

National Drought Management Authority
THARAKA NITHI COUNTY (THARAKA)
DROUGHT EARLY WARNING BULLETIN FOR MAY 2018



A Vision 2030 Flagship Project



MAY 2018 EW Phase



Drought Situation & EW Phase Classification

Biophysical Indicators

- The average amount of rainfall received in the month of May was normal and it was above the long term average.
- The water recharge level in rivers was normal with water subsiding in the earlier flooded areas. There were suspected cases of 3 Cholera cases in Kathangachini.
- Vegetation cover across the County was normal with an improving trend due to persistent rainfall.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- The condition of pasture and browse was normal and it improved from that of the previous month. Livestock body condition for cattle and goats also improved and it remained good.
- Food Stock at households' level improved due to commencement of the harvesting season. However, there was infestation of fall army worms in most farms hence reducing crop yield.

Access Indicators

- Livestock prices increased due to improved body condition while commodity prices reduced due to the onset of the harvesting season but all the prices were within their normal range. Grazing and household water distance decreased from that of the previous month due to improvement in pasture, browse and persistent rains.
- Milk production and consumption improved but still remained low.

Utilization Indicators

- Percentages of children at risk of malnutrition decreased from that of the previous month and remained within the normal range.
- Following all the above prevailing conditions, the overall drought phase in May was Normal and the trend was improving.

Early Warning Phase Classification

	EW PHASE	TRENDS
Mixed Farming	Normal	Stable
Marginal Mixed Farming	Normal	Stable
Rain Fed Livelihood Zone	Normal	Stable
County	Normal	Stable
Biophysical Indicators	Value	Normal Ranges
Rainfall % of Average	122.22	80-120
VCI-3month	66.21	>35
Water Sources	Normal	Normal
Production Indicators	Value	Normal Ranges
Livestock Migration Pattern	No Migration	No Migration
Livestock Body Conditions	Good	Good
Milk Production	1.2 Litre	>1.19Litre
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade	147	<80
Milk Consumption	1 Litres	>1.13Litre
Water for Households	Normal	Normal
Utilization indicators	Value	Range/Value
MUAC	1.6	<7.5
Coping Strategy Index (CSI)	8	<52
Food Consumption (Marginal Mixed Farming)	95 Percent Acceptable	>80 Percent Acceptable

Seasonal Calendar

<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 ▪ Kidding (Sept) ▪ Increased HH Food Stocks 	<ul style="list-style-type: none"> ▪ Short rains ▪ Planting /weeding 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- Rainfall amount received in the month of May was normal. An average amount of 88 mm of rainfall was received in the county for the month of May.
- With reference to the long-term average, rainfall performance for May was above the long term average of 72mm. The May rainfall was 122.22% of the long term average which was almost within the normal range of 80-120 percent.

1.1.1 Rainfall Station data

- The figure below shows the actual rainfall received in mm during the month of May.

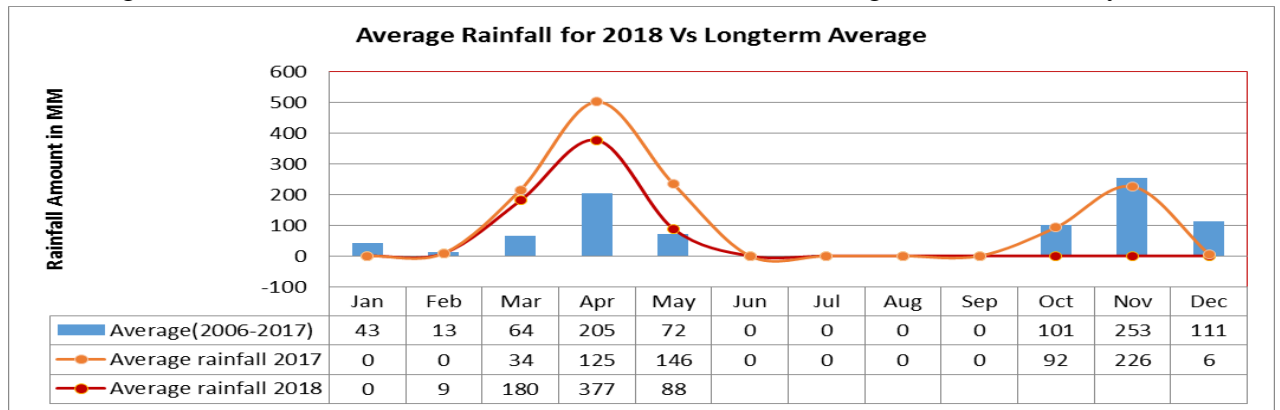


Figure 1: Average Rainfall for April 2018

1.1.2 Spatial and Temporal Distribution

- Rainfall was evenly distributed across the county. Chakariga received 91.9mm for 8days, Tunyai received 150.2mm for 7 days, Kamanyaki received 45.6mm for 3 days, Kathanga Chini received 9 for 1 day while Mukothima received 129.88mm for 4 days as shown by figure 2 below.

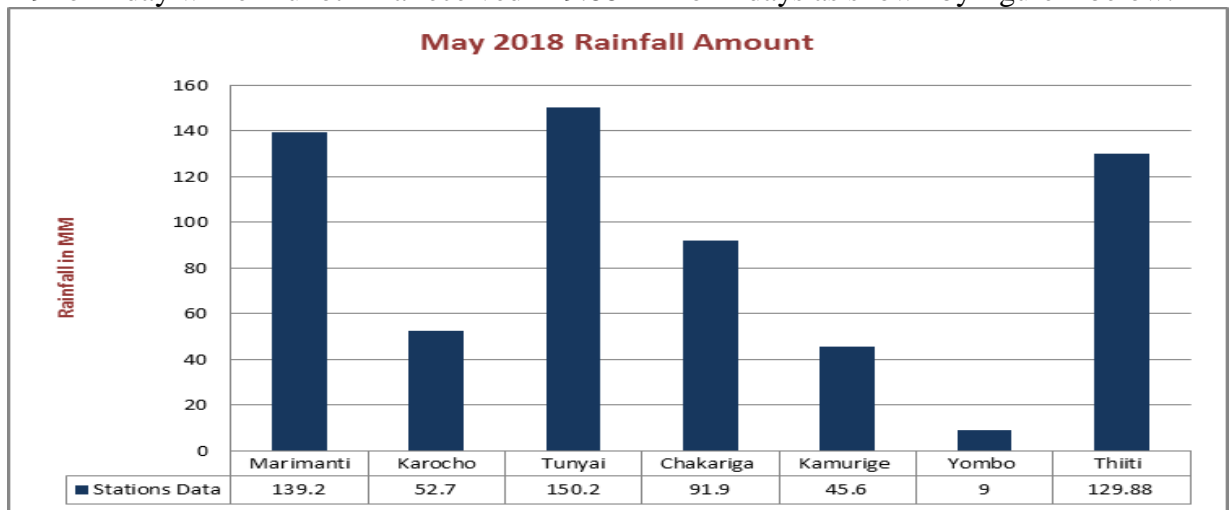


Figure 2: Spatial and Temporal Distribution

1.1.3 Dekadal Distribution of Rainfall

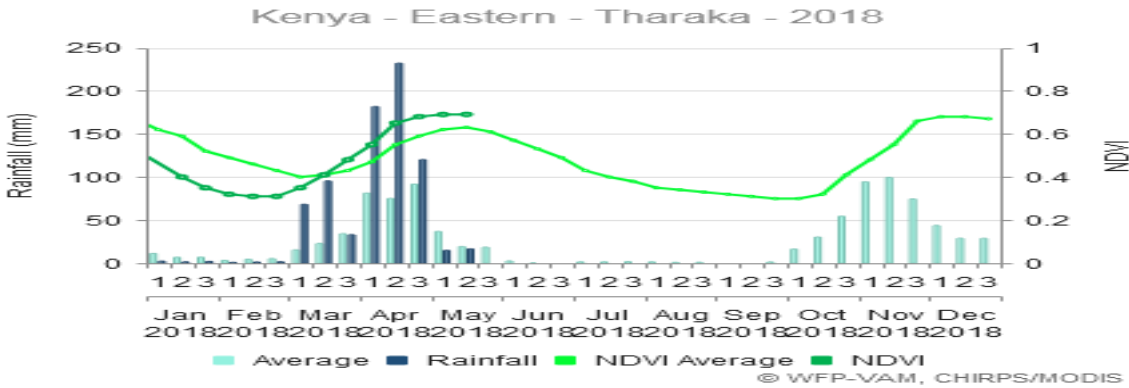


Figure 3: May 2018 Rainfall Distribution by Dekad

2.0 IMPACTS ON VEGETATION AND WATER

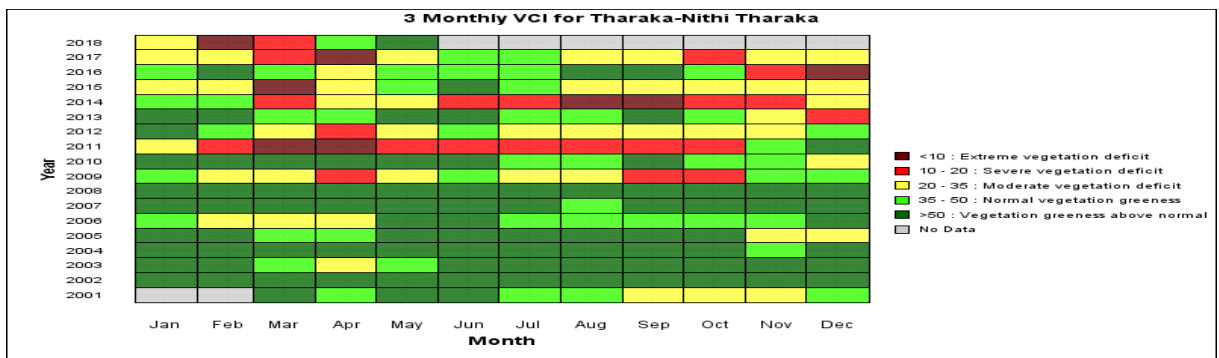
2.1 Vegetation Condition Index (VCI)

- The vegetation cover for Tharaka Nithi County in the month of May improved from that of the previous month and was normal compared to the long term average.
- The Vegetation Condition Index for Tharaka Nithi County (Tharaka) was 66.21 indicating a normal vegetation condition.

Table 1: May 2018 VCI (3M)

ADMINISTRATIVE UNITS		VCI as at 16 th April 2018	VCI as at 26 th May 2018
County	County/Sub County		
Tharaka Nithi	County	47.38	52.68
	Tharaka	45.23	66.21
	Chuka Igambang'ombe	49.39	35.89
	Maara	57.12	30.14

- The matrix below shows the vegetation condition for the month of May 2018 classified based on VCI thresholds.



The Figure 4: VCI Matrix for Tharaka Nithi (Tharaka)

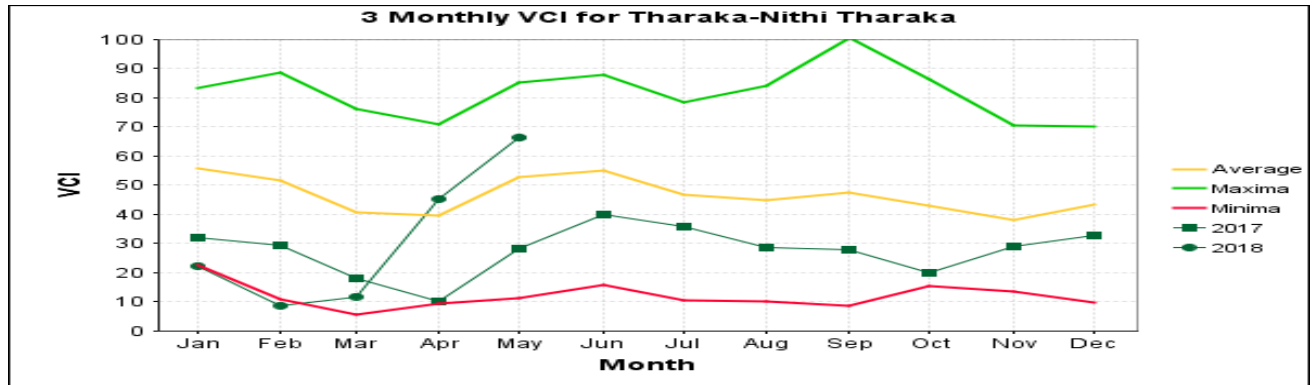


Figure 5: VCI Chart for Tharaka Nithi (Tharaka)

2.2 Natural Vegetation and Pasture Condition

Pasture Condition

- Pasture quantity and quality was good in April and it continued to improve in May. This improvement was attributed to the persistent rainfall which has been received in the county. The pasture condition was however, normal compared to the long term average.

Browse Condition

- Browse condition in terms of quantity and quality was good and the condition continued to improve. The browse condition for May was normal compared to the long term average.

2.3 Distance to Grazing Areas

- The average distance to grazing areas decreased from 1.5Km in April to 1.2Km in May. This was attributed to improvement in pasture and browse leading to shorter grazing distances. The longest return distance to grazing areas was recorded in the Mixed Farming Zone at 1.8Km, Marginal Mixed Farming livelihood zones at 1.6Km while in Rain fed Cropping, it was 1 Km.
- The distance to grazing areas was 48.27 percent lower than the long term average of 2.9 km for this time of the year.

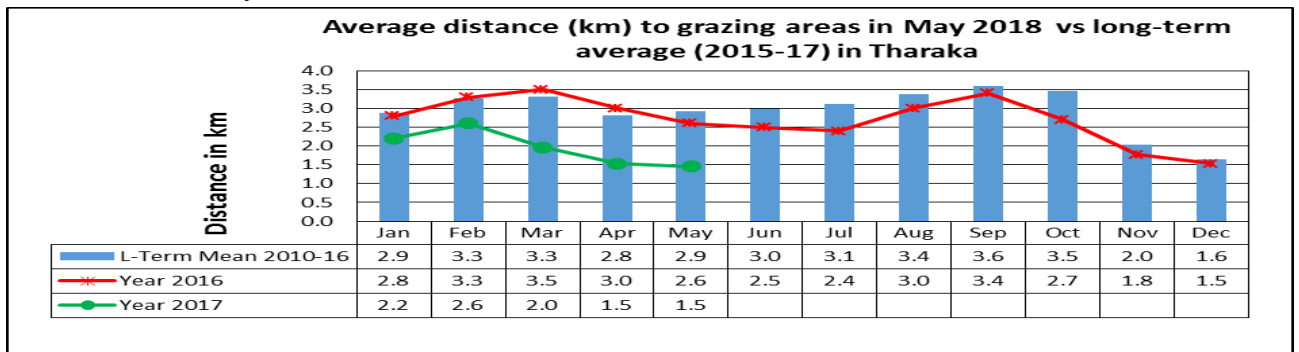


Figure 6: Grazing Distance for Livestock

2.2 Water Sources and Availability

2.2.1 Main Sources of Water

- The major sources of water for livestock and domestic use in Tharaka Nithi County were Traditional river wells, Rivers, Shallow Wells, Pans & Dams and Boreholes as shown by figure 9 below.

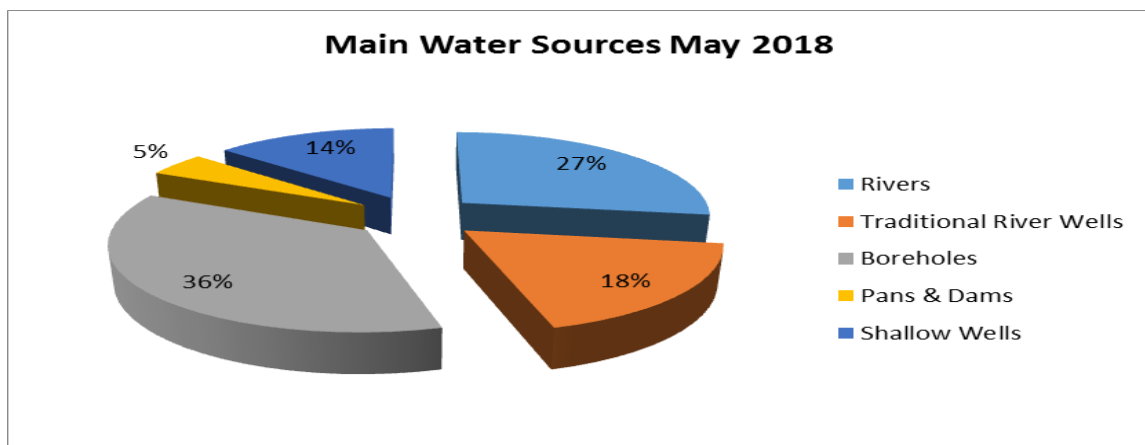


Figure 7: Main Water sources for May 2018

State of Water Sources

- The state of water sources for the month of May was normal an improvement from that of the previous month. This was due to the persistent rains which was been experienced across the County. The status of water sources was ranked at index 6 in reference to the scale below:

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- Livestock body condition for both cattle and shoats was good across all the livelihood zones. This was attributed to improvement in pasture and browse. For most livestock, current body condition can be rated at index 7 as per the threshold scale below.

Table 2: Livestock Body Condition categories

BODY CONDITIONS	SCORE	WARNING STAGE
Emaciated, little muscle left	1	Emergency
Very thin no fat, bones visible	2	
Thin fore ribs visible	3	Alert Worsening/Alarm
Borderline fore-ribs not visible. 12 th & 13 th ribs visible	4	Alert
Moderate. Neither fat nor thin	5	Normal/Alert
Good smooth appearance	6	
Very Good Smooth with fat over back and tail head	7	Normal
Fat, Blocky. Bone over back not visible	8	
Very Fat Tail buried in fat	9	

3.1.2 Livestock Diseases and Migration

- There were no cases of Livestock in migration reported in the month of May. This was attributed to plenty of pasture even in the neighbouring counties of Isiolo and Garissa.

3.1.3 Milk Production

- Milk production increased from an average of 1litre per household in April to an average of 1.2 litre per household in May.
- Marginal Mixed Farming livelihood zone had an average production of slightly above 1 litre while Mixed Farming and Rain Fed livelihood zone had an average milk production of less than a litre per household per day each.
- This was attributed improvement in browse and pasture condition. Milk production per household was 0.84 percent higher than the 3-year average of 1.19 litre.

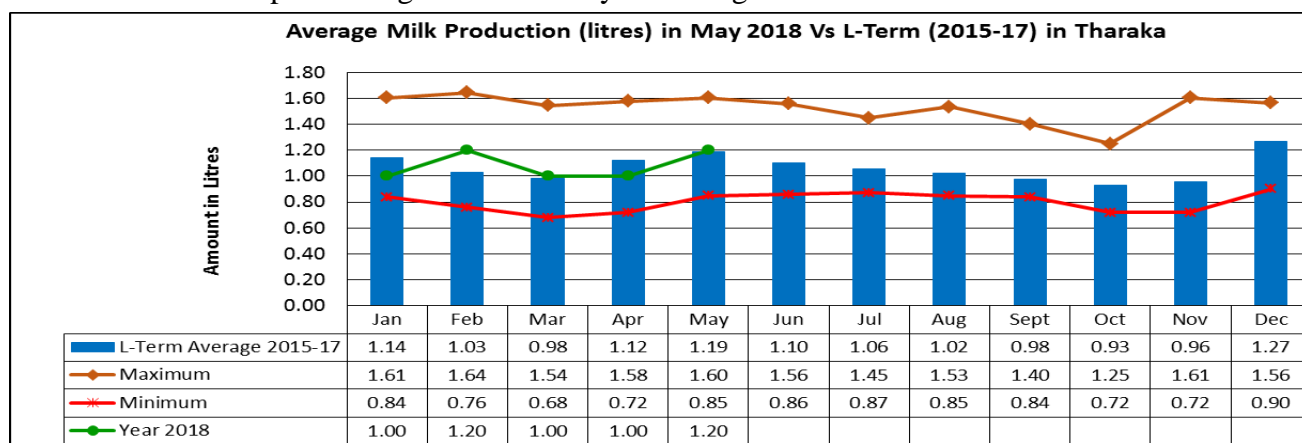


Figure 8: Milk Production Trend

3.2 Crop Production

3.2.1. Timeliness and Status of Crops

- Farming activities for the month under review was mainly harvesting and marketing of green grams, cow peas and pigeon peas. Sorghum, Millet and Maize are in their final stages of maturity.

3.2.2. Pests and Diseases

- Fall army worms were the major pests which were reported in the county during the month of May. This mainly occurred after the amount of rainfall reduced especially in the first and second week of May. There is need for mitigation measures to be put in place to avoid crop loses to pests in future.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- The average cattle price increased from Kshs. 21,875 recorded in the previous month to Kshs. 22,000 in the month of May. This was attributed to good body condition due to improvement in pasture.
- The Rain Fed Cropping livelihood had the highest average price of Ksh 24,000; Mixed Farming Livelihood Zone had the price of Ksh 23,000 while the Marginal Mixed Farming Zone had the price of Kshs 20,500.
- The current price was 25.13 percent higher than the three-year average of Kshs 17,582.

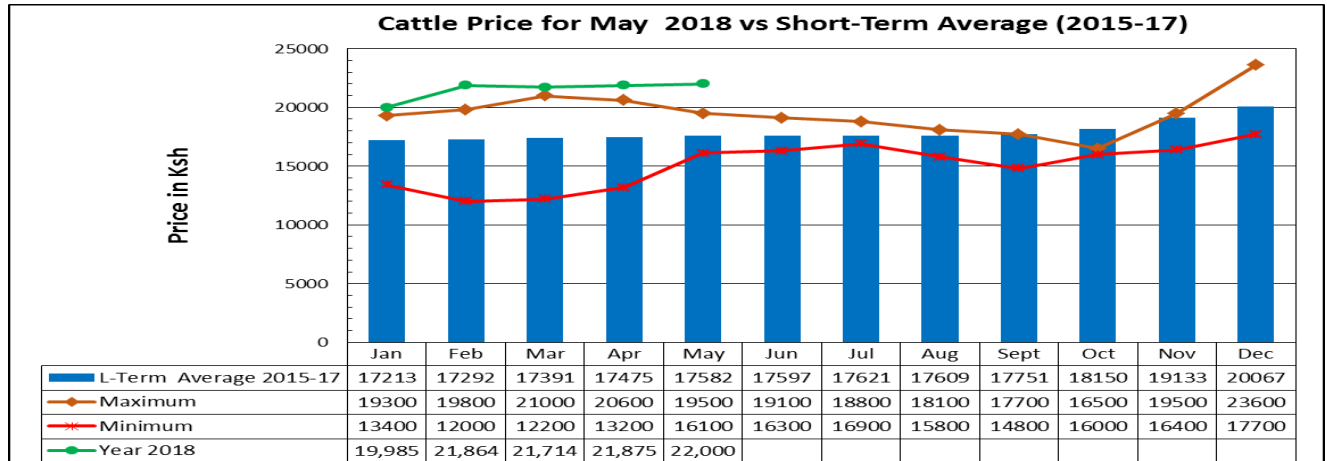


Figure 9: Cattle Price Trend

4.1.2 Goat Prices

- The average goat price increased from Ksh. 4,471 in March to Ksh. 4,542 in the month of May. Increased price could be attributed to fair body condition due to improvement in browse.
- The Marginal Mixed Farming Livelihood Zone had the highest price of Ksh. 4,750 while Rain Fed Cropping Livelihood Zone and Mixed Farming Zone recorded an average goat's price of Ksh. 4,333 each.
- The average goat price was 50 percent higher than the three-year average of Ksh 3,026.

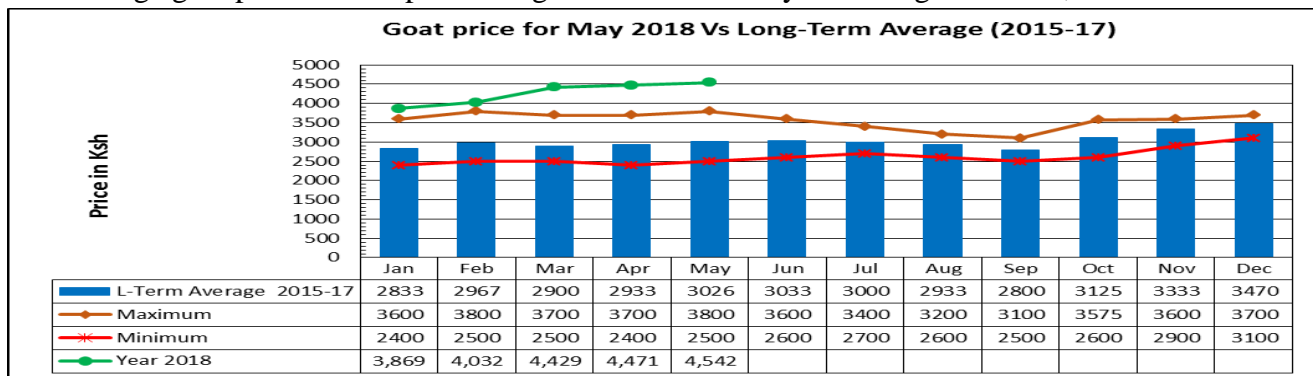


Figure 10: Goat Price Trend

4.2 Price of Cereals and Other Food Products

4.2.1 Maize Prices

- The average market price of a kilogram of maize decreased from Kshs. 33 per Kg in April to Kshs. 31 per Kg in May. This decrease of maize price was attributed to increased supplies of maize from outside the county and also use of substitute crops for food such as pigeon peas, cow peas, and green grams where harvesting has started within the county.

- The highest maize price was recorded in the Rain Fed Cropping Zone at a price of Kshs 33 per kg while the Marginal Mixed Farming Zone and Mixed Farming Zone recorded a price of Kshs 30 per Kilogram.
- The average maize price was 20.51 percent lower than the three-year average of Ksh 39.

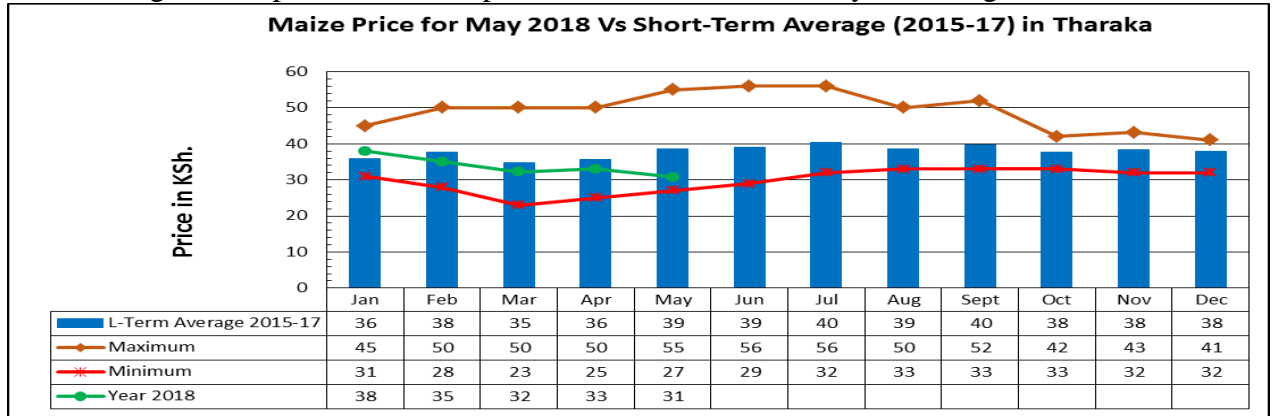


Figure 11: Maize Price Trend

4.2.2 Millet Price at Market Level

- The average market price of millet decreased from Kshs 47 per Kg in April to Kshs 34 per Kg in May due to onset of the long rain harvest coupled with few numbers of buyers leading to decrease in millet price.
- The Mixed Farming and Marginal Mixed Farming livelihood Zone recorded the highest market prices of Kshs 35/Kg, while Rain Fed Livelihood Zone recorded the least price of Kshs 30/Kg.
- The millet price was 24 percent lower than the long-term average price of Kshs.45 per Kg for the month of May.

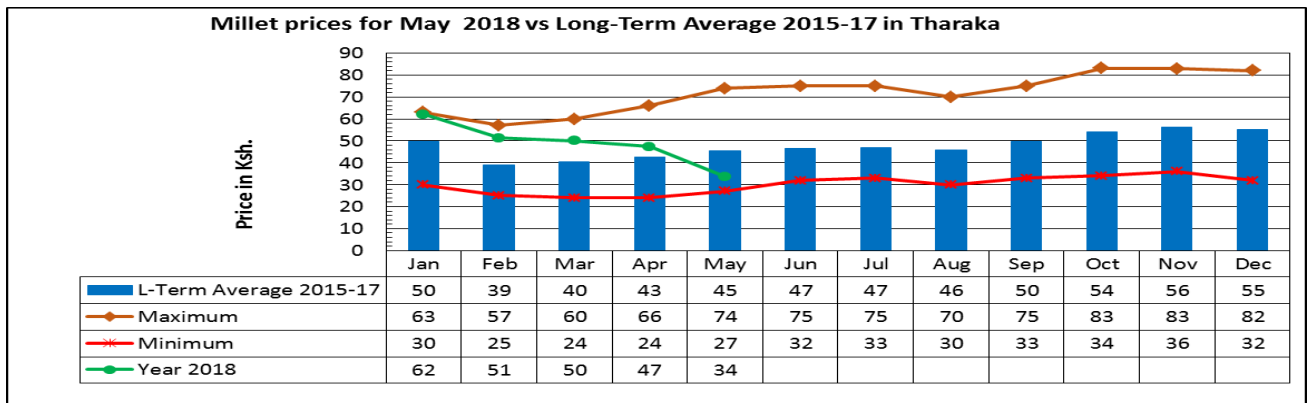


Figure 12 : Millet Price Trend

4.2.3 Terms of Trade (ToT)

- The Terms of Trade increased from 135 in the previous month to 147 in May due to an increase in goat price and a decrease in goat price.
- The highest ratio was recorded in the Marginal Mixed Farming Zone at 158.33; followed by Mixed Farming Livelihood Zone at 144.43 while Rain Fed Cropping Livelihood Zone had a ToT of 131.30.
- The ToT for the period under review was 1.13 percent higher than the three year average value of 69 during the same period.

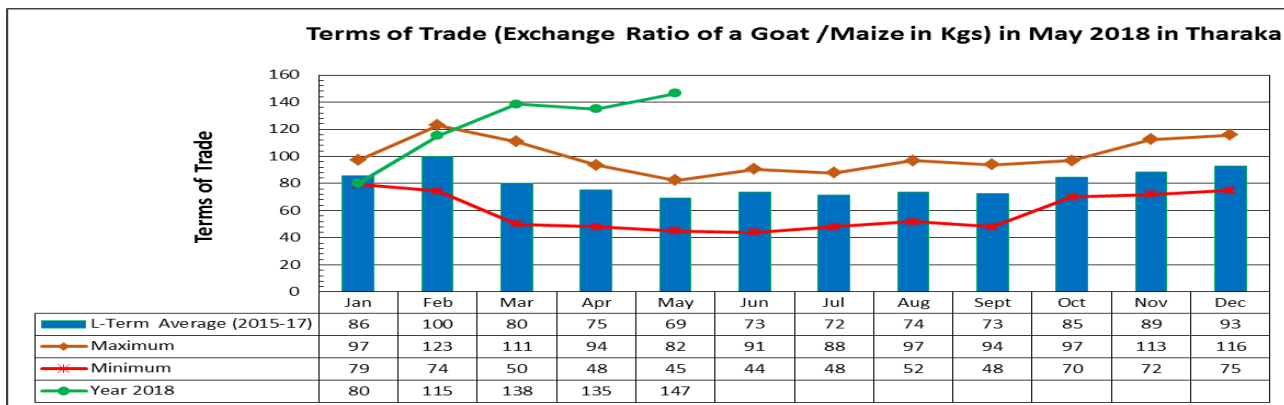


Figure 13: Term of Trade

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1.1 Milk Consumption

- The average milk consumption per household in the month of May was unchanged from that of the previous month. Milk consumption still remains generally low across all the livelihood zones. The average milk consumed was 11.5 percent lower than the 3-year average of 1.13 litre per household per day.
- However, despite the low milk consumption, the nutritional status of children and adult improved due to the onset of the harvesting season hence increased use of supplement food such as millet porridge, green grams, pigeon peas and cow peas among others.

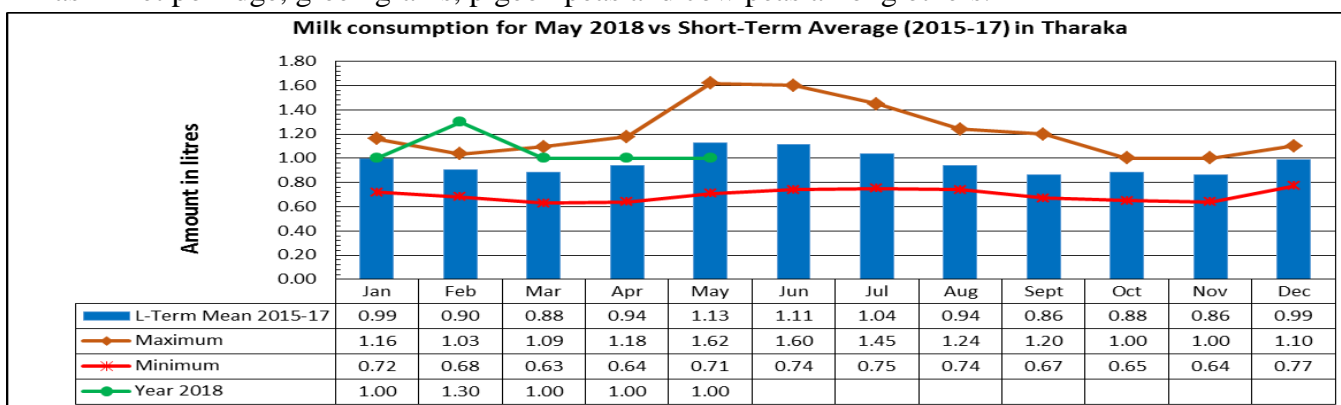


Figure 14: Milk Consumption Graph

5.1.2 Food Consumption Score

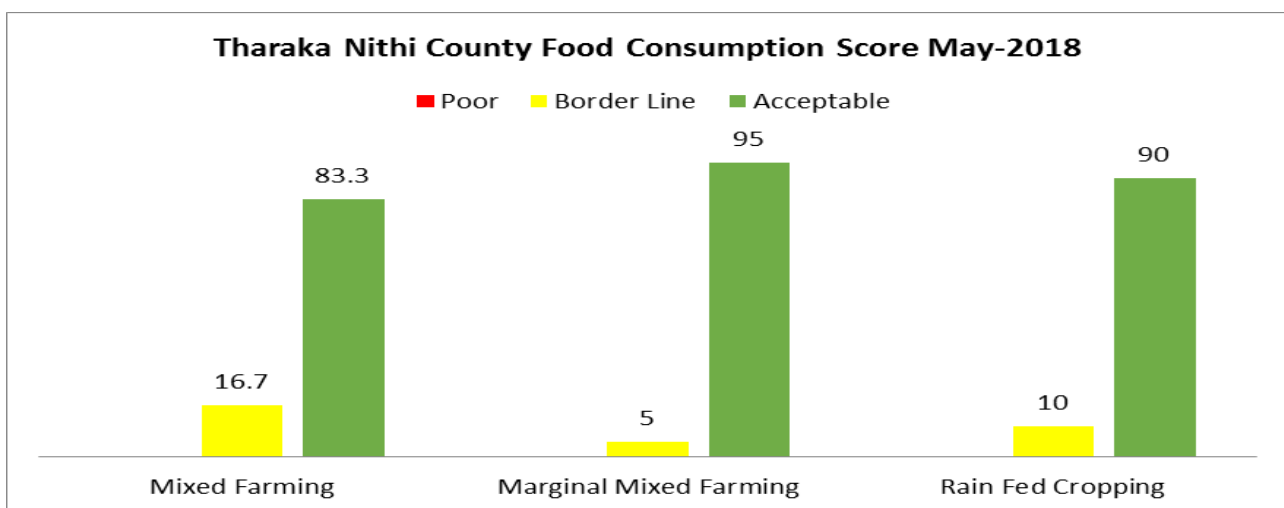


Figure 15: Food Consumption Score Chart

- Proportion of food insecure households with poor and borderline Food Consumption Score (FCS) decreased from 17.76% in April to 10.57% in May. This could be attributed to decrease in food prices hence increasing household access to food. The majority of Food Stressed Households were in the Mixed Farming Livelihood Zone at 16.7%, followed by Rain Fed Livelihood Zone at 10% while the majority of household in the Marginal Mixed Farming Livelihood Zone were food secure.

Table 3: Average Food Consumption Score

Period	Acceptable (%)	Borderline (%)	Poor (%)	Food Insecure HH (%)
December,2017	72.47	26.47	1.067	27.537
January, 2018	66.1	27.23	6.53	33.76
February,2018	60.97	36.8	2.17	38.97
March	70.6	23.03	6.4	29.43
April	82.23	16.67	1.1	17.76
May	89.43	10.57	0	10.57

- The poor food consumption score implies household are not consuming staples and vegetables every day and rarely consuming protein rich food, borderline imply household consuming staple, vegetable every day accompanied by oil and pulse a few times in a week while the acceptable imply households consuming staples, vegetables every day, and frequently accompanied by pulses.

5.1.3 Availability of Water for Household

- Average Household water distance decreased from 1.5Km in the previous month at 1.2 Km in the month of May. This was attributed to improved recharge level of surface and underground water due to persistent rainfall was good. The Marginal Mixed Farming livelihood Zone recorded an average distance of 1.5 Km, the Mixed Farming Livelihood Zone 1.4 Km while Rain Fed zone had a distance of 0.6Km per household.
 - The distance of household access to water was lower than the long-term average of 2.6 Km for the month of May.

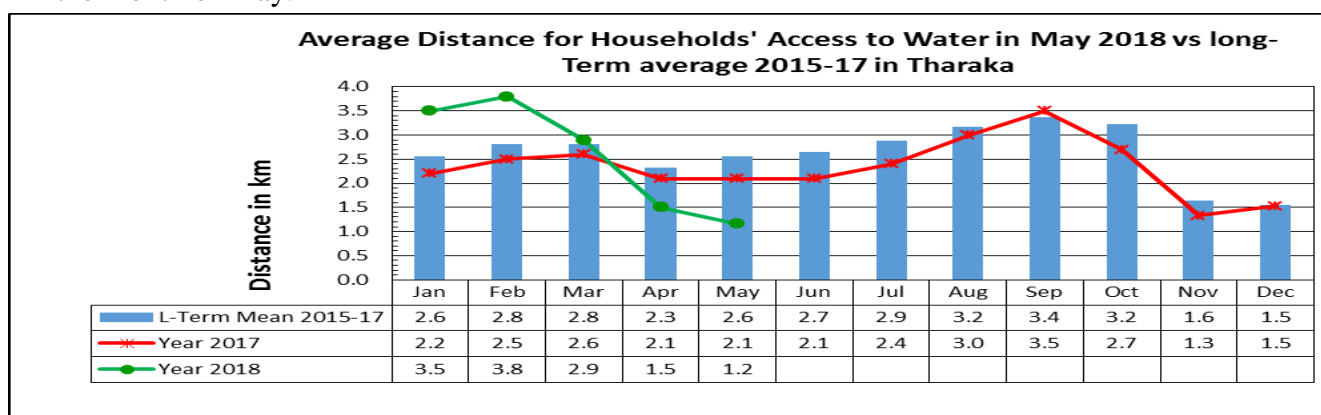


Figure 16 : Household Water Distance Graph

5.2 UTILISATION INDICATORS

5.2. Health and Nutrition Status

5.2.1 MUAC

- The proportion of children between 6 to 59 months at risk of malnutrition whose MUAC measurement was below 135 mm decreased from 2.1 percent in April to 1.6 percent in May. The decrease in MUAC percentage was attributed to improved food security at household level.
- The proportion of children at risk of malnutrition whose MUAC measurement was below 135mm was below the long-term average of 7.5 percent.

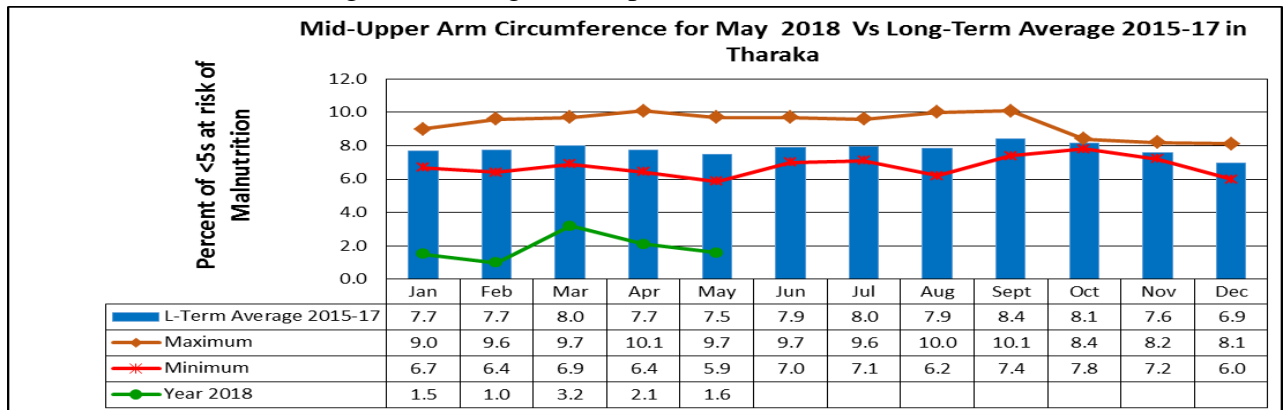


Figure 17: MUAC Graphs

5.2.2 Health

- The prevalence of most common diseases for the general population in Tharaka Nithi County include diseases of the respiratory system, malaria, skin disease, urinary tract infections and rheumatism while those mainly affecting children under five years include: diseases of the respiratory system, pneumonia, malaria, intestinal worms and skin diseases.

5.2.3 Coping Strategy Index

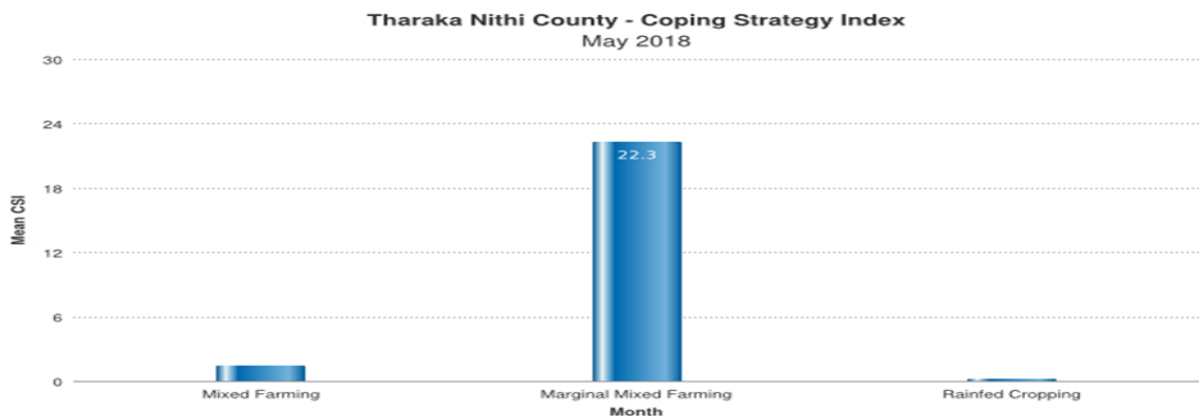


Figure 18: CSI Chart

- The Coping Strategy Index (CSI) decreased from 8.07 in April to 8 in the month of May which indicated reduction in household stress due to lack of food or money to buy food during the month. CSI was also within the normal range.
- The highest CSI was recorded in the Marginal Mixed Farming zone at 22.3, followed by 1.5 for Mixed Farming Livelihood Zone while Rain Fed had the lowest CSI of 0.2

- The most commonly employed coping strategy mechanisms during the month of May was: - Obtaining of goods on credit, Reliance on less preferred and less expensive food, reduction of the number of meals and reduction in portion or size of meals.
- Some households employed livelihood based coping strategies such as sale of some household assets, spending of savings as well as borrowing of short term loans.

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Food Interventions

- 20 bags of 90 Kg beans per location in Tharaka North Sub-County.
- 40bags of 90Kg beans for schools in Tharaka North Sub-County.
- 3cartons of cooking oil per location in Tharaka North Sub-County.
- 10 bales of fortified Healthy food in Hospitals of Tharaka North sub-County

6.2 Non-Food Interventions

Table 4: Non-food interventions

Sub	Intervention	Location	No. of beneficiaries	Implementers	Cost	Time Frame
Agriculture						
Tharaka North and South	Cereals Enhancement program	all	9000	MOA/KCEP	40M	December 2019
	Cushioning of farmers from exploitation by Traders through Purchase of Green grams.	all	Farmers	County Government	-	June-July 2018
	Ward level Drought Contingency Planning	5 Wards: Chakariga, Marimanti,Nkodi ,Mukothima and Gatunga	Residents and Stakeholders	NDMA,County Government	1Million	June 2018
	Review of County Drought Contingency Planning	all		NDMA,County Government	0.5Million	June-July 2018
	Promotion of conservation agriculture	all	3400 Famers	MOA/FAO	20M	December 2019
	ISPP	all	4000	FAO	20M	December 2019
Livestock						
Tharaka South and North	[Rural livelihood]Improving local indigenous chicken	Mukothima and Gatunga	250	Upper-Tana ,Caritas of Meru and Livestock Production Office	2.5 m	From August 2017 continuous
	Harvesting and storage of strategy livestock Feed.	Tharaka south	Livestock Farmers	MoL		June-July
	(Rural livelihood) Dairy farming – goats and cow	Marimanti, Nkondi Chiakariga, Gatunga and Mukothima	210	Upper-Tana ,Caritas of Meru and Livestock Production Office	Kshs. 2.5M	From August 2017 (continuous)
Water						
Tharaka North	Keiranthi Earth Dam Project	Kathanga Chini	1,660 HH 6,000 Goats 2,000 cattle 200 donkeys	NDMA	9.6m	From Nov 2017 to March 2018
Tharaka	Upgrading of 15 water	Gatunga-3no.	Gatunga-700,	County	5 Million	3 months

South and North	facilities, construction of elevated tower for storage tanks and solar panels and a distribution line	Marimanti-2 no., Chiakariga-3 no, Igambang'ombe - 3, Mukothima-2no. Nkondi - 2no	Mari- 450 Chiaka- 650 Igamba- 800 Mukothima-450 Nkondi -400	Government		
Tharaka South	Irrigation scheme	6 sites in Nkondi Ward, 1 site in Chiakariga and 2 sites Marimanti	7,200 Beneficiaries	National Government and County Government and UTANRMP	450 Million	24 Months
Health and Nutrition						
Tharaka South and North	High impact nutrition programme	All health facilities	All children under 5 years, pregnant and lactation mothers.	MOH	11m	Continuous
	Management of Acute Malnutrition (IMAM)	Health facilities		MOH and NHP	2.3m	Continuous

7.0 Food Security Prognosis

- Food Stocks at households' level is normal and has improved from that of the month due to the onset of the harvesting season. Crop yield was better hence long rain harvest is expected to be higher than the long term average. The stocks are likely to increase beginning June till the end of the harvesting season in the month of July.
- Markets operations are likely to improve in the next one month hence improving in the household economy. Commodity prices are likely to drop while livestock prices are most likely to improve due improved livestock body condition caused by sufficient pasture and supplementary feed for livestock.
- With the continuity of the long rains, status of water sources is normal with household and Livestock watering distance being within normal ranges and the situation is likely to improve for the next one month.
- Browse and pasture condition is good and the condition is improving due to the ongoing long rains which will likely result to shorter grazing distance, increased milk production; improved livestock body condition and fair livestock prices for the next one month.
- Terms of Trade was still favourable to Livestock farmers compared to crop farmers due to higher livestock prices compared to the long term average but this is likely to change one month.
- Households in the County are likely to improve from stressed phase (IPC Phase 2) in the next 1 month.

8.0 Recommendations

- Capacity build farmers on post-harvest management to avoid contamination of cereal and post-harvest losses.
- Promote Rain Water Harvesting during this long rain season in Institutions such as schools, technical institutes, churches and schools.
- Upscale establishment of Farm ponds to promote rain water harvesting for small scale subsistence irrigation farming by NDMA through the Food for Asset (FFA) Project.
- Provision of water treatment chemicals at household level and at piped water reservoirs to minimise the risk of water related diseases.
- Promote the establishment and management of livestock fodder to be used during dry season.
- Fencing and inlet preparation of four household water pans which were completed in December at Nthwa in Kamwathu by International Aid Services.
- Sensitisation and promotion of water treatment methods to avoid infection and spread of water related diseases.
- Distribution of mosquito nets and spraying of mosquitoes to reduce spread of malaria.
- Need to promote rain water harvesting through roof catchment to be used for domestic purposes and through farm ponds to be used for farming during the dry season.