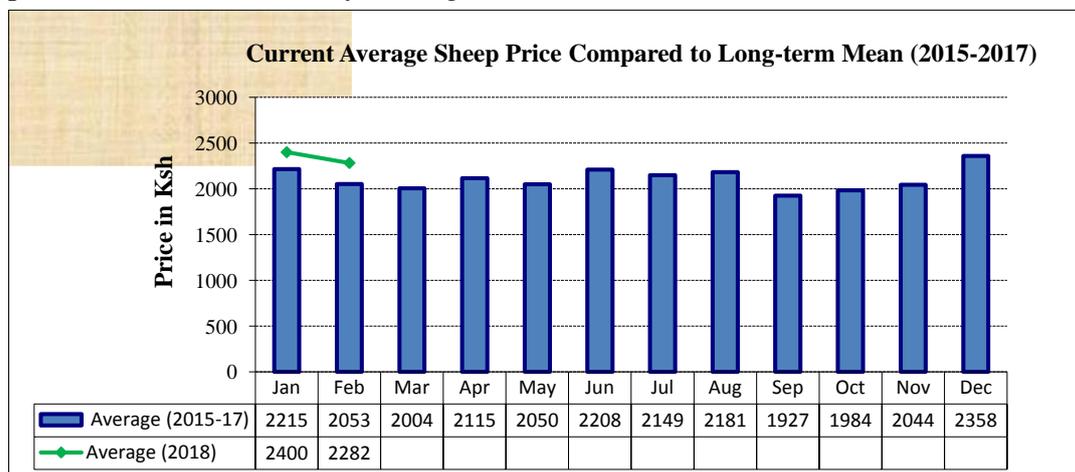


Figure 11: Graph Showing Sheep Selling Price Trends at Market Level

4.2 Crop Prices

4.2.1 Posho (Milled Maize)

- Posho price stabilized compared last month. Majority of households were rely on markets to stocks deplete. The current price is still low compared to the LTA attributed to availability of maize following long rains season harvest and importation of maize by local traders from outside the county.
- Lekuru market which is in agro-pastoral zone recorded the highest price at Ksh 60 whereas Lpus and Baragoi market in pastoral zone fetched the least price at Ksh 40 per kilogram. Households in agro-pastoral livelihood rushed to sell their maize produce at throw away price remaining with little stock which has been exhausted and the local traders are exploiting this opportunity. The current retail average price remained below the LTA by 6 percent at this time of the year (Figure 12).

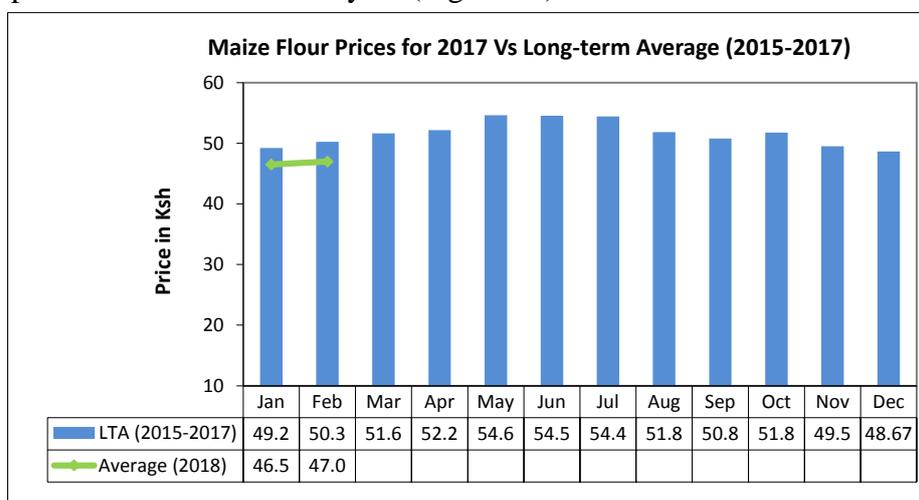


Figure 12: Graph Showing Maize meal Price Trends

4.3 Livestock Terms of Trade (TOT)

- A pastoralist was able to exchange a goat with 57.4 kilograms of cereals which was an increase compared to 55 kilograms received in January. The increase was as a result of high goat prices versus stable cereal prices.
- The current TOT is favourable to pastoralists considering that it is 9 percent above the LTA at the same time of the year (Figure 13).

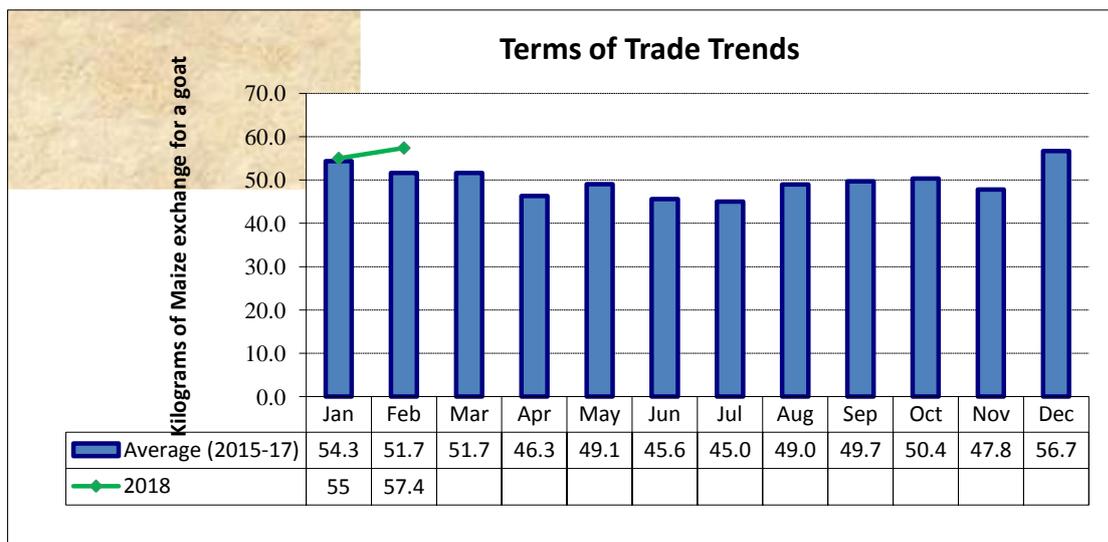


Figure 13: Trends in Terms of Trade (TOT)

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- Milk consumption at household level declined from 1.3 litres in January to 1.2 litres in February. Consumption was restricted to children under five years and in some instances, the elderly. Tough economic times due to the drought forced many households to sell their milk to purchase other food stuffs which has led to the reduction in consumption levels.
- Consumption in agro-pastoral and pastoral zone was 1.6 and 1.5 litres respectively.
- Some household preferred to sell their milk to purchase other basic necessities whereas some households sold excess produce. Whichever the case, milk price retailed between Ksh 60 – 100 per litre.
- Milk consumed at household level on average was 25 percent below the LTA at this time of the year (Figure 14).

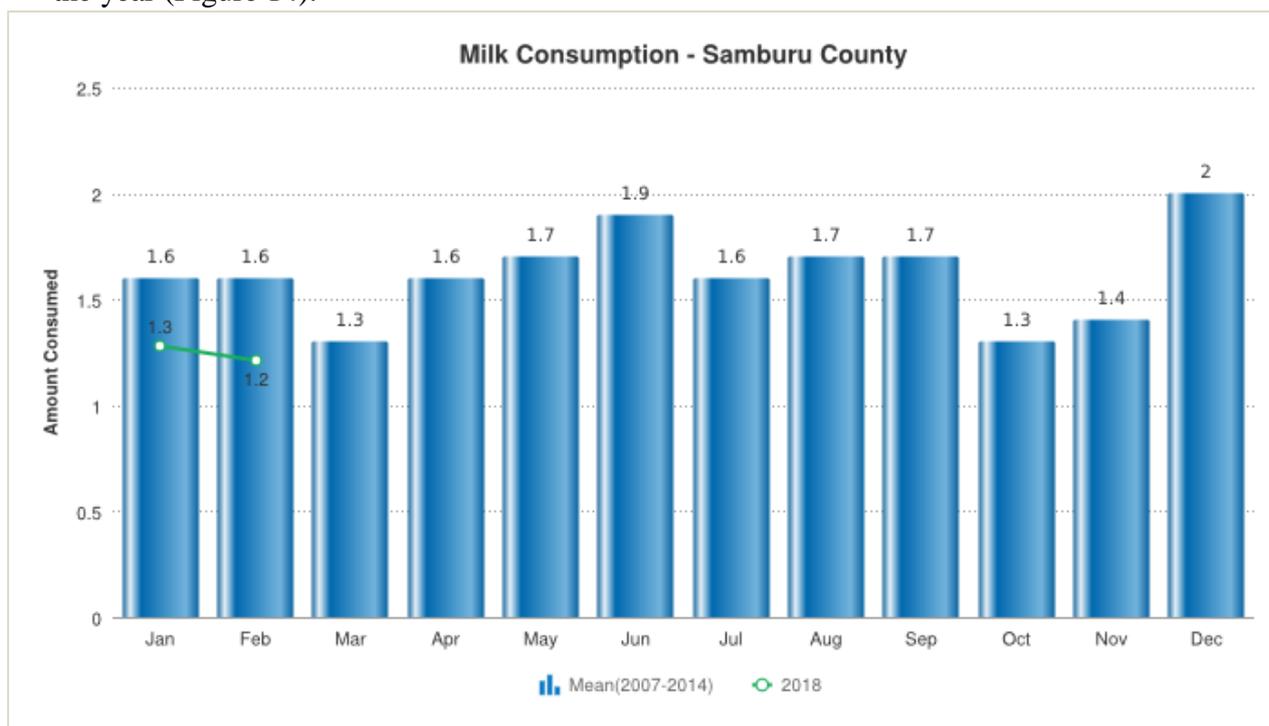


Figure 14: Trends in Milk Consumption per Household

5.2 Food Consumption Score (FCS)

- In pastoral livelihood, proportion of households with poor FCS increased from 18.9 percent recorded in January to 19.9 percent while those with borderline FCS decreased to 31.6 percent from 37.1 percent documented last month. Proportion of households in acceptable FCS increased to from 44.1 in January to 48.5 in January.
- In agro-pastoral livelihood, proportion of households in acceptable FCS reduced from 93.3 percent recorded in January to 93.1 percent while those with borderline FCS increased to 3.4 percent from 6.7 percent documented last month. Proportion of households in poor FCS was also 3.4 as compared to nil in January. The high acceptable FCS of 93.1 is due to availability of cereals and beans from long rains season harvest

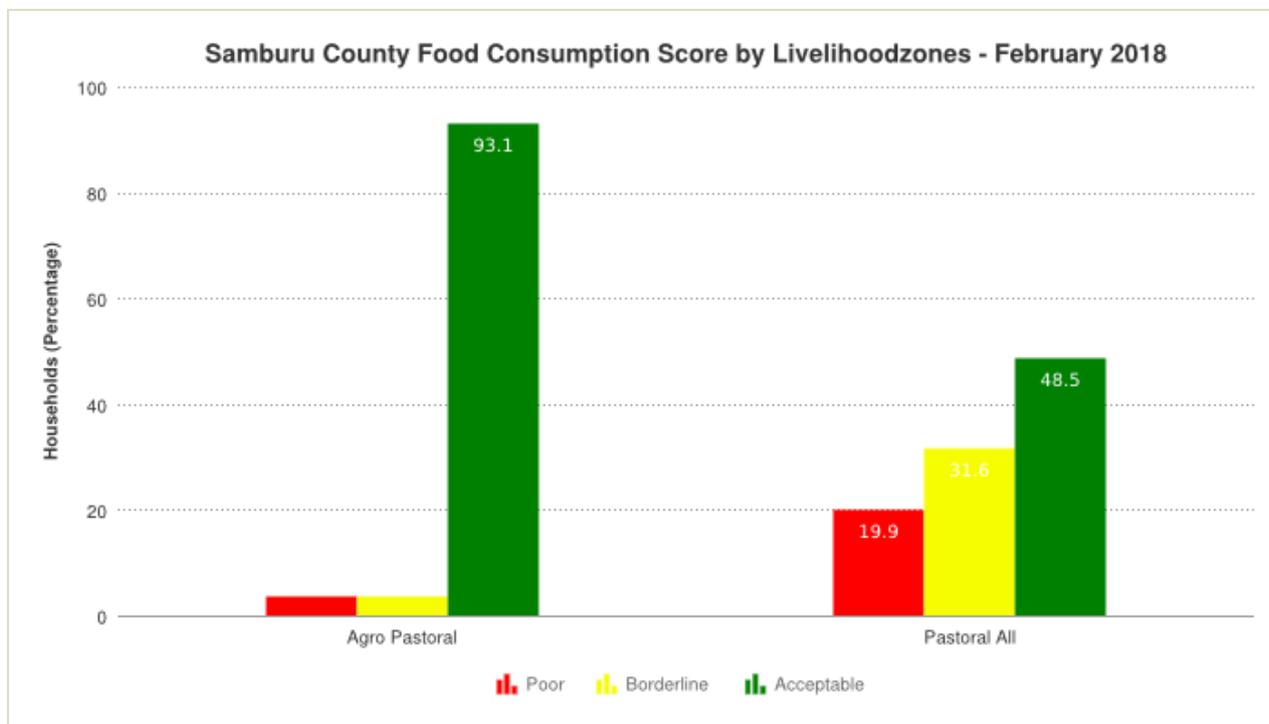


Figure 15: Bar chart showing FCS per Sub County

5.3 Health and Nutrition Status

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

- Proportion of sampled children at risk of malnutrition increased by 7 percent in February as compared to January. Deteriorating drought conditions has resulted to reduced milk production and consumption at household level. It has also forced households to employ coping strategies such as reduction in number of meals which has affected the household dietary diversity. These factors coupled with poor child care practices and high poverty level may have contributed to the increase.
- Agro-pastoral livelihood of Samburu central had lowest proportion of children at risk of malnutrition at 22 percent whereas pastoral livelihood of Samburu north and east sub counties recorded proportions of 25.4 percent and 19.8 percent respectively.
- Compared to similar time of the year, the proportion of under-five at risk of malnutrition was 5 percent above LTA (Figure 16).

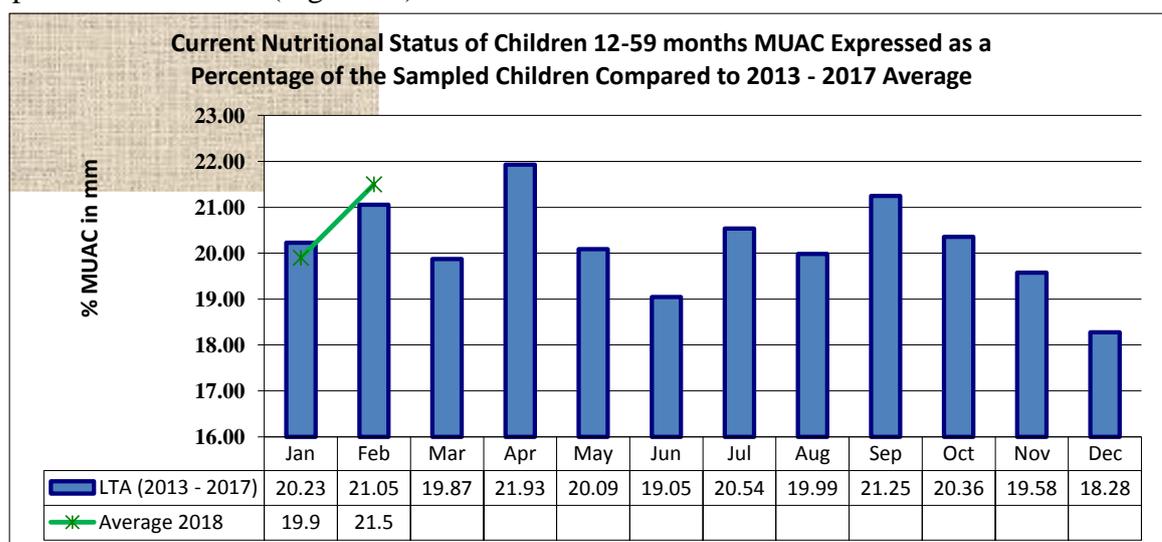


Figure 16: Graph showing average Nutritional status (MUAC)

5.3.2 Health

- Incidences of Malaria, Pneumonia, diarrhoea and URTI continued to be reported 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)

- Mean reduced (rCSI) was 12.87 compared to 12.35 recorded in January. Households in pastoral livelihood employed more strategies than households in agro-pastoral to enable them deal with lack of food or money to purchase food. CSI in pastoral households increased to 15.2 from last month's CSI of 14.9. Agro-pastoral households also witnessed an increase in strategies employed from 0.7 in January to 1.2 in February.
- Frequent coping strategies included 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.

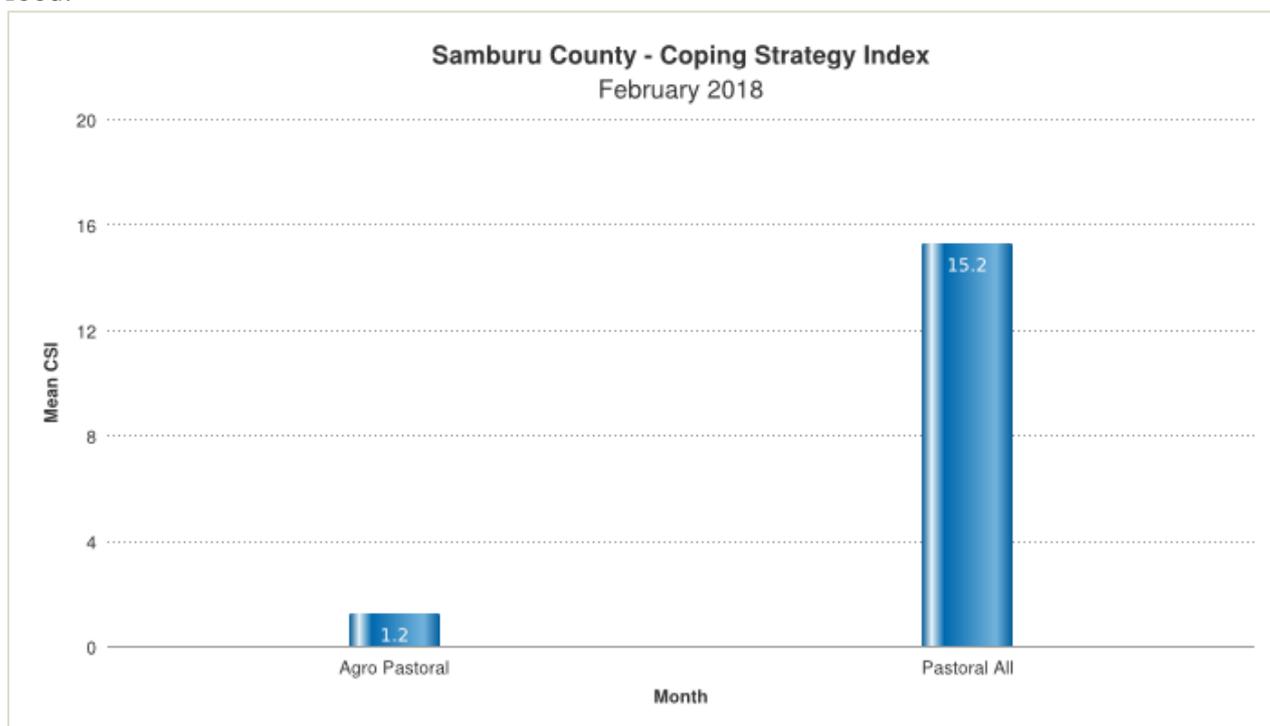


Figure 17: Bar chart showing CSI

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Non-Food On-going Interventions

Table 1: Non-food On-going Interventions

SECTOR	INTERVENTION	IMPLEMENTERS
Livestock	Provision of drought pellets in Samburu North	CARITAS
	Provision of 170 camels to Samburu north and Samburu east	County Department of Veterinary & Livestock
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
	Active Surveillance of epidemic prone diseases	MOH
	Prepositioning of nutrition commodities	MOH
	Knowledge Attitude and Practice survey	MOH
Water	Water trucking in Samburu East and North	Water department
Social Inclusion	On-going cash transfer and business mentorship to women	BOMA Project
	On-going cash transfer for old persons, people living disability and orphan and vulnerable children	National Government

6.2 Food Aid

No food aid reported.

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Insecurity attributed to cattle rustling was witnessed in Samburu North leading to loss of lives from the two warring communities residing there. Tension remains high following there as mediation to return stolen livestock continues. The rest of the sub counties remained relatively calm.

7.2 Migration

- Increased out migration by animals from Samburu central to Kirimun plains of Laikipia, Kirisia hills and Pura. Intra migration of livestock from Lesirikan to Kilepoi and Waso Rongai in Samburu North. In Samburu East, Intra migration from Lodungokwe and Nkaroni to Ndikir,Nasunyai, Loijuk and Mathew ranges and also from Raraiti to Mbukoi was witnessed.

Table 2: Current Migration Routes

Livestock Species	From	To	Nature
Cattle, Goats and Sheep	Lesirikan	Kilepoi, Uaso Rongai	Normal
Cattle	Lodung'okwe, Nkaroni	Ndikir, Nasunyai, Loijuk, Mathew ranges	Normal
Cattle	Raraiti,	Mbukoi	Normal
Cattle (Out migration)	Lolmolek, Longwen, Lodokejek	Kirimun plains in Laikipia, Kirisia Hills	Normal
Cattle (In-migration)	Marsabit County	Ndoto hills	Normal

7.3 Food Security Prognosis

- The arrival of the long rains will likely leads to rejuvenation of pasture and browse within a month subsequently leading to livestock returning home. However production levels in terms of milk production will take another two to three months to improve save for households with lactating animals who will feel the impact immediately.
- Agro pastoralists are likely to take the advantage of the rains and may plant early maturing crops such as beans and late maturing crops such as beans. Whichever the case the fruits of the rains will be felt from around August.
- Meanwhile the effects of the drought will continue being felt for sometime.

8.0 RECOMMENDATIONS

Table 3: Proposed Interventions per Sector

SECTOR	INTERVENTION
Livestock	<ul style="list-style-type: none"> • Enhance livestock disease surveillance across the livelihood zones • Provision of pasture establishment to
Health	<ul style="list-style-type: none"> • Upscale WASH practices at household level
	<ul style="list-style-type: none"> • Provision of water treatment chemicals for households getting water from open water sources
	<ul style="list-style-type: none"> • Upscaling of integrated disease surveillance and response
Water	<ul style="list-style-type: none"> • Repair of broken down boreholes • Equipping of new drilled boreholes
Peace and Coordination	<ul style="list-style-type: none"> • Support dialogue between warring communities in Samburu north
Agriculture	<ul style="list-style-type: none"> • Stockpiling of seeds and other farm inputs for planting. • Farmers need to be sensitized to start land preparation early.

Annexes

Table 4: 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	