

National Drought Management Authority
MARSABIT COUNTY
DROUGHT EARLY WARNING BULLETIN FOR MAY 2017



A Vision 2030 Flagship Project



MAY EW PHASE: ALERT

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- **Rainfall:** Moyale Township and Marsabit Central rainfall stations received rainfall of 157.1mm and 50.2mm respectively. The cumulative rainfall for Marsabit rainfall station amounts to only 66.5% of the normal for the same period.
- **Vegetation condition:** Vegetation condition index gradually improved to 14.73 in May from 10.52 in April. Pasture and browse is fair-good in Agro-pastoral zone while poor-fair in Pastoral livelihood zone.

Socio Economic Indicators (Impact Indicators)

- **Production indicators:** Livestock body condition was fair in Agro-pastoral zone while poor-fair in Pastoral zone except camel which is fair-good across the livelihood zones. Milk production per household was 1.6Litres improved mainly in Moyale and Saku but still outside the normal range. Migration of livestock is generally unusual.
- No cases of livestock deaths attributed to drought reported.
- **Access indicators:** Household water distances have declined and are within the normal ranges. Terms of trade improved from 45 to 60 due to improved goat prices but still outside the normal range by a 20% margin. Milk consumption improved due to improved milk production.
- **Utilization indicators:** Children rated at risk of malnutrition slightly reduced to 18.7 but still outside the normal range of below 17.9. Food consumption score improved while coping strategy index declined. All the utilization indicators were outside the normal ranges.

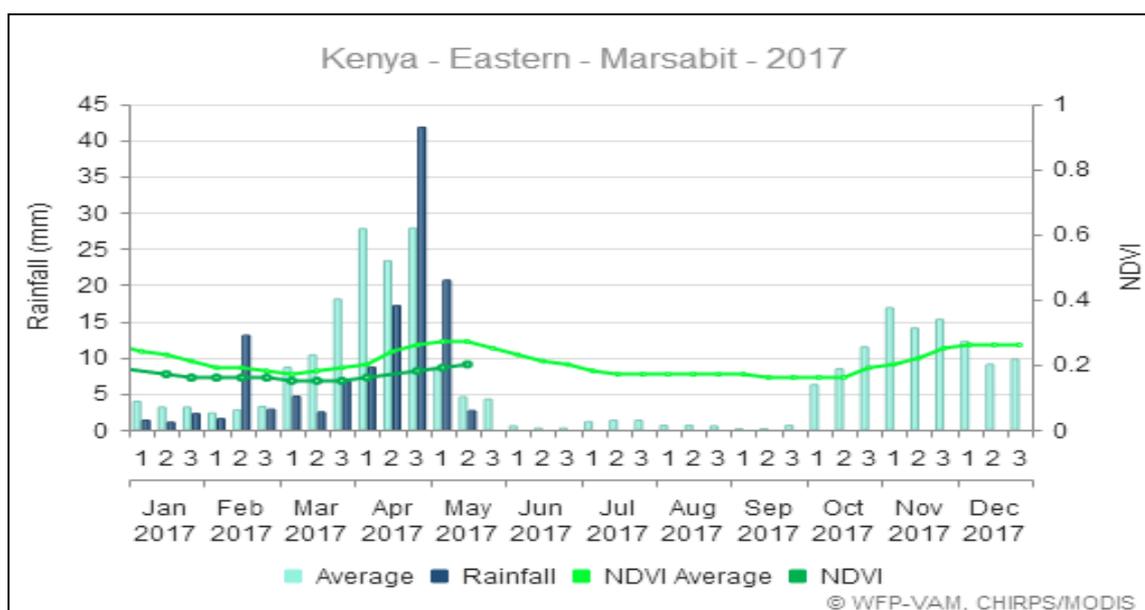
Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Agro-pastoral	Alert	Improving
Pastoral All species	Alarm	Improving
Fisherfolk/ Casual labour	Alert	Improving
County	Alert	Stable
Biophysical Indicators	Value	Normal Range
Rainfall (% of Normal)	66.5	80 -120
VCI-3Month	14.73	>35
Forage condition	Fair	Good
Production indicators	Value	Normal
Livestock Body Condition	Fair	Good
Milk Production	1.6	>1.9 litres
Livestock Migration Pattern	Unusual	Normal
Livestock deaths	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	60	>75
Milk Consumption	1.2	>1.4 litres
Return distance to water sources	2.1	0.0-2.2 Km
Cost of water	0-5	<5 Ksh
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	18.7	0.0-17.9
Coping Strategy Index (CSI)	19.8	<15
Food Consumption Score	24.3	>35

<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



Source: VAM-World Food Programme

- From the figure shown above, Marsabit County received enhanced rainfall in the first dekad of the month. First dekad rainfall amount of 20.6mm is above the dekad long term average of 8.4mm. In the second dekad, rainfall amounts subsided thereafter gradually increasing towards the end of May. Also the Normalised Difference Vegetation Index (NDVI) of 0.19 is below the Long term NDVI value of 0.27.

1.2 Amounts received

- During the month under review, 50.2 mm was recorded at Marsabit Mountain in 6 rainy days with the highest amount being recorded on 7th May amounting to 22.1 mm. Moyale station recorded the highest for the amount at 157.1mm in 10 rainy days with the highest amount being 73.4mm of rainfall recorded on 3rd May.
- Laisamis and North Horr sub-counties received depressed rainfall in the month under review. Cumulatively, Marsabit station rainfall amounts for the month is 66.5% of the normal.

1.3 Spatial and Temporal Distribution

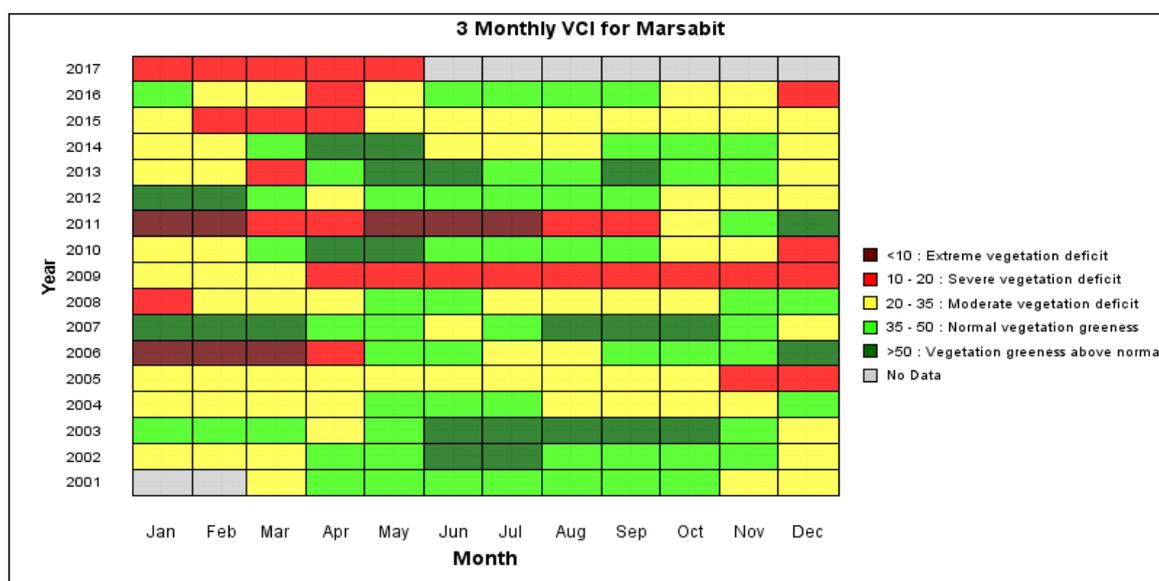
- Distribution of rainfall in space and time was poor since Saku, Moyale, Marsabit Central and Laisamis sub-counties received rainfall of varied intensity. Moyale received enhanced rainfall in 10 rainy days whereas Saku received near normal rainfall amounts in 6 rainy days.
- However, Laisamis and North Horr sub-counties received below normal rainfall amounts in 1-3 rainy days. Areas in the aforementioned sub-counties which received rainfall were Gas, eastern side of Maikona, Logologo, Korr, Loyangalani, Illeret and some parts of North Horr.
- Notably worst hit areas of El-hadi, Balesa, Amballo, Burgabo, Turbi, Dabel and Bubisa neither received even traced amounts nor any rainfall amounts in the month under review. Based on the livelihood zones, Agro-pastoral livelihood zone received near normal-normal rainfall amounts whereas Pastoral livelihood zone received depressed and below normal rainfall amounts.

2.0 IMPACTS ON VEGETATION AND WATER

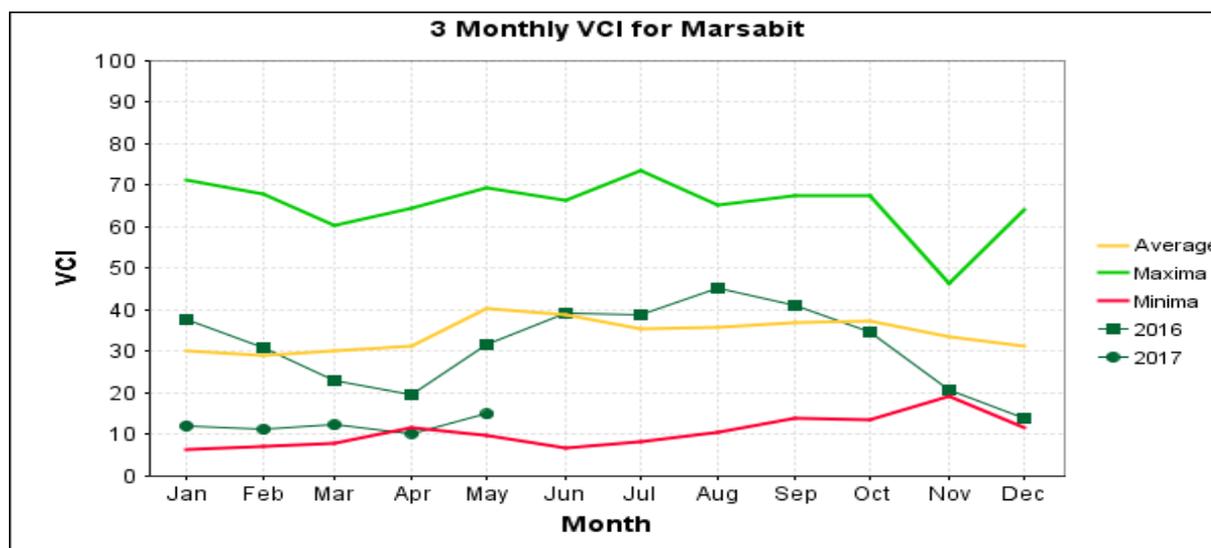
2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- Below is a county matrix that depicts how each month from January to December has been classified in terms of agricultural drought based on VCI thresholds indicated. The vegetation condition has been analysed retrospectively and categorized under an appropriate vegetation deficit band for the month under review.
- The basis for the vegetation condition index involves comparison of the relative NDVI (Normalised Difference Vegetation Index) change with respect to minimum and maximum historical NDVI value.



- In the month under review, Vegetation Condition Index (VCI-3month) was 14.73 across the county which falls under the severe vegetation deficit band. Notably, the county has been in a severe vegetation deficit band since the beginning of the year.
- The vegetation condition index slightly improved from 10.52 in April to 14.73 May due to regeneration of vegetation mainly across the county.
- The vegetation condition index in North Horr and Laisamis sub-counties still remains critical and still under severe vegetation index as illustrated with a VCI-3month of 12.14 and 15.19 respectively. However, significant improvements were noted in Moyale and Saku sub-counties as there VCI-3month improved to moderate vegetation deficit as depicted with a VCI of 22.41 and 21.65 respectively. For instance, rainfall received in Moyale was enhanced that it significantly improved VCI-3month from extreme vegetation deficit in April to moderate vegetation deficit in May.



- The graph shown above compares 2017 VCI trend to 2016, long term average and gives maximum and minimum values ever recorded. It can be noted that since the beginning of the year the VCI has been way below the long term average and also 2016 VCI. VCI improved from an all-time low in April to slightly above the minimum VCI ever recorded in May.

2.1.2 Pasture

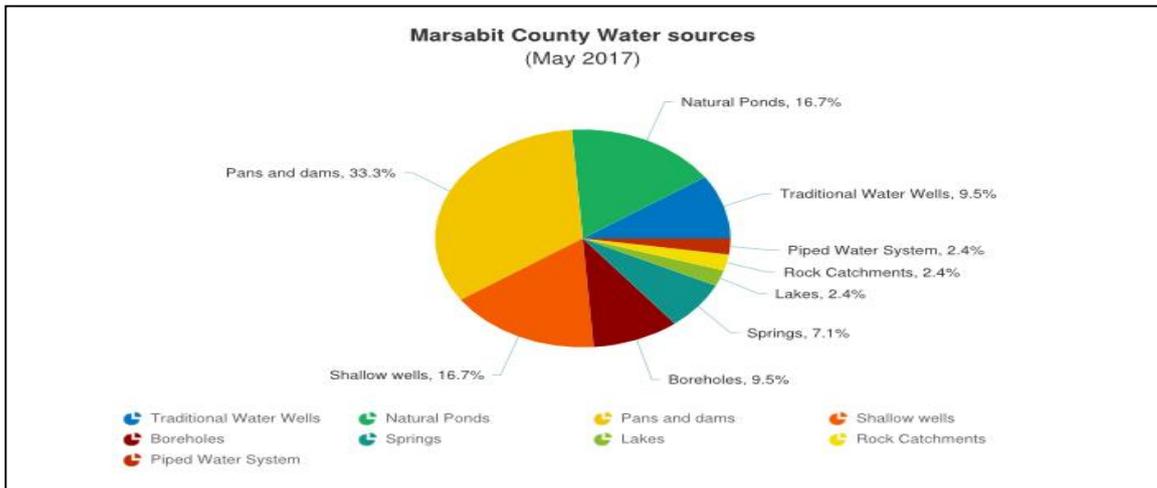
- Generally, pasture condition is fair across the livelihood zones. Pasture condition improved when compared to the preceding month due to the cumulative rainfall amounts received. When compared to a normal season, pasture condition is below normal.
- Quantity and quality of pasture is fair-good in the Agro-pastoral areas of Moyale, Saku, Mount Kulal, Shurr, Huri Hills and Pastoral areas of Illeret, Dukana, Logologo and eastern part of Maikona. However, in the Pastoral areas of Bubisa, Balesa, Dabel, Funanqumbi, Amballo and larger parts of North Horr pasture condition is poor.
- Available pasture is expected to last for 2 months in the Agro-pastoral livelihood zone whereas 1 month in the Pastoral livelihood zone.

2.1.3 Browse

- Condition of browse is fair-good in Saku and Moyale sub Counties. In some pockets of North Horr and Laisamis sub-counties browse condition is fair but poor in most pastoral livelihood zone areas. Generally, browse condition improved due to the long rains received in the month under review.
- In the Agro-pastoral areas of Moyale and Saku sub-counties browse is expected to last for 3 months whereas in the Pastoral areas of Laisamis and North Horr sub-counties browse is expected to last for 2 months. Browse is expected to last for only 3 months in the Agro-pastoral areas because of intense in-migration of livestock. Herbaceous vegetation is depleted and unavailable for grazing livestock.
- Quantity and quality of browse is below normal when compared to a normal season.

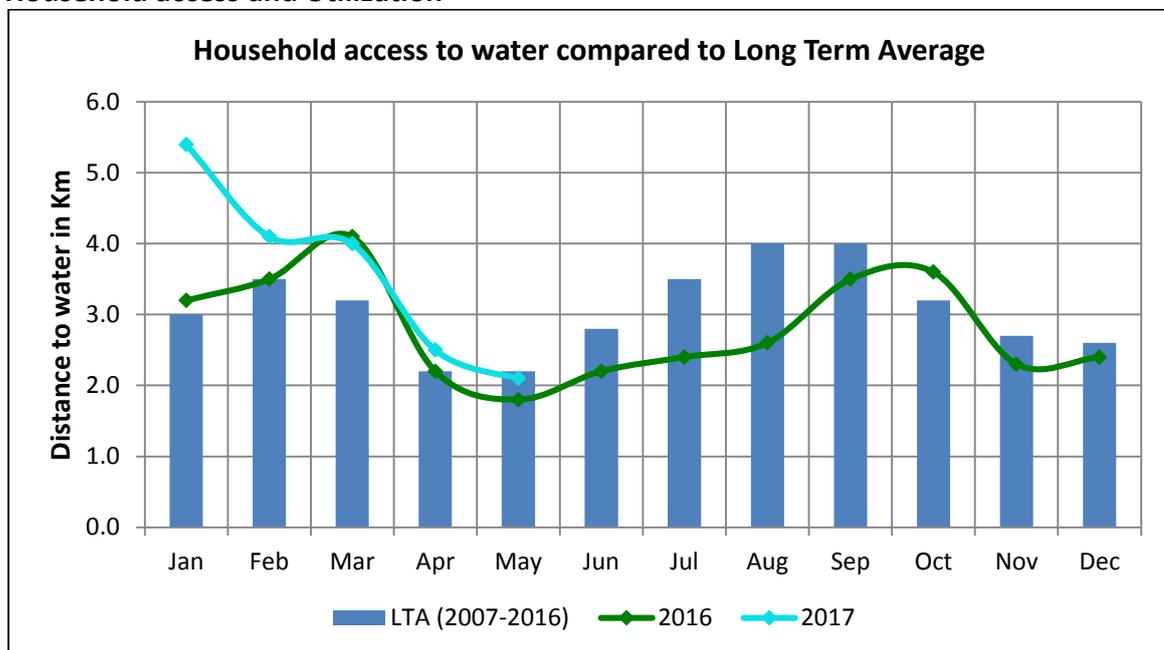
2.2 WATER RESOURCE

2.2.1 Sources



- From the pie-chart shown above, 33.3% of the communities used pans and dams for water consumption. This is due to high recharge levels of pans and dams in Moyale and Saku as a result of cumulative long rains received and partially recharged in areas that received rainfall in Laisamis and North Horr sub-counties. Also 16.7%, 9.5% and 7.1% of the communities drew there water for household and livestock use from shallow wells, natural ponds, boreholes, traditional water wells and springs respectively.
- In comparison to the preceding month, quantity of water further improved due to the long rains received in the month of May. The above water sources are normal.

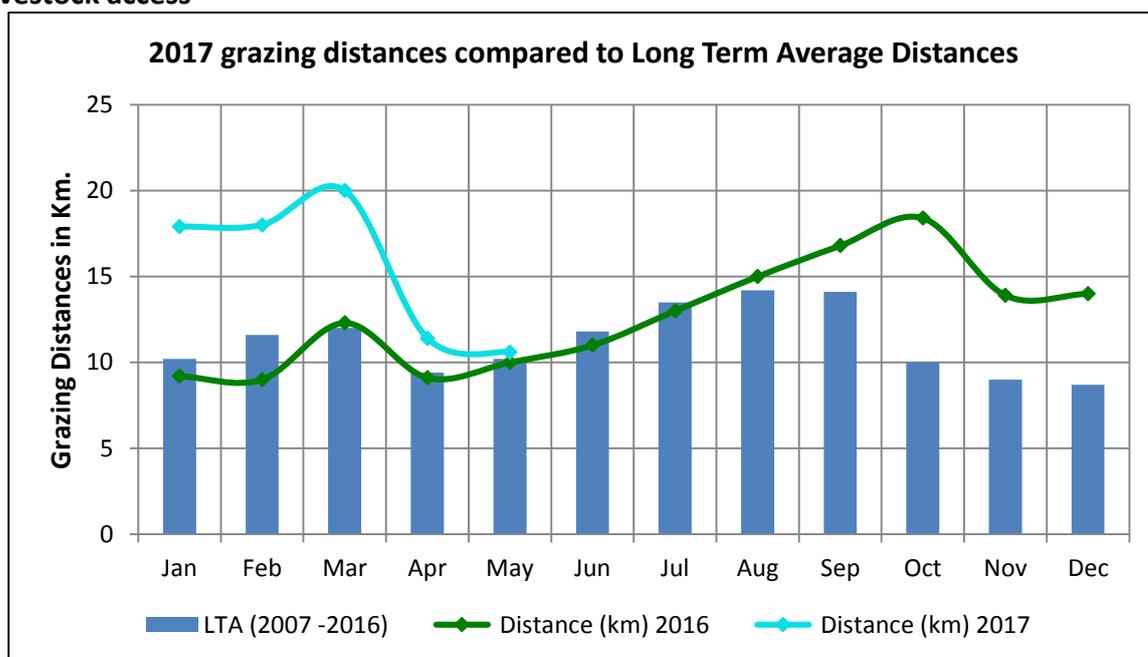
2.2.2 Household access and Utilization



- From the figure shown above, average return distance from households to main water sources was 2.1 km exhibiting a slight decline from household water access distance of 2.5km recorded in the month of April. Households in Pastoral livelihood zone trekked longer distances to access water than those in the Agro-pastoral livelihood zone.

- Decline in household water access distances was attributed to continued long rains received in the month under review. The current household water distance is within the normal ranges.
- Household water waiting time at the source was 30-45 minutes across all livelihood zones which is above the normal waiting time of 15-30 minutes at this time of year.
- The average household water consumption per person per day is 5-8 litres in the Pastoral zone whereas in the Agro pastoral zone is 10-15 litres per person per day.
- Cost of water is within the normal ranges of Ksh 0-5 per 20 litre jerrican at the source.

2.2.3 Livestock access



- The current livestock return trekking distance from grazing areas to water sources is 10.6 Km, exhibiting a slight decline from 11.4Km recorded in the month of April. In comparison to the normal grazing distance of 10.2 Km, current trekking distance is 4 percent above the long term grazing distance.
- Livestock grazing distances is longer in Pastoral livelihood zone with some pockets registering over 15-20km trekking distances. However, the grazing distances in Agro-pastoral livelihood zone is within the normal ranges.
- Watering frequency for the livestock species varies also in the livelihood zones. In the Agro-pastoral zone, watering frequency for cattle/shoats and camel is daily and 4 days respectively. Nevertheless, in the Pastoral livelihood zone watering frequency for cattle/shoats and camel is after 1-2 days and 6 days respectively.
- The watering frequencies are normal in the Agro-pastoral and not normal in the Pastoral livelihood zones.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

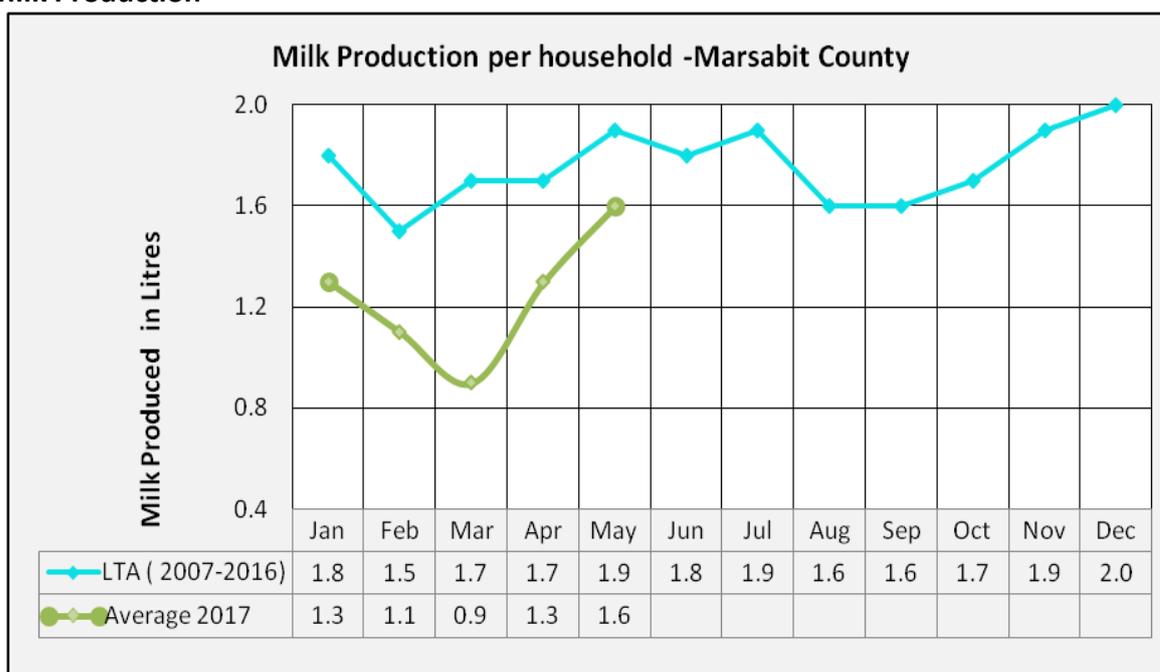
3.1.1 Livestock Body Condition

- Livestock body condition is generally fair across the livelihood zones.
- Livestock in Moyale, Saku sub-counties depicts good body condition due to the replenished forage. In isolated areas of Laisamis(Logologo, South Horr, Mount Kulal) and North Horr(Huri hills, Dukana) livestock body condition is fair-good. However, in the Pastoral areas of Maikona, North Horr, Amballo, Korr, Kargi, El-Hadi, Badan Rero, Laq, Farakoren, Gas, Burgabo, Dabel, Eleborr, Barambate and Balesa,Bubisa, Turbi and Loyangalani livestock body condition is generally poor with the exception of camel which exhibits fair body condition.
- This is attributed to below normal rainfall amounts in the mentioned areas which was not adequate to rejuvenate the poor forage condition.
- Livestock in Marsabit and Moyale sub-counties are within their normal migration routes. However, most Livestock in Laisamis have migrated towards southern Laisamis and Mount Kulal whereas Livestock in North Horr sub-county are concentrated in Darade, Dukana, Diid Gola, Mount Kulal and Huri Hills.
- Livestock body condition is not normal when compared to a normal season. Livestock body condition is expected to improve if the long rains continue.

3.1.2 Livestock Diseases

- In the month under review, there were no reported cases of livestock diseases across the county.

3.1.3 Milk Production



- In the graph shown above, average milk production at household level per litre was 1.6 Litres. When compared to the month of April, average milk production improved from 1.3 Litres.
- In a normal season, current milk production is less by 16 percent.
- Improvement of household milk production level of 1.6litres was attributed to the reduced trekking distance from grazing areas to water points, significant herd sizes returning to their normal grazing areas and improved forage cover mainly in the Agro-pastoral zone.

3.2 RAIN-FED CROP PRODUCTION

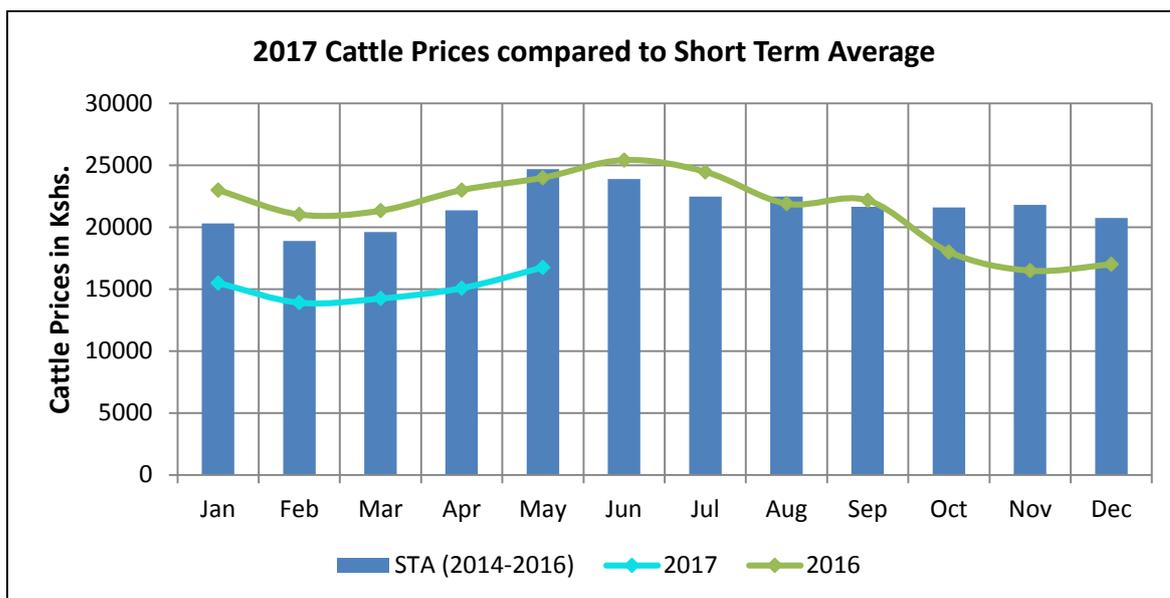
3.2.1 Stage and Condition of food Crops

- In the Agro-pastoral areas of Marsabit Central and Moyale Township, 60% of maize planted has formed tassels while 40% are still at knee height stage. Likewise 70% of the beans planted have formed pods, while those that were planted late have flowered.
- When compared to a normal season, majority of maize and beans are always at tasseling and podding stages respectively.
- Main attribution to the not normal crop growth are attributed to late planting due to late onset of the long rains which will likely lead to reduce for availability within the high potential Agro- pastoral areas of Moyale and Marsabit Central sub-counties.
- There is wilting of dry planted maize and beans crops mainly in Saku central due to physiological stress resulting from high temperature and strong winds at the time of immediately after seed germination.

4.0 MARKET PERFORMANCE

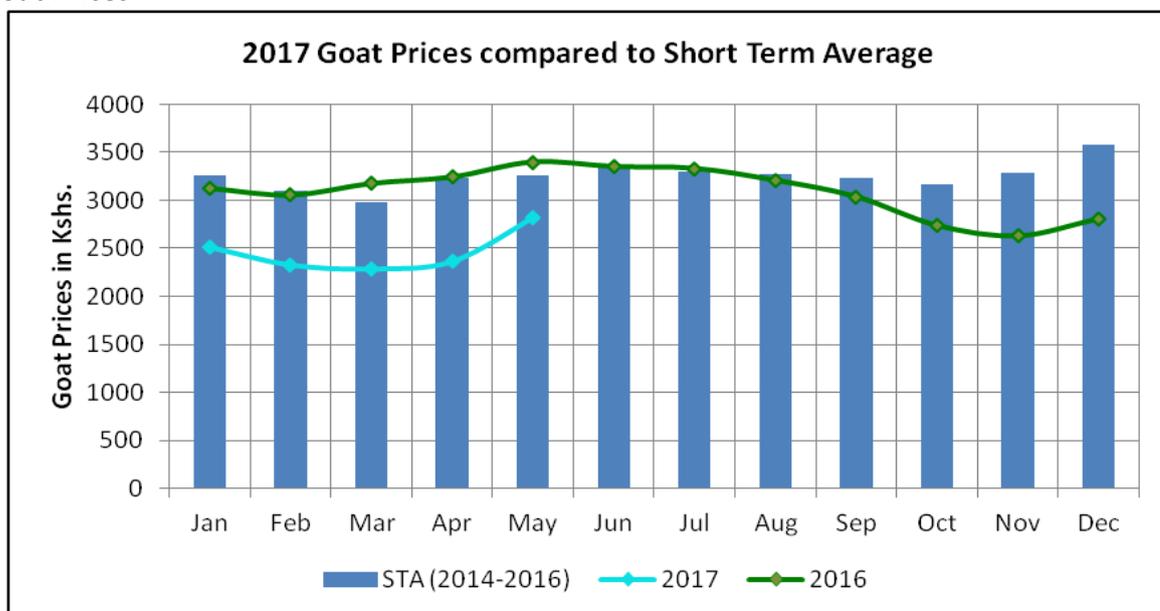
4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices



- In the month under review, average price of cattle across the livelihood zones was Ksh.16, 762 which represents a slight increase in cattle prices from Kshs.15, 083 recorded in April.
- Compared to short term average price of Kshs.24, 692, the current cattle prices are lower by 32percent. Cattle prices have slightly increased as a result of improved cattle body condition.

4.1.2 Goat Prices

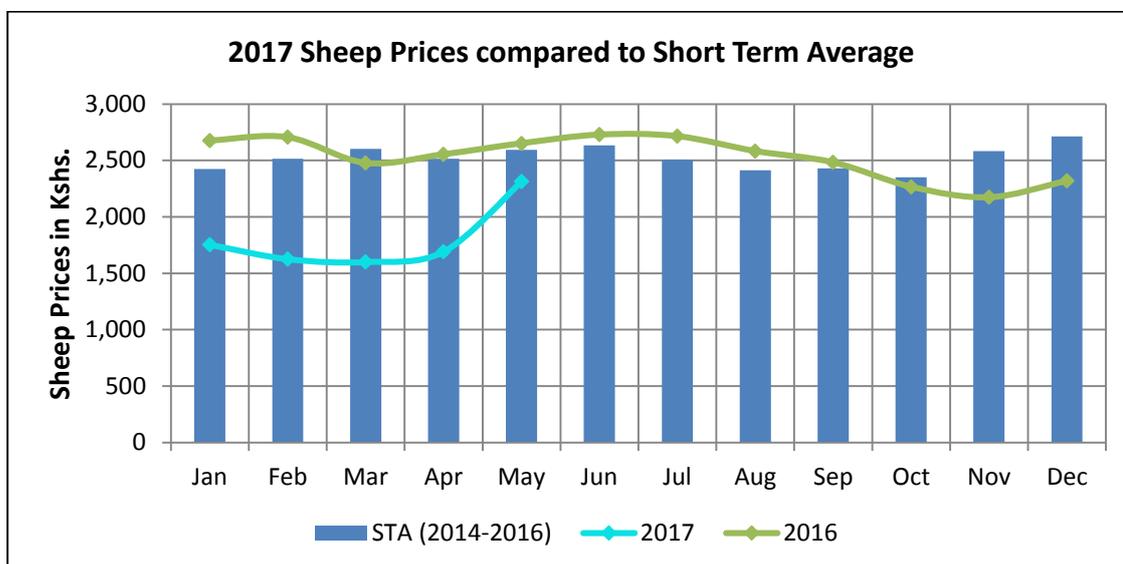


- From the graph illustrated above, average selling price of a medium sized goat was Ksh 2,822 in May and Ksh2, 366 in April hence increase of goat prices in the terminal markets.
- Major markets in Saku, Moyale and Sololo had prices of goats retailing not less than Kshs.3, 00 hence the Agro-pastoral zone had favourable goat prices as opposed to the

Pastoral areas of North Horr and Laisamis sub-counties which posted unfavourable goat prices due to the biting drought situation.

- When compared to a normal price of Kshs.3263, the current goat price is 14 percent below the short term average price.

4.1.3 Sheep Prices

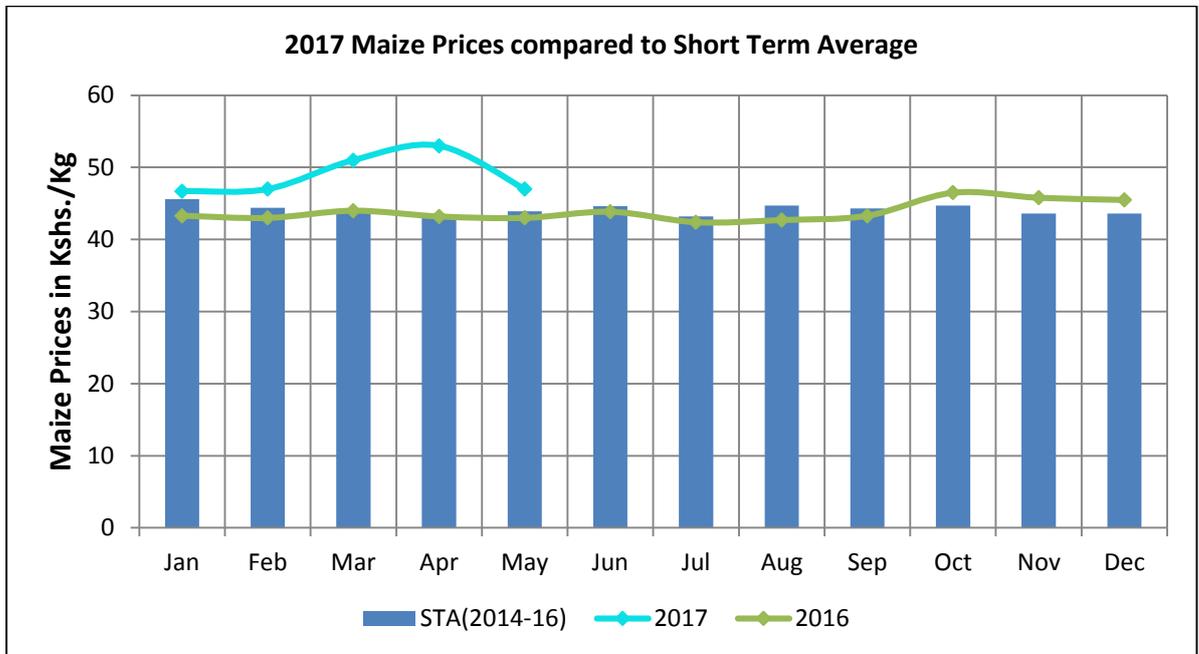


- From the figure shown above, average selling price sheep in May was Ksh2, 313. When compared to sheep price in the preceding month, there was improvement from Kshs.1, 691 recorded in the month of April.
- When compared to a normal season, the current sheep price is 11 percent below the short term average.
- Improvement in sheep prices is mainly attributed to improved body condition as a result of pasture generation and reduced trekking distance.

4.2 CROP PRICES

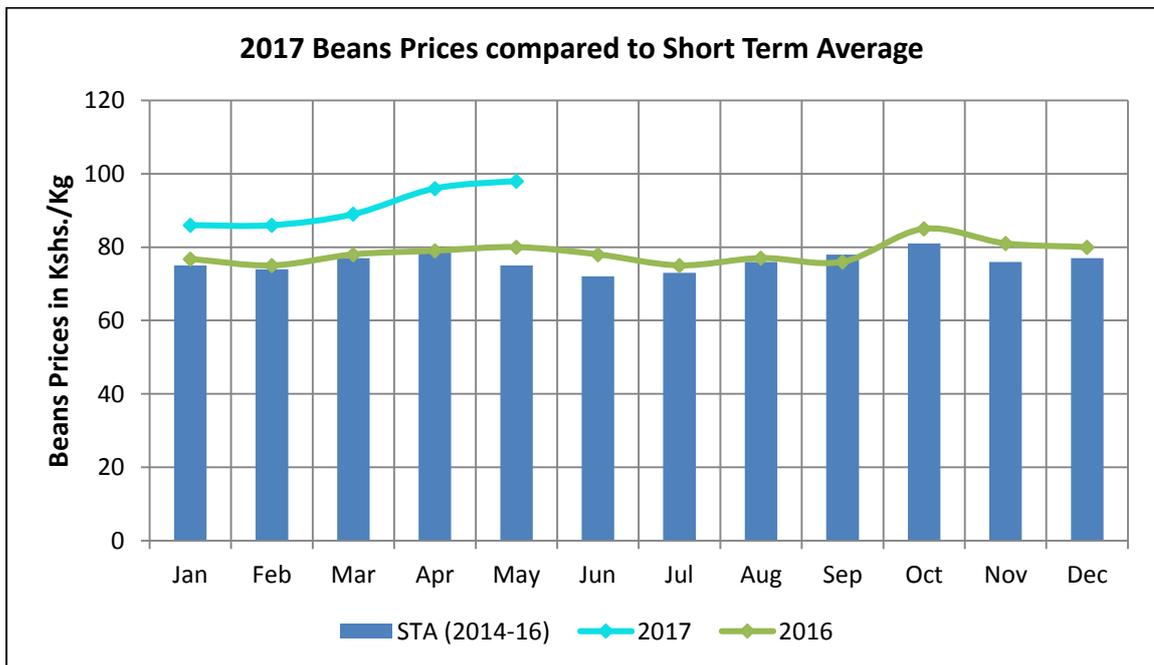
4.2.1 Maize

- From the figure shown below, average price of maize for the month under review was Ksh.47. When compared to the preceding month, maize prices slightly dipped from Kshs.53 posted in the preceding month.
- Reduction in maize prices was mainly attributed to improved supply from the neighbouring Ethiopia and government price control policy which set the price ceilings.
- When compared to the short term average price of Kshs.44, the current maize price is 6% above the normal price.
- Favourable maize prices were noted in Saku, Moyale Township, Dukana and Sololo retailing between Kshs.38-44/Kg. However, higher prices were recorded in Turbi and Loyangalani with prices averaging at Kshs.60/kg.



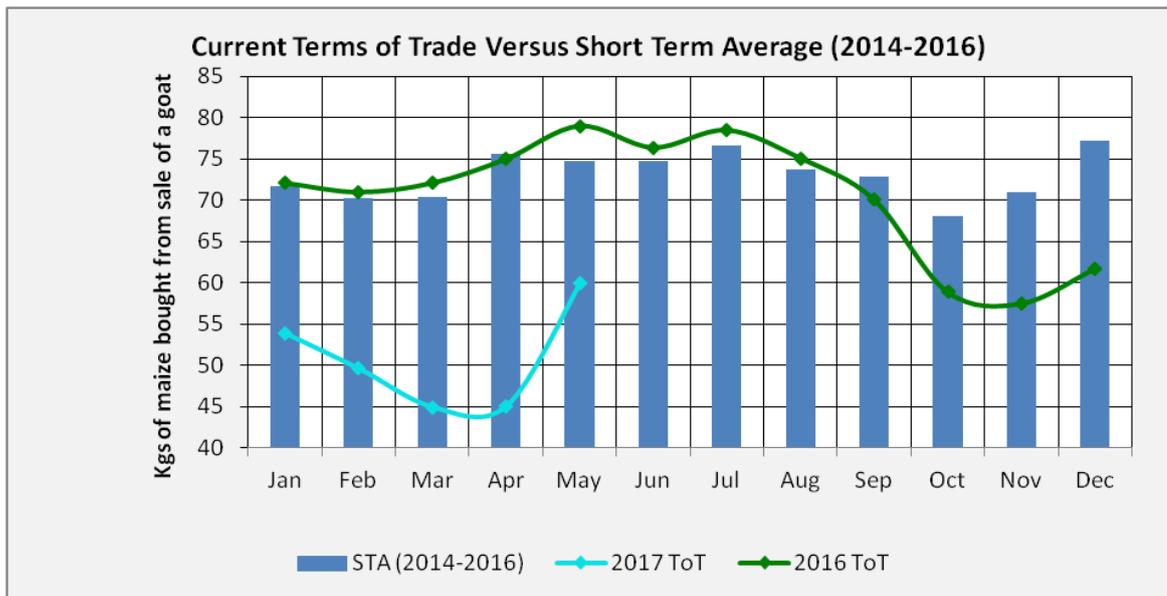
4.2.3 Beans

- From the figure shown below, the average beans price was retailing at Kshs.98. When compared to the previous month, beans prices insignificantly increased from Kshs.96.
- The current average beans price of Kshs.98 is above the normal beans price by 31 percent.



- Beans prices were much favourable in Moyale Township, Sololo, Marsabit Town because of increased supply from Meru and the neighbouring Ethiopia whereas much higher in Loiyangalani, Ngurnit and Elmolo.

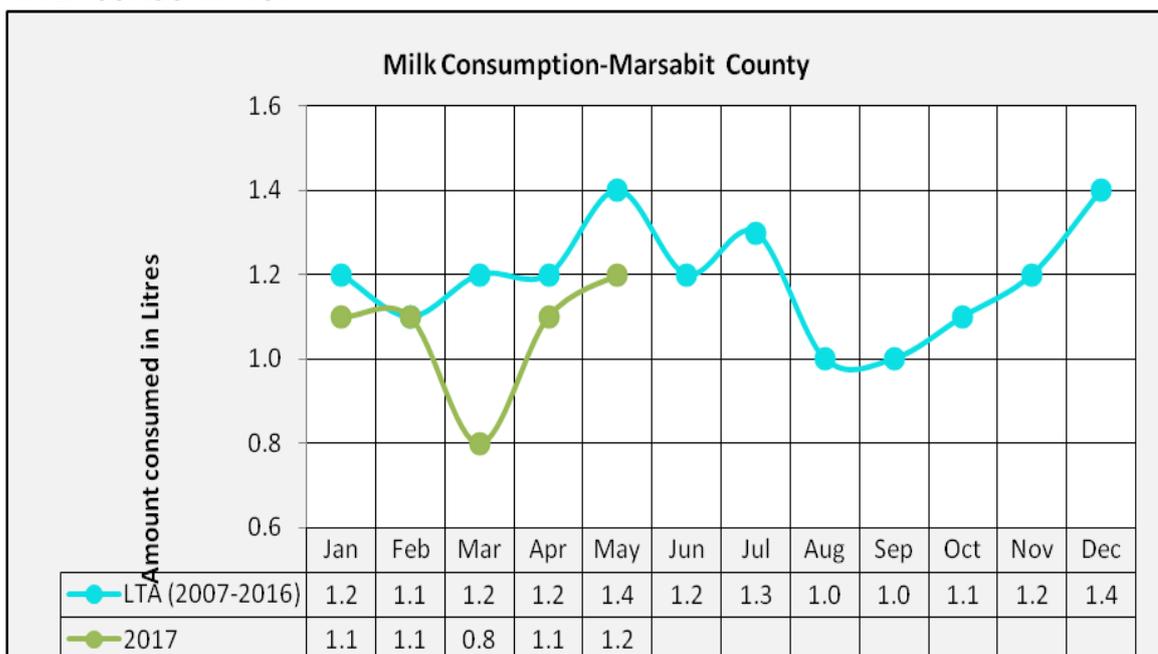
4.2 Terms of Trade (TOT)



- Terms of trade remains unfavourable at 60 implying that pastoralists are getting less amount of maize as they could have obtained in a normal season. The terms of trade improved from 45 recorded in April to 60 in May due to improved goat prices in the market.
- When compared to a normal period, the current terms of trade is 20 percent below the short term average. Terms of Trade is expected to slightly improve if goat prices increase further and maize prices stabilize.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION



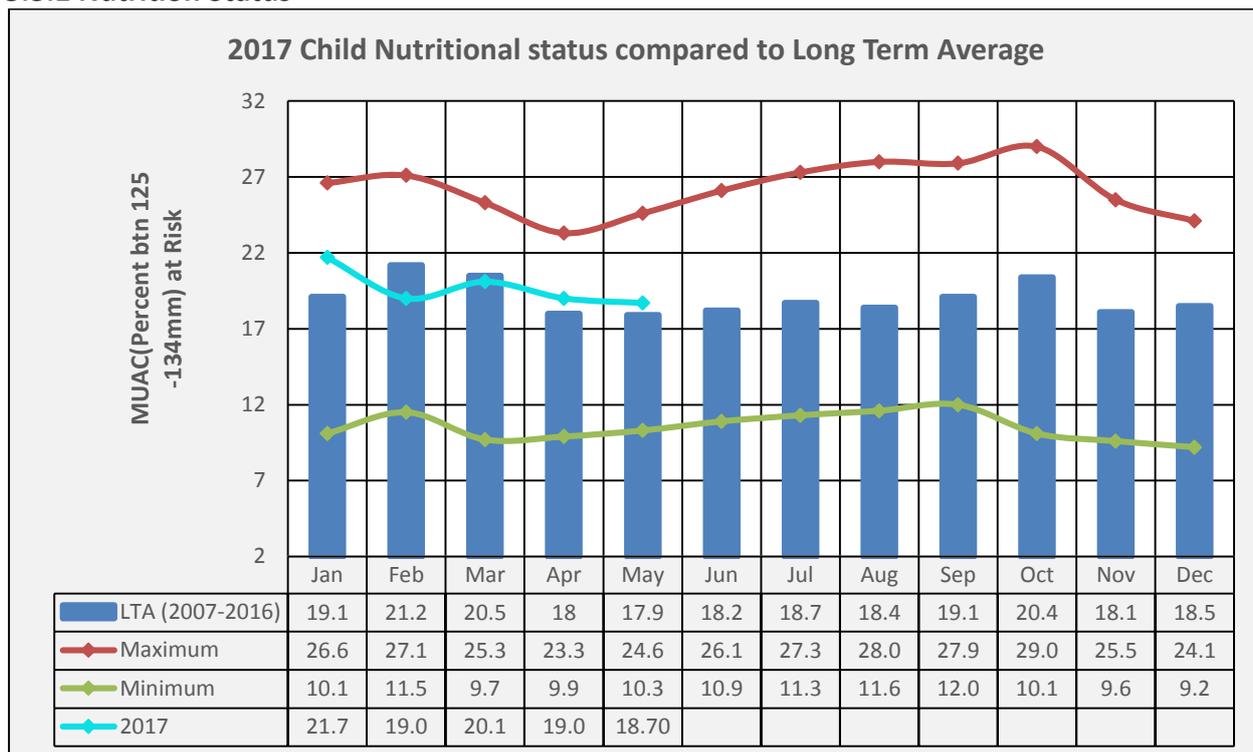
- From the figure shown above, average household milk consumption gradually improved from 1.1Litres in April to 1.2Litres in May across the livelihood zones.
- When compared to the long term average milk consumption, current household milk consumption is lower by 14 percent.
- Milk consumption improved mainly in the Agro-pastoral livelihood zone of Saku and Moyale. Improvement in milk consumption was attributed to improved milk production as a result of improved livestock body condition and forage regeneration mainly in the Agro-pastoral areas.

5.2 FOOD CONSUMPTION SCORE (FCS)

- The mean food consumption score for the month under review was 24.3 across the livelihood zone which falls within the borderline food consumption score band. This depicted an improvement recorded in the previous month of 20.6.
- Food consumption score was higher in Agro-pastoral than Pastoral livelihood zone with a mean of 28.8 and 19.7 respectively.
- Proportion of households that were within the poor, borderline and acceptable food consumption score categories were 21 percent, 45 percent and 34 percent respectively. When compared to the month of April food consumption score categories, 44 percent, 31 percent and 25 percent of the households fell within poor, borderline and acceptable food consumption score categories.
- Improved in food consumption score may be attributed to improved milk availability, improved market access and ongoing food and nutritional interventions.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

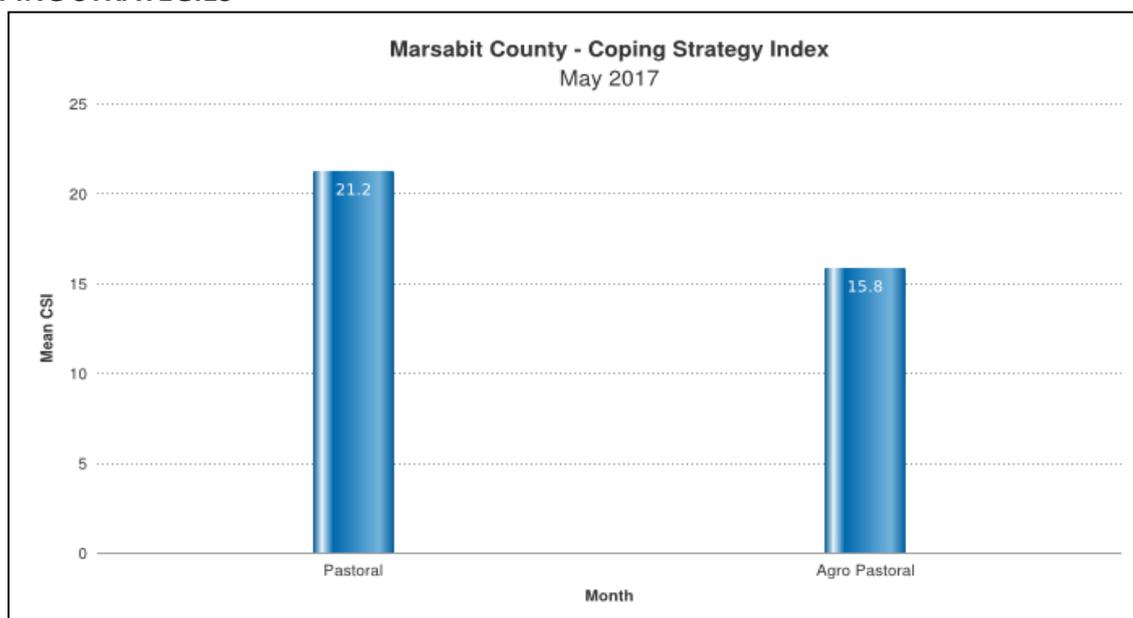


- From the figure shown above, children rated ‘at risk’ of malnutrition slightly declined from 19 percent to 18.7 percent. The slight decline was attributed to ongoing nutritional interventions across the livelihood zones.
- Malnutrition rates were lower in Moyale and Saku at 10 percent and 12.3 percent respectively. However, Laisamis sub-county (Loyangalani, Olturot, Korr and Logologo) registered higher malnutrition rates at 38 percent. There was significant improvement in North Horr where children ‘at risk’ of malnutrition stood at 19% as a result of blanket supplementary feeding programmes and other feeding programmes coupled with intensive state and non-state actors interventions.
- Within normal malnutrition rates in Moyale and Saku were attributed to increased milk consumption at household coupled with good infant feeding practices.
- It was also noted that 0.4 percent and 2.9 percent children below the age of five years were severely and moderately malnourished respectively.

5.3.2 Health

- There were reported cases of Kalazar outbreak in Shurr, Logologo and Laisamis. The leading cases of outbreak in morbidity for both children under five years and the general population for the month were; Upper Respiratory Tract Infections (URTI), diarrhoea, Pneumonia and fever.

5.4 COPING STRATEGIES



- In the month under review, coping strategy index was 19.8. Coping strategy index slightly improved from 20.2 recorded in April. Thus households employed irreversible coping strategies that were less severe.
- Agro Pastoral livelihood zone recorded a coping strategy index of 15 in comparison to the 21.2 in Pastoral livelihood zone. Reduced coping strategy index mainly in Agro-pastoral livelihood zone was due to improved livestock productivity and market dynamics.
- Proportion of households who employed coping strategies in May was 76% and this was a decline from the 80% recorded in April.
- Notable consumption based coping strategies employed by majority of the households during the month included reduced portion size of meals and reliance on less preferred/less expensive food.

6. CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

- Cash transfers by World Food Programme, County Government, Concern WorldWide, NDMA, DORCAS AID , Social Services Department and Kenya Red Cross
- Integrated outreaches and screening across the County.
- Water trucking in few pockets which received traced rainfall amounts.

6.2 FOOD AID

- Slaughter destocking done by PACIDA in collaboration with livestock department.
- General Relief food distribution to across the County done by various partners.
- Food for Asset (FFA) in Moyale and Sololo done by WFP, NDMA and WVK targeting 4,067 households.

- Blanket supplementary feeding programme in North Horr targeting children less than five years, pregnant and lactating women supported by WFP, Concern WW and Sub County health management team.
- 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 WFP, UNICEF, CONCERN WW and FHK.
- WFP supported 179 public primary school with adequate stock for 70 school days in Term II, 30 days in-kind food provided by GOK, 40 days Cash transfer to schools provided by WFP. The enrolment is 48,000 school going children.

7. EMERGING ISSUES

7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT

- There was reported case of resource based conflict (pasture) along Lagi- Korondille border
- There were human displacements in Illeret, Bori, Qate, Karare and Godoma as a result of flash floods. 9 deaths were reported in Illeret.

7.1 Migration

- There is intense livestock migration from Waso (Isiolo) to Saku, Badanrero, Laqi and Amballo. Southern Ethiopia to Badanrero, Bori and Laqi, Wajir to Moyale. Most livestock in North Horr and Laisamis are concentrated around Gudas, Mount Kulal, Hurri Hills and Dukana.
- Intense migration patterns are likely to lead to resource based conflict and drastic depletion of vegetation cover.

7.2 FOOD SECURITY PROGNOSIS.

- The food security situation is likely to gradually worsen if the long rains cease particularly in the Pastoral livelihood zone of North Horr and Laisamis sub-counties where rainfall amounts were depressed and vegetation condition index still in a severe vegetation deficit band. However, food security situation is likely to be favorable in the Agro-pastoral areas of Moyale and Saku sub-counties where long rains received were enhanced to above normal amounts. Recharge of open water sources will lead to reduced trekking distances majorly in Saku and Moyale sub-counties whereas in North Horr and Laisamis sub-counties there will be insignificant decline in trekking distance hence gradual decline in livestock productivity.
- Likewise, majority of pastoralists are rebuilding herds sizes and are also likely to continue accessing livestock products until when the drought situation becomes severe and thereafter households could employ unusual coping mechanisms to access food. Improved livestock prices in the Agro-pastoral zone coupled with reduced market supplies will lead to better and favorable terms of trade. Nutrition amongst children below the age of five years had gradually declined and is expected to improve further due to enhanced food and nutritional interventions by Nutrition actors in the county. Cash

transfers and other food security related interventions will likely cushion households against looming drought.

8.0 RECOMMENDATIONS

- Initiation of commercial livestock offtake, provision supplementary feeds and livestock vaccination in some critical pockets of North Horr and Laisamis sub-counties.
- Promotion of joint socio-cultural activities, development of livestock feed and water resource
- Provision for water storage tanks and water treatment chemicals.
- Water tankering in identified hotspots and continued stock piling of fast moving spare parts.
- Continued provision of supplementary feeds to malnourished children
- Continued cash transfers programmes