

National Drought Management Authority SAMBURU COUNTY



A Vision 2030 Flagship Project



DROUGHT EARLY WARNING BULLETIN FOR MAY 2018

MAY 2018 EW PHASE

Drought Status: **NORMAL**

Shughuli za kawaida

Early Warning Phase Classification

LIVELIHOOD ZONE	EW PHASE	TRENDS
Agro-pastoral	Normal	Stable
Pastoral (North)	Normal	Stable
Pastoral (East)	Normal	Stable
County	Normal	Stable

Drought Situation & EW Phase Classification

Biophysical Indicators

- Rainfall progressed well into May but with reduced intensity and frequency compared to April.
- Further improvement in vegetation cover noted.
- Water sources are fully recharged.

Socio Economic Indicators Details

- Trekking distances for both household and livestock decreased further across the county.
- All livestock species are currently grazing in wet season grazing areas close to homesteads.
- Milk production and consumption is below the long term average attributed to upsurge of diseases that affected production.
- Body condition for all livestock species was good due to availability of forage and water across all the livelihood zones.
- Livestock prices for all species remained above long term average
- Maize/*posho* prices remained low and below the long term average during the month.
- Favourable Terms of Trade witnessed with a goat exchanged with 73 kilograms of cereals.
- Proportion of children under 5 years at risk of malnutrition worsened compared to April.

Biophysical Indicators	Value	Normal range/Value
VCI-3month (County)	76.66	35-50
VCI-3month -Samburu East	71.12	35-50
VCI-3month -Samburu North	85.37	35-50
VCI-3month-Samburu West	69.02	35-50
Production indicators	Value	Normal ranges
Livestock Migration Pattern	No Migration	No Migration
Livestock Body Conditions	Neither fat nor thin with good smooth appearance	Fat & Smooth appearance
Milk Production	1.5	>2
Livestock deaths due to drought/Floods	Deaths due to floods.	No death
Access Indicators	Value	Normal ranges
Terms of Trade (TOT)	73	>49.1
Milk Consumption	1.4	>1.7
Return distance (km)	Household	3.6
	Livestock	7.9
Acceptable FCS (percent)	Pastoral	66.9
	Agro pastoral	90
100	100	
Utilization indicators	Value	Normal ranges
MUAC (percent)	21.8	<20.09
Mean CSI	Pastoral	14.1
	Agro pastoral	0.6
<56	<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

- Rainfall progressed well into the reporting month though with reduced intensity as compared to April. However the amount was still significant to disrupt normal functioning of the community by temporarily making roads impassable and damaging other infrastructures.
- The frequency in number of days which received rainfall also declined totalling about 8-10 days though the rain gauge stationed in Maralal County meteorology office recorded 15 days of rainfall for the whole month. The showers were spontaneous and erratic and lasted for about 45 minutes to an hour.

1.2 Amount of Rainfall and Spatial Distribution

- Rainfall received in the 1st, 2nd and 3rd dekad was 43 percent, 25 percent and 57 percent above LTA respectively (Figure 1). According to rainfall station in Maralal, the total rainfall received as of 30th April was 173 mm for the month under review.
- The rains were well distributed across the three sub counties. Generally distribution over space was good and fair over time.

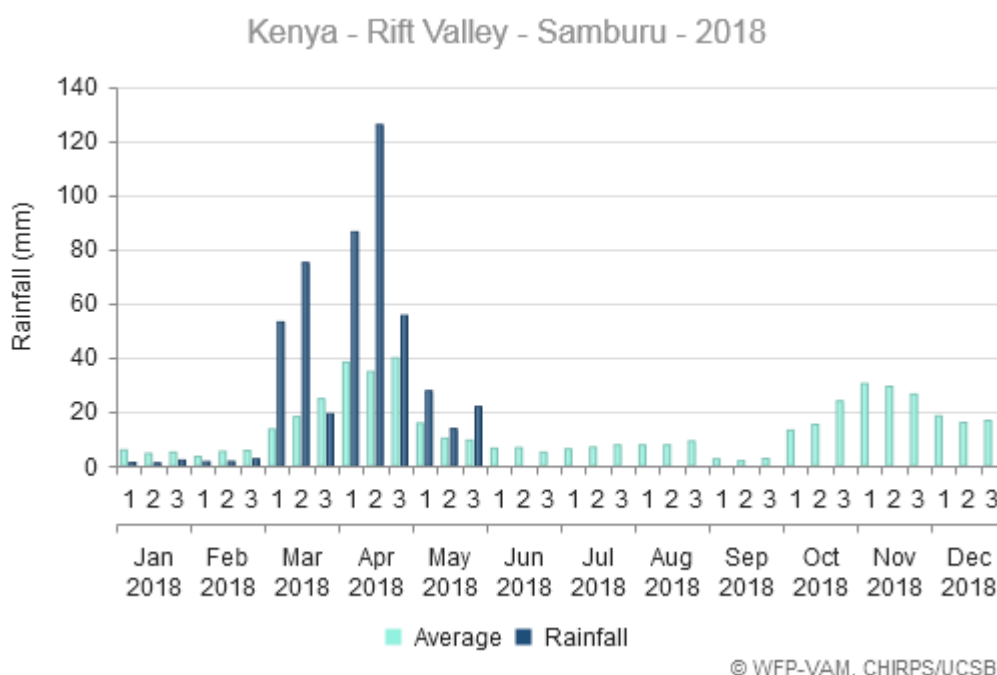


Figure 1: Graph Showing Rainfall Estimates (RFE) Trends for Samburu County (Source: WFP-VAM, CHIRPS/UCSB)

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition

2.1.1 Vegetation Condition Index (VCI)

- Vegetation cover improved further across all livelihood zone attributed to the rains which progressed well from the previous month. Substantive forage rejuvenation for both grazers and browsers noted. According the Vegetation Condition Index (VCI), the overall 3-month average VCI improved by 22 percent from last month.
- Vegetation condition index for all the three sub counties was within the vegetation greenness above normal during the month under review.
- The situation was above normal at this time of the year (Figure 2).

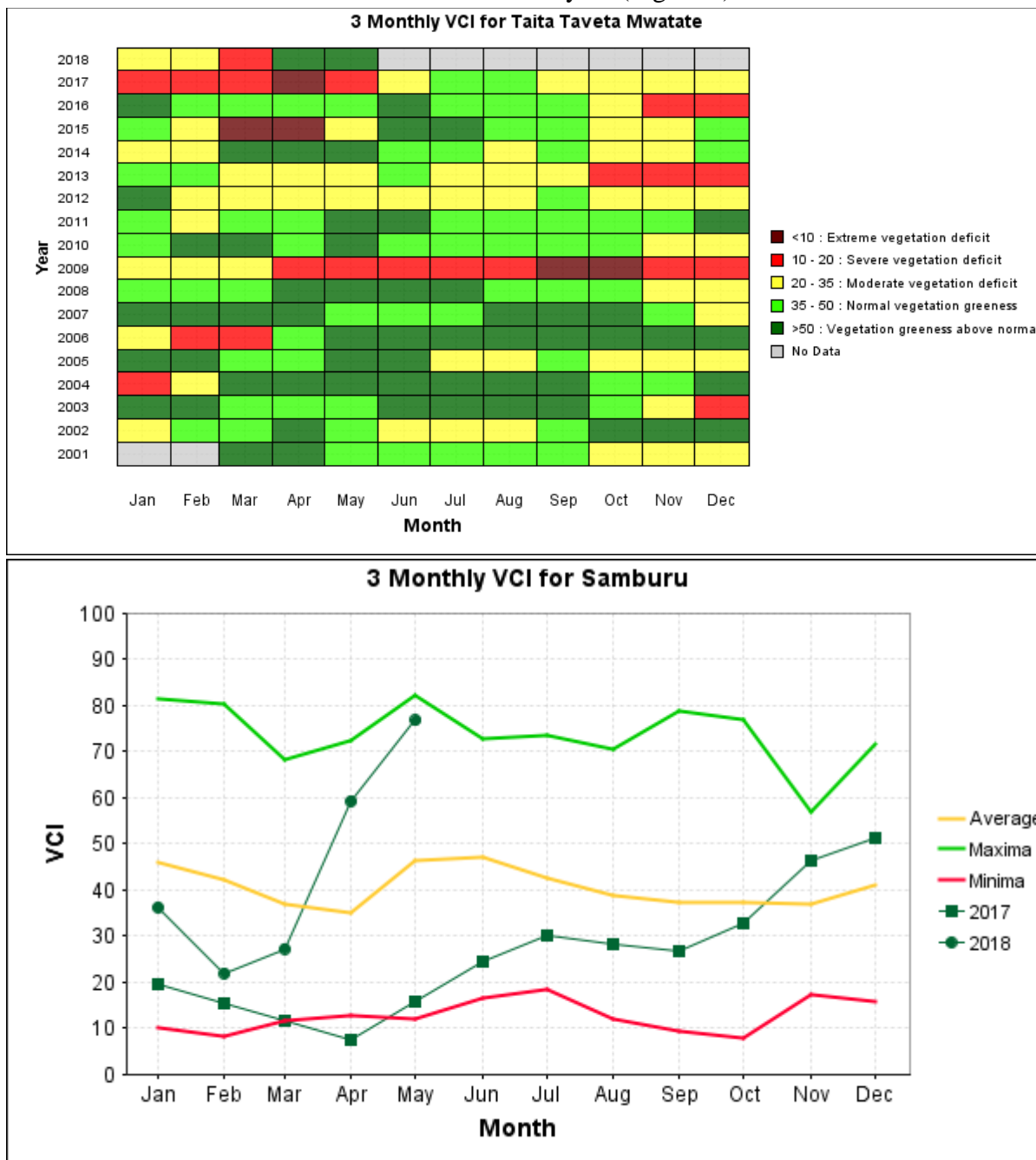


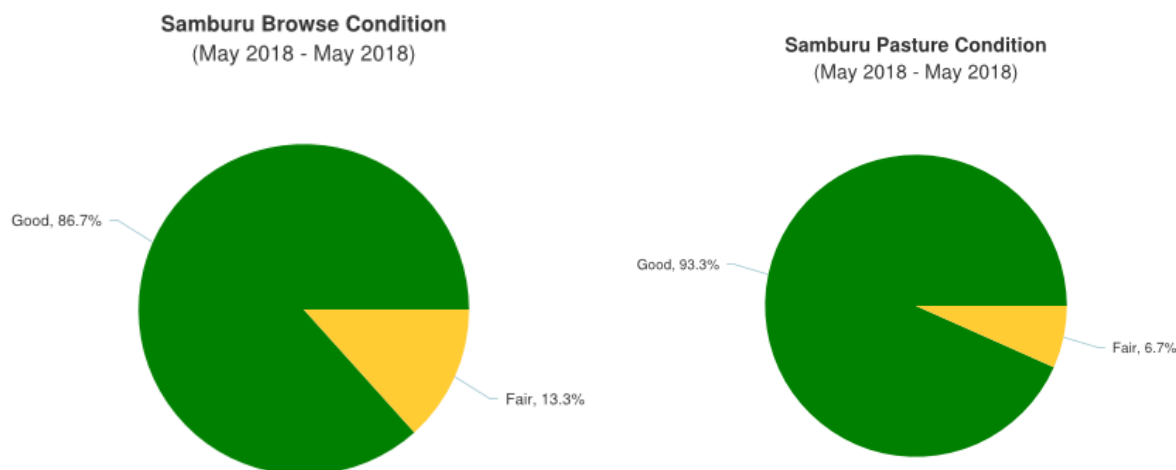
Figure 2: Matrix and Graph Showing VCI Trends for Samburu County

(Source: Boku University)

2.1.2 Field Observations (Pasture and Browse Conditions)

Quality and Quantity

- Quality and quantity of both pasture and browse is good across all livelihood zones as a result of the ongoing rains. Tall, lush and rich grass dominates the rangelands which might last for over 3 months if managed properly. Similarly, shrubs and trees are so leafy and dense and can last over 4 months.
- Out of the sampled community key informants, 93.3 percent and 86.7 percent responded that pastures and browse was good respectively. It was also noted that some areas in Wamba West ward such as Nkaroni are degraded resulting into deep gullies causing minimal pasture growth.



2.2. Water Resource

2.2.1 Sources

- Communities are having a variety of water sources to choose from ever since the rains started in March. Surface and underground water sources are fully recharged in all the livelihood zones and most streams are flowing with river Waso overflowing to its banks. Of the sampled households, 29.7 percent preferred shallow wells, 24.3 percent relied on traditional river wells, 21.6 percent on pans and dams and 16.2 percent on boreholes. The remaining households relied on rivers and springs at 5.4 percent and 2.7 percent respectively (Figure 3).
- Some water sources were destroyed by the rains. According to the report from water department, 17 boreholes were damaged, 6 water pans breeched and 1 gravity water systems tampered with due to soil erosion.

Samburu County Water sources
(May 2018)

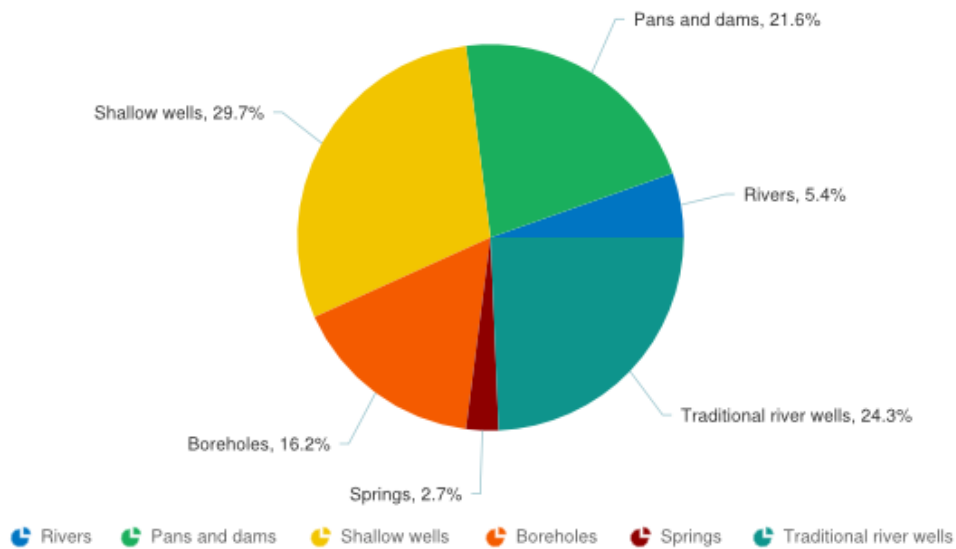


Figure 3: Common water sources

2.2.2 Household Access and Utilization

- The ongoing rains have led to recharge of most water sources making water to be easily accessible. This has contributed to plummeting of trekking distance since March. A decrease of 18 percent was witnessed in May at 3.6 km down from 4.4 km recorded in April. Despite the decrease, the current distance is 19.4 percent above the LTA (Figure 4).
- Pastoral livelihood recorded an average of 2.7 whereas agro pastoral livelihood recorded average of 1.8 km. High concentration of water sources in agro pastoral livelihood translated to reduced distances as compared to pastoral livelihood.
- Majority of the household consumed water without subjecting it to any water treatment method which is likely to predispose them to possibility of water borne diseases.

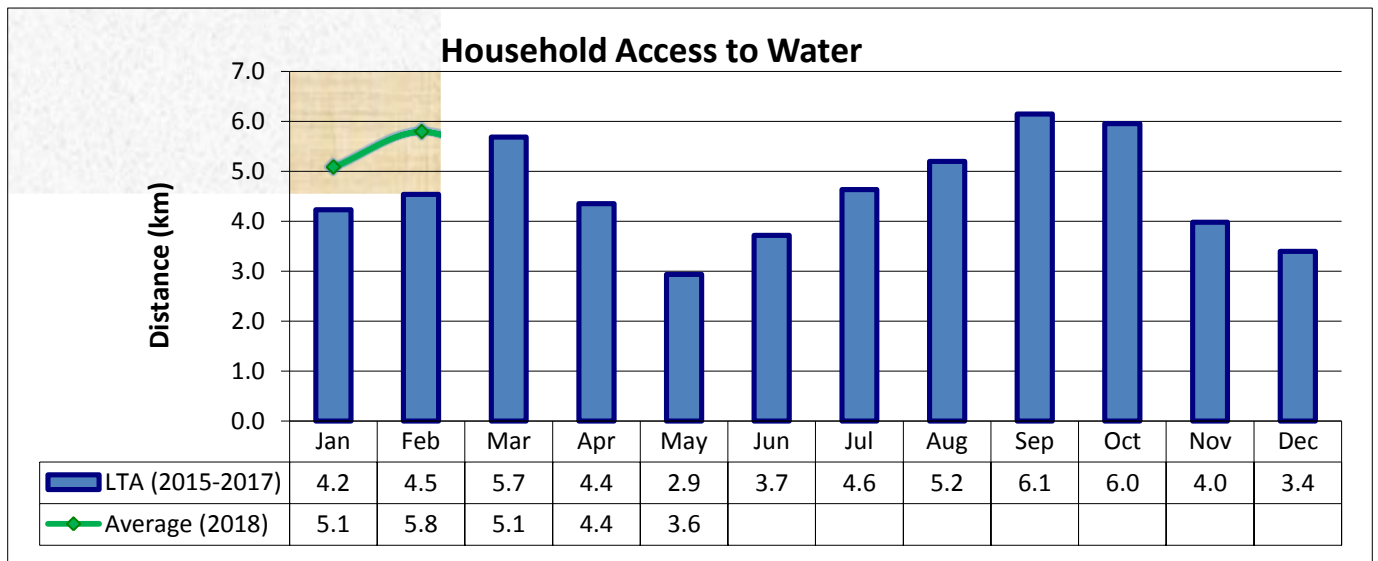


Figure 4: Average Distance Travelled by Households in Search of Water

2.2.3 Livestock Access (Grazing Distances to Water Points)

- Availability of pasture and browse across the county and fully recharged water sources have resulted in reduced trekking distance for livestock.
- Current trekking distance decreased by 8 percent from 8.6 km in April to 7.9 km in May.
- In comparison to 3 year average, the current average distance was 18 percent above the three year average at this time of the year (Figure 5).

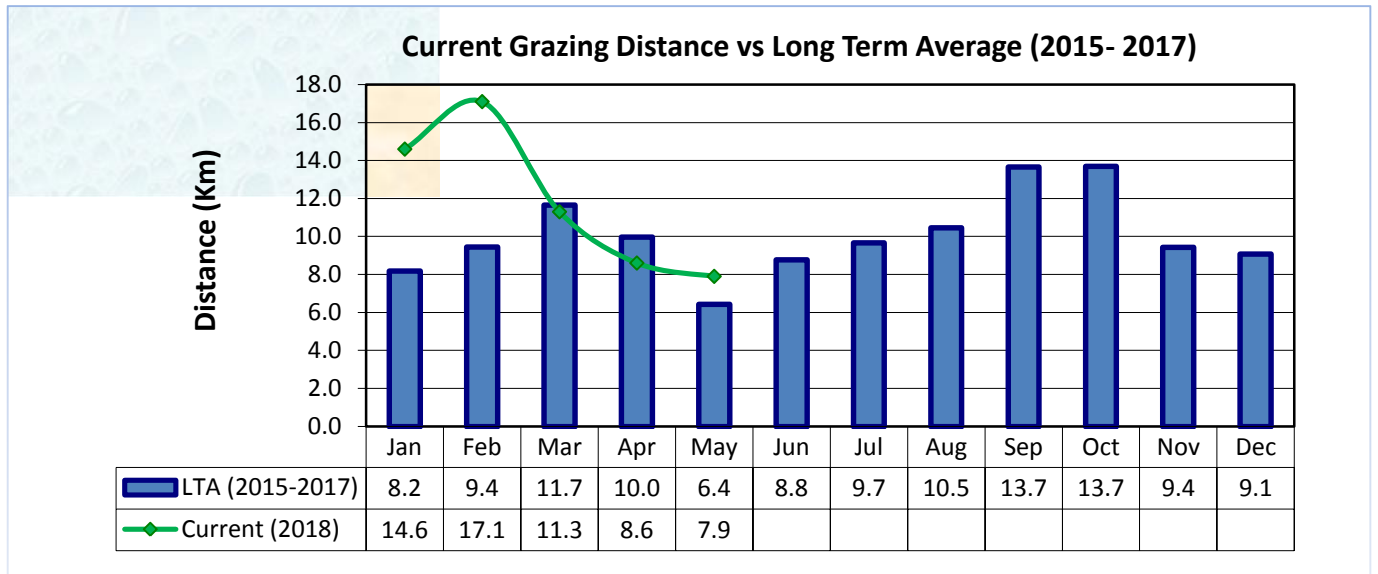


Figure 5: Distance Travelled from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- Livestock body condition for both small stock and cattle is good attributed to reduced trekking distance in search of forage and water. Body condition for most livestock is characterized by good smooth appearance and moderate body condition (neither fat nor thin) (*Refer to table 1 in annex*).

3.1.2 Livestock Diseases and Deaths

- Since the rains started, an upsurge of livestock diseases has been witnessed. Cases of diseases from the sentinel sites have been confirmed by the veterinary department. Below is a summary of the diseases and areas where they were reported:

Disease	Occurrence
Cold stress	Anderi,Arsim,Lonjorin,
Bloat	Lerata,Archers
Brucellosia	Barsaloi
Ephemeral fever	Tuum,Anderi,lonjorin ,South Horr
FMD	Loosuk,Ledero,Marti,Lonjorin
CCPP	Raraiti,Lgotoi
PPR	Laparan,Anderi,Lesirkan
Sheep and Goat Pox	Sereolipi,Archers

- Since the rains started, around 25 cows and around 7000 small stock have died as a result of the floods.

3.1.3 Milk Production

- Production at household level dipped by 25 percent from an average of 2 litres per day to 1.5 litres a day. Production was affected by upsurge of livestock diseases which consequently led to decreased productivity.
- The current production of 1.5 litres per household was 25 percent below the long term value at the same period of the year (Figure 6).

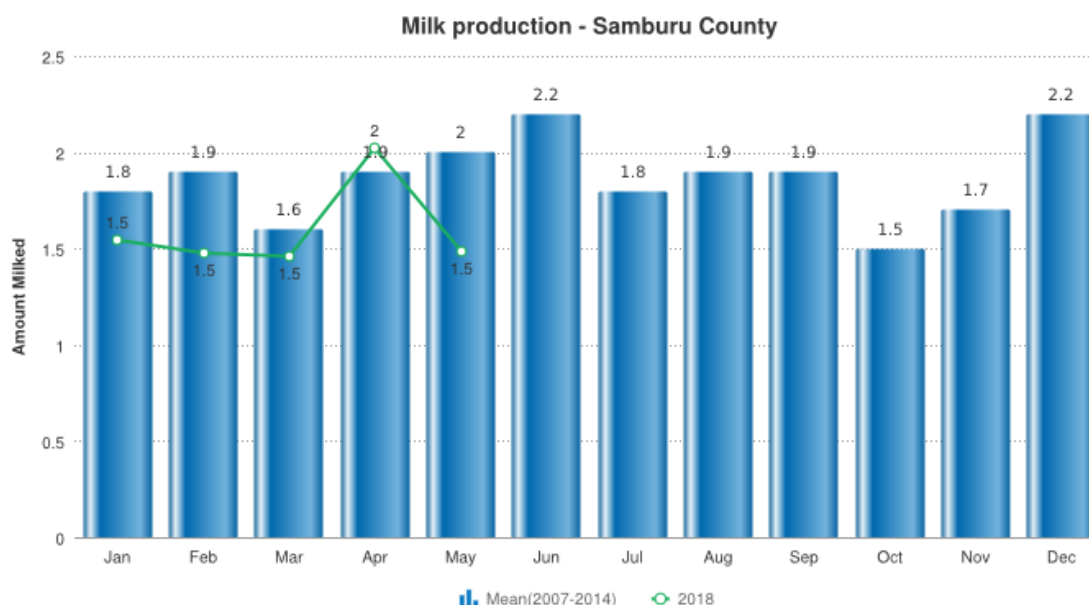


Figure 6: Trends in Milk Production per Household

3.2 Rain Fed Crop Production

3.2.1 Stage and Condition of Food Crops

- The two main crops grown in the agro pastoral zone: maize and beans, are performing well. Maize crop which was planted before the onset of the rains is at knee height stage whereas bean crop is at flowering stage. Most farmers were caught unaware with the early onset and planted their crops late which are now in germination stage.
- Good production is anticipated if the rains progress well. However infestation of fall army worms in maize crop might hinder good yields if not controlled early enough.

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

- A slight increase of 3 percent in cattle price from Kshs 19,640 in April to Kshs 20,277 in May was noted attributed to good body condition.
- Archers post market recorded the highest price at Kshs 30,000 followed by Lolkuniani at Kshs 24,000 whereas Lekuru recorded the least price at Kshs 15,000.
- The current average cattle market price remained above LTA by 32 percent at the same period of the year (Figure 7).

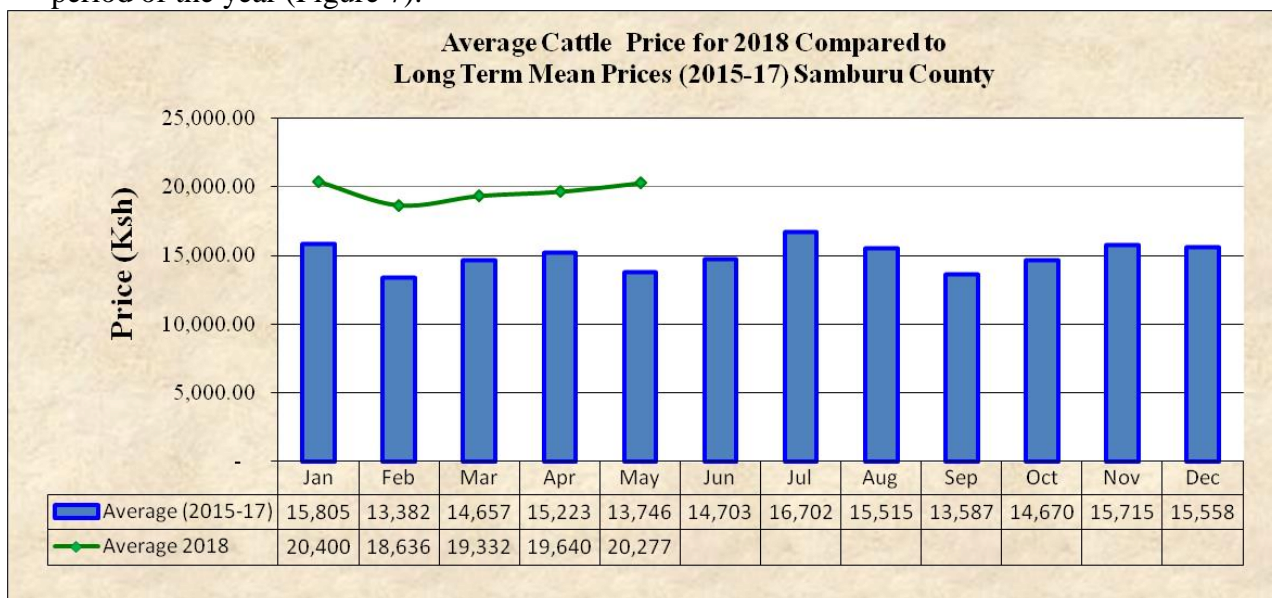


Figure 7: Graph Showing Cattle Selling Price Trends at Market Level

4.1.2 Goat Prices

- Goat prices stabilized at Kshs 3,333 in May compared to Kshs 3,320 recorded in April. Good prices fetched by goats are a result of good body condition which was occasioned by good browse coupled with reduction in grazing distances.
- Lolkuniani market recorded the highest price of Kshs 4,500 while Illaut market fetched the least at Kshs 2000.
- In comparison to LTA, the current average was 29 percent normal at this time of the year (Figure 8).

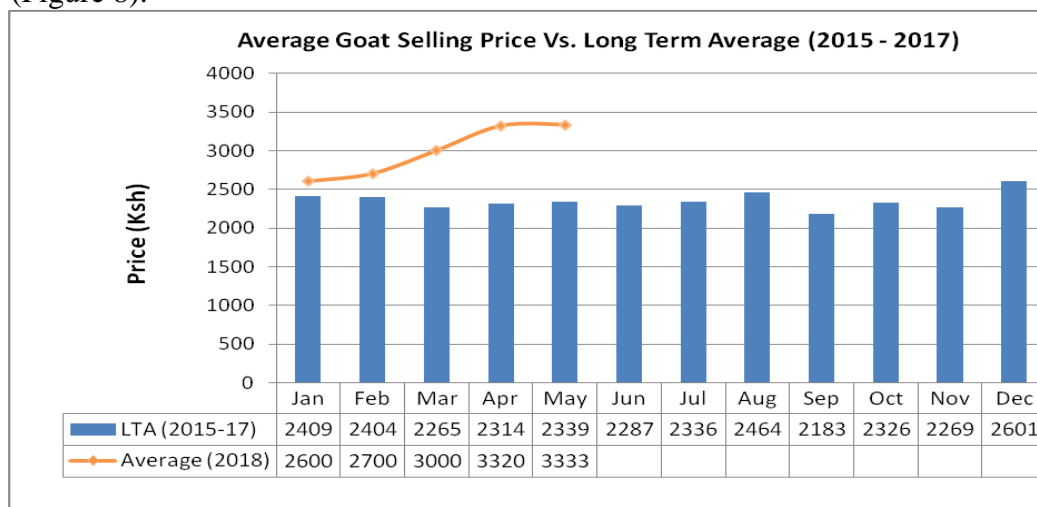


Figure 8: Graph Showing Goats' Selling Price Trends at market Level

4.1.3 Sheep Prices

- Similarly like goat price, sheep price also stabilized at Kshs 2826 in May compared to Kshs 2800 recorded in April. Good body condition which was a result of good browse coupled with reduction in grazing distances is to be credited for the high prices fetched.
- Lolkuniani market recorded the highest price of Kshs 3,500 while Illaut market fetched the least at Kshs 1500.
- In comparison to LTA, the current average was 27 percent normal at this time of the year (Figure 9).

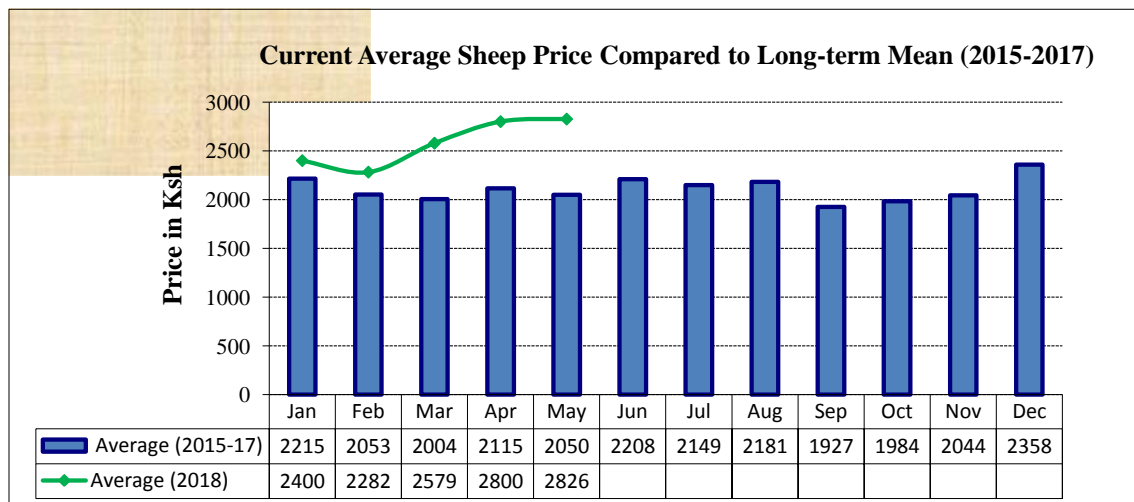


Figure 9: Graph Showing Sheep Selling Price Trends at Market Level

4.2 Crop Prices

4.2.1 *Posho* (Milled Maize)

- Maize price at market level stabilized at Kshs 45.7 per kilogram compared to Kshs 45.8 per kilo recorded in April. Maize which is the main staple food commodity was well provisioned in most of the markets thus resulting in stabilization of prices. The commodity is mainly supplied from external markets such as Uasin Gishu, Nakuru and even as far as Uganda.
- The maize/posho prices were ranging between Kshs 45 to Kshs 60 in most of the sampled main markets save for Archers post that recorded a price of Ksh 45 per kilogram attributed to ease of access to the market as a result of Isiolo - Moyale tarmacked road passing through Archers Post.
- Like the last three months, *Posho*/maize prices remained below the LTA approximately by 16 percent at this time of the year (Figure 10).

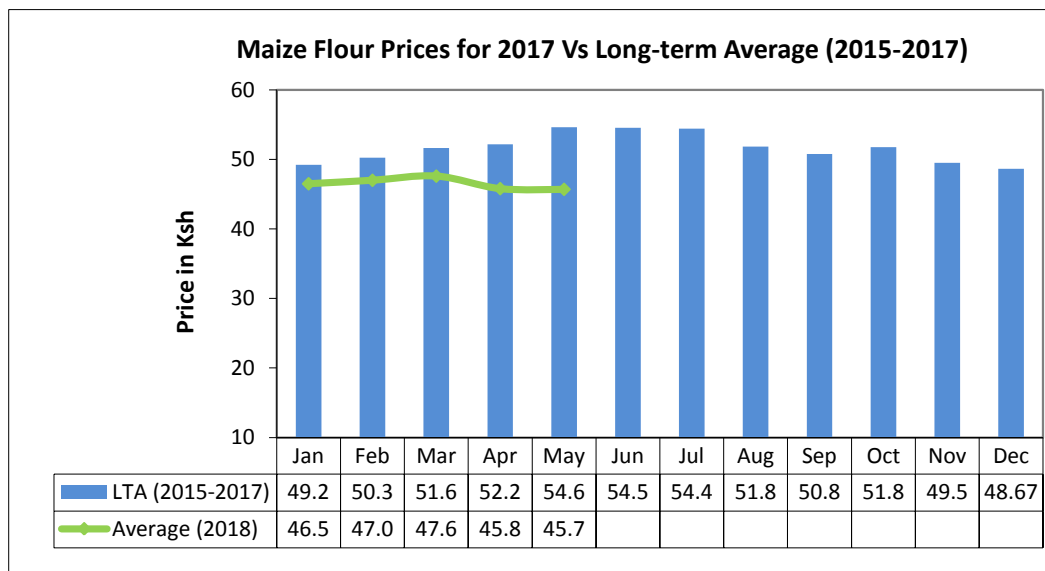


Figure 10: Graph Showing Maize meal Price Trends

4.3 Livestock Price Ratio/Terms of Trade (TOT)

- A medium sized goat during the month of May was exchanged with 73 kilograms of cereals which was almost similar to last month.
- Pastoralists in pastoral and agro pastoral received 68.4 kilograms and 78.9 kilograms respectively from income of a goat. The variance between the livelihood zones is due to availability of cereals at farm level in agro pastoral livelihood.
- The favourable terms of trade is attributed to increasing goats' prices due to good body condition and stable maize prices prompted by maize importation from Uganda and Tanzania into Kenya.
- Current average TOT remained above the LTA by 32 percent at this time of the year (Figure 11).

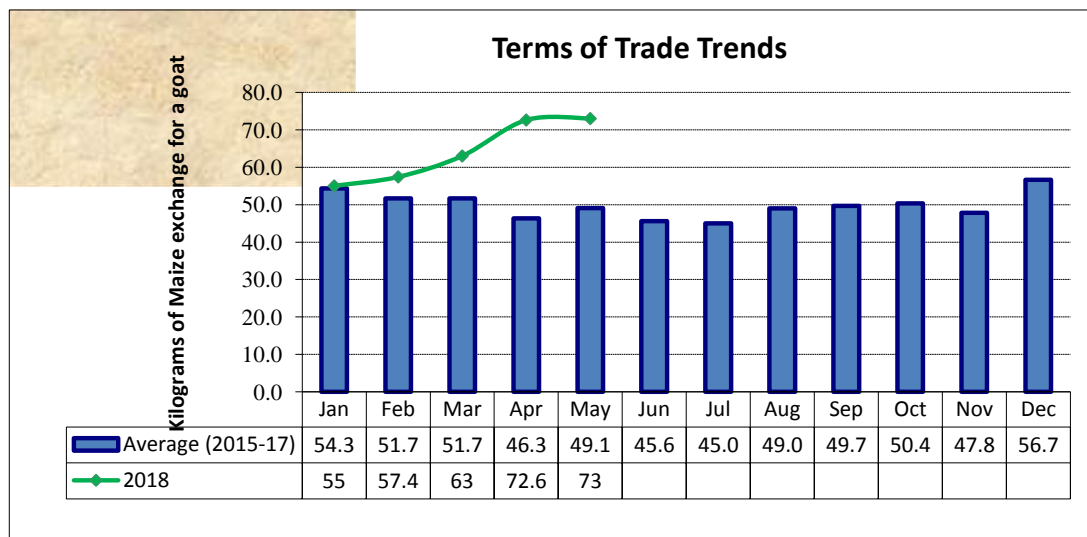


Figure 11: Trends in Terms of Trade (TOT)

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- Milk consumption at household level decreased by 30 percent from an average of 2 litres per day to 1.4 litres. The decrease is a result of decreased production. Children and the elderly are the ones reported to have consumed milk in the household.

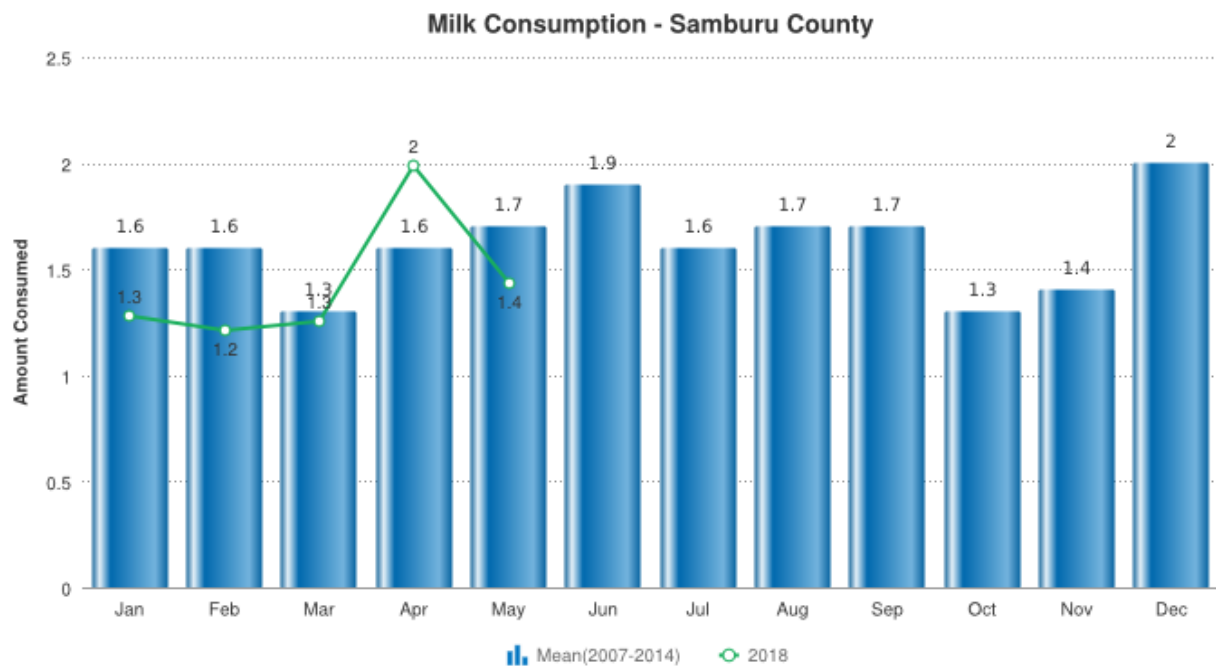


Figure 12: Trends in Milk Consumption per Household

5.2 Food Consumption Score (FCS)

- During the period under review, 90 percent and 66.9 households in agro pastoral and pastoral livelihood were categorized as having acceptable FCS. This implied their meals contained staples and vegetables everyday frequently accompanied by oils and pulses and occasionally meat and dairy products.
- Meanwhile, 10 percent and 25 percent households in agro pastoral and pastoral livelihood were categorized as having borderline FCS. Households in this category consumed staples and vegetables everyday accompanied by oil and pulses a few times a week.
- 8.1 percent of households in pastoral livelihood was classified as having poor FCS an indication that the households were not consuming staples and vegetables everyday and rarely or never consuming meat or dairy. None of the households in agro pastoral was classified as having
- Good feeding habits in agro pastoral livelihood can be attributed to community awareness on importance of diet diversification and also availability of various food items at their disposal as compared to their pastoral counterparts.

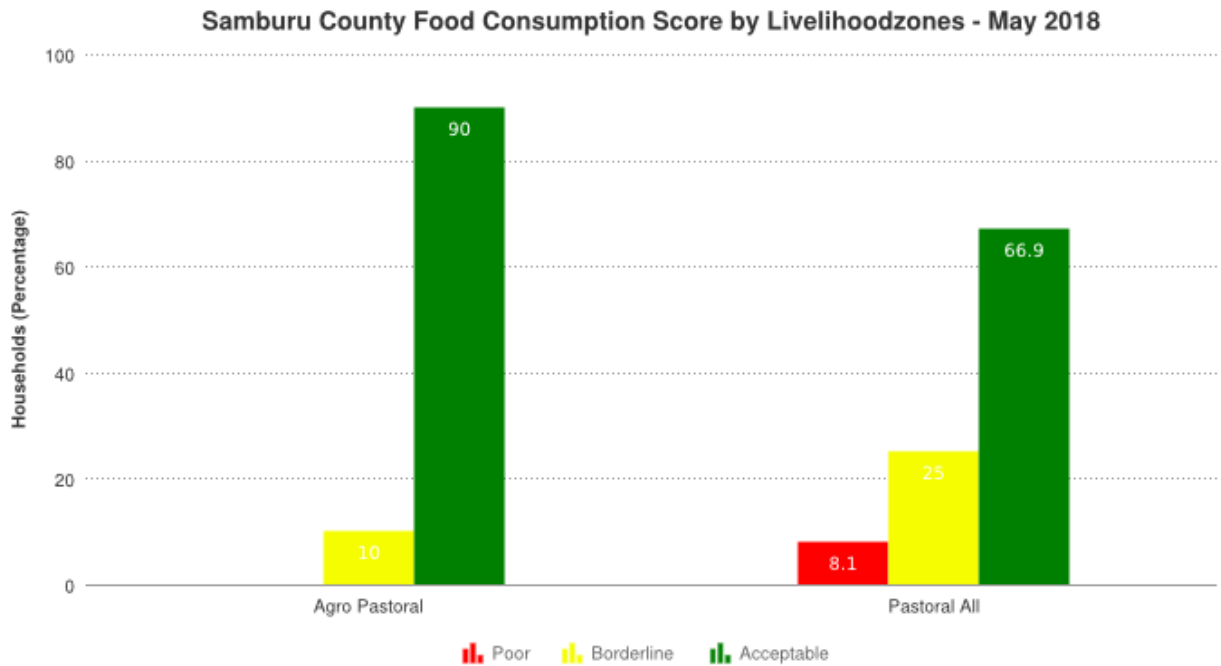


Figure 13: Bar chart showing FCS per livelihood zone

5.3 Health and Nutrition Status

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

- Proportion of sampled children under 5 years at risk of being malnourished significantly jumped from 19.5 in April to 21.8 in May. Cases of diarrhoea in children was widely reported attributed to contamination of water sources caused by the floods. Such illnesses may be blamed for the sudden jump.
- Proportion of children at risk in Samburu central was lowest at 19.5 percent while Samburu north and east recorded 20.9 percent and 22.3 percent respectively.
- The current proportion of under-five at risk of malnutrition remained 7 percent above LTA (Figure 14).

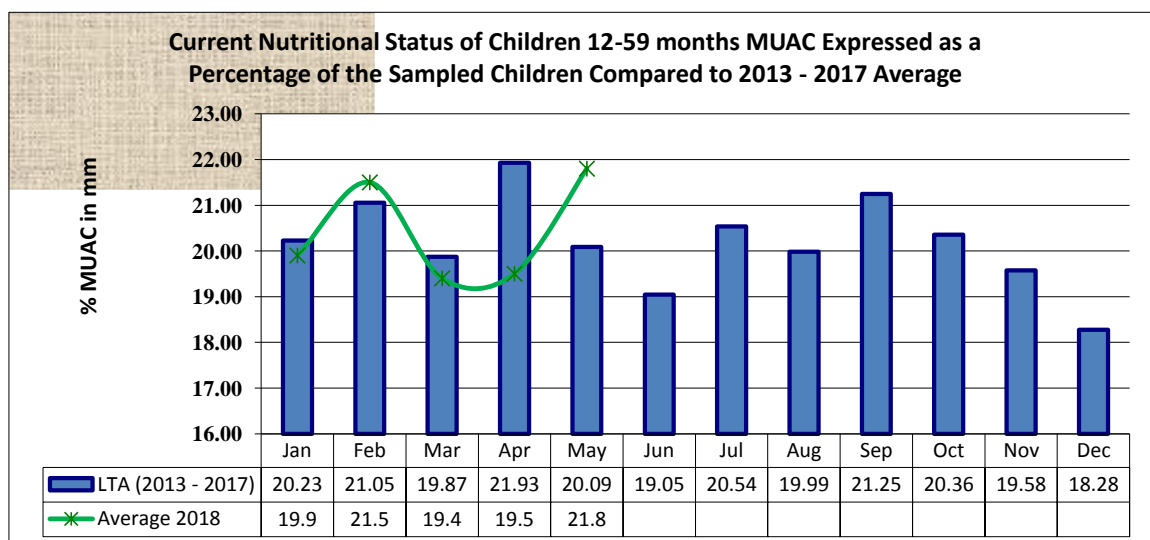


Figure 14: Graph showing average Nutritional status (MUAC)

5.3.2 Health

- There has been an upsurge in cases of malaria and diarrhoea being reported across the

county which is also evident as captured in the DHIS. The rains are to blame for this upsurge as water logged areas have become a breeding ground for mosquitoes. Contamination of water sources due to over flooding has also been noted thus the high reported cases.

- Most households visited public health centres seeking treatment while others used local herbs for treating the ailments.

5.4 Coping Strategies Index(CSI)

- Households in pastoral livelihood zone employed more coping mechanisms with CSI of 14.1 similar to April. This is an indication that households employed similar strategies to last months to access money to buy food. In agro pastoral livelihood the CSI slightly increased to 0.6 up from 0.4 in April an indication of more households struggling to access food or money to purchase the food
- 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.

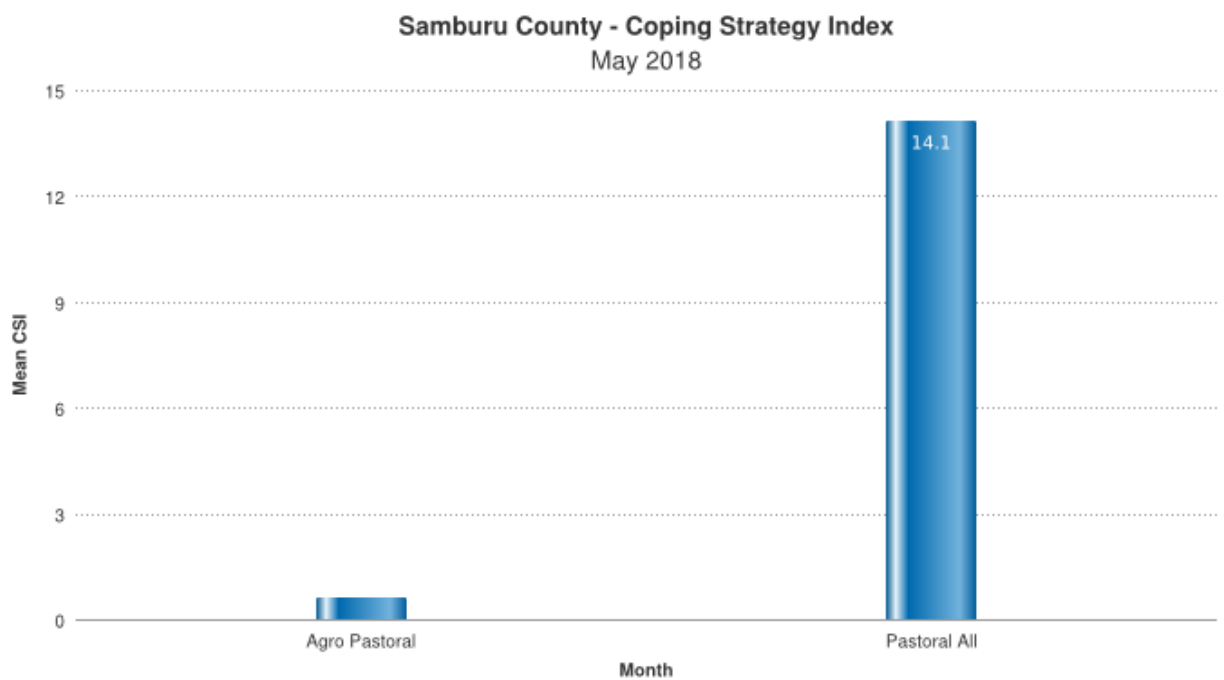


Figure 15: Bar chart showing CSI per livelihood zone

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Non-Food On-going Interventions

Table 1: Non-food On-going Interventions

SECTOR	INTERVENTION	IMPLEMENTERS
Livestock	Emergency restocking of 1024 goats targeting 102 HH in 15 villages	RPLRP
	Participatory diseases surveillance	County veterinary department, RPLRP
	Distribution of 250 camels across the county	County department of livestock
	Field day on pasture and fodder production in Mugie	County department of livestock
Environment	Rangeland reseeding Samburu east to improve land cover and reduce land degradation	County department of Water, Environment and Natural resources and energy
Water	Rehabilitation of boreholes and WASH promotion	ACTED
	Repair of Ngorika and Baawa boreholes	County department of Water
	Rehabilitation of Raraiti and Opiroi borehole, completion of Simale gravity water system, WASH training in schools	CARITAS
Health	Distribution of 2000 mosquito nets	MOH
	Integrated outreaches in 9 facilities in Waso	MOH
Agriculture	Promotion of kitchen gardens using vertical bags farming	County department of Agriculture, NHPplus USAID
	On farm demonstration on control of fall army worms	County department of Agriculture.
Social Inclusion	On-going cash transfer and business mentorship to women and old person, windowed and orphaned children	BOMA Project, National Government through
	Chakula kwa Jamii cash transfer	National government through WFP
	Cash transfer to 4546 HH	ACTED

6.2 Food Aid

- Protective food ration given to 20,000 beneficiaries under Asset Creation Program (ACP).
- Protective food ration to around 4000 households with children under supplementary feeding program.

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- A cattle rustling incident in Loruko (border with Isiolo) led to loss of 4 lives and 3 injuries. Over 200 cattle were driven away and households displaced. The rest of the sub counties remained relatively calm.

7.2 Migration

- No migration of livestock reported across the livelihood zones. Livestock are currently within the homesteads grazing in wet season grazing areas.

7.3 Food Security Prognosis

- Though the rains have subsided when compared to April, they have brought with them both positive and negative effects. Beginning with the positive effects, it is evident that water and forage conditions are excellent to sustain livestock for over 4 months across the livelihood zones consequently promoting good livestock body conditions and increased milk production.
- Good body condition will likely translate to high livestock market prices and consequently improved household purchasing power. In addition available casual labour activities such as weeding in the farms will improve household income.
- With the rains showing signs of subsiding, farmers who were caught unaware with the early onset will be able to cultivate and plant their farms while some farmers will get a breather to do weeding. Crops are likely to continue doing well having received some much needed sunshine which is crucial in photosynthesis process which will in turn translate to higher yields.
- The negative effect is some farms in Siambu were washed away by floods meaning the affected households will not have any food come the harvesting time.

8.0 RECOMMENDATIONS

Table 2: Proposed Interventions per Sector

SECTOR	INTERVENTION
Livestock	<ul style="list-style-type: none"> • Advocacy for pasture conservation through deferred grazing management and participatory rangeland management
	<ul style="list-style-type: none"> • Treatment and vaccination of reported livestock diseases
Environment and Natural Resources	<ul style="list-style-type: none"> • Rangeland reseeding in degraded pastoral areas and trees planting in water catchment areas.
Health	<ul style="list-style-type: none"> • Upscale mapping out potential areas for water borne and malaria outbreak and to intensify surveillance of such diseases.
	<ul style="list-style-type: none"> • Provision of water treatment chemicals for households getting water from open water sources
Water	<ul style="list-style-type: none"> • Roof water catchment promotion in schools and at household level
	<ul style="list-style-type: none"> • Rehabilitation of boreholes and water sources damaged by floods
Peace and Coordination	<ul style="list-style-type: none"> • Support dialogue between warring communities in (Loruko Waso)
Agriculture	<ul style="list-style-type: none"> • Scouting in farms for early detection of fall army worms to be able to control them.
Education	<ul style="list-style-type: none"> • Repair of damaged school infrastructure e.g toilets and roofs
DRM	<ul style="list-style-type: none"> • Awareness creation to communities to avoid flash flood prone areas
Public works and Roads	<ul style="list-style-type: none"> • Grading and maintenance of roads linking to health facilities, schools and markets for easy access

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	