

National Drought Management Authority

MARSABIT COUNTY

DROUGHT EARLY WARNING BULLETIN FOR DECEMBER 2017



A Vision 2030 Flagship Project



EW PHASE: NORMAL

Drought Status: NORMAL

Shughuli za kawaida

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Agro-pastoral	Alert	Worsening
Pastoral All species	Normal	Worsening
Fisherfolk/ Casual labour /Petty Trading	Normal	Worsening
County	Normal	Worsening
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	73	80 -120
VCI-3Month	37.37	>35
Forage condition	Good-Fair	Good
Production indicators	Value	Normal
Livestock Body Condition	Good	Good
Milk Production	1.8	>2.0Litres
Livestock Migration Pattern	Unusual	Normal
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	74	>77
Milk Consumption	1.5	>1.4Litres
Return distance to water sources	2.5	0.0-2.6 Km
Cost of water	0-5	<Ksh.5
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	19.4	0.0-18.5
Coping Strategy Index	17	<20
Food Consumption score	39.7	>35

Drought Situation & EW Phase Classification

Biophysical Indicators

- **Rainfall:** Light showers were witnessed across the County. Rainfall received was erratic and below normal. Generally, when compared to normal seasons, cessation of the short rains was early.
- **Vegetation condition:** Vegetation condition index for December was 37.37 henceforth an illustration of slight decline from 38.08 depicted in the previous month but was within the normal vegetation greenness band. Forage condition is good-fair across the livelihood zones.

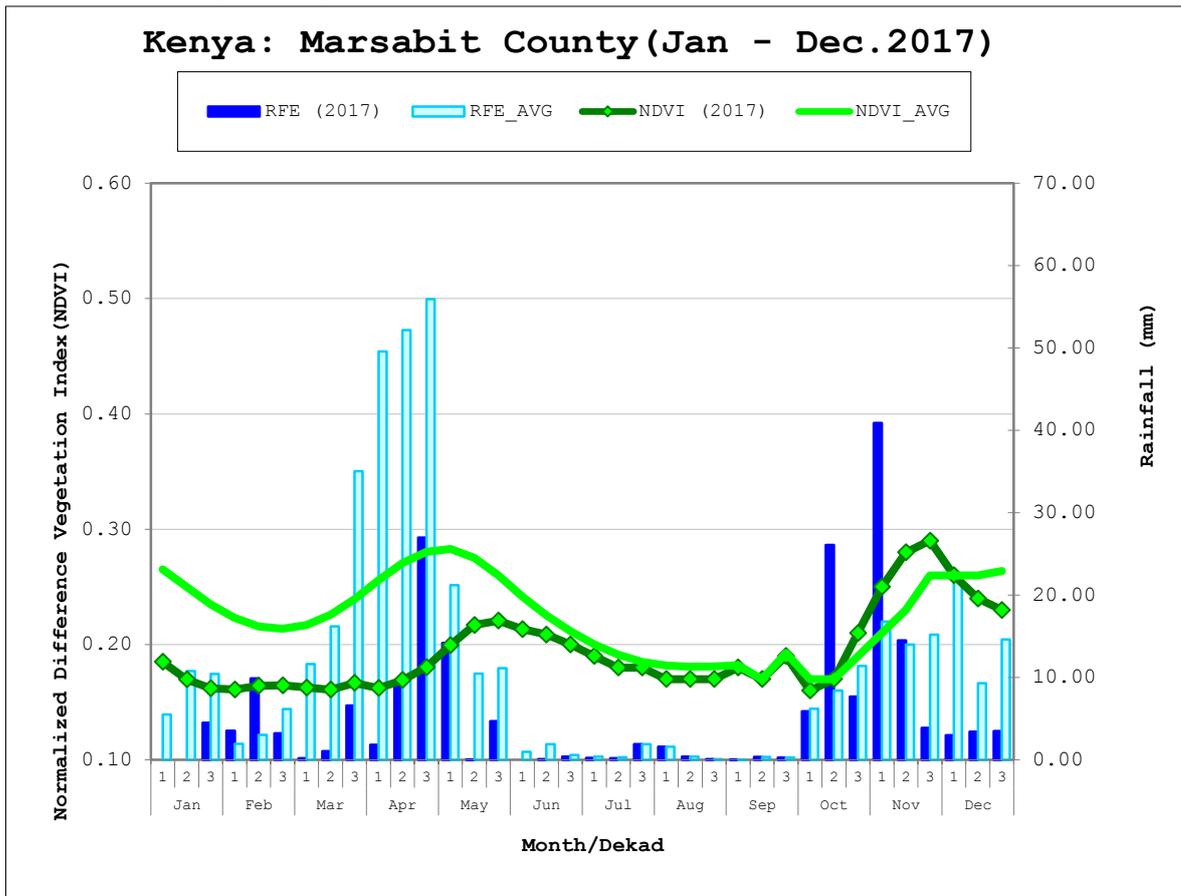
Socio Economic Indicators (Impact Indicators)

- Production indicators:** Livestock body condition was generally good for all the species across the County with exception of cattle in some isolated areas of Moyale sub-county. Milk production per household per day was recorded at 1.8Litres which is above normal. No Livestock mortalities attributed to drought was reported. No reported cases of livestock disease outbreak were witnessed across the County. Maize is in the tarsling stage/knee height whereas beans is in flowering/podding stage in the Agro-pastoral areas of the County.
- **Access indicators:** Household and livestock trekking distances to water points slightly became longer across the livelihood zones when compared to the previous month. Milk consumption was within the normal ranges and Terms of trade was favourable across the livelihood zones.
 - **Utilization indicators:** Children rated 'at risk' of malnutrition gradually increased. Food consumption score was acceptable and Coping Strategy Index declined as households adopted less strategies to cope.

<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



- From the figure shown above, Marsabit County received erratic rainfall which were below normal. Dekadal rainfall amounts received in the first, second and third dekads were 3.0mm, 3.4mm and 3.5mm respectively against long term decadal averages of 22.3mm, 9.32mm and 14.64mm in the first, second and third dekads respectively.

1.2 Amounts received

- The County experienced depressed rainfall which were generally light showers. The amounts were negligible in most of the rainfall stations and raingauges across the County where traceable amounts between 2mm-3.5mm of rainfall recorded in the month under review.

1.3 Cessation of the short rains

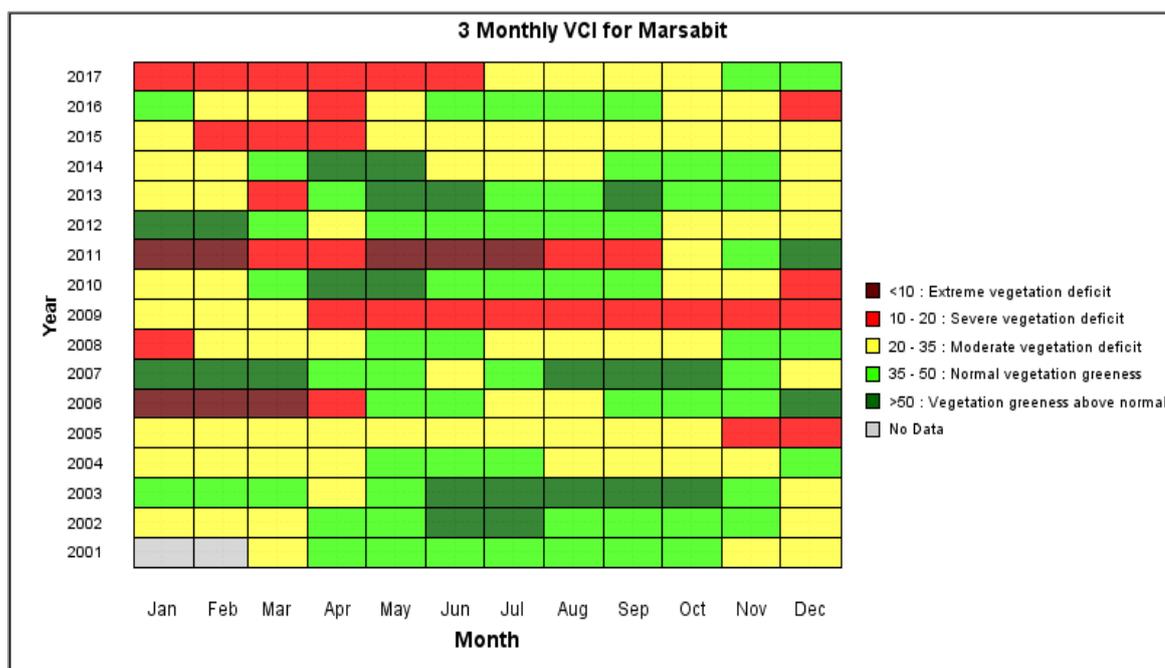
- According to the traceable amounts of rainfall received across the livelihood zones which were generally below 4mm of rainfall, cessation of the short rains occurred in the third dekad of November.
- Cessation of the short rains was early when compared to the usual cessation period in the second dekad of December.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

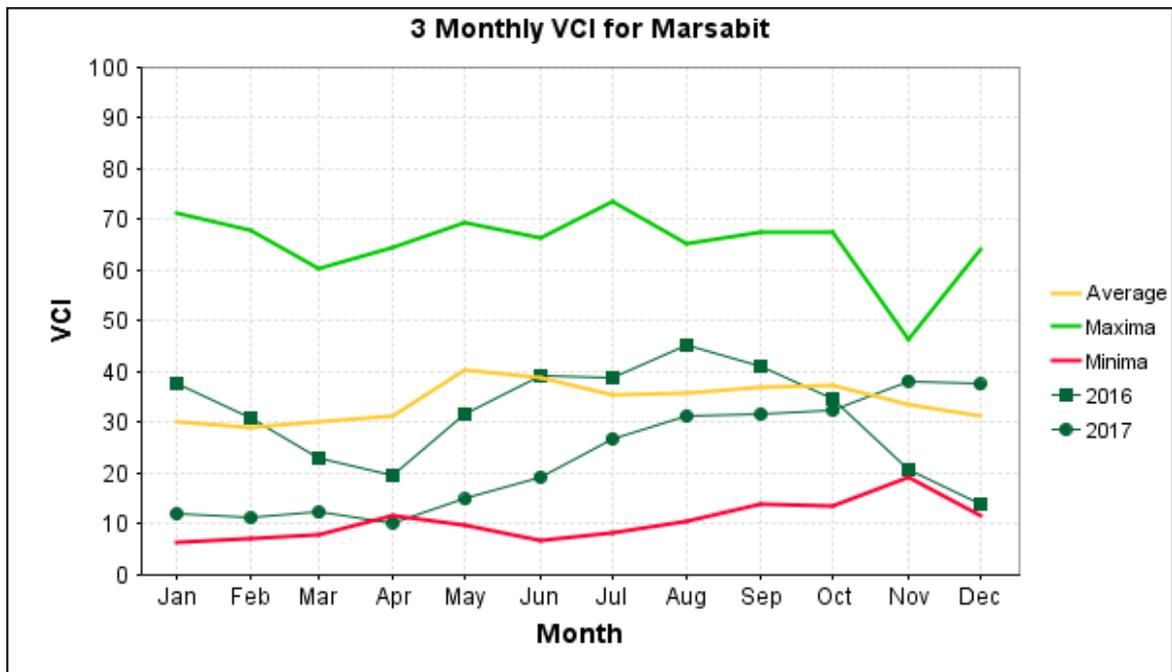
2.1.1 Vegetation Condition Index (VCI)

- The 3-months VCI matrix shown below exhibits VCI bands of the months in terms of agricultural drought based on indicative VCI thresholds. The vegetation condition index has been retrospectively grouped on the appropriate vegetation deficit band for the month of December.
- Vegetation condition index incorporates comparison of the relative NDVI (Normalised Difference Vegetation Index) change with respect to minimum and maximum historical NDVI values.
- The 3-month Vegetation Condition Index for the month of December was 37.37 across the County henceforth classified as normal vegetation greenness.



- There was insignificant decline in the vegetation condition index from 38.08 exhibited in November to 37.37 recorded in the month under review.
- Marsabit County recorded normal vegetation greenness for two consecutive months due to cumulative improvement in vegetation as witnessed across the livelihood zones
- The vegetation condition index for North Horr was above normal because substantial short rains and offseason experienced which had a positive ripple effect on the vegetation cover whereas Laisamis sub-county fell under the normal vegetation greenness band.

- However, Saku and Moyale sub-counties had below normal vegetation condition index mainly attributed to the influx of livestock before the short rains which completely depleted forage hence negatively affecting the rolling effect on vegetation.



- The graph shown above compares 2017 VCI trend to 2016, long term average and gives maximum and minimum values ever recorded. From the figure above, it can be presumed that vegetation condition index improved from April 2017 then stagnating in September and October 2017 before improving to normal vegetation greenness because of the substantial cumulative rains experienced in October and November.

2.1.2 Pasture

- Pasture condition is good-fair across the livelihood zones. When compared to the previous month, pasture condition slightly deteriorated across the livelihood zones which was attributed to lack of rainfall witnessed in the month under review nevertheless was normal when compared to this particular period of the year.
- Emergence of non-palatable vegetation is predominant in Laisamis and North Horr sub-counties.
- Quantity and quality of pasture is good-fair across the livelihood zones with exception of Amballo in Moyale sub-county which depicted poor pasture condition. Quality of pasture is good in Moyale sub-county (Badanrero, Sololo, Bori, Mado Adhi, Wahegodha, Mado Adhi and Dambala Fachana), North Horr sub-county (Hurri Hills, Balesa, Chari Ashe, Dukana, Illeret, Elbeso, Elhadi and Diid Gola), Laisamis sub-county (South Horr, Mt.kulal and

southern parts of Laisamis) and Mt.Marsabit and Karare in Saku sub-county. Merille and Laisamis are isolated areas in Laisamis sub-county with fair-poor pasture.

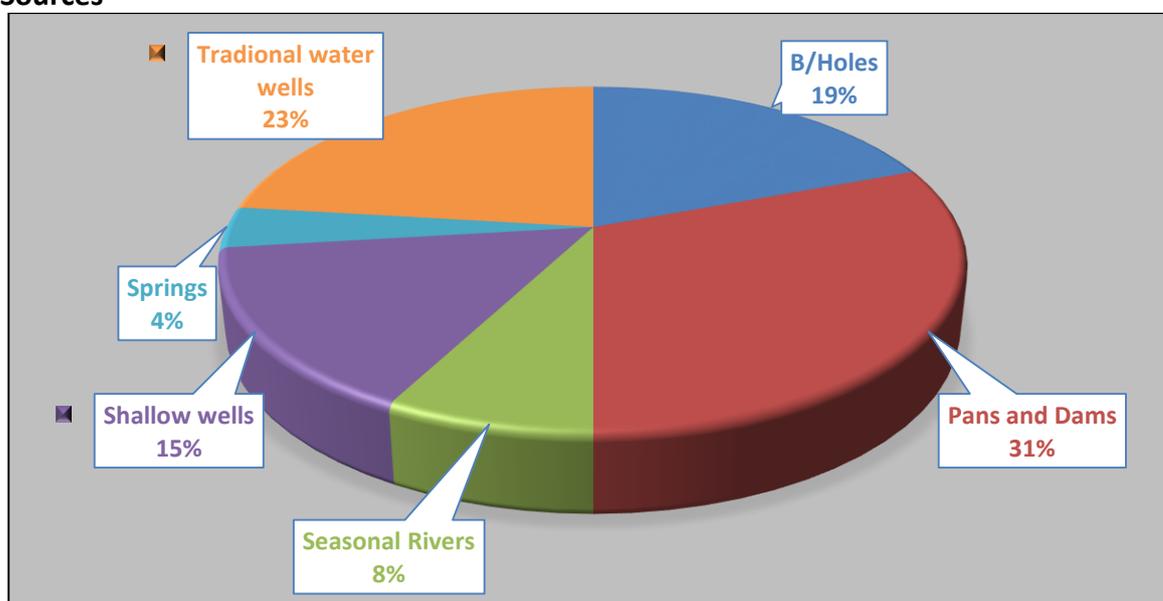
- The available pasture is expected to last for the next 2months across the livelihood zones.

2.1.3 Browse

- The condition of browse is good in Saku, Moyale, Mt.Kulal, South Horr while in other areas is generally fair.
- When compared to the normal season, browse condition is normal. Normal browse condition was triggered by substantial cumulative short rains received in the months of October and November.
- The available browse is expected to last for the next 3months across the livelihood zones.

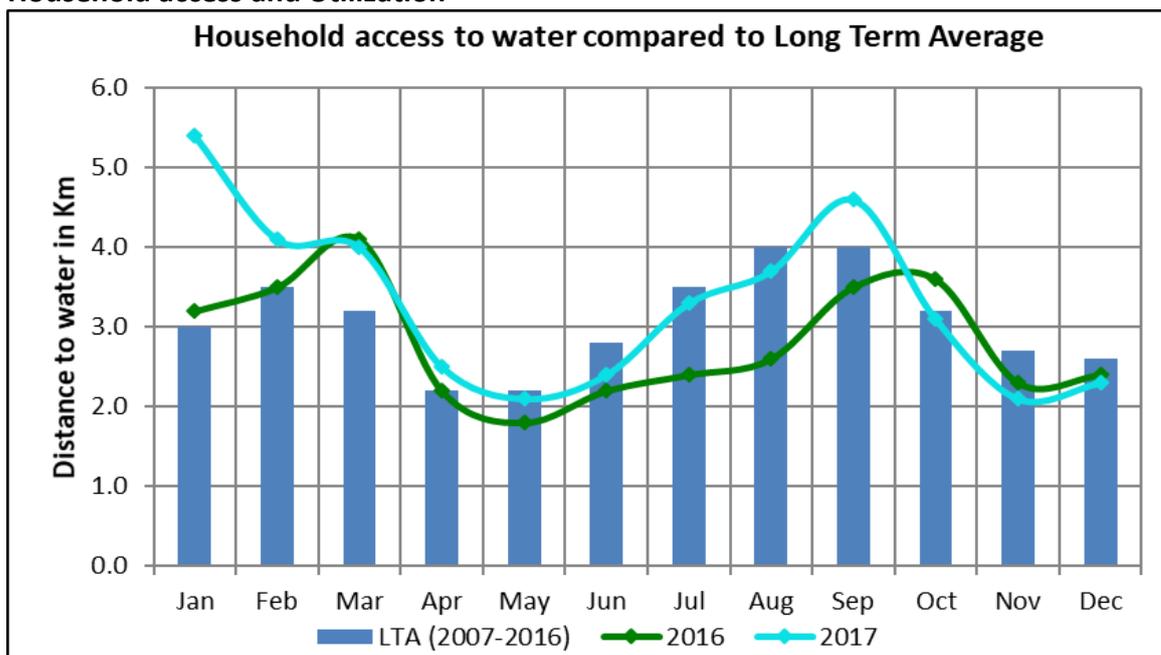
2.2 WATER RESOURCE

2.2.1 Sources



- From the figure shown above, majority of the communities interviewed used water pans for water consumption as depicted by 31percent response rate across the livelihood zones.
- When compared to a normal period, water pan is the normal water source at this time of the year.
- Other water sources used by the communities are traditional water wells, boreholes, shallow wells, seasonal river and springs at 23percent, 19percent, 15percent, 8percent and 4percent respectively.
- Reliance on boreholes have slightly increased compared to last month due to drying of natural ponds and seasonal rivers
- Recharge levels of open water sources is declining since no rains was witnessed in the month under review and its anticipated to last for the two months.

2.2.2 Household access and Utilization

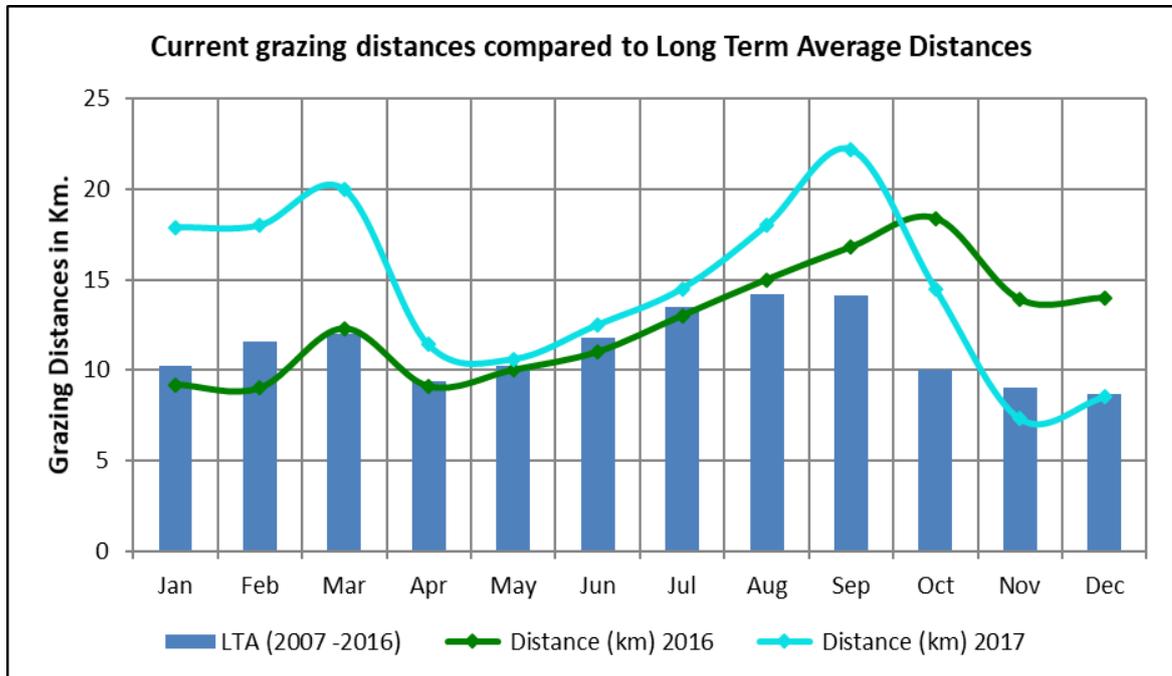


- The figure shown above exhibits that in the month under review household water distances to the predominant water sources was 2.3Km.
- When compared to the preceding month household water distance of 2.1Km, water access slightly declined.
- Slight decline in water access was attributed by the gradual reduction in water levels of the open water sources across the livelihood zones.
- Shorter household water distances were exhibited in most of the Pastoral livelihood zone as opposed to the Agro-pastoral livelihood zone which recorded slightly longer distances.
- When compared to this particular time of the year, the current household water distance of 2.3Km is 12percent shorter than the normal household water distance.
- Waiting time at the water source slightly increased from less than 30minutes recorded in the previous month to 30-45minutes in the month of December.
- Household water consumption is 12Litres/per person/day in the Pastoral livelihood zone whereas 10Litres/per person/day in the Agro-Pastoral zone hence household water consumption per day gradually declined across the livelihood zones when compared to the preceding month.
- Cost of water varies at Ksh. 0-5/20Litres jerry can across the county with exception of Marsabit and Moyale towns where water vendors retailed water at Ksh.50/20Litres jerry can.

2.2.3 Livestock access

- From the figure shown below, return livestock trekking distance from grazing areas to water points was 8.5Km in December hence a paltry increase from 7.3Km illustrated in the previous month.

- Paltry increase in livestock trekking distances across the livelihood zones was occasioned by gradual reduction in water levels of the open water sources and slight decline of the vegetation cover across the livelihood zones.
- The current livestock trekking distance of 8.5Km is 2percent shorter when compared to the normal trekking distance of 8.7Km at this particular period of the year.



- Lack of pasture and water in Amballo in Moyale sub-county limited livestock access of grazing areas.
- Watering frequency for cattle/shoats and camel is daily and after 3 days respectively across the livelihood zones. When compared to a normal season, watering frequency is above normal.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition is good in Mt.Kulal, North Horr, Balesa, South Horr, Elbesso, Diid Gola, Darade, Sololo and along Uran ward in Moyale sub-county occasioned by normal-above normal vegetation greenness in addition to within normal livestock trekking distances.
- Isolated areas of Laisamis, Merille, Amballo, Sagante and Karare exhibited fair cattle body condition.
- When compared to the normal season, livestock body condition is normal. Due to the cessation of the short rains, livestock body condition is expected to worsen as the short dry spell ensue.

3.1.2 Livestock Migration

- There was unusual livestock migration in some parts of the County and outflux to the counties. Most of the livestock in North Horr, Saku and Moyale sub-counties are grazing at usual grazing areas away from satellite camps.
- Unusual livestock migration was witnessed from Laisamis sub-county to the neighbouring Samburu County. Within Laisamis sub-county, livestock have migrated towards Nolotola, Nolwou, Koya and Lembarpar. Outmigration from Laisamis (Kinya, Nguposorogi, Chapulo, Lentasimi, Ndonyo) towards Serelivi, Archers post and Wasin-wamba in Samburu County.
- Also livestock from Wajir and drought hit Isiolo County have migrated towards Dabel, Malbeali and Badanrero in Moyale sub-county.

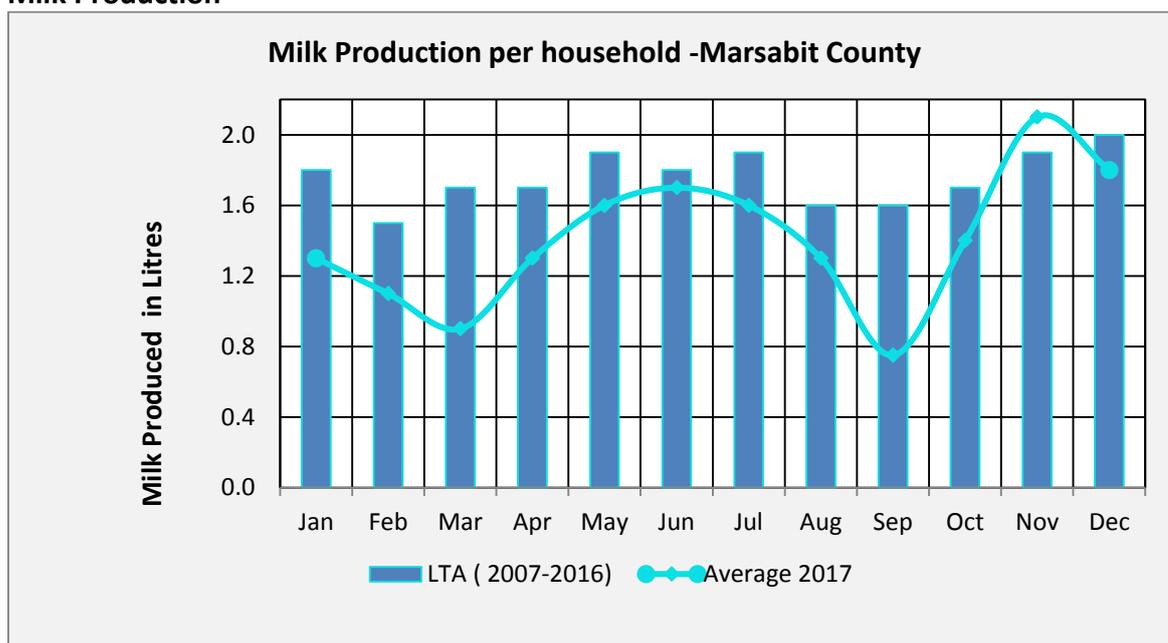
3.1.3 Livestock Diseases

- There was no outbreak of livestock diseases in the County. However, endemic livestock diseases like PPR, CBPP were reported across the County.

3.1.4 Livestock mortalities

- No cases of livestock mortalities attributed to drought were reported across the County.

3.1.5 Milk Production



- The figure shown above exhibits that milk production/household/Litre for the month under review was 1.8Litres. When compared to the previous month of 2.1Litres, slight decline in milk production was noted.
- Slight decline in milk production was occasioned by influx of livestock from Wajir and Isiolo into Moyale sub-county and livestock out-migration from Laisamis/Merille towards Samburu County.

- When compared to a normal period, milk production was 10percent below normal with production recorded in 60percent of the households interviewed.
- Milk prices are retailing at an average price of Kshs.90-100 per Litre across the livelihood zones. Current milk prices of Kshs.90-100 is normal at this particular time of the year.

3.2 RAIN-FED CROP PRODUCTION

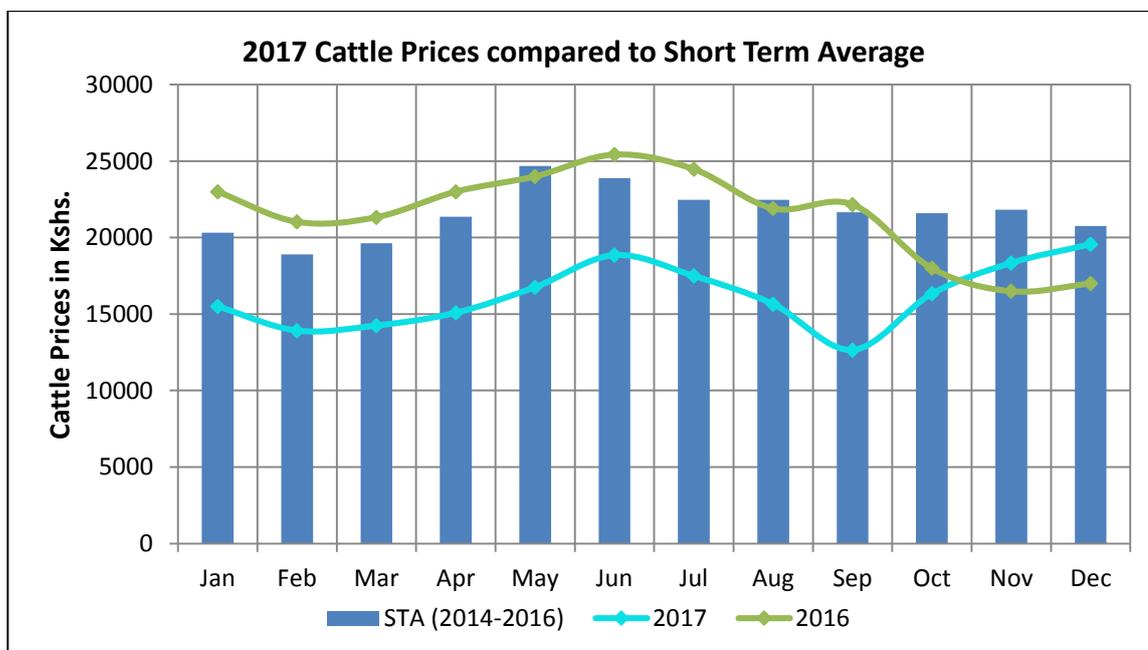
3.2.1 Stage and Condition of food Crops

- The maize crop is in tasseling stage while the late planted crops are at knee height. Beans are also flowering and podding but due to lack of moisture/water at this critical stage of the crops growth both maize and beans are withering, wilting and drying.
- Total crop failure is expected in Sololo and Uran wards of Moyale sub-county due to water stress. Maize flowered in Wayye Godha, Maddo adhi, Anona, Golole, Lataka, Somare, Teso and Mansile. Beans also flowered and started forming pods. The cessation of rainfall during critical plant growth period has caused severe water stress for crops.
- In Saku sub-county, the performances of crops for the past 4 to 5 seasons have been very deplorable. The challenges of climate change may have a lot to play in the performances of cereals and pulses in Saku Sub County. Like all other areas within the County, we expect very poor harvest of below 10% should there be no more precipitation. The farmers have no food reserves either and food security challenges are real. The beans expected harvest will be below 30%.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

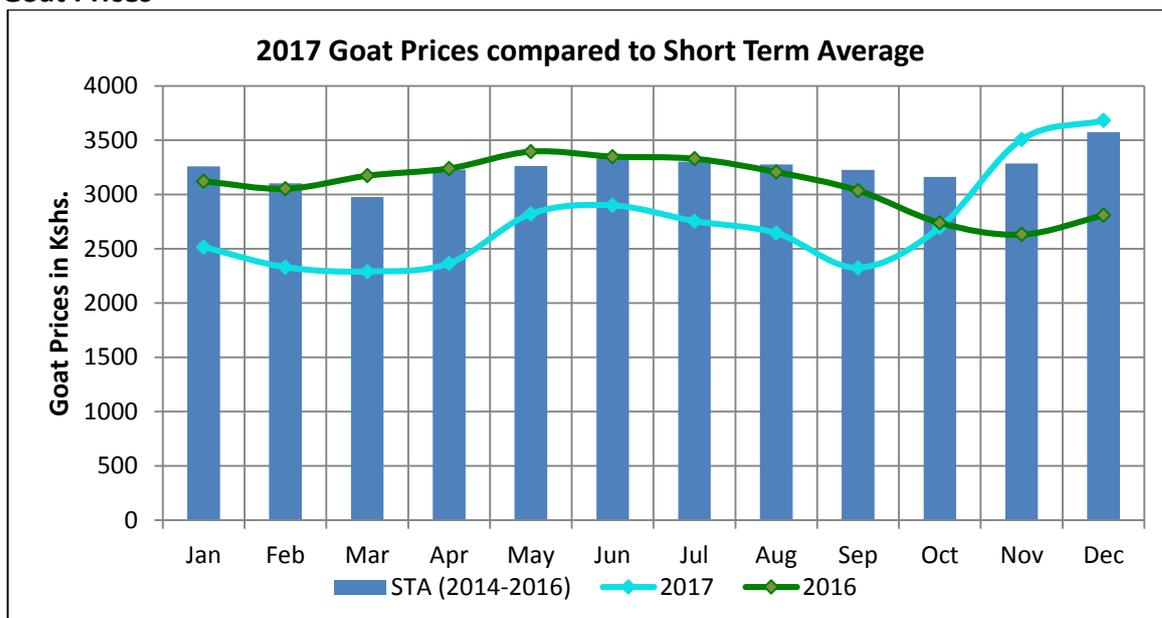
4.1.1 Cattle Prices



- The figure shown above depicts that cattle prices increased from Kshs. 18,346 in the previous month to Kshs. 19,565 in December across the livelihood zones.

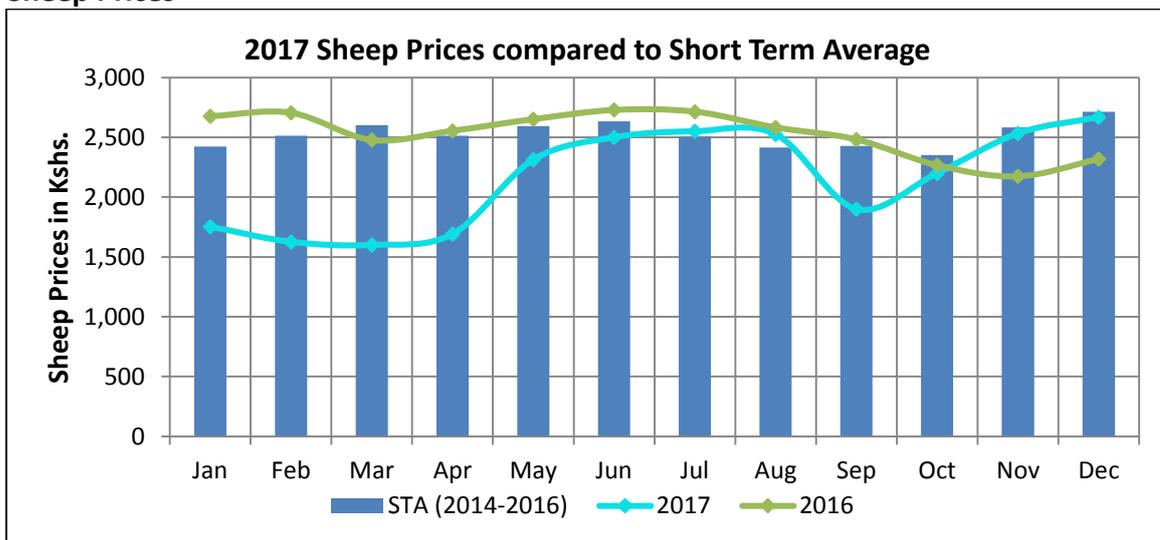
- When compared to the short term average price of Kshs.20, 759, current average cattle price of Kshs. 19,565 is 6percent below normal.
- Improved cattle prices were prompted by the festival season and good cattle body condition in most areas of the County as a result of cumulative good pasture condition and within normal livestock trekking distances from grazing areas to water points.
- Moyale and North Horr livestock markets posted the highest cattle prices ranging from Kshs. 25,000-Kshs. 30,000 due to close proximity to the neighbouring vibrant Ethiopia market. In addition, the terminal markets exhibited improved cattle prices ranging from Kshs. 15,000-Kshs. 20,000.

4.1.2 Goat Prices



- The figure shown above exhibits that the average goat price is Kshs.3, 683. When compared to the previous month goat price of Kshs.3, 508 insignificant improvements in goat prices was noted.
- The current goat price is 3percent above the short term average price of Kshs.3, 575.
- Above normal goat prices were induced by relatively improved forage condition and high demand for goats during the festive season. Higher goat prices were reported in the terminal markets of Merille and Marsabit.
- Goat prices are expected to gradually decline in the subsequent months when the onset of the short dry spell begins.

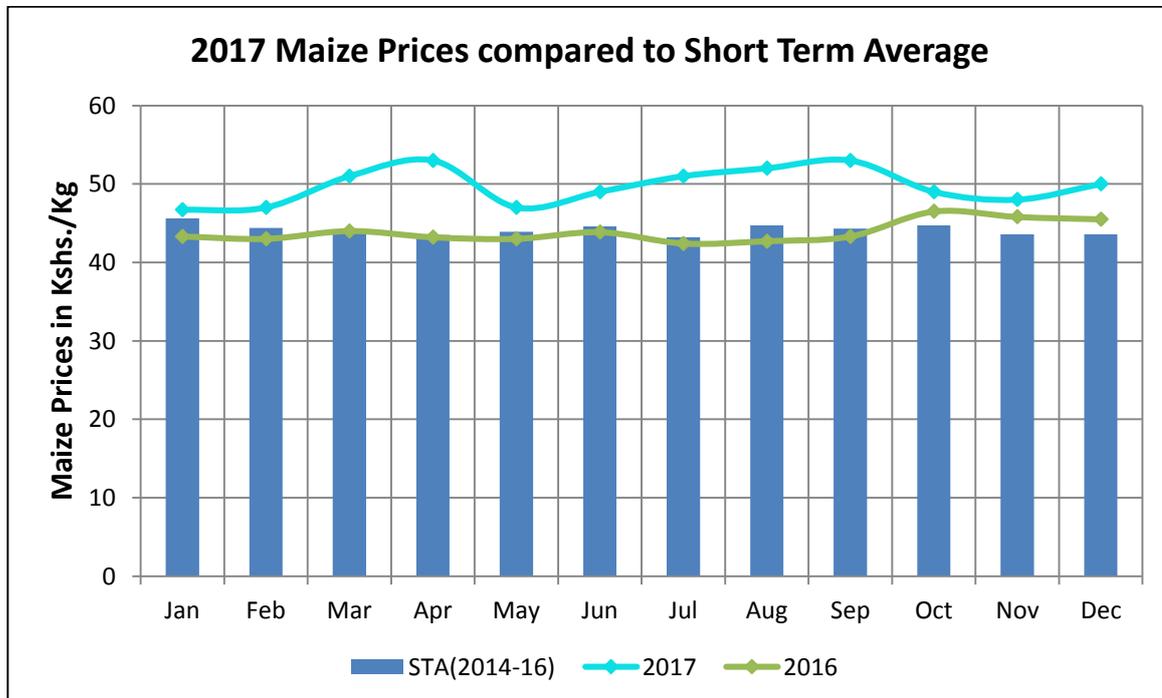
4.1.3 Sheep Prices



- From the figure shown above, the average sheep price in the month under review was Ksh.2, 669. Gradual increase in sheep price was noted from Kshs. 2 ,533 posted in the preceding month.
- Sheep prices were favourable in North Horr and Moyale markets with prices averaging at Kshs.3, 500. Favourable sheep prices in the Moyale and North Horr markets were attributed to the vibrant Ethiopia market.
- When compared to the short term average price of Kshs.2, 713, sheep prices were normal.

4.2 CROP PRICES

4.2.1 Maize

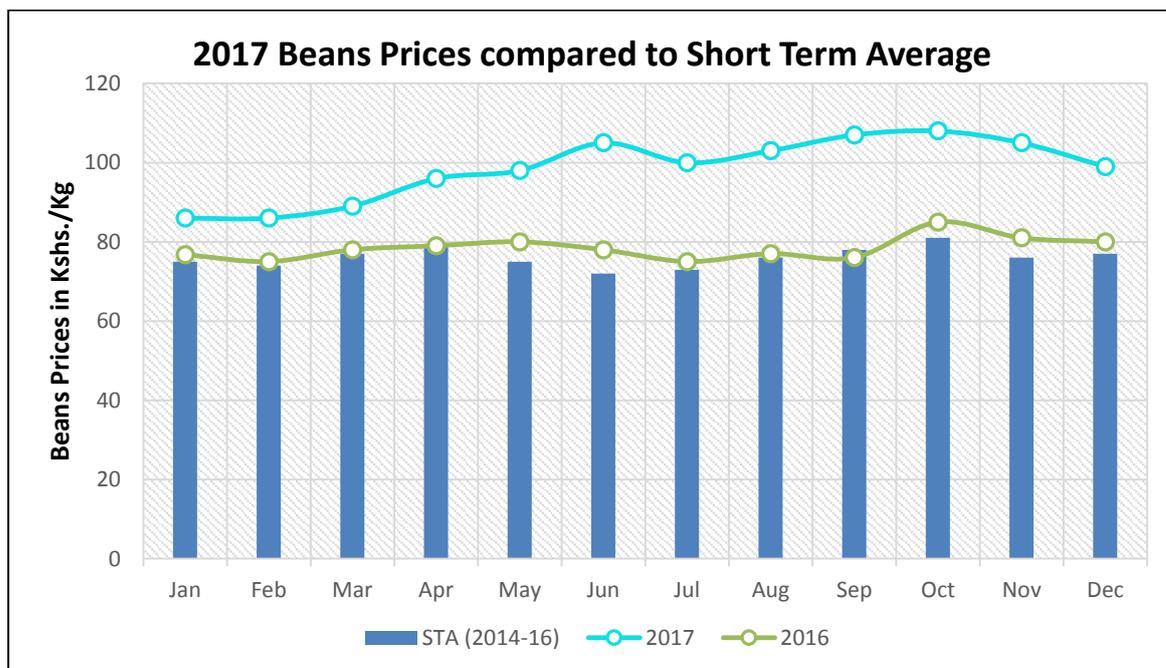


- From the figure shown above, current average price of maize is Kshs.50. When compared to the preceding month price of Kshs.48, there was no notable change in maize prices.
- Current maize price is 14percent above the short term average maize price of Kshs.44. Above normal maize prices may be attributed to failure of the previous two rainy season

in addition to total maize failure witnessed this season due to water stress hence impeding physical maturity of crops.

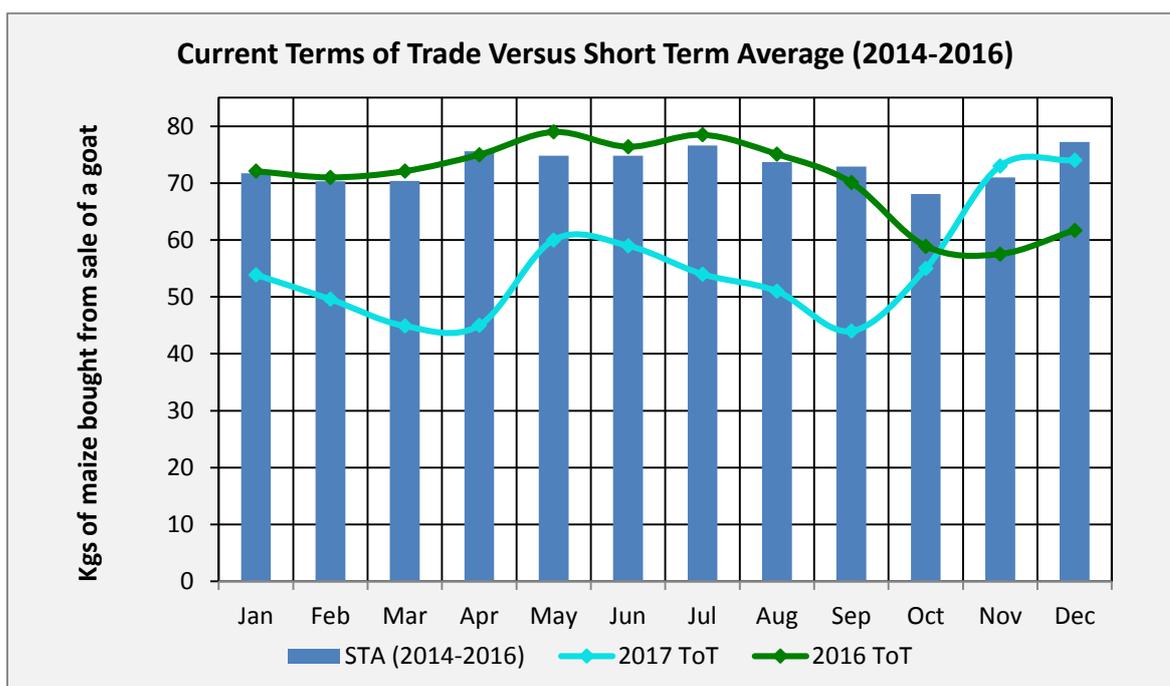
- Favourable maize prices were recorded in North Horr, Moyale Central and Sololo commodity markets with prices ranging between Kshs.36-40 attributed to increased maize supplies from the neighbouring Ethiopia vibrant market. Higher maize prices were recorded in Elmolo, Merille, Logologo, Laisamis and Dabel commodity markets with prices ranging between Kshs.50-70/kg.

4.2.2 Beans



- The figure shown above illustrates that in the month under review beans prices were selling at Kshs.99. When compared to the previous month average price of Kshs.105, beans prices slightly declined.
- The current average beans price of Kshs.99 is 29percent above the short term average price of Kshs.77. Above normal beans prices were caused by successive failure of two seasons coupled with near total crop failure for beans.
- Favourable beans prices were recorded in Moyale, Dukana and North Horr commodity markets with prices averaging at Kshs.90/kg due to increased beans injections from the neighbouring Ethiopia vibrant market.

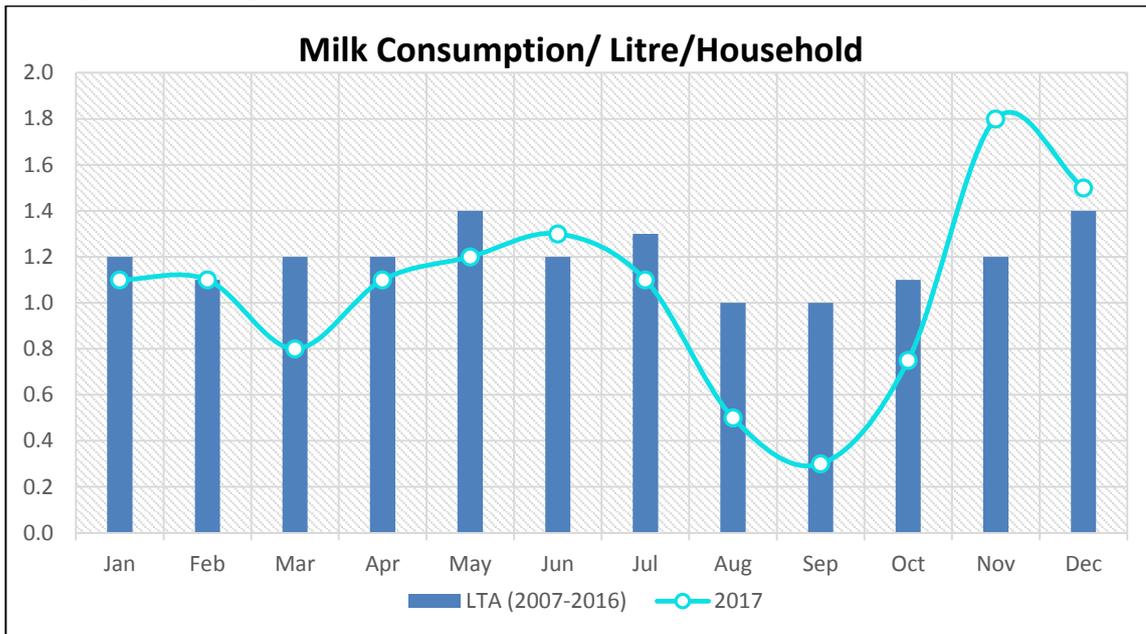
4.2.3 Terms of Trade (TOT)



- From the figure shown above, current terms of trade was slightly below normal.
- The current terms of trade remained stable for the two consecutive months due to no notable change in maize prices and insignificant increase in goats prices.
- Therefore, pastoralists derived the same quantities of maize from a sale of a goat in the two consecutive months.
- When compared to the three year short term terms of trade of 77, the current terms of trade is 4percent below normal.
- Slightly below normal terms of trade was attributed to total crop failure in the Agro-pastoral areas of Moyale and Saku sub-counties with exceptions of North Horr and Dukana which exhibited favourable terms of trade.
- Due to total crop failure predominantly in maize, it is expected that terms of trade will be unfavourable until the next harvest season.

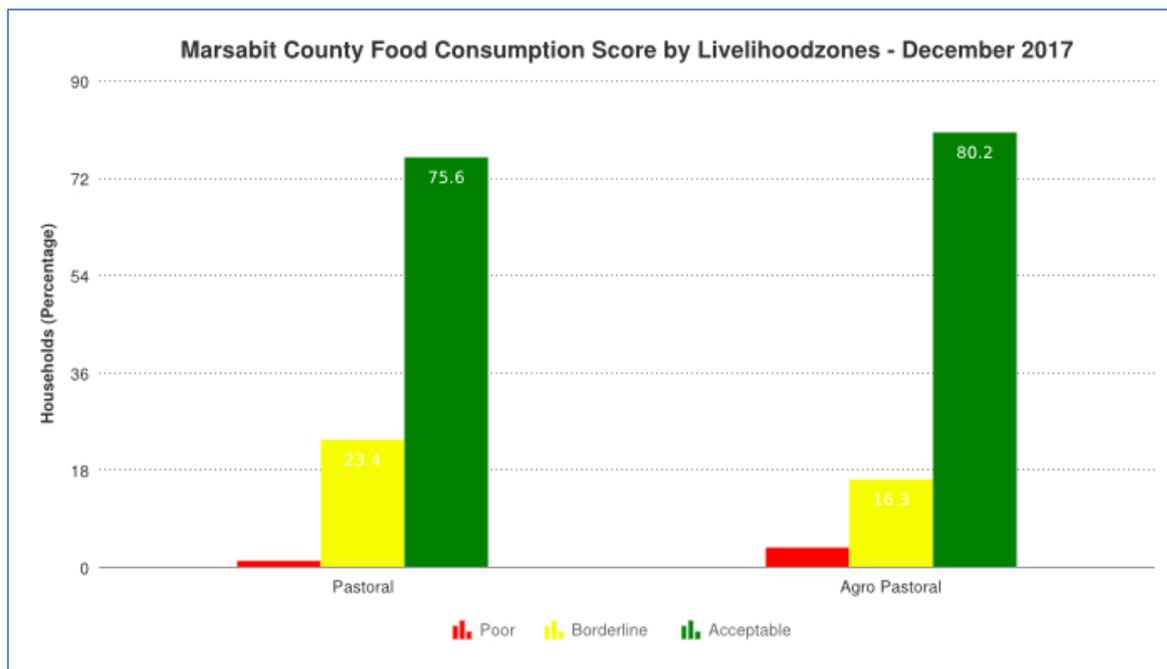
5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION



- From the figure shown above, current household milk consumption is 1.5Litres/household/day across the livelihood zones. In comparison to the preceding month, milk consumption slightly declined from 1.8Litres recorded in the preceding month.
- When compared to the long term average milk consumption of 1.4Litres/household/day, current household milk consumption is 7percent higher.
- Slight decline in milk consumption in December when compared to the preceding month was prompted by reduced milk production in the month under review as a result of traced rainfall received in the month.

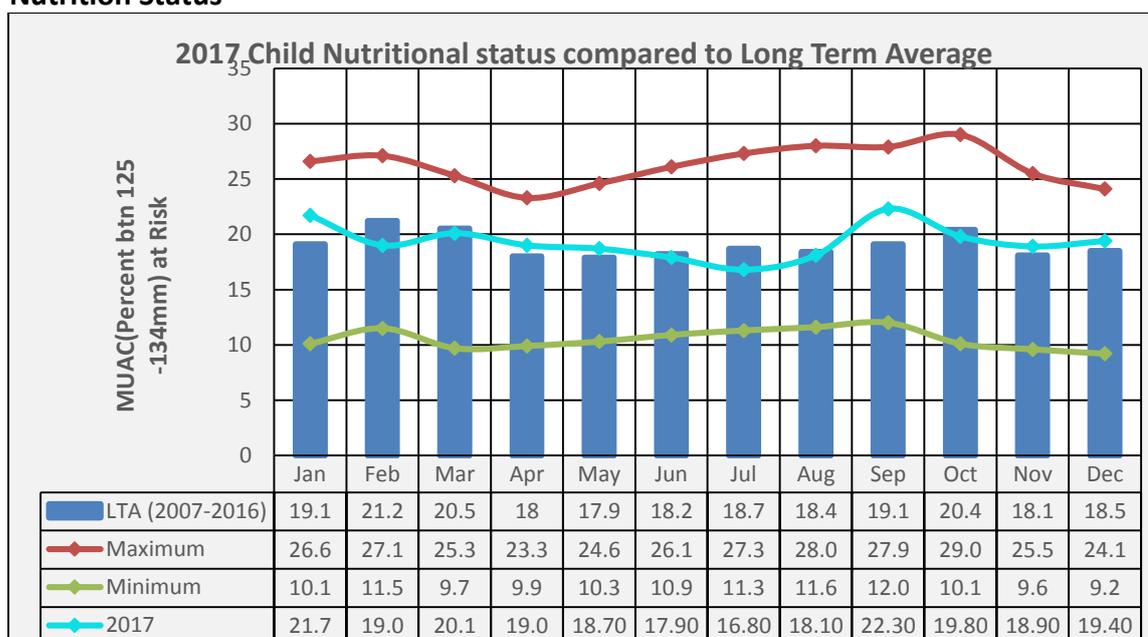
5.2 FOOD CONSUMPTION SCORE (FCS)



- The mean food consumption score for the month under review was 39.5 across the livelihood zone hence fell within the acceptable food consumption score band.
- When compared to the preceding month food consumption score of 36.2, food consumption score improved due to improved food intake in the festive season and nearly 30percent harvest of beans.
- Food consumption score was better in Agro-pastoral than Pastoral livelihood zone as a posted with a mean of 40.1 and 38.8 respectively
- Proportion of households in the Agro-pastoral livelihood zone that were within the acceptable, borderline and poor food consumption score were 80.2percent,16.3percent and 3.5percent respectively. Likewise, 75.6percent, 23.4percent and 1percent of the households in the Pastoral livelihood zone had acceptable, borderline and poor food consumption scores respectively.
- Therefore, households in the Agro-pastoral livelihood zone consumed food rich in dietary diversity and more frequently than those in the Pastoral livelihood zone.

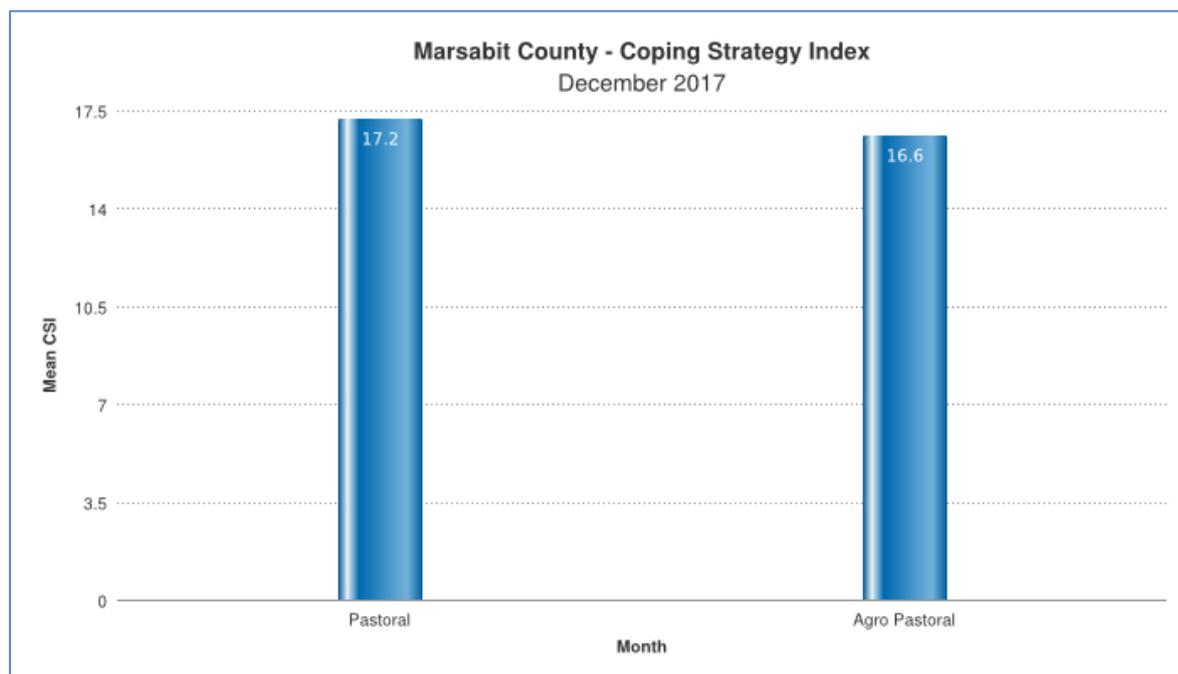
5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status



- From the figure shown above, children rated 'at risk' of malnutrition slightly increased from 18.9percent in the previous month to 19.4percent in December.
- Children rated 'at risk' of malnutrition were slightly above normal by 5percent when compared to the long term MUAC average of 18.5percent.
- Slightly above malnutrition cases might be attributed to underlying issues such as increased incidences of diseases amongst under-fives and poor infant feeding practices.
- Dabel, Illeret, Korr and Loiyangalani reported to have surpassed their normal thresholds with Dabel, Loiyangalani and Illeret reporting Emergency.

5.4 COPING STRATEGIES



- The coping strategy index for the month under review was 17.0.
- When compared to the preceding month coping strategy index of 17.79, slight improvement was noted across the County.
- When compared across the livelihood zones, coping strategy index for Pastoral and Agro-Pastoral livelihood zones were 17.2 and 16.6 respectively hence households in the Agro-Pastoral livelihood zone were more food secure than those in the Pastoral livelihood zone.
- Proportion of households who coped and didn't cope in the month under review were 76percent and 27percent respectively.
- Slight improvement in coping strategy index posits that households adopted less severe and irrevocable consumption based coping mechanisms in the month under review than the previous month.
- Notable consumption based coping strategies adopted by the households in the month under review were reliance on less preferred/less expensive food, reduction in frequency of food consumption and reduced portion size of meals.

6.0 CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

- Cash transfers by NDMA, SND (support from Terre des Hommes Netherlands), Concern WorldWide, VSF Germany, PACIDA, Kenya Red Cross and CARITAS.

6.2 FOOD AID

- Blanket Supplementary Feeding Programme intervention continued in North Horr and Laisamis sub-counties and implemented by WFP, UNICEF, Concern WW, FH Kenya, World Vision and Sub Counties health management teams.

- Therapeutic Integrated Management of Acute Malnutrition for the Under-fives, Pregnant and Lactating Mothers (Supplementary Feeding Program (SFP), Out Patient Therapeutic Program (OTP) by MOH supported by UNICEF, WFP, World Vision, CONCERN WW and FHK.

7.0 EMERGING ISSUES

7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT

- No cases of insecurity, conflict or human displacement was reported in the County.

7.2 FOOD SECURITY PROGNOSIS.

- Food security situation will worsen mainly in the Agro-pastoral areas of Moyale, Saku and Mt.Kulal because cessation of the short rains occurred in the critical growth stage of crops hence crops were water stress negatively affecting physical maturity. However, food security situation in the pastoral areas of North Horr and Laisamis which are currently at minimal and stressed phase respectively will worsen in the next 1-2months due to expected forage and water diminution. Household food consumption score is expected to deteriorate due to total crop failure hence affecting dietary diversity of food uptake.
- Livestock body condition is expected to gradually worsen especially for cattle due to influx of livestock from neighbouring counties hence probable pasture depletion.
- Terms of trade will probably slightly dip as a result of stable goats' prices coupled with anticipated increase in maize prices due to total crop failure. Traded volumes in the main livestock terminal markets will likely improve due to stable livestock prices.
- Nutrition status of children is expected to be within the normal ranges prompted by ongoing blanket supplementary feeding, infant feeding practices and disease prevention measures being undertaken in areas which are prevalent in common disease incidences.
- Households are more likely to adopt severe and irreversible consumption based coping mechanisms as a result of expected upsurge in cereal and pulses prices occasioned by total crop failure.

8.0 RECOMMENDATIONS

- Conservation of strategic rangeland grazing areas
- Mass screening, intensified integrated outreach services and recruiting of community health workers
- Coordination of cash transfers programmes undertaken by various implementers.
- Disinfection of water sources and water treatment and monitoring to avoid upsurge of waterborne diseases.
- Continued Livestock disease surveillance, treatment and vaccination. Restocking should also be undertaken
- Crop pests and control measures in the Agro-pastoral areas of Moyale and Saku sub-counties.