



National Drought Management Authority SAMBURU COUNTY DROUGHT EARLY WARNING BULLETIN FOR FEBRUARY 2020



Early Warning Phase Classification

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

Biophysical Indicators	Value	Normal range/Value	
VCI-3month (County)	96.66	35-50	
VCI-3month -Samburu East	92.28	35-50	
VCI-3month -Samburu North	101.42	35-50	
VCI-3month-Samburu West	98.07	35-50	
Production indicators	Value	Normal ranges	
Livestock Migration Pattern	No Migration	Migration to wet season areas	
Livestock Body Conditions	Moderate to Good smooth appearance	Good Smooth appearance	
Milk Production	1.5	>1.4	
Livestock deaths due to drought	No death.	No death	
Access Indicators	Value	Normal ranges	
Terms of Trade (TOT)	62	>46.2	
Milk Consumption	1.2	>1.2	
Return distance (km)	Household	4.6	<6.9
	Livestock	6.5	<17.1
Acceptable FCS (%)	Pastoral	61.7	100
	Agro pastoral	81.5	100
Utilization indicators	Value	Normal ranges	
MUAC (%)	21.3	<14.7	
rCSI	Mean	10.36	<56

Drought Situation & EW Phase Classification

Biophysical Indicators

- The quality and quantity of forage has remained in good conditions except in marginal pockets invaded by desert locusts.
- Recharge level for water sources remained above normal.

Socio Economic Indicators Details

- Distances stabilized compared to long term average.
- All livestock species are grazing in wet season grazing areas.
- Milk production and consumption was stable at household level.
- Body condition for all livestock species was good to fair.
- Market prices for all livestock species remained above normal during the month of January.
- Maize/*posho* prices are stable compared to last month prices.
- Households goat to maize terms of trade are favourable and remained above average.
- The proportion of sampled children under five years of age worsened indicating critical situation as measured by Mid Upper Arm Circumference (MUAC).

- Short rains harvests
- Short dry spell
- Reduced milk yields
- Increased HH Food Stocks
- Land preparation

- Planting/Weeding
- Long rains
- High Calving Rate
- Milk Yields Increase

- Long rains harvests
- A long dry spell
- Land preparation
- Increased HH Food Stocks
- Kidding (Sept)

- Short rains
- Planting/weeding

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
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1.0 CLIMATIC CONDITIONS

1.1 Rainfall Performance

- Marginal pockets of the county continued to receive enhanced and intermittent off-season rains for 3 – 4 days throughout the dekads. The rains continued to support good weather conditions as oppose to usually high daytime temperatures experienced during the January – March dry spell period.

1.2 Amount of Rainfall and Spatial Distribution

- The rainfall amounts received were fairly distributed in terms of space and in terms of time across the livelihood zones. In the first dekad of February, heavy rainfall was recorded of about 260 percent of the normal rains and 44 percent 44 percent of the normal in the second dekad. The precipitation increased in the third dekad by 112 percent as compared to long term average (Figure 1).

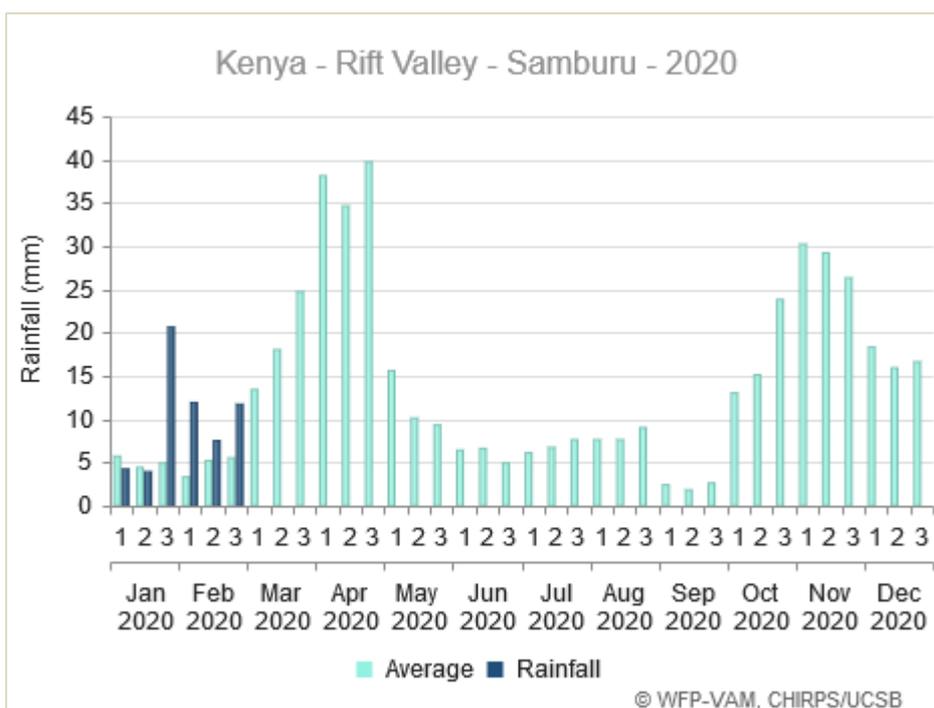


Figure 1: Graph Showing Rainfall Estimates (RFE) Trends for Samburu County
(Source : WFP-VAM, CHIRPS/UCSB)

1.3 Other Events

1.3.1 Desert Locust Invasion

- Large swarms of locust entered the county from Isiolo County through Waso ward. The desert locusts have laid eggs and hatchlings were observed in marginal pockets of Wamba west and Waso wards especially in Loijuk, Lembaute, Naibelibeli, Remote, Westgate and Samburu national reserve indication that locust have laid eggs and hatched. The locusts and hoppers have destroyed some shrubs in Samburu east sub county. The hoppers are a threat to farmers preparing to plant crops in March – May 2020 long rains season.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition

2.1.1 Vegetation Condition Index (3 month-VCI)

- The off-season rains have sustained good vegetation conditions remaining above normal across the livelihood zones. The vegetation greenness improved by 13 and 15 percent in Samburu north and Samburu east sub counties respectively as measured by satellite imagery (VCI). In Agro pastoral zone (Samburu central), the vegetation improved by seven percent although remained above the long-term average.
- The situation in terms forage remained above the long-term average at this time of the year (Figure 2).

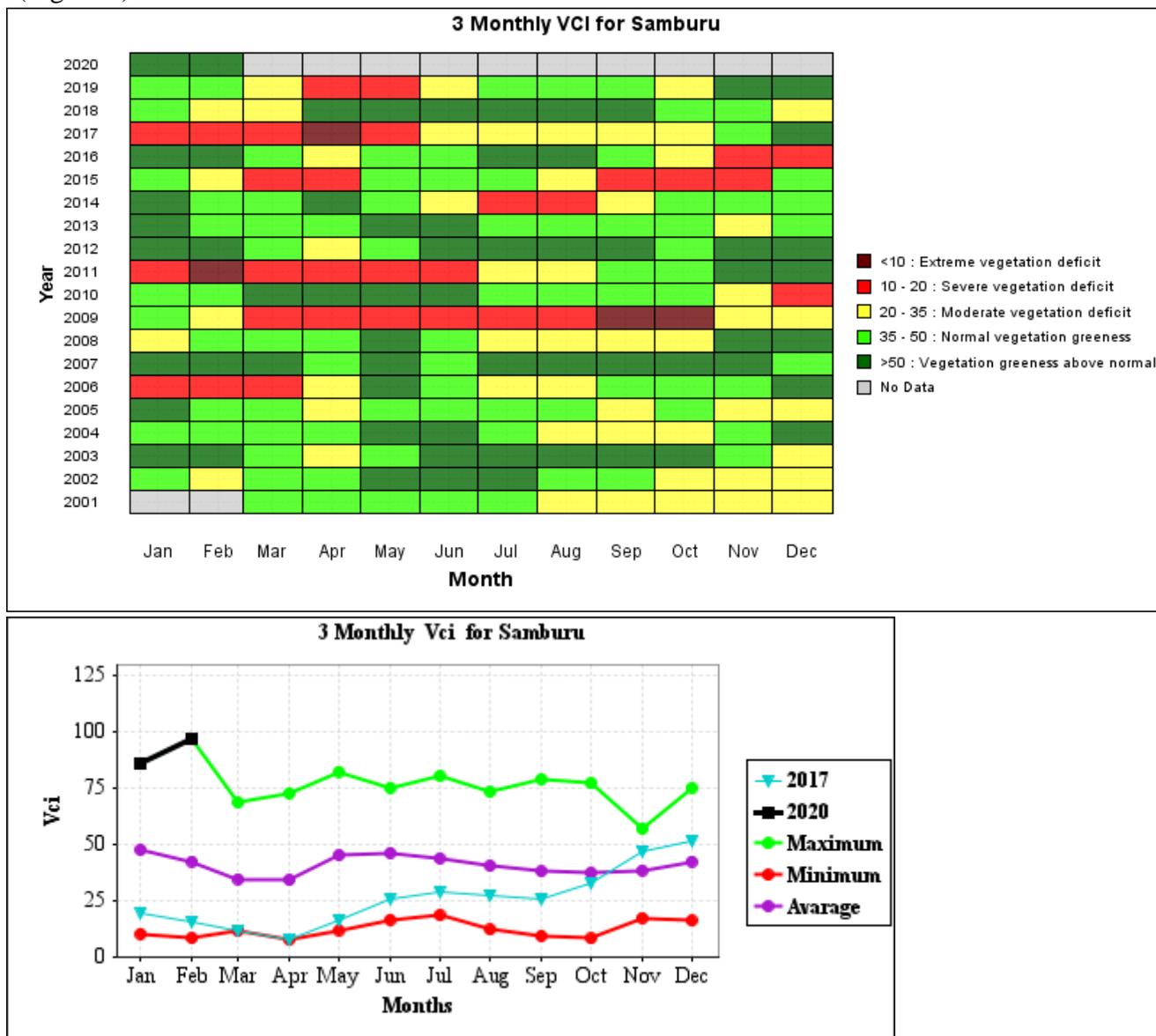


Figure 2: Matrix and Graph Showing VCI Trends for Samburu County (Source: Boku University)

2.1.2 Field Observations (Pasture and Browse Conditions)

Quality and Quantity

- Vegetation condition in the county still remain in conditions which is attributed to off – season rains which were received in the month of January and February. The available pasture and browse are projected last through March when the long rains season is forecasted to set in.

- Majority of key informants indicated that 94.1 percent of pasture and 88.2 percent of was good. However, marginal pockets of Wamba West ward in Samburu east sub county reported fair pasture condition with deterioration linked to locust invasion and massive infestation of invasive species (*Acacia Reficiens*) resulting into land degradation.
- Recurring resourced based conflicts in Samburu north sub county continued to limit access to grazing fields in parts of Marti, Angata Sikira Ngorishe and Kawop.

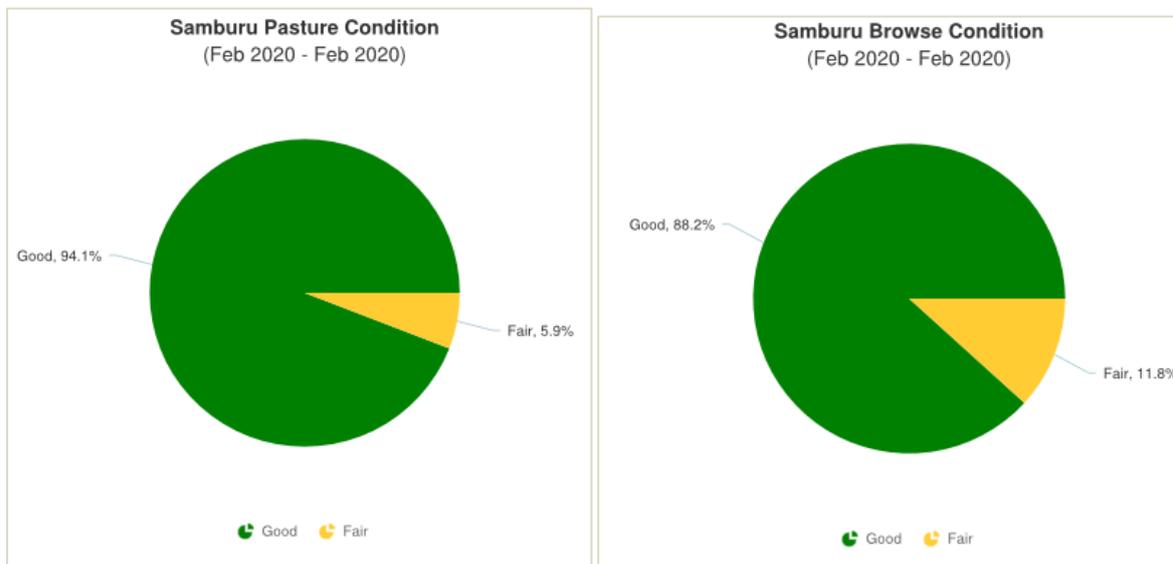


Figure 3: Pasture and Browse Condition

2.2. Water Resource

2.2.1 Sources

- The water sources were replenished by the off -season showers thus households depended on similar water sources both for domestic and livestock use. Natural and hand wells remained the most used water sources with about 46.9 percent of the households getting water from them for both domestic and livestock use. Pans and dams were used by approximately 24.3 percent of the households. Other sources used include boreholes at 16.2 percent, Springs at 8.1 and streams and river waso Nyiro at 5.4 percent (Figure 4).

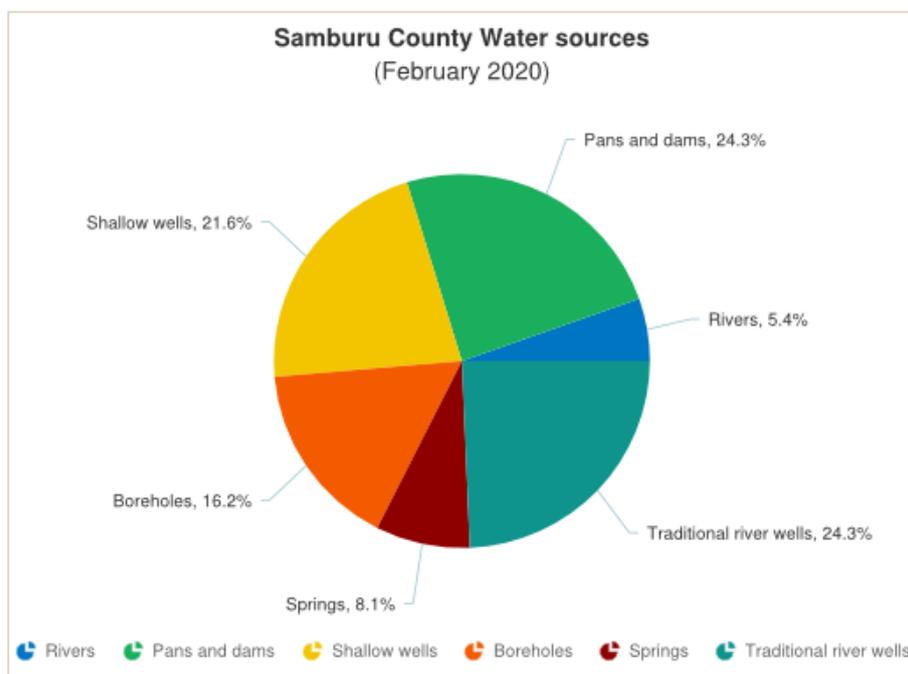


Figure 4: Common Water Sources

2.2.2 Household Access and Utilization

- Water resources have relatively been stable due to recharge by the off-season rains therefore stabilizing household trekking distances in some livelihood zones. In addition, increase in water infrastructure by the county government and partners also supported water access by the households and livestock.
- Current average household trekking distance was 4.6 km compared to 4.2 km reported in the month of January.
- The water access for the household remained below the long-term average by 33 percent at the same period of the year (Figure 5).

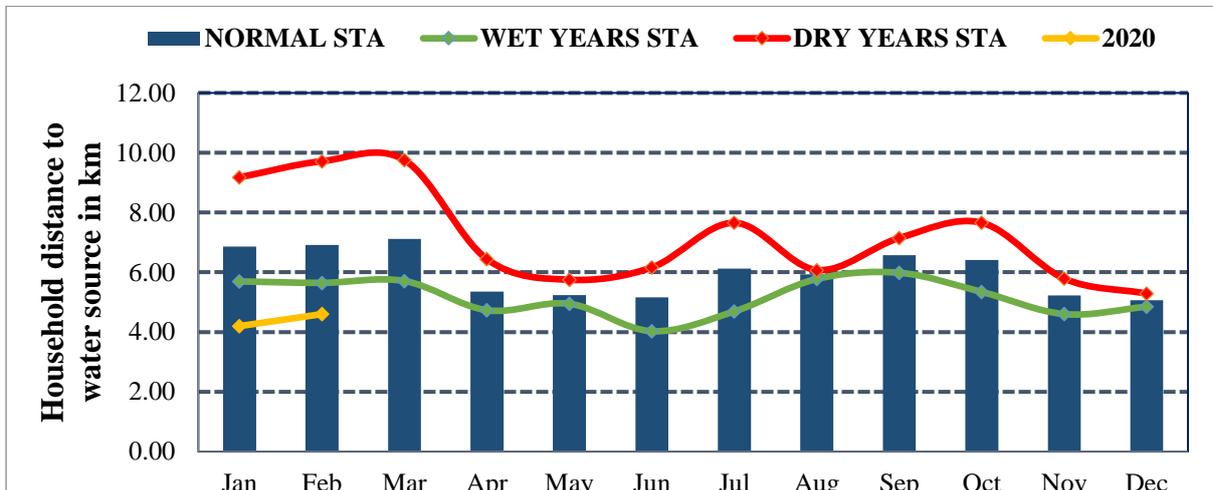


Figure 5: Average Distance Travelled by Households in Search of Water

2.2.3 Livestock Access (Grazing Distances to Water Points)

- The current distances livestock walk from grazing fields to watering points has remained stable. The watering points remained similar to last month due to recharge occasioned by the off-season rains experienced in January and February that also support further improvement in quality of pasture and browse condition.
- The average distance for the month of February was 6.5 km compared to 6.7 km recorded in January. Long distances have been noticed in pastoral areas which include parts of Nachola, Wamba north and Wamba west.
- The good performance of the short rains season coupled with off-season rains supported reduction in trekking distances compared to long term average. The current average distance of 6.5 km was 62 percent below the long-term average at the same of the year (Figure 6).

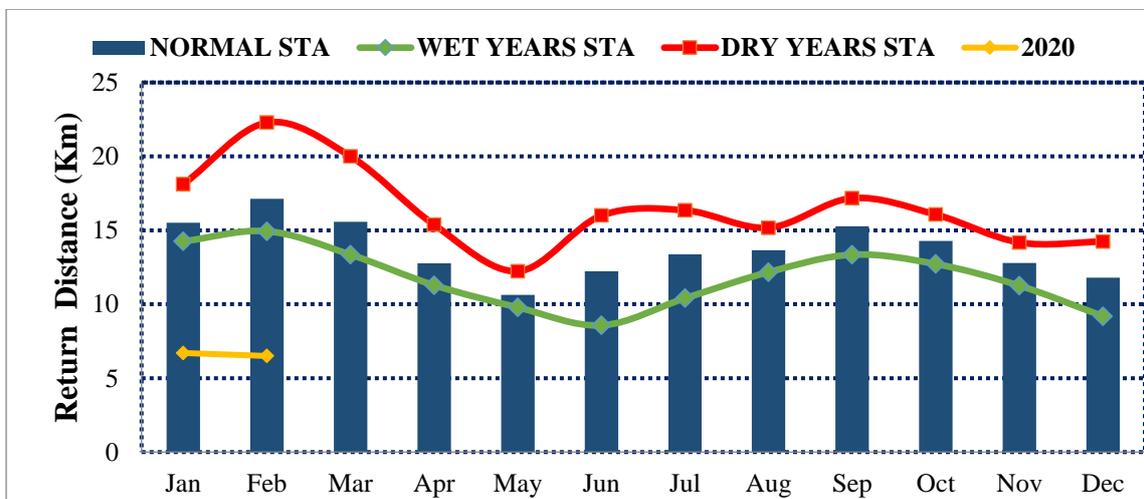


Figure 6: Distance Travelled from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- Following the good regeneration of vegetation cover driven by good performance of the short rains that progressed into January and February supported good livestock body condition for all species. The current body condition is very good smooth with fat over back and tail head as per the livestock body condition scoring chart (Annex 1).

3.1.2 Livestock Diseases and Deaths

- Reported clinical signs of foot and mouth diseases (FMD) have been confirmed by the county department of veterinary. Lumpy skin disease, contagious caprine pleuropneumonia (CCPP), foot rot in goats and sheep and goat pox were also reported within the county. Cases of peste des petits ruminants (PPR) have been confirmed in South Horr and Kirimun due to farmers not bringing livestock for vaccination. No unusual occurrence of livestock mortalities reported across the livelihood zones.

3.1.3 Milk Production

- A slight increase was noticed in milk production from 1.5 litres per household per day to 1.7 litres per household per day. The increase was attributed good body condition and kidding and lambing across the livelihood zones. Community interviews indicated that the milk produced are majorly from cattle and in some cases camel in the pastoral areas.
- Milk production was higher in Agro-pastoral livelihood at 3.5 litres per household per day attributed to improved livestock breeds supported by sedentary way of living while households in pastoral areas produced 2 litres per day per household.

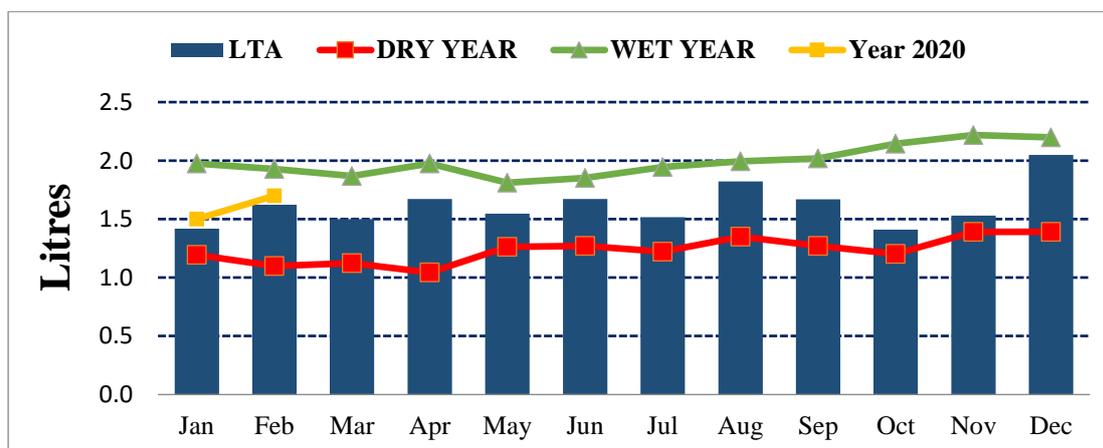


Figure 7: Trends in Milk Production per Household

3.2 Rain Fed Crop Production

3.2.1 Stage and Condition of Food Crops

- Households in the lowland of Samburu central sub-county who planted maize during the short rains season are now utilizing the green maize for roasting and boiling and beans have been harvested.

3.2.2 Harvest of Crop

- Households in marginal pockets of the lowland of Samburu central mainly in Baawa, Kirimon and Lodokejek have harvested beans.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- The good body condition for cattle due to improved rangeland resources has attracted better prices at the markets. The current price was Ksh 20,985 for a medium sized bull which was stable compared to last month price of Ksh 21,600.
- Lolkuniani market which is a terminal to feeder markets had the highest average price of Ksh 31,100 due to ease access by external traders while Baragoi had the lowest price of Ksh 10,000 due to hinderance by recurring conflicts in the area.
- The current price of Ksh 20,985 remained above the 2015 – 2019 long term average by 32 percent at the same time of the year (Figure 8).

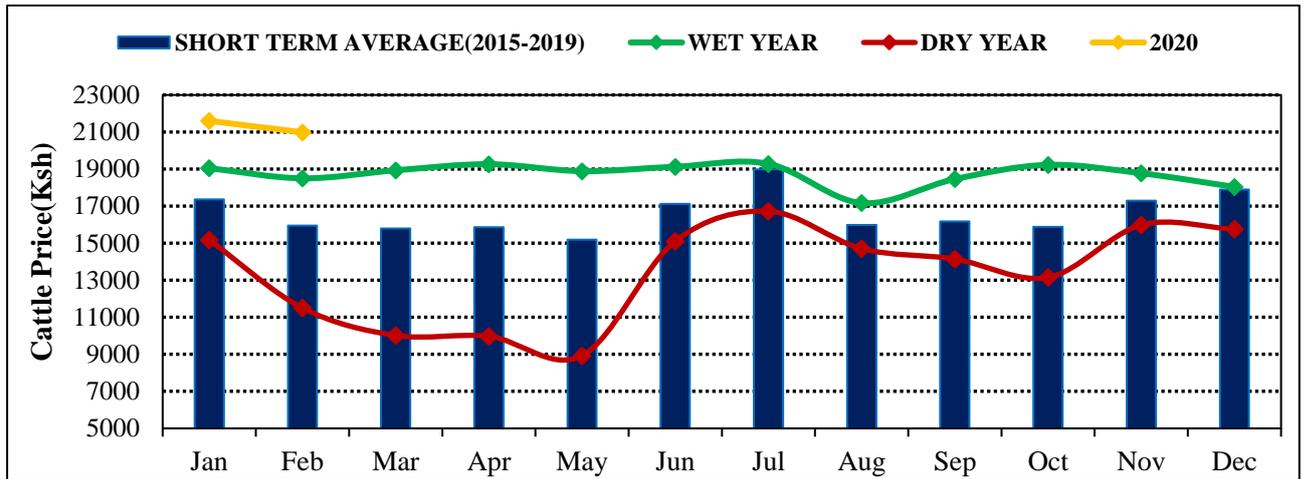


Figure 8: Graph Showing Cattle Selling Price Trends at Market Level

4.1.2 Goat Prices

- Like cattle prices, goats' selling prices have maintained an upward trend remaining considerably above the long-term average attributed to good body condition as a result of availability of browse and water resources due to extended rainfall season.
- The current market price for a medium sized goat was Ksh 3,220 which was 32 percent above the January price. Better prices continued to be observed in Lolkuniani market with an average price of Ksh 5,417 while low prices were noticed in Illaut and Baragoi market which are in Samburu north sub county. The current price remained above the long-term average by about 25 percent at the same period of the year (Figure 9).

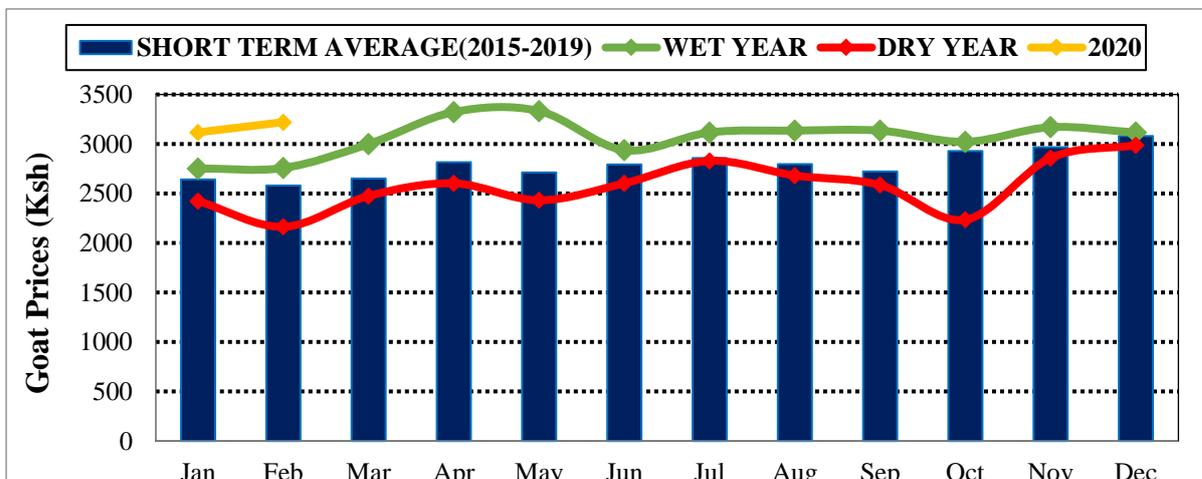


Figure 9: Graph Showing Goats' Selling Price Trends at market Level

4.1.3 Sheep Prices

- The market price for sheep remained stable compared to last month price standing at Ksh 2,618 which was 20 percent above the long-term average. The prices were above the long term due to improved sheep body conditions resulting from enhance short rains season that supported significant vegetation regeneration.
- Baragoi and Illaut markets continued to record low prices due to poor access roads coupled with road banditry and communal conflicts. High prices were noted in terminal market of Lolkuniani with an average price of Ksh 3,500 for a medium sized sheep.

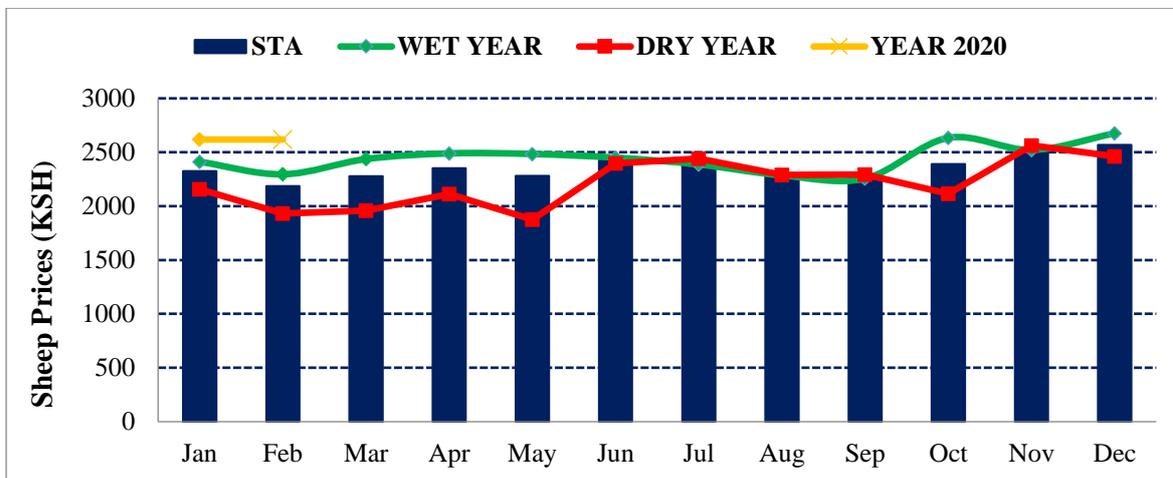


Figure 10: Graph Showing Sheep Selling Price Trends at Market Level

4.2 Crop Prices

4.2.1 Posho (Milled Maize)

- The maize commodities have dwindled at the household’s level but available in the market. The maize prices remained high in the market due to traders taking advantages of households who have exhausted their maize stocks and now relying on markets.
- The current average price was Ksh 52 per kilogram which was stable compared to last month price but was 11 percent high than the long-term average at the same period of the year (Figure 11).
- In the sampled markets, a kilogram of maize was selling between Ksh 50 – 55 except in Lolkuniani and Archer post markets where it was retailing at Ksh 60 and Ksh 45 respectively. The prices were low in Archer due to its close proximity to Meru and Nanyuki connected by a tarmac road.

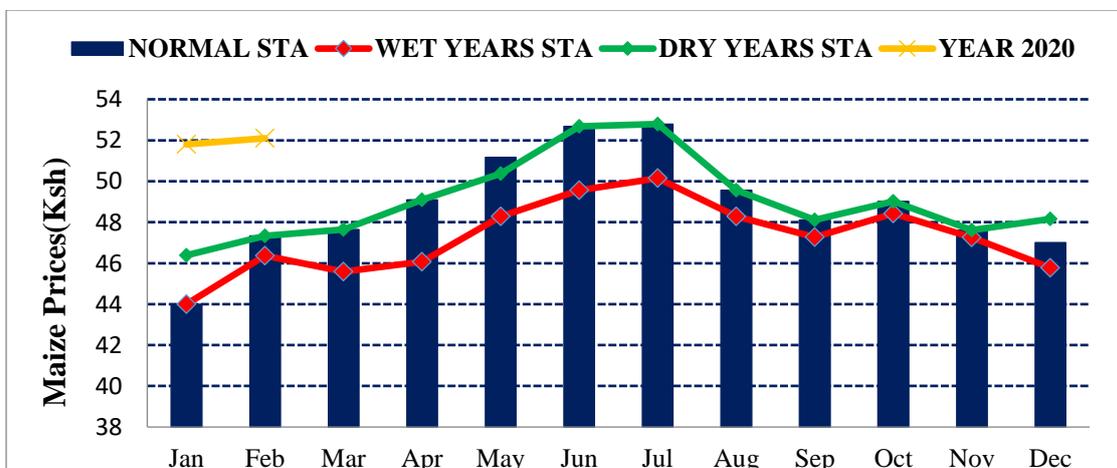


Figure 11: Graph Showing Maize Meal Price Trends

4.3 Livestock Price Ratio/Terms of Trade (TOT)

- The good body condition for livestock has supported good prices for all livestock species thus improving purchasing power at the household level. The current average ToT remained stable compared to the previous month.
- Currently, households are able to buy approximately 62 kilograms of maize from the proceeds of one mature goat.
- Terms of trade are favourable as they stand above the long term by 35 percent the same period of the year (Figure 12).
- Terms of trade are higher in Agro-pastoral at about 84 kilograms of maize by sale of one goat and household are pastoral were able to purchase 68 kilograms of maize.

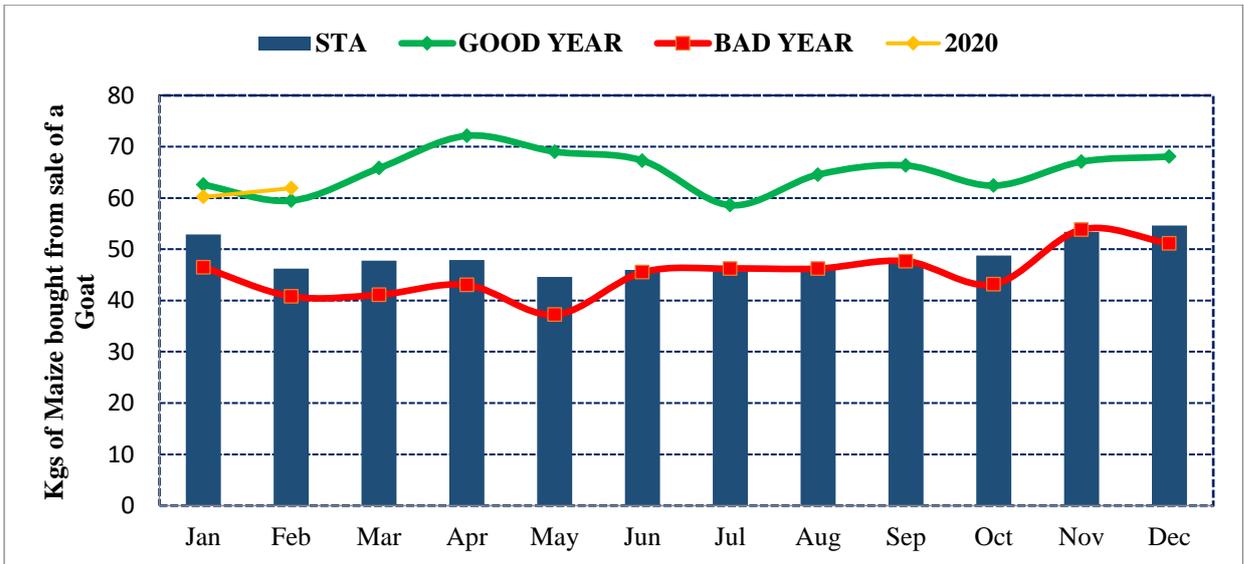


Figure 12: Trends in Terms of Trade (TOT)

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- Milk produced at household level were mainly consumed by the children under five and the elderly. Household consumed 1.5 litres of milk compared to 1.2 litres in the month of January. The remaining amount of milk were retailed at Ksh 60 – 70 per litres and in some areas, camel milk is sold at Ksh 80 – 100 per litre.

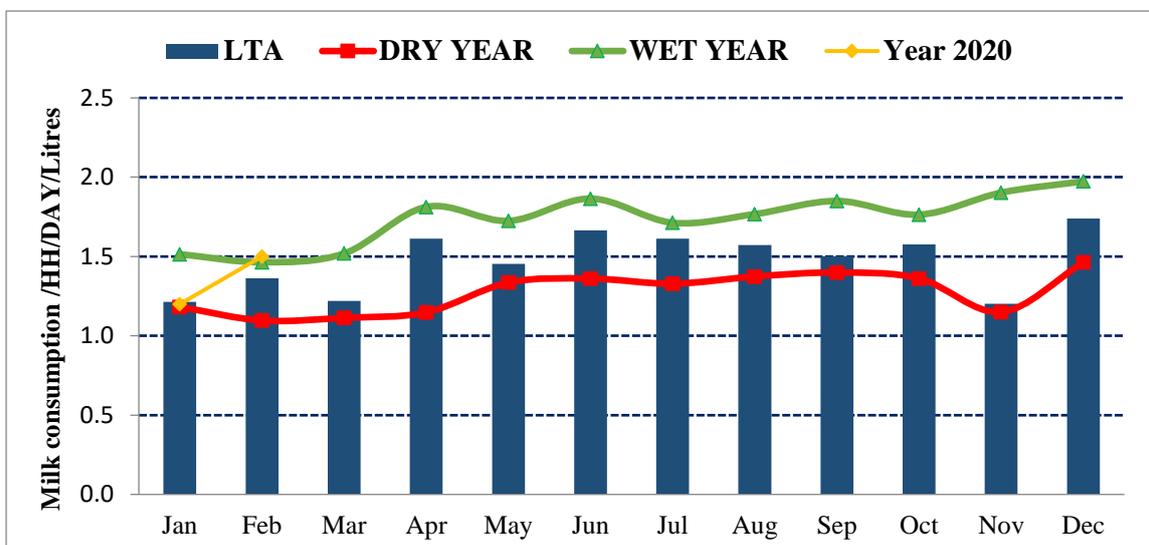


Figure 13: Trends in Milk Consumption per Household

5.2 Food Consumption Score (FCS)

- The enhance short rains performance resulted to improved livestock productivity and food commodities access which subsequently improving food intake and diversity. The proportion of households with acceptable remained stable compared to last month. The current proportion in acceptable in Agro pastoral 81.5 percent and 61.7 percent in pastoral livelihood.
- About 10.1 percent of the household in pastoral livelihood zone had poor food consumption implying taking starch and vegetables every day a week. The proportion of households with borderline food consumption were 18.5 and 28.2 percent in Agro pastoral and pastoral livelihood zone respectively (Figure 14).

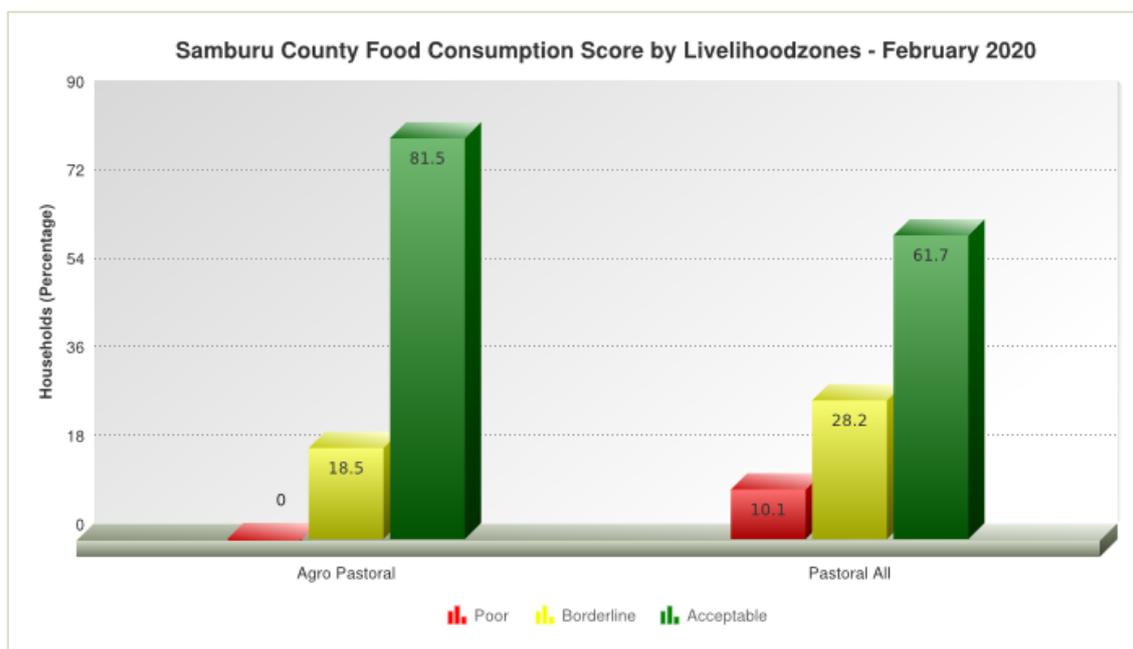


Figure 14: Bar chart showing FCS per livelihood zone

5.3 Health and Nutrition Status

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

- The prevalence of children at risk of malnutrition as per measured by MUAC was high at 21.3 percent compared to 23.7 percent recorded in last month. The high rates of children under five at risk are attributed to increase in morbidity cases for under five attributed to moist and cold temperatures and dusty environment coupled with poor child feeding and maternal practices at household level.
- The high rates of children at risk of malnutrition were noticed include Wamba west, Nachola and Ndoto wards ranging between 26.8 to 34.6 percent.
- The proportion of children at risk of malnutrition has remained high currently standing at 45 percent above the seasonal average (Figure 15).

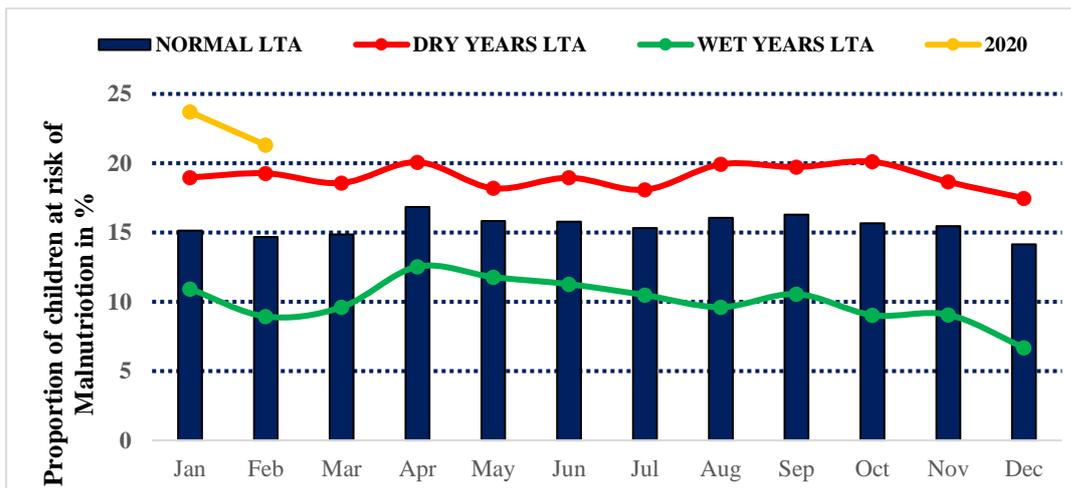


Figure 15: Graph showing average Nutritional status (MUAC)

5.3.2 Health

- Incidences of upper respiratory tract infections (URTI) and diarrhoea continued to be reported for both under five and general population (KHIS2). The cases of diarrhoea are attributed to high open defecation and increased usage of untreated open water sources mainly replenished from the surface water runoff.

5.4 Reduced Coping Strategies Index (rCSI)

- The current mean rCSI was 10.36 which was stabled compared to 10.72 recorded in the last month.
- The most commonly used coping strategies include relied on less preferred and/or less expensive food and reduced the portion of meals taken in a day and borrow from the neighbours.

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Non-Food On-going Interventions

Table 1: Non-food On-going Interventions

SECTOR	INTERVENTION	IMPLEMENTERS
Agriculture	<ul style="list-style-type: none"> • Aerial and ground spray of desert locust in Samburu east sub county 	County Government, National Government, FAO, NYS, KDF
Health	<ul style="list-style-type: none"> • Integrated outreaches across the county 	MOH and Partners
Peace and Conflict	<ul style="list-style-type: none"> • Peace building and dialogue initiatives in Suguta ward between Samburu and Pokot communities 	National Government, County department of Special Programs, CDF, CSI
Livestock	<ul style="list-style-type: none"> • Hay harvesting in Loosuk and Suguta wards • Training group members in Lodokejek on grazing management 	County department of livestock County department of livestock supported by KRCS

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Tension has been high along the border of Samburu and Baringo counties following the killing of one person at Longewan by the bandits and attempted cattle rustling. In Samburu north sub county incidences of cattle theft were reported between the warring communities of Turkana and Samburu resulting into high tension in fear of retaliatory attacks.

7.2 Migration

- All livestock species are grazing within the homesteads in the wet season grazing areas.

7.3 Food Security Prognosis

- According to Kenya Meteorology, the forecast for March – April – May 2020 long rains season is likely to be higher than the long-term average amounts (above normal) for the season.
- The ongoing off-season precipitation is expected to sustain the improvement in rangeland conditions till the start of the next season expected in March.
- Livestock market prices are likely to remain above normal in the next three months due to good body conditions driven by good pastures and water resources supported by enhance short rains and replenished by off season rains.
- Maize market prices are likely to remain typically stable and near average to above average for the 2 – 3 months.
- The ongoing locust invasion that laid eggs and hatched nymphs is projected to cause ravage to forage and expected long rains crops to be planted in March.

8.0 RECOMMENDATIONS

Table 2: Proposed Interventions per Sector

SECTOR	INTERVENTION	Areas
Agriculture	<ul style="list-style-type: none"> • Upscaling aerial and ground spraying of desert locust across the county to control spread of Nymphs (Hoppers) • Embrace water harvesting for crop production (Small scale irrigation) 	<ul style="list-style-type: none"> • County wide
	<ul style="list-style-type: none"> • Provision of subsidized certified seeds and tractor fuel 	<ul style="list-style-type: none"> • Suguta, Loosuk, Poro, Maralal, Lodokejek, Baawa
Livestock	<ul style="list-style-type: none"> • Vaccination against FMD, CCPP, Entorotoxemia diseases 	<ul style="list-style-type: none"> • Pastoral and Agro-pastoral livelihood zones
Health	<ul style="list-style-type: none"> • Up scaling of integrated outreaches, CLTS and WASH • Sensitization on treatment of drinking water as most households are accessing water from unprotected sources 	<ul style="list-style-type: none"> • County wide
	<ul style="list-style-type: none"> • Screening for acute malnutrition and advocacy for maternal practices 	<ul style="list-style-type: none"> • Ndoto, Wamba West, Nachola
Water and Environment	<ul style="list-style-type: none"> • Rehabilitation of water catchment, broken water extension pipes and breched pans and dams. • Construction of gabions and range land reseeded 	<ul style="list-style-type: none"> • Destroyed water sources and degraded rangelands

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	