

National Drought Management Authority

MARSABIT COUNTY

DROUGHT EARLY WARNING BULLETIN FOR AUGUST 2017



A Vision 2030 Flagship Project



AUGUST EW PHASE: ALARM



Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Agro-pastoral	Alarm	Stable
Pastoral All species	Alarm	Stable
Fisherfolk/ Casual labour	Alert	Worsening
County	Alarm	Stable
Biophysical Indicators	Value	Normal Range
Rainfall (% of Normal)		80 -120
VCI-3Month	31.08	>35
Forage condition	Fair	Good
Production indicators	Value	Normal
Livestock Body Condition	Fair	Good
Milk Production	1.3	>1.6 litres
Livestock Migration Pattern	Unusual	Normal
Livestock deaths	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	50	>74
Milk Consumption	0.75	>1.0 litres
Return distance to water sources	3.7	0.0-4.0 Km
Cost of water	0-5	<5 Ksh
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	18.1	0.0-18.4
Coping Strategy Index	20.3	<20
Food Consumption Score	24.9	>35

Drought Situation & EW Phase Classification

Biophysical Indicators

- **Rainfall:** Most parts of the County didn't receive rainfall in the month under review. However, few parts of North Horr sub-county received off season precipitation towards end of the month.
- **Vegetation condition:** Vegetation condition index relatively remained the same where 3-month VCI posted was 31.08 and falls within the moderate vegetation deficit band. Pasture condition is fair and poor in the Agro-pastoral and Pastoral livelihood zones respectively. Similarly, Browse condition is fair in Agro-pastoral and fair-poor in the Pastoral livelihood zone.

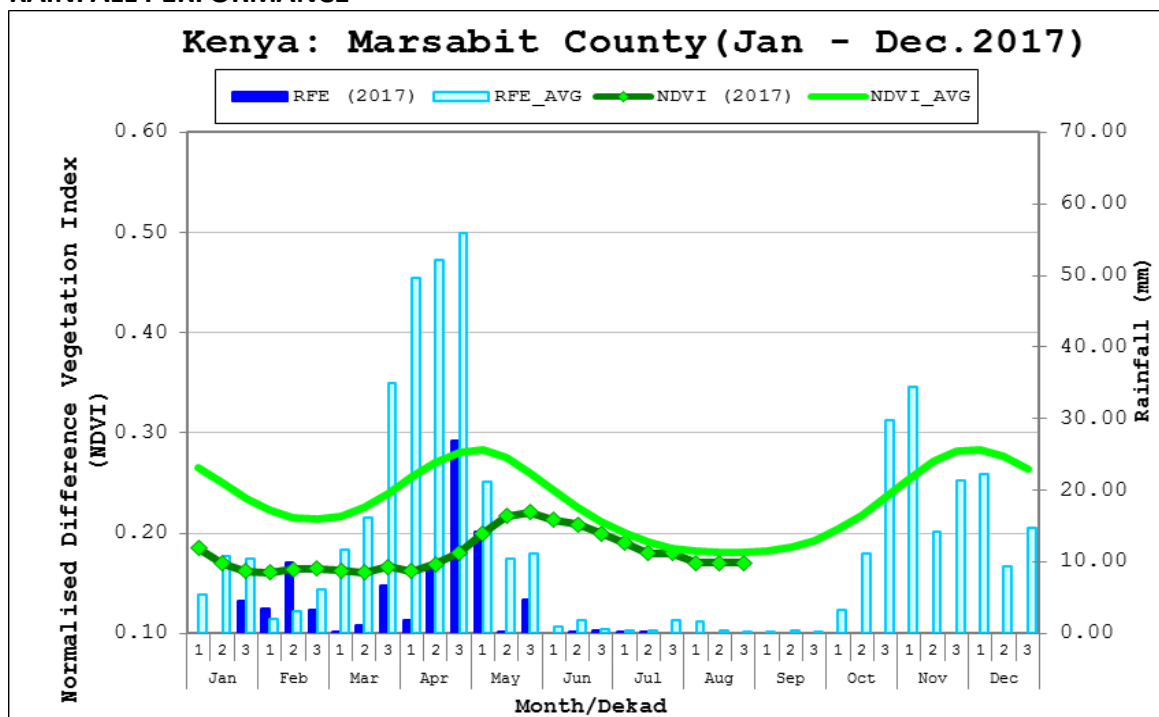
Socio Economic Indicators (Impact Indicators)

- **Production indicators:** Body condition of livestock species have deteriorated and ranges from poor, fair and good-fair for cattle, shoats and camel respectively. Milk production per household per day plummeted to 1.3Litres which is outside the normal range. Migration of livestock was generally unusual and massive in Moyale. No cases of livestock deaths attributed to drought reported however cases of CBPP, PPR and diarrhoea were reported.
- **Access indicators:** Household and livestock trekking distances increased across the livelihood zones. Terms of trade was non-propitious across the livelihood zones goat prices declined. Milk consumption declined at household level. Market prices for cereals were higher whereas for livestock were low and unfavourable.
- **Utilization indicators:** Children rated at risk of malnutrition slightly increased but was within the normal range of 18.4percent. Food consumption score fell within the borderline band while coping strategy index increased hence households were more food insecure.

<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, most parts of Marsabit County did not receive rainfall in the month under review. However, Northern parts of North Horr sub-county namely Kalacha, North Horr, Darade, Illeret and Mt. Kulal in Laisamis sub-county received off-season rains.
- Off-season rains received in the aforementioned areas were of good intensity of temporal distribution 1-2 rainy days. Saku and Moyale sub-counties didn't receive any rainfall.
- Normalised Difference Vegetation Index (NDVI) of 0.17 is slightly below the Long term NDVI value of 0.18. NDVI values have been on a declining trend in the 3 dekad of August.

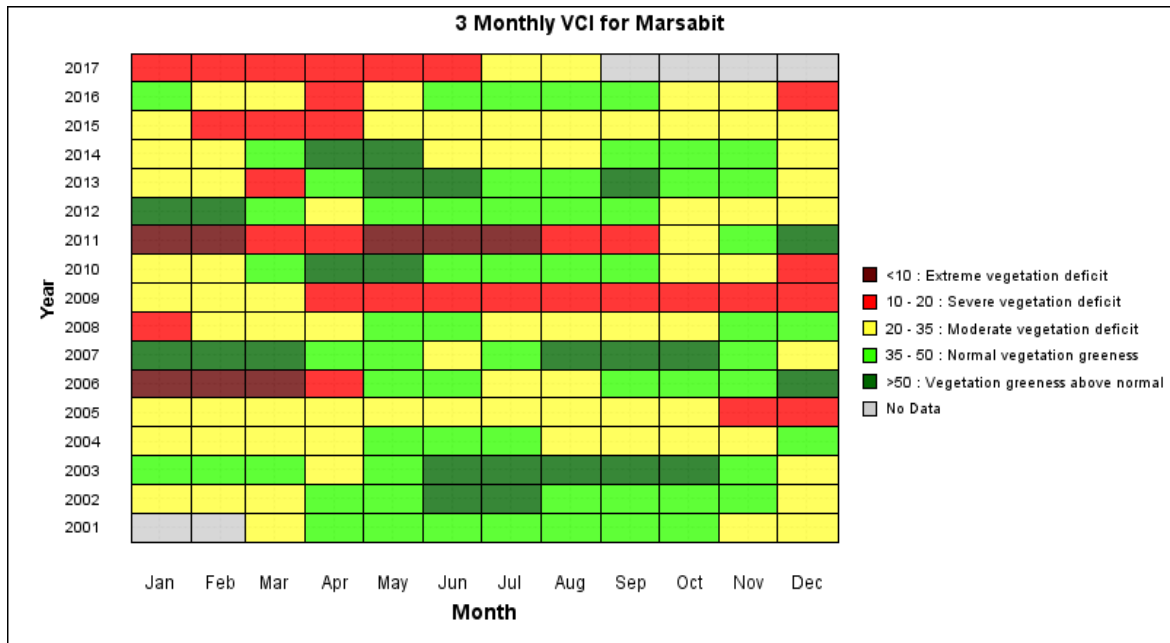
2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

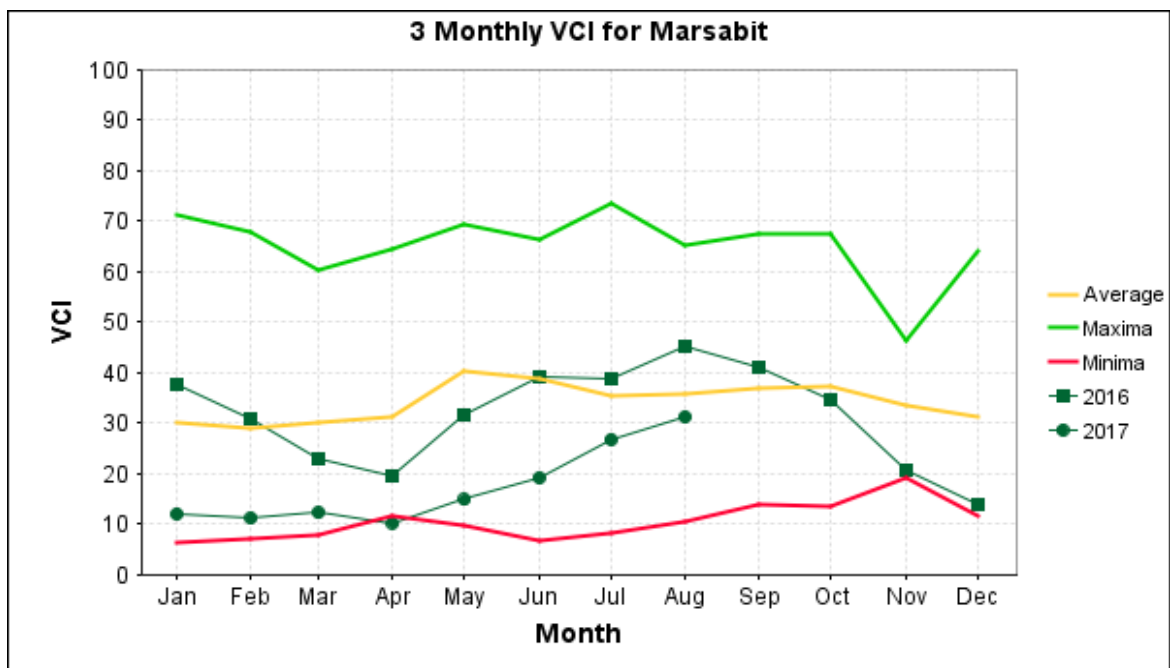
2.1.1 Vegetation Condition Index (VCI)

- The 3-months VCI matrix shown below illustrates grouping of the months in terms of agricultural drought based on indicated VCI thresholds. The vegetation condition has been analysed retrospectively and classified under appropriate vegetation deficit band for the month under review.
- The basis for the vegetation condition index comprises the comparison of the relative NDVI (Normalised Difference Vegetation Index) change with respect to minimum and maximum historical NDVI values.

- In the month under review, Vegetation Condition Index (VCI-3month) was 31.08 across the County hence falling in the moderate vegetation deficit band for two months sequentially.



- There was no significant change in the vegetation condition index for the month under review related to July as 3-months VCI for the month under review was 31.08 compared to 26.66 in July and still below normal when compared to a normal season.
- However, there was significant improvement of 3-months VCI in North Horr sub-county from 21.67 recorded in the preceding month to 30.92 in August due to the off-season rains received in the Northern stretch of the sub-county which had a ripple effect on the overall vegetation condition index in the sub-county.



- The graph shown above compares 2017 VCI trend to 2016, long term average and gives maximum and minimum values ever recorded. 3-months VCI for the month under review is below the long term VCI value.
- Below normal VCI values been noted from January 2017 to August 2017 due to failure of two consecutive rainy seasons which wasn't sufficient for regeneration of vegetation.

2.1.2 Pasture

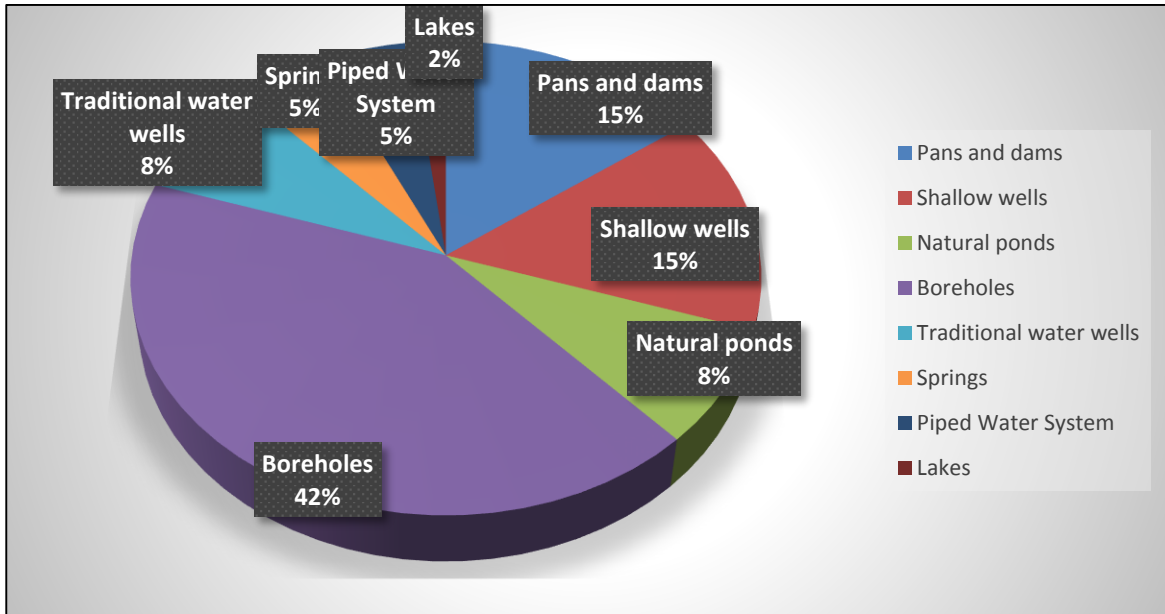
- Pasture condition is fair-poor and poor in the Agro-pastoral and Pastoral livelihood zones respectively. Pasture condition is below normal when compared to a normal period. General poor pasture condition is occasioned by failure of two successive rainy seasons characterized by erratic rainfall and massive in-migration of livestock in the Agro-pastoral livelihood zone. There is renaissance of non-herbaceous forage for livestock species in the Pastoral livelihood zone.
- Quantity and quality of pasture is fair in the Agro-pastoral areas of Moyale sub-county namely: Laqi, Odda, Uran-Lataka, Bori, Mado Adhi, Amballo, Dadach Elele, Ele Dimtu, Somare, Sololo, Dambala Fachana and few areas of Saku sub-county namely: Karare, Mt.Marsabit and Kituruni. Similarly, South Mount Kulal, Hurri Hills and South Horr Horr and in the Pastoral areas of southern Laisamis, Darade, Sarimo, Dukana and Bulluk.
- Pasture is depleted in the Pastoral areas of Dabel, Godoma, Balesa, Malabot, Bubisa, Farakoen, Gas,El-gade, El-hadi, Bubisa ,Turbi,Qorqa and Elbeso.
- Therefore, in most parts of Pastoral livelihood zone pasture is depleted whereas the available pasture in the Agro-pastoral zone is expected to last for only one.

2.1.3 Browse

- Browse condition is fair in the Agro-pastoral areas of Moyale and Saku sub-counties. However, in most parts of Laisamis and North Horr sub-counties browse condition is fair-poor due to the prolonged dry spell occasioned by failure of two successive rainy seasons.
- Browse is expected to last for the next 2 months in the Agro-pastoral areas of Moyale and Saku sub-counties against the normal 4 months whereas in the Pastoral areas of North Horr and Laisamis sub-counties browse is expected to last for the next 1 months against the normal 2-3 months.
- When compared to a normal season, browse condition is below normal. There is regeneration of non-palatable browse across the County. Faster depletion of browse in the Agro-pastoral areas is attributed to massive in-migration of livestock from Isiolo, Wajir and southern parts of neighbouring Ethiopia.

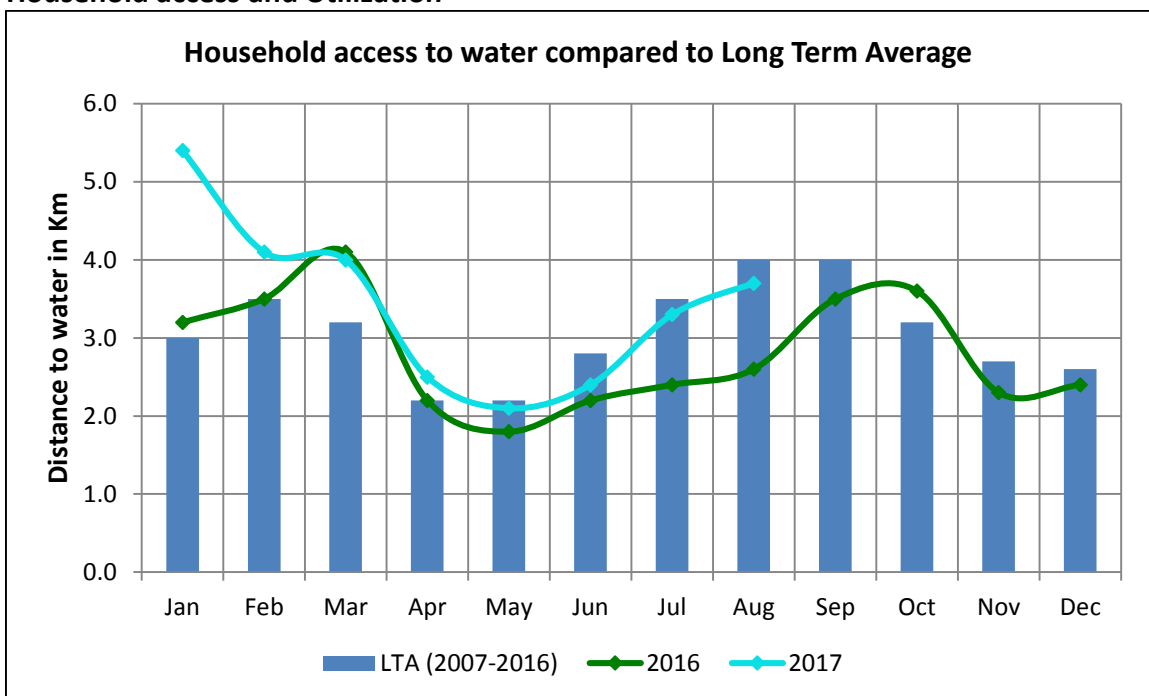
2.2 WATER RESOURCE

2.2.1 Sources



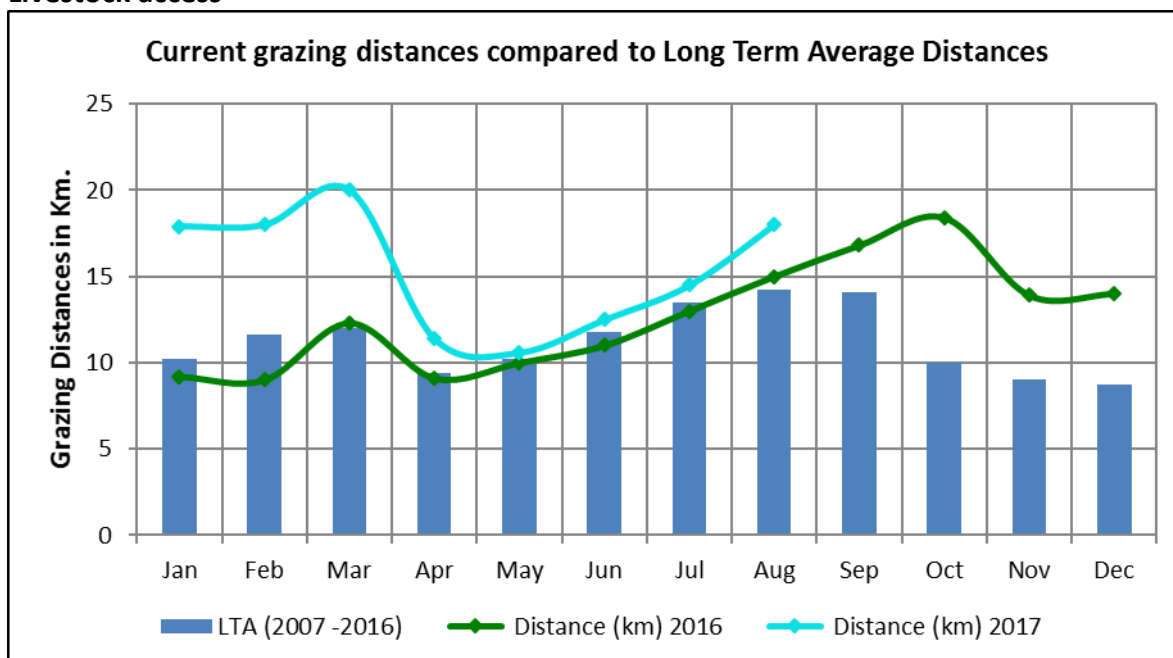
- From the pie-chart shown above, 42percent of the communities interviewed used boreholes for water consumption. The main water sources were boreholes, water pans and shallow wells across the livelihood zones which are the normal water sources.
- Insignificant proportion of the communities interviewed at 8percent, 5percent and 2percent used traditional water wells, piped water and springs respectively for household and livestock water consumption.
- In comparison to the preceding month, boreholes were overstretched due to the drying up of most of the open water sources across the livelihood zones.

2.2.2 Household access and Utilization



- From the figure shown above, household return distance to main water sources was 3.7km in the month under review. When compared to the preceding month distance of 3.3Km, household water distance increased
- An increase in household water access distance was attributed to drying up of most of open water sources. The current household water distance is 7percent within the normal household water distance of 4Km.
- The Agro-pastoral livelihood zone exhibited longer household water distances than households in the Pastoral livelihood zone due to the availability of more boreholes.
- Household water waiting time at the water source was 45-60 minutes across the County which is above the normal waiting time of 30-45 minutes in the same period of the year.
- Average household water consumption per person per day is 7 litres in the Pastoral zone whereas in the Agro pastoral zone its 5 litres per person per day.
- Cost of water ranges between Ksh. 0-5/20 litres jerry can across the county with exception of Marsabit and Moyale towns where water retailed at Ksh. 50 per 20 litres jerry can.

2.2.3 Livestock access



- From the figure shown above, return livestock trekking distance from grazing areas to water sources is 18Km. Current livestock trekking distances increased when compared to the preceding months' trekking distance of 14.5Km.
- When compared to the normal grazing distance, the current distance is 27percent above the long term livestock trekking distance of 14.2Km.
- Shorter livestock grazing distances were noted in Agro-pastoral livelihood zone of Moyale and Saku sub-counties than in the Pastoral areas of North Horr and Laisamis sub-counties.
- Longer trekking distances in the Pastoral areas of Balesa, Malabot, Bubisa, Farakoen, Gas,El-gade, El-hadi,Bubisa ,Turbi,Qorqa and Elbeso hindered access to pasture.
- In the Agro-pastoral zone, watering frequency for cattle/shoats and camel is daily and 4 days respectively. In the Pastoral livelihood zone, watering frequency for cattle/shoats and camel is after 2 days and 7 days respectively. Watering frequencies have increased due to the prolonged dry spell.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition is fair-poor across the livelihood zones with exception of Camel which depicts a good-fair body condition.
- In the Agro-pastoral areas of Saku and Moyale livestock body condition is fair with exception of camel which exhibits good body condition. In most parts of Laisamis and North Horr sub-counties cattle/shoats have poor body condition while came body condition is fair. Worst hit areas where livestock body condition is generally poor are Mallabot, Elbeso, Godoma, Bubisa, Turbi, Elbeso, Kargi, Gas, Burgabo, Farakoen and Dabel. Notably, there is significant variation in livestock body across the livelihood zones.
- Livestock body condition is not normal when compared to a normal season. Livestock body condition is expected to deteriorate as the long dry spell perseveres.

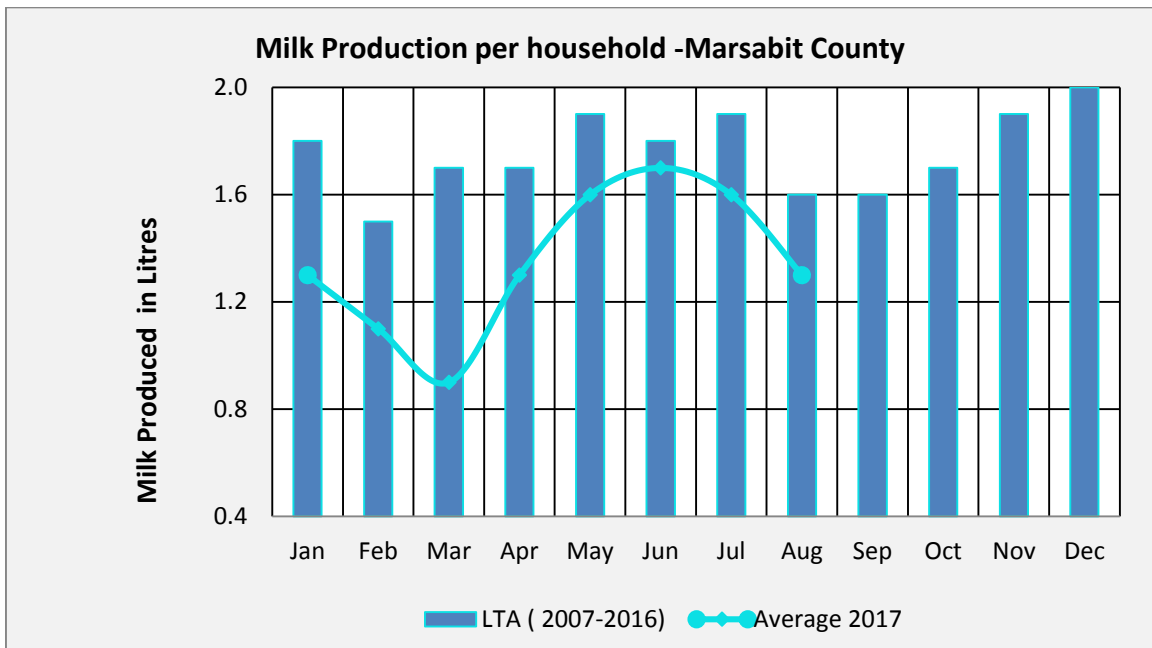
3.1.2 Livestock Migration

- Intense livestock migration was reported from Merti and Waso (Isiolo County) to Laqi, Amballo and Badanrero in Moyale sub-county. Similarly, In-migration of livestock was noted from southern Ethiopia to Badan-Rero, Bori and Laqi in Moyale. Some livestock from Isiolo migrated towards Marsabit-Isiolo border.
- Out migration routes include Malabot to Sabare and Tao in southern Ethiopia. Most livestock from North Horr are concentrated around Darade, Bulluk, Hurri Hills, Dukana, Shurr and Hawaye, Lalesa whereas livestock in Laisamis sub-county are concentrated in Koya, Gudas, Behai, Mount Kulal, South Horr, Ogicho and Nyiro ranges.
- Massive Influx of livestock in Moyale and Saku sub-counties has led to near depletion of pasture which is expected to last only for the next one month as opposed to the normal 2-3 months. Other in-migration routes were from Samburu County to the southern parts of Marsabit County
- About 70 percent of the livestock have migrated to satellite camps while only 30 percent have remained in homesteads (mostly milking herds).

3.1.2 Livestock Diseases

- Due to intense influx of livestock into the Agro-pastoral areas of Moyale and saku sub-counties and intra-migration of livestock to southern Laisamis and northern parts of North Horr sub-counties, cases of Lumpy Skin Disease for cattle, diarrhoea in goats, Contagious Caprine Pleuropneumonia (CCPP), and Contagious Bovine Pleuro-Pneumonia (CBPP) have been reported across the County.

3.1.3 Milk Production

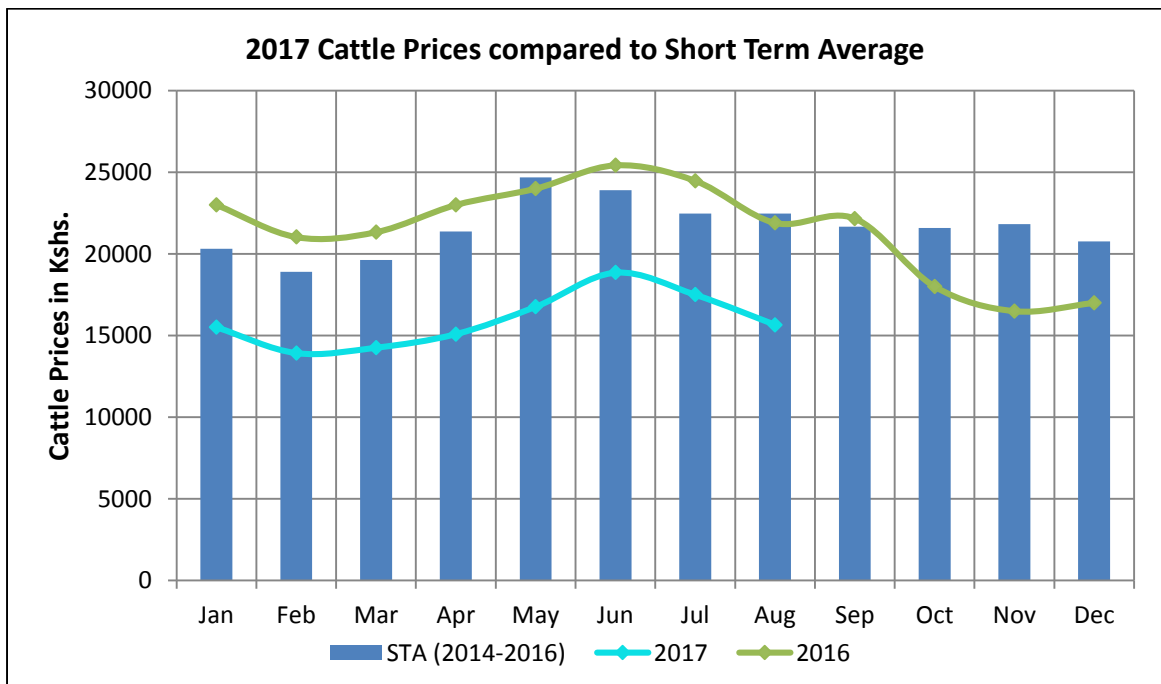


- In the figure shown above, average milk production at household level per liter was 1.3.
- Decline in milk production was recorded in the Agro-pastoral areas from 1.6Litres in July to 1.3Litres in August. In comparison to a normal period, milk production was 19 percent below normal. No milk production was recorded at the household level in the Pastoral zone. Below normal milk production in the agro-pastoral zone was occasioned by deterioration of palatable vegetation due to intense livestock in-migration.
- Scarce milk availability hindered access thereby leading to an upsurge in milk prices between Ksh.100-120 per litre against the normal Kshs.90/Litre.

4.0 MARKET PERFORMANCE

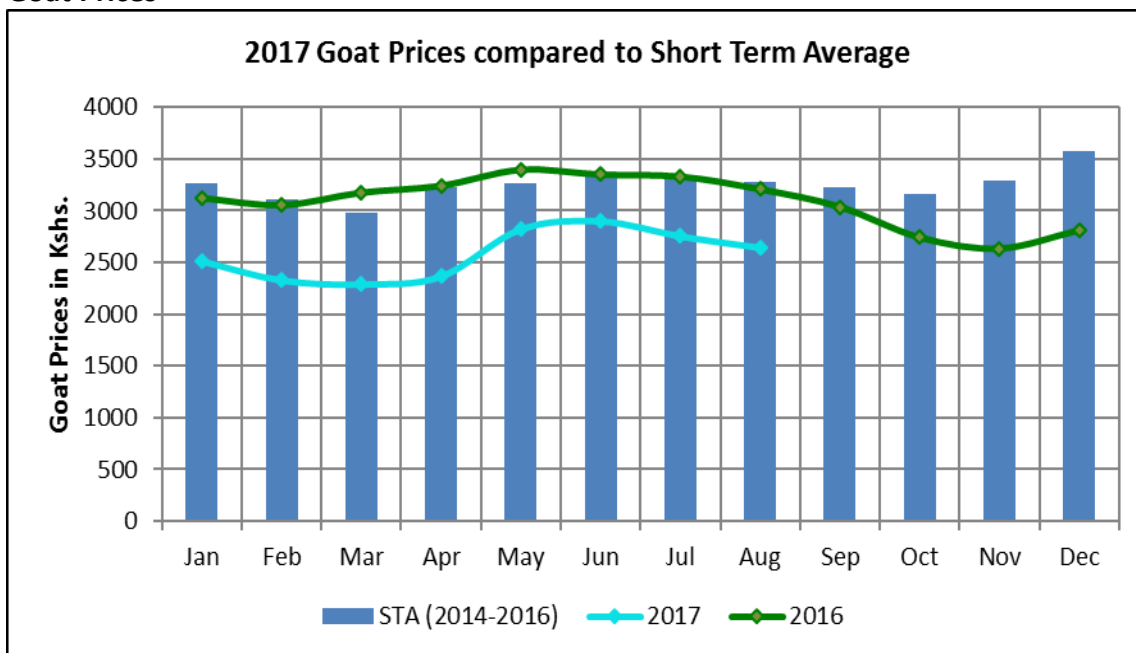
4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices



- From the figure shown above, average cattle prices declined from Kshs.17, 500 in July to Kshs.15, 655 in the month under review across the livelihood zones.
- Declining cattle prices was occasioned by deteriorating cattle body condition due to the persistence of the long dry spell.
- Cattle prices in Moyale posted high prices on average at Kshs.20, 000 due to favourable market in the neighbouring Ethiopia.
- When compared to the short term average price of Kshs.22, 472, current average cattle price was 30percent below normal.

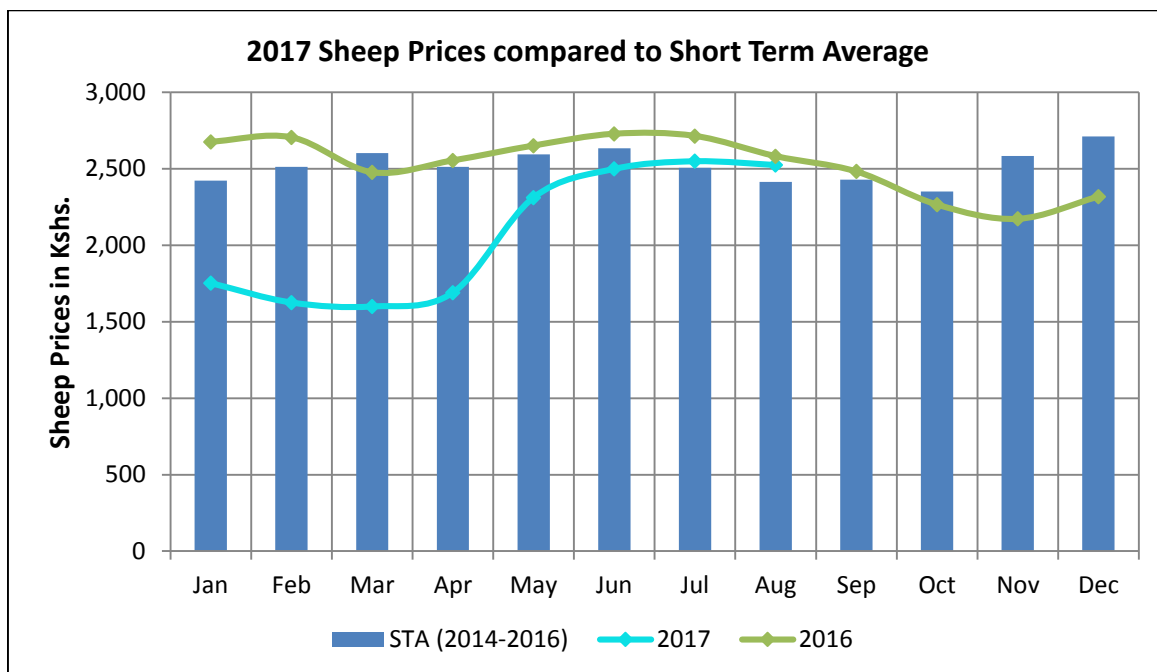
4.1.2 Goat Prices



- From the figure shown above, goat prices averaged at Kshs.2, 645 in the month of August which is an indication of a slight decline of Kshs.2, 755 recorded in the previous month.
- When compared to a normal price of Kshs.3, 276, the current goat price is 19percent below the short term average price.
- Below normal goat prices are attributed to worsening body condition as a result of the persistence long dry spell.

4.1.3 Sheep Prices

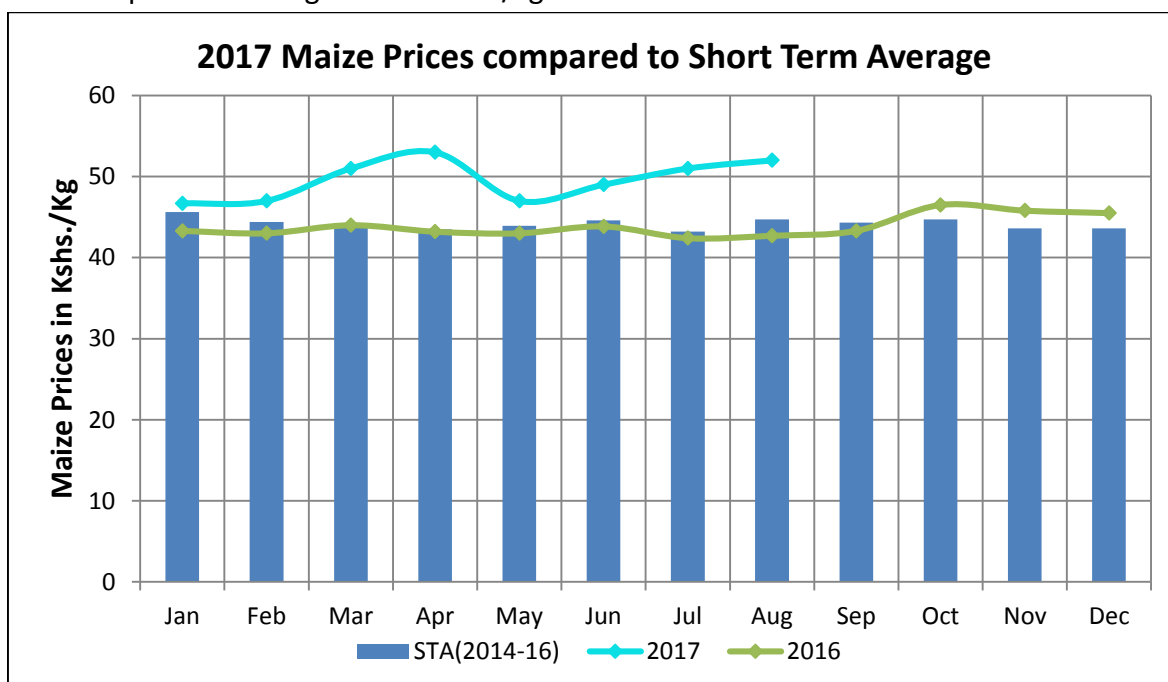
- From the figure shown below, the average selling price of sheep in the month under review was Ksh2, 583. When compared to Kshs.2, 550 recorded in the preceding month, there was no significant change recorded.
- When compared to the short term average price of Kshs.2414, sheep prices were 7percent above the normal prices.
- Above normal sheep prices were attributed to favourable prices North Horr and Moyale due to close proximity with the neighbouring Ethiopia market. In some instance, households are purchasing a 1Kg of sheep at Kshs.100 hence having a ripple effect on the general whole sheep price.



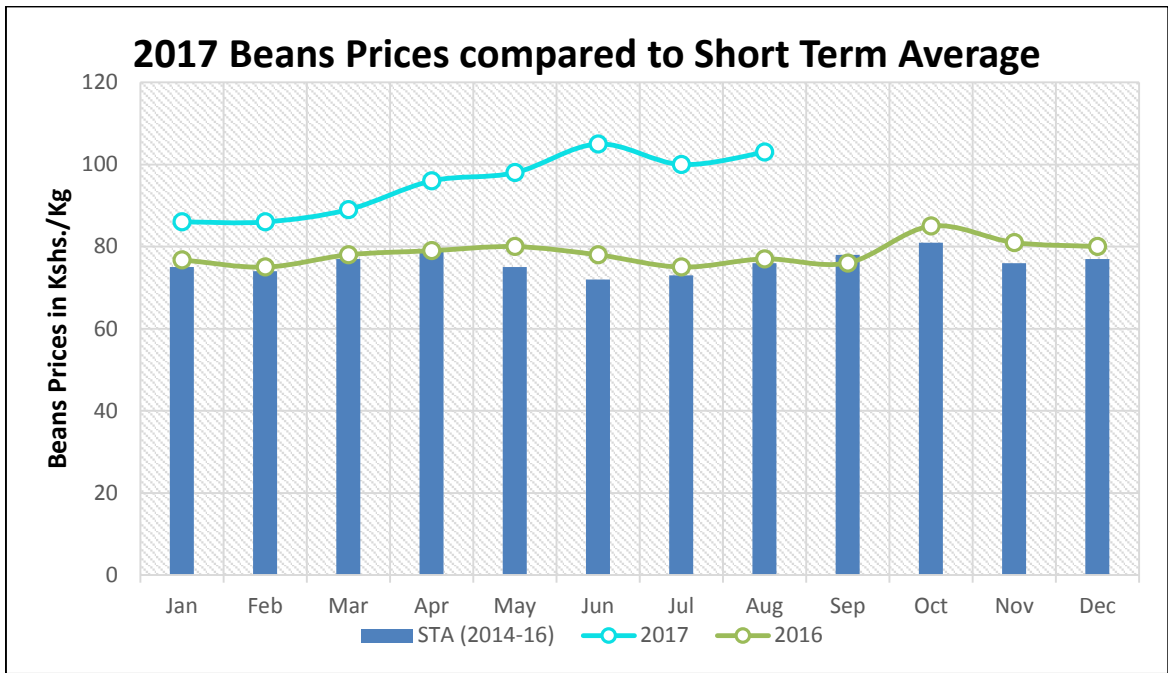
4.2 CROP PRICES

4.2.1 Maize

- From the figure shown below, average price of maize for the month under review was Ksh.52. When compared to the month of July, there was no notable change in maize prices.
- When compared to the short term average price of Kshs.45, the current maize price is 16% above the normal price.
- Above normal maize prices were mainly attributed to near maize failure in the Agro-pastoral areas of Moyale and Saku sub-counties.
- High maize prices were noted in Loyangalani, Golbo, Farakoen, Malabot, Turbi, Kargi and Gas with prices retailing at Kshs.60-70/kg.

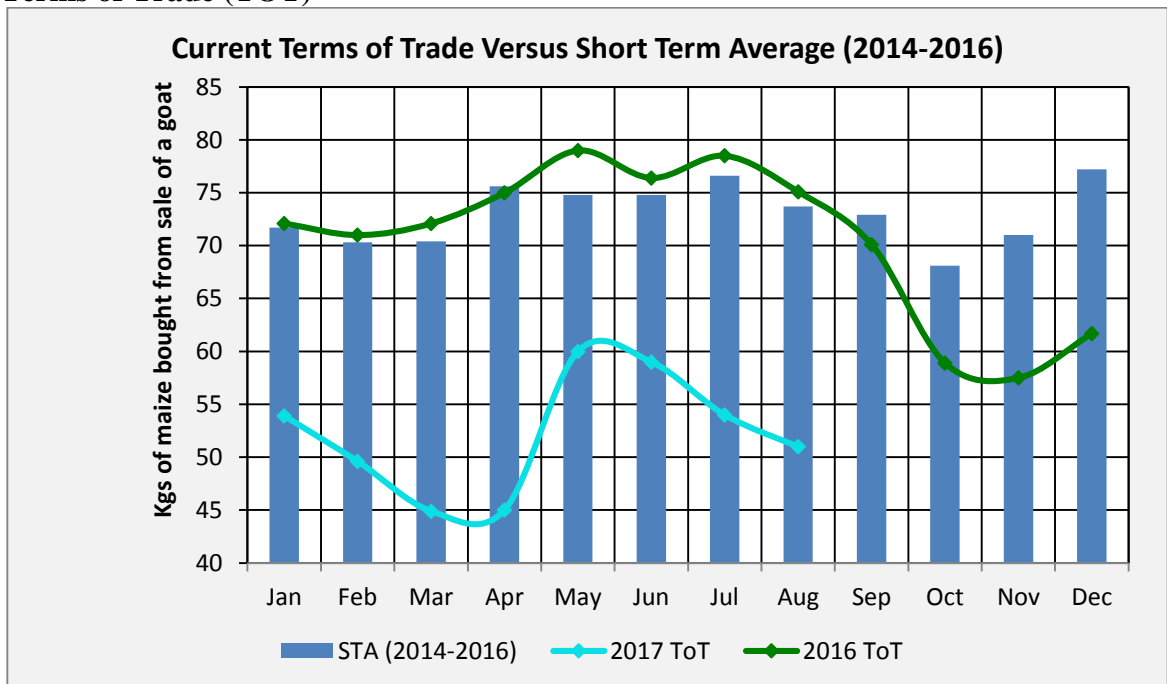


4.2.2 Beans



- From the figure shown above, the average price of beans was Kshs.103 for the month of August. When compared to the month of July, there was no significant change in prices.
- Beans prices were favourable in North Horr, Moyale, Sololo and Marsabit town because of the supply from the neighbouring Ethiopia and Meru terminal market.
- The current average beans price of Kshs.103 is above the short term beans price by 36 percent. Above normal beans price was mainly occasioned by a paltry 5percent harvest from this season.
- Higher beans prices were recorded mainly in isolated Pastoral areas of North Horr and Laisamis sub-counties and was retailing at Kshs.120-130/Kg.

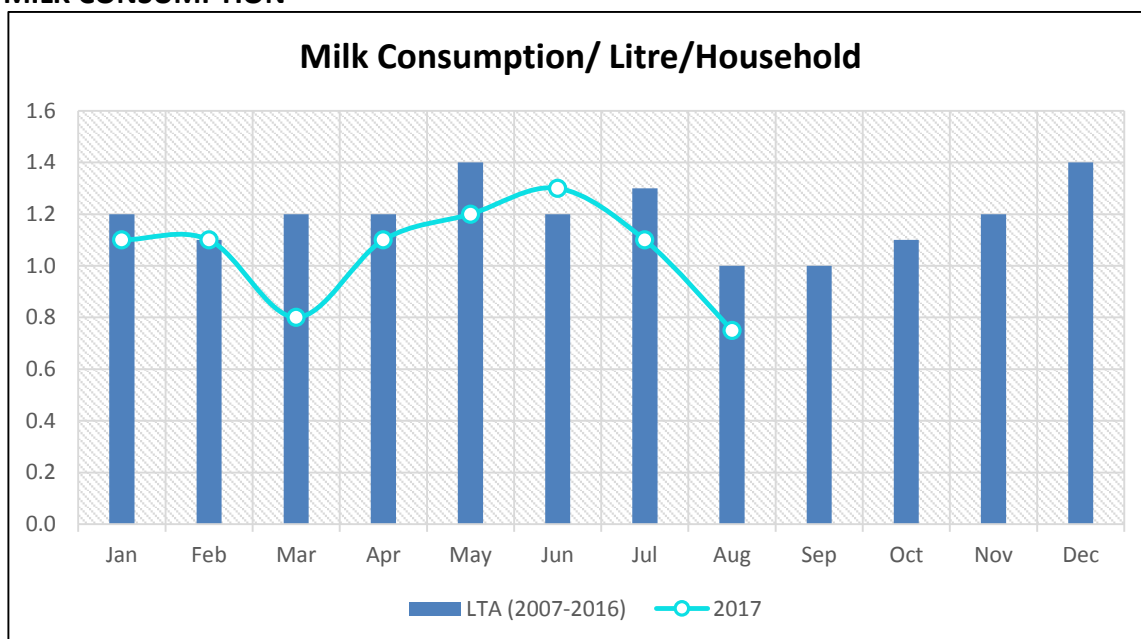
4.2.3 Terms of Trade (TOT)



- Terms of trade slightly declined and was unfavourable at 51. The terms of trade slightly declined from 54 recorded in the month of July to 51 in the month under review due gradual goat prices and above normal maize prices. Therefore, pastoralists derived less quantities of maize from a sale of a goat when compared to a normal season.
- When compared to a normal period, the current terms of trade was 31percent below the short term average .
- Declining and unfavourable terms of trade from the beginning of year to date was caused by sequential failure of two rainy seasons. Terms of Trade is expected to be unfavourable due to prolongation of the long dry spell.

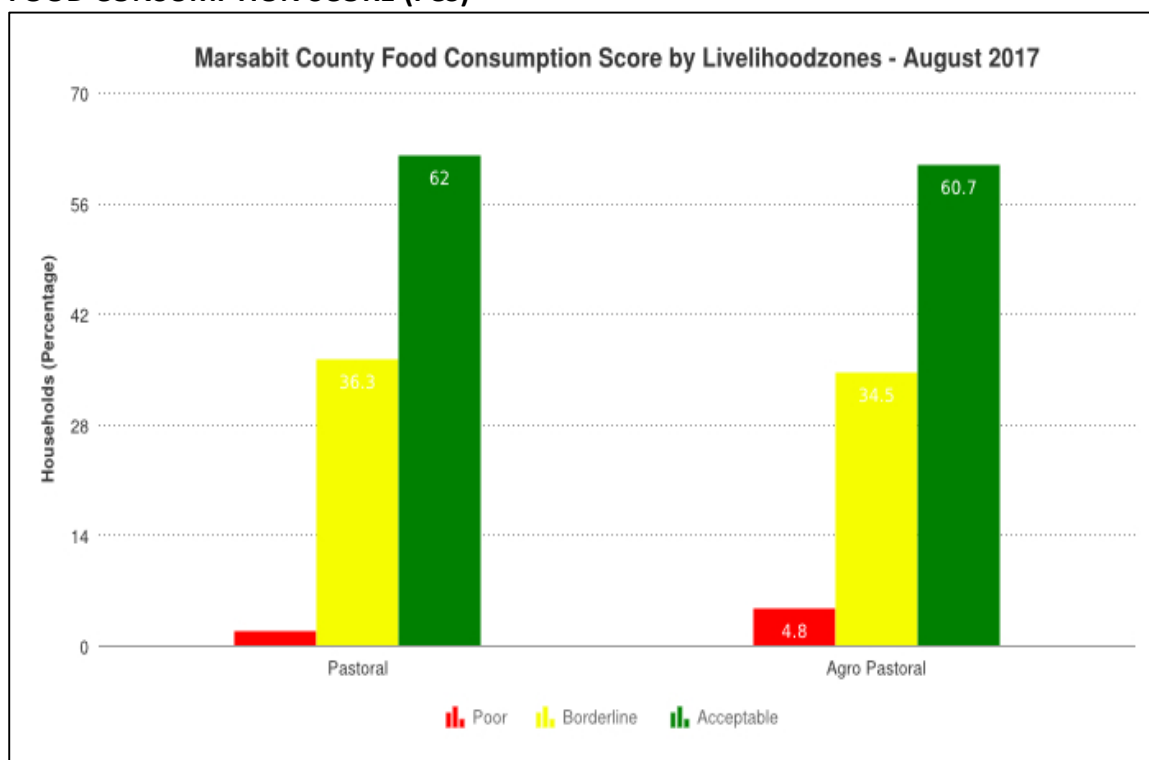
5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION



- Average milk consumption per household declined from 1.1Litres in July to 0.75Litres per household in the Agro-pastoral livelihood zone. Nevertheless, in most parts of the Pastoral livelihood zone there was generally no milk consumption at the household level.
- Current household milk consumption of 0.75Litres is 25percent below normal when compared to a normal season.
- Milk consumption plummeted in the Agro-pastoral livelihood zone of Moyale and Saku sub-counties due to intense in-migration of livestock from southern Ethiopia, Isiolo and Wajir Counties which led to faster deterioration of vegetation hence low milk production negatively affecting milk consumption.
- Milk consumption is expected to worsen and will reach an all-time low due to the ongoing long dry spell.

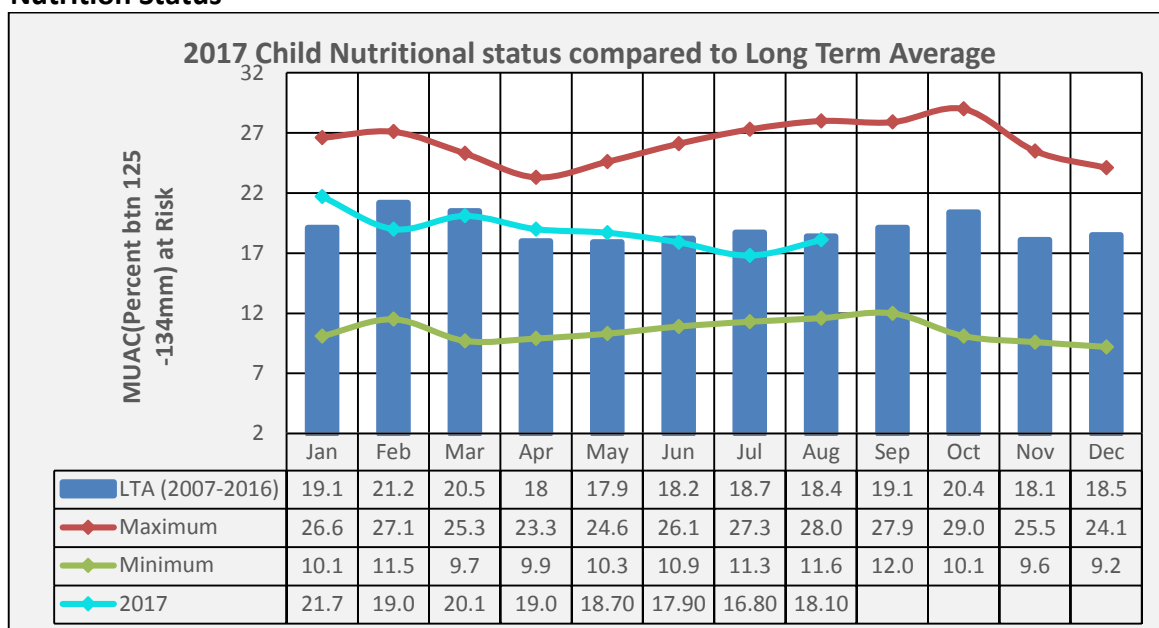
5.2 FOOD CONSUMPTION SCORE (FCS)



- The Food Consumption Score is a composite score based on dietary diversity, food frequency and relative nutrition importance of different food groups and therefore used to reflect the quality and quantity of households' diet.
- In the Agro-pastoral livelihood zone; proportion of households that were within the poor, borderline and acceptable food consumption group categories were 4.8percent, 34.5percent and 60.7percent respectively. When compared to the Pastoral livelihood zone, 1.7percent, 36.3percent and 62percent of the households had poor, borderline and acceptable food consumption scores respectively.
- The mean food consumption score for the month under review was 24.9 across the livelihood zone hence falling within the borderline food consumption score band. Hence household consumed staples and vegetables every day, accompanied by oil and pulses a few times a week.
- Food consumption score was better in Pastoral than Agro-pastoral livelihood zone with a mean of 26.6 and 23.1 respectively.
- Therefore, it was deduced that households in the Pastoral livelihood zone had consumed food rich in nutrient quotient than those in Agro- pastoral livelihood zone hence more food secure.
- Households in the Agro-pastoral livelihood zone had no better food consumption score than those in the Pastoral livelihood zone because of dependence on farming output that failed due to failure of the rains in two consecutive rainy seasons.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status



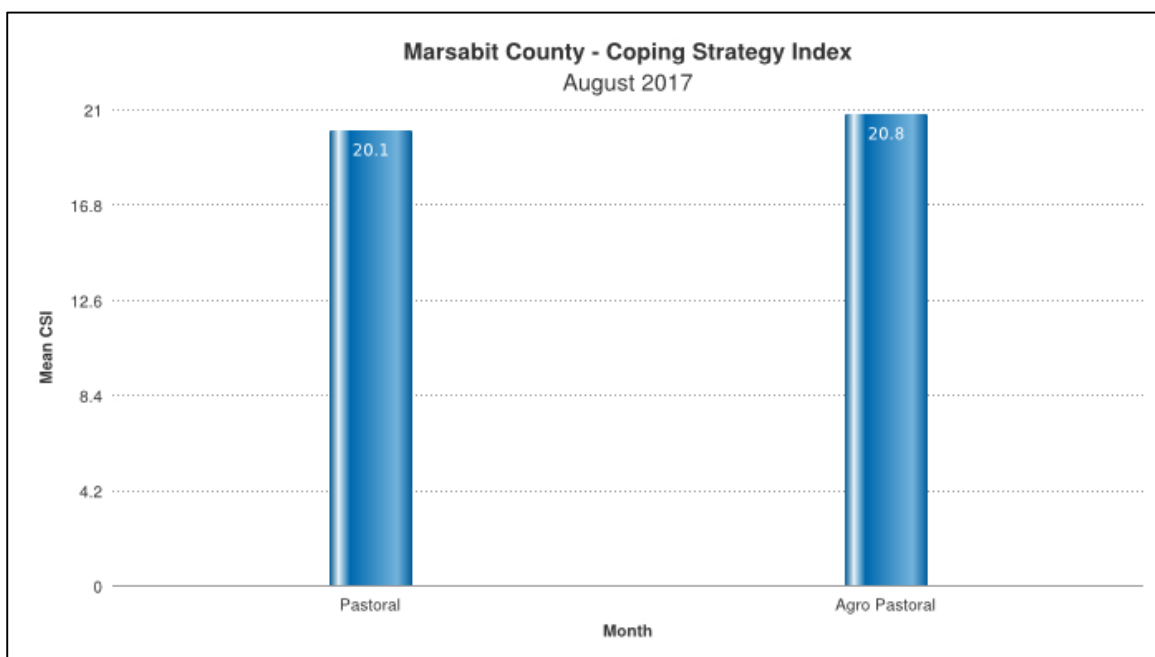
- From the figure shown above, children rated ‘at risk’ of malnutrition slightly increased from 16.8percent in July to 18.1percent in August.
- When compared to the long term average of 18.4percent, current children rated ‘at risk’ of malnutrition was within the normal range by 2percent.
- Within normal malnutrition rates were attributed to unconditional HSNP II cash transfer programme, blanket supplementary feeding programme, other food security related interventions and cash transfer programmes.
- Higher malnutrition rates amongst under-fives were recorded in Laisamis sub-county where 27.3percent of the under-fives were ‘at risk’ of malnutrition. Nonetheless, lower malnutrition rates amongst the under-fives in Moyale and Saku sub-counties 12.3percent and 13.1percent respectively due to paltry milk consumption at household level as opposed to Laisamis sub-county where household milk consumption is almost nil.
- There is notable improvement in nutrition rates in North Horr sub-county where 21percent were at risk of malnutrition.

5.3.2 Health

- There were no reported cases of human disease outbreak. However, 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

- From the figure shown below, coping strategy index for the month of August was 20.3.
- When compared to the month of July, coping strategy index increased from 17.9 recorded in the previous month hence households were more food insecure and adopted more severe coping mechanisms.
- Agro Pastoral livelihood zone recorded a coping strategy index of 20.8 in comparison to 20.1 in Pastoral zone hence household in Agro-pastoral zone were more food insecure.



- Proportion of households who employed and didn't employ coping strategies in the month under review were 85percent and 15percent respectively.
- Notable consumption based coping strategies adopted were reduced frequency in food consumption, reduced portion size of meals and reliance on less preferred/less expensive food.

6.0 CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

- Cash transfers by NDMA, SND, World Food Programme, Concern WorldWide, VSF Germany, PACIDA and Kenya Red Cross.
- Dorcas Aid International distributed 2000 blankets across households in Heilu manyatta, Butiye and Golbo wards and 100 sanitary towels to Butiye mixed secondary school and Moyale girls each.
- Integrated outreaches and screening across the County.
- Water trucking in the worst hit areas of North Horr sub-county.

6.2 FOOD AID

- Food for Asset (FFA) in Moyale and Sololo done by WFP, NDMA and WVK targeting 4,067 households.
- Blanket Supplementary Feeding Programme intervention continued in Laisamis Sub County. The 1st cycle was completed successfully and 2nd cycle commenced. In North Horr, distribution for 3rd and 4th cycle was completed. A total of 60Mt of super cereals was distributed and 2.75Mt of RUSF distributed to all health facilities by WFP, Concern WW, UNICEF and Sub County health management team.

- Dorcas Aid International distributed 4 tonnes of beans, 4 tonnes of rice and 1000 liters of cooking oil to households in Heilu manyatta, Butiye and Golbo wards. Supporting community groups in horticulture production near water sources
- 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, CONCERN WW and FHK.

7.0 EMERGING ISSUES

7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT

- No cases of insecurity, conflict nor human displacement were reported in the month.

7.1 FOOD SECURITY PROGNOSIS.

- The food security situation in the county is expected to deteriorate across the livelihood zones. Food consumption score is expected to decline and stagnate at borderline food consumption group implying that households' will be consuming staples accompanied by oil and pulses less frequently in a week. Pasture and browse condition expected to deplete in the next 1-2 months as intense influx of livestock into the Agro-pastoral areas continues. Correspondingly, most of the open water sources are expected to dry up in the next one month.
- Livestock body condition is expected to deteriorate across all the livelihood zones due to expected faster forage depletion as in-migration intensifies compounding outbreak of livestock diseases in the migratory satellite camps. Terms of trade is expected to worsen further with the expected fall in goat prices and high maize prices.
- Markets are expected to be a major hindrance and poor environmental management and regulation will prompt the county to further adverse effect of climate change. Drought will continue to impact heavily on the livelihoods of the communities.
- Households are expected to adopt more severe coping mechanisms as drought looms. Nutrition amongst under-fives is expected to improve due to intense food and nutritional interventions by different nutritional implementers in the county. Ongoing cash transfers interventions and other food security related interventions will likely cushion against the ongoing long dry spell.

8.0 RECOMMENDATIONS

- Support preparedness program for the current long dry spell and emergency borehole rapid response team.
- Procurement of major spare parts for rehabilitation and repair of existing genset and continued water trucking to worst affected areas.
- Coordination of Nutrition technical working groups (SCNTF, CNTF)
- Initiation of commercial livestock offtake, provision supplementary feeds and livestock vaccination in some critical pockets of North Horr and Laisamis sub-counties.
- Urgent roll-out of blanket supplementary feeding program in Laisamis sub-county.
- Coordination of cash transfers programmes undertaken by various implementers.