

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



A Vision 2030 Flagship Project



JUNE 2018 EW Phase



Drought Situation & EW Phase Classification

Biophysical Indicators

- The average amount of rainfall received in the month of June was normal compared to the long term average.
- The water recharge level in rivers was normal compared to the long term average. Vegetation cover across the County was normal with an improving trend compared to the long term average due to high rainfall amount in the previous 3 months.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- The condition of pasture and browse was normal but it reduced slightly from that of the previous month. Livestock body condition for cattle and goats improved and it remained good due to presence of a variety of animal feeds especially from crop residue.
- Food Stock at households' level improved due to the ongoing long rain harvesting.

Access Indicators

- Livestock prices increased due to improved body condition of livestock while commodity prices reduced due to high supplies to the market from the ongoing harvest. Grazing and household water distance increased from that of the previous month due to reduction in rainfall amount leading to less pasture compared to the previous months.

- 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 June 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	>80	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	1.5 Litre	>1.10Litre
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade	149	<80
Milk Consumption	1.7 Litres	>1.11Litre
Water for Households	Normal	Normal
Utilization indicators	Value	Range/Value
MUAC	2.7	<7.9
Coping Strategy Index (CSI)	1.5	<52
Food Consumption (Marginal Mixed Farming)	100 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 	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 June was normal compared to the long-term average. An average amount of 9.27 mm of rainfall was received in the county for the month of June.
- With reference to the long-term average, rainfall performance for June was above the long term average as shown in the graph below.

1.1.1 Rainfall Station data

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

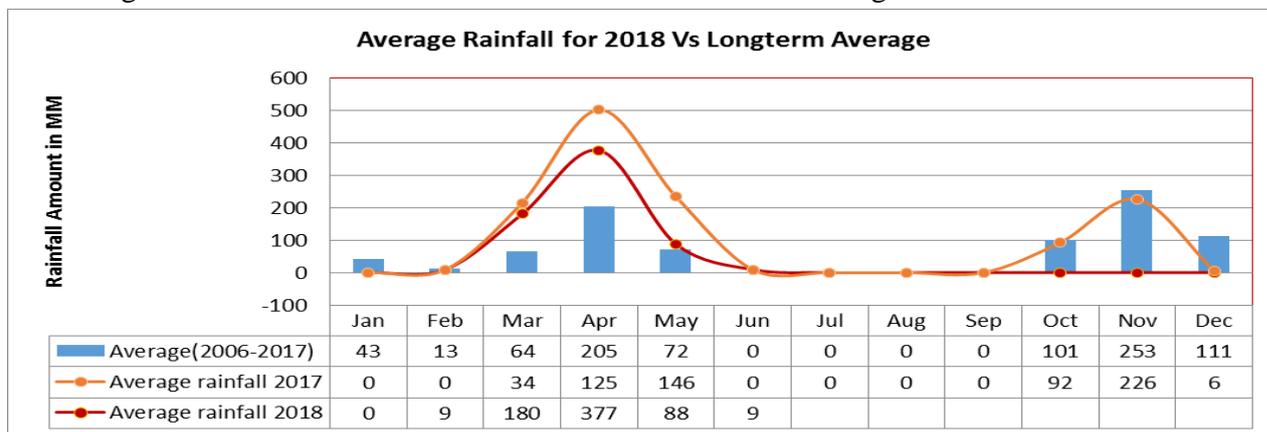


Figure 1: Average Rainfall for June 2018

1.1.2 Spatial and Temporal Distribution

- Rainfall was unevenly distributed across the county. Karocho received 42.1mm for 9days, Tunyai received 12.9mm for 3days, Marimanti received 9.9mm for 3 days while no rainfall was recorded in the rest of the stations as shown by figure 2 below.

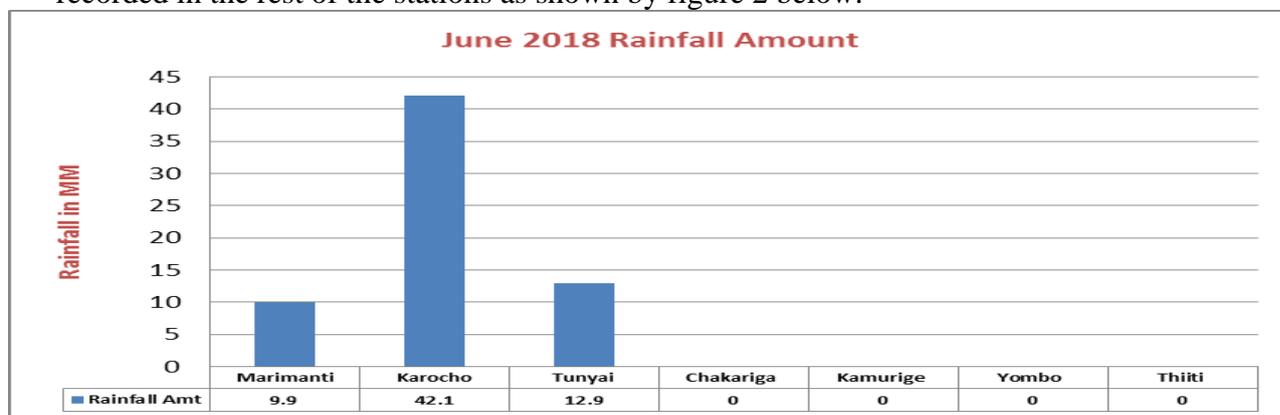


Figure 2: Spatial and Temporal Distribution

1.1.3 Dekadal Distribution of Rainfall

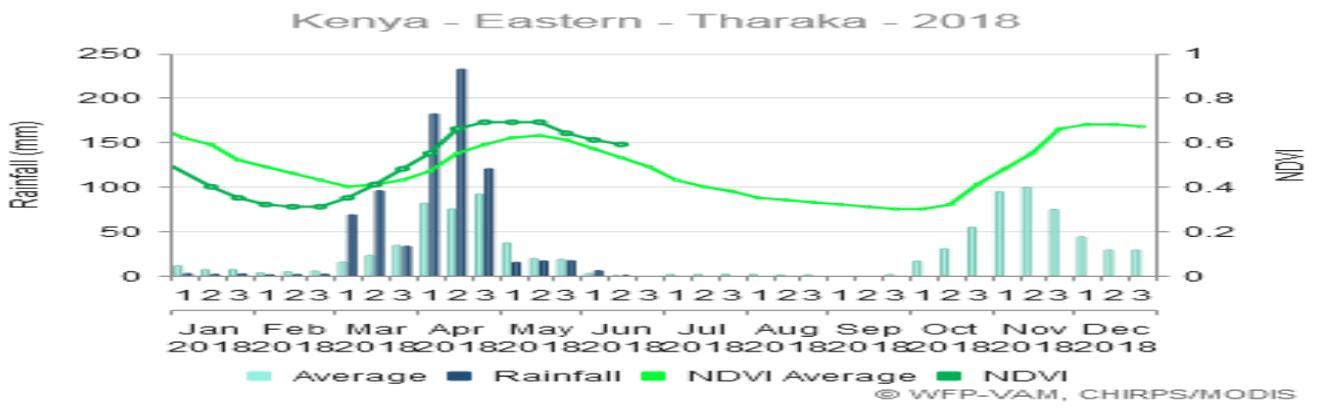


Figure 3: June 2018 Rainfall Distribution by Dekad

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition Index (VCI)

- The vegetation cover for Tharaka Nithi County in the month of June 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 69.5 indicating a normal vegetation condition.

Table 1: June 2018 VCI (3M)

ADMINISTRATIVE UNITS		VCI as at 26 th May 2018	VCI as at 26 th June 2018
County	County/Sub County		
Tharaka Nithi	County	52.68	65
	Tharaka	66.21	69.5
	Chuka Igambang'ombe	35.89	59.18
	Maara	30.14	57.99

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

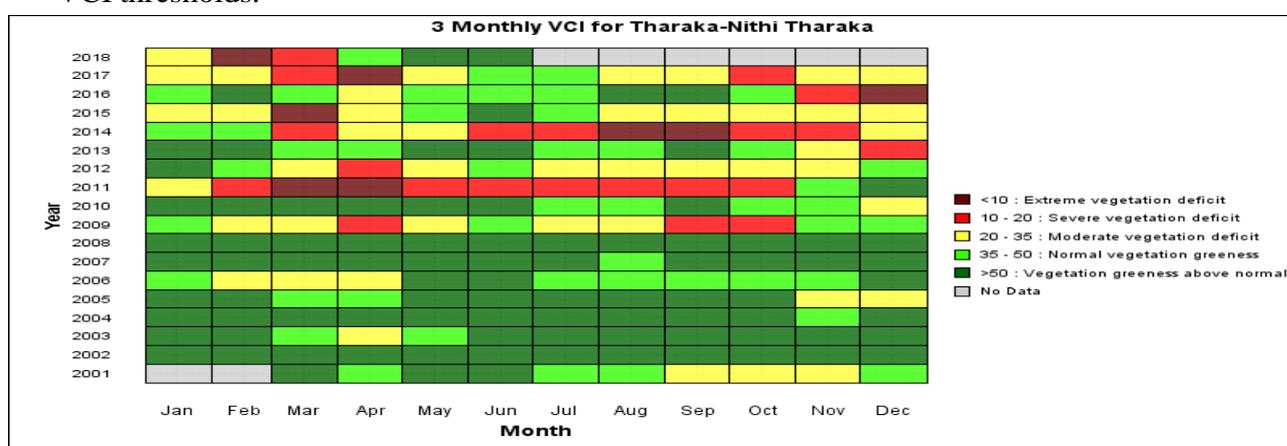


Figure 4: VCI Matrix for Tharaka Nithi (Tharaka)

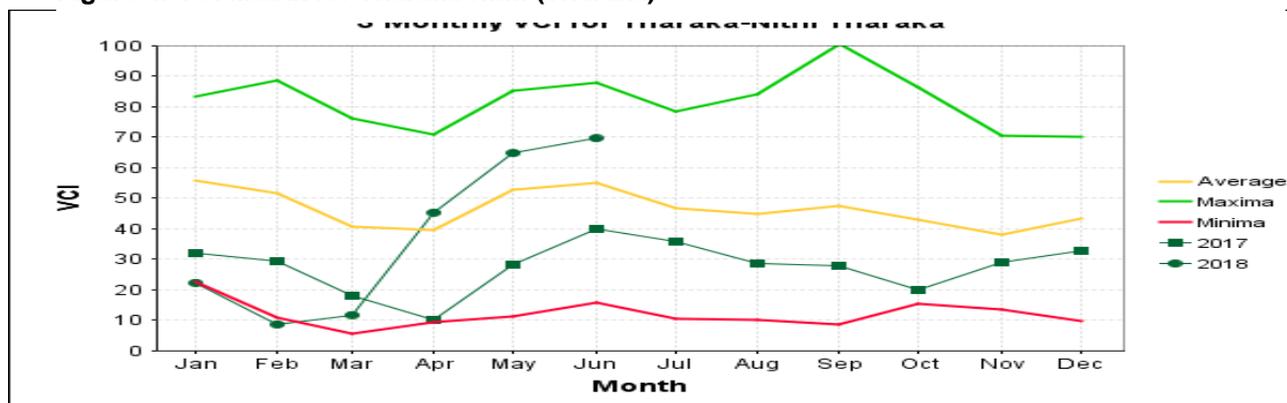


Figure 5: VCI Chart for Tharaka Nithi (Tharaka)

2.2 Natural Vegetation and Pasture Condition

Pasture Condition

- Pasture quantity and quality was good in June although it slightly reduced from that of the previous month due to reduced rainfall. 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 from that of the previous month. The browse condition for June was normal compared to the long term average.

2.3 Distance to Grazing Areas

- The average distance to grazing areas increased from 1.5Km in May to 1.7Km in June. The increase in distance was attributed to a slight reduction in pasture and browse leading to longer grazing distances.
- The grazing distance for June was however lower than that of the previous year hence within the normal range. The longest return distance to grazing areas was recorded in the Marginal Mixed Farming Zone at 2.2Km, Mixed Farming livelihood zones at 2.1Km while in Rain fed Cropping, it was 1 Km.
- The distance to grazing areas was 43.33 percent lower than the long term average of 3.0 km for this time of the year.

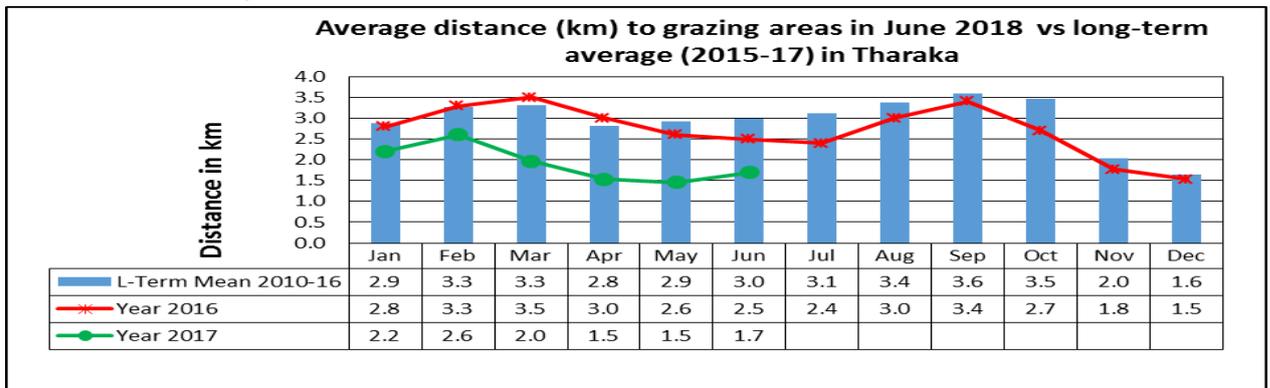


Figure 6: Grazing Distance for Livestock

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, springs and Boreholes as shown by figure 9 below.

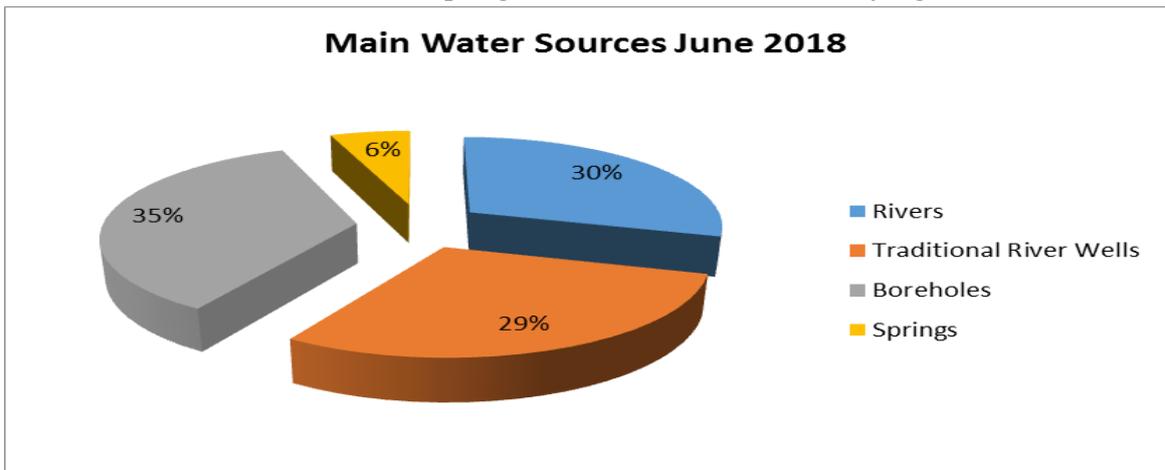


Figure 7: Main Water sources for June 2018

State of Water Sources

- The state of water sources for the month of June was normal and stable as 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 5 in reference to the scale below:

Table 2: State of Water Sources

INDEX	STATE OF WATER	DESCRIPTION
1	EMERGENCY.SITUATION	All main water sources have dried up; only few boreholes still yielding significant amounts
2	STRONGLY INADEQUATE	Surface water sources have dried up while the underground water sources are yielding very little amounts of water. Breakages of boreholes contribute to worsen the situation. Acute water shortage in many areas within the livelihood
3	INADEQUATE	Surface water sources have dried up while the underground water sources are yielding modest amounts of water. Concentration of livestock around few water points contribute to spread communicable diseases and to degradation of rangeland
4	DECLINING	The water availability is below normal for the period, but showing declining trends.
5	NORMAL	The water availability is normal for the period
6	GOOD	The water availability is above normal for the period

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 good 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 June. This was attributed to normal pasture and browse even in the neighbouring counties of Isiolo and Garissa.

3.1.3 Milk Production

- Milk production increased from an average of 1.2litre per household per day in May to an average of 1.5litre per household per day in June.
- 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 good browse and pasture condition. Milk production per household was 36.36 percent higher than the 3-year average of 1.10 litre.

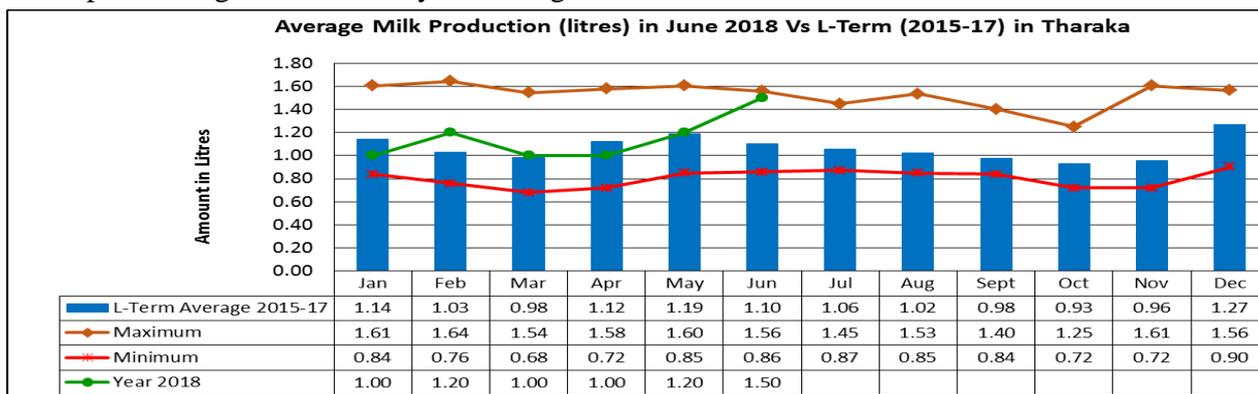


Figure 8: Milk Production Trend

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 losses to pests in future.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- The average cattle price increased from Kshs. 22,000 recorded in the previous month to Kshs. 23,325 in the month of June. This was attributed to good body condition due to improvement in pasture.
- The Mixed Farming Livelihood Zone had the highest average price of Ksh 34,500; Marginal Mixed Farming Livelihood Zone had the price of Ksh 21,000 while the Rain Fed Cropping Zone had the price of Kshs 16,800.
- The current price was 32.55 percent higher than the three-year average of Kshs 17,597.

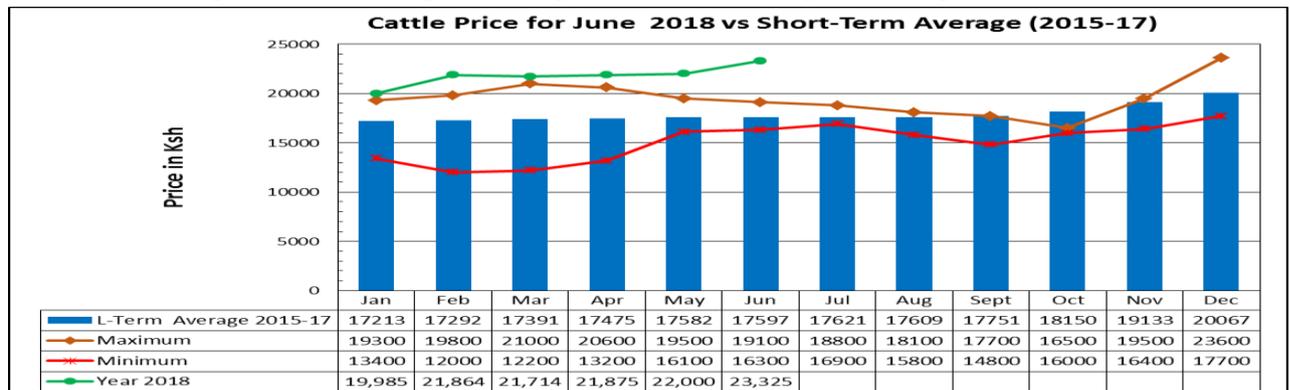


Figure 9: Cattle Price Trend

4.1.2 Goat Prices

- The average goat price increased from Ksh. 4,542 in May to Ksh. 4,625 in the month of June. 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. 4,850, Rain Fed Cropping Livelihood Zone the price was Kshs 4,533 while the Mixed Farming Zone recorded an average goat's price of Ksh. 4,267.
- The average goat price was 52.49 percent higher than the three-year average of Ksh 3,033.

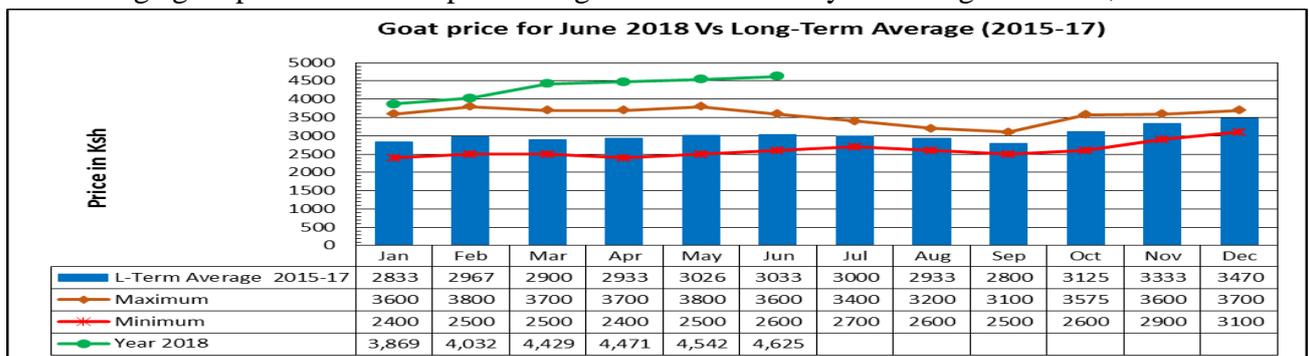


Figure 10: Goat Price Trend

4.2 Price of Cereals and Other Food Products

4.2.1 Maize Prices

- The average market price of a kilogram of maize in the month of June remained unchanged from that of the previous month at Kshs. 31 per Kg. This 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 due to the ongoing harvesting.
- The highest maize price was recorded in the Rain Fed Cropping Zone at a price of Kshs 35 per kg, Mixed Farming Livelihood Zone was Kshs. 31 while the Marginal Mixed Farming Zone recorded the lowest price of Kshs 30 per Kilogram.
- The average maize price was 20.51 percent lower than the three-year average of Ksh 39.

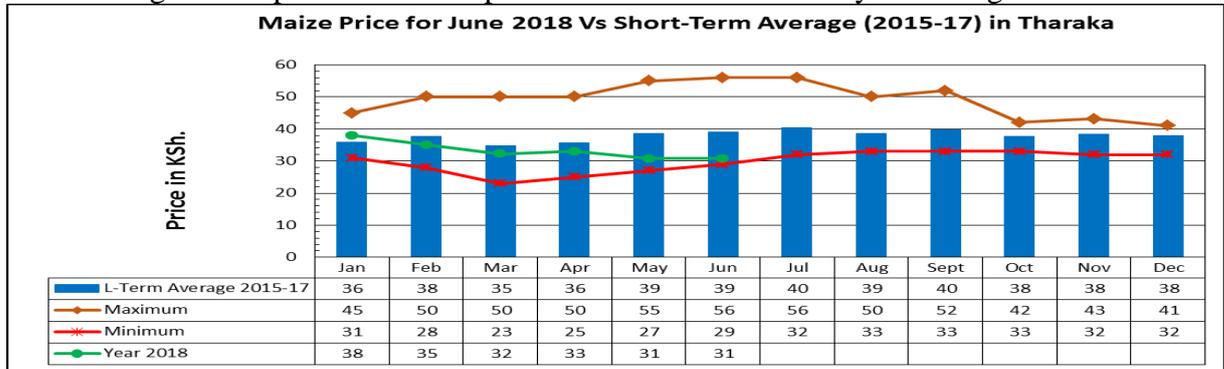


Figure 11: Maize Price Trend

4.2.2 Millet Price at Market Level

- The average market price of millet decreased from Kshs 34 per Kg in May to Kshs 31 per Kg in June due to the ongoing long rain harvest coupled with few numbers of buyers leading to decrease in millet price.
- The Mixed Farming Livelihood Zone recorded the highest market prices of Kshs 34/Kg, while the Marginal Mixed Farming and Rain Fed Livelihood Zone recorded the least price of Kshs 30/Kg each.
- The millet price was 34 percent lower than the long-term average price of Kshs.49 per Kg for the month of June.

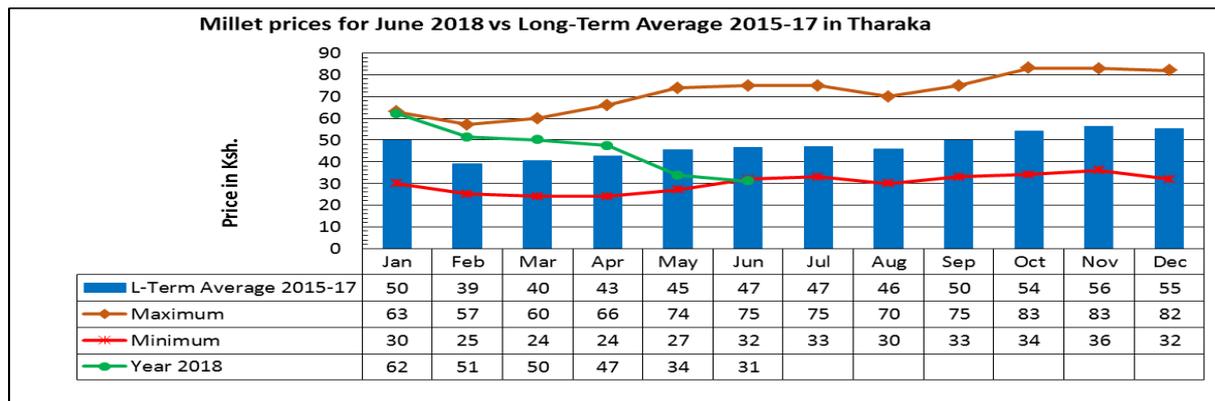


Figure 12 : Millet Price Trend

4.2.3 Terms of Trade (ToT)

- The Terms of Trade increased from 135 in the previous month to 149 in June due to an increase in goat price and a decrease in maize price.
- The highest ratio was recorded in the Marginal Mixed Farming Zone at 61.67; followed by Mixed Farming Livelihood Zone at 137.65 while Rain Fed Cropping Livelihood Zone had a ToT of 129.51.

- The ToT for the period under review was 104.11 percent higher than the three year average value of 73 during the same period.

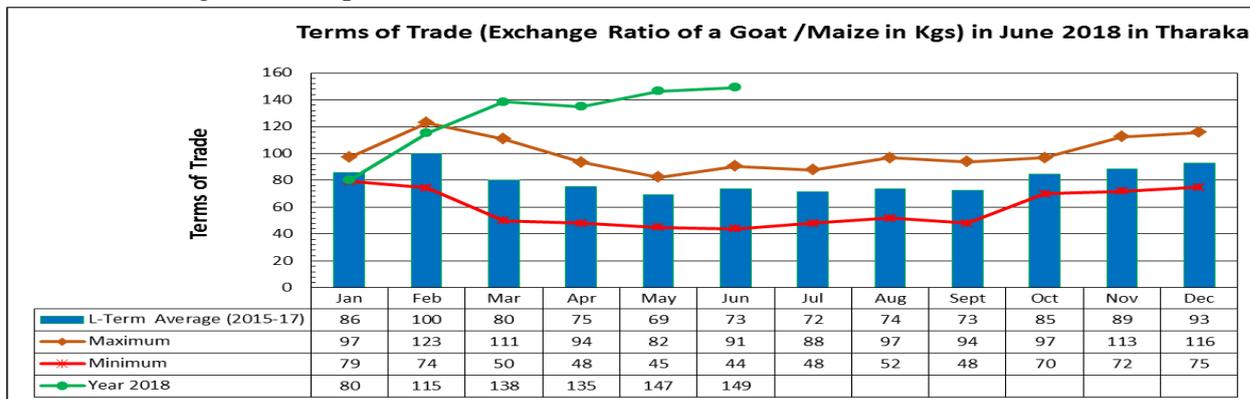


Figure 13: Term of Trade

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1.1 Milk Consumption

- The average milk consumption per household increased from 1litre in the month of May to 1.7 litre in the month of June. This was attributed to increase in pasture and browse. Milk consumption still remains generally low across all the livelihood zones.
- The average milk consumed was 53.15 percent higher than the 3-year average of 1.11 litre per household per day.
- However, despite the increase in milk consumption, the nutritional status of children below the 5yrs of age decreased slightly but still remained within the normal range.

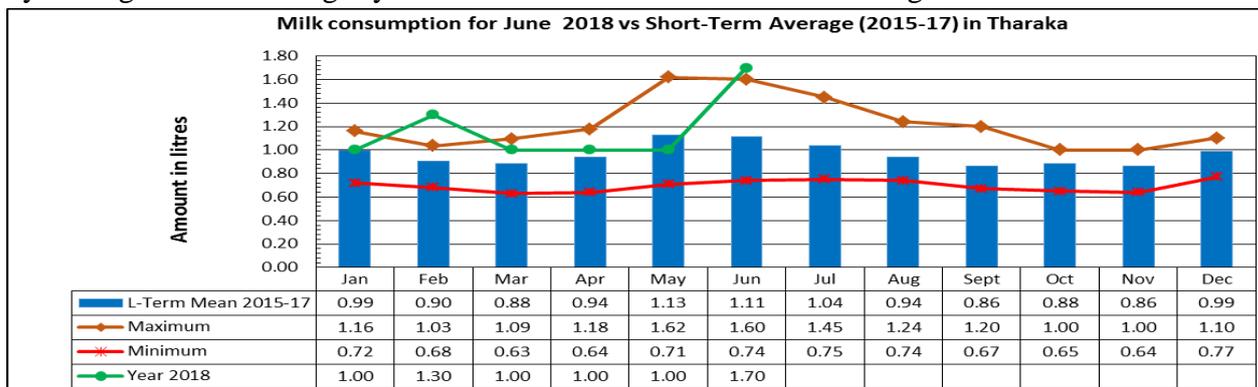


Figure 14: Milk Consumption Graph

5.1.2 Food Consumption Score

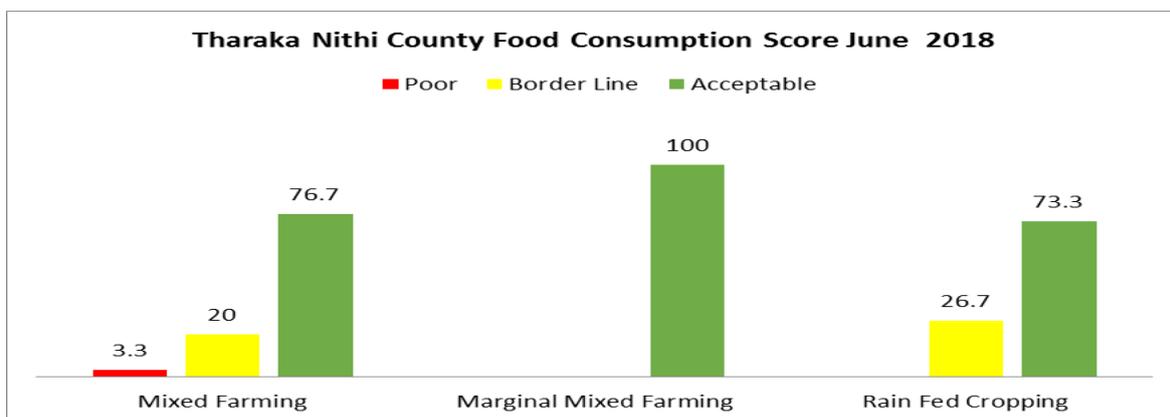


Figure 15: Food Consumption Score Chart

- Proportion of food insecure households with poor and borderline Food Consumption Score (FCS) increased slightly from 10.57% in May to 16.67% in June. This could be attributed to preferences of some food and eating habits since there was an increase in household access to food. A higher number of Food Stressed Households were in the Rain Fed Cropping Livelihood Zone at 26.7%, followed by Mixed Farming Livelihood Zone at 23.3% 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
June	83.33	15.56	1.1	16.67

- 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 increased from 1.2Km in the month of May to 1.4 Km in the month of June. This was attributed to reduction in rainfall amount. The Marginal Mixed Farming Livelihood Zone recorded an average distance of 2 Km, the Mixed Farming Livelihood Zone 1.5Km 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 2.7 Km for the month of June.

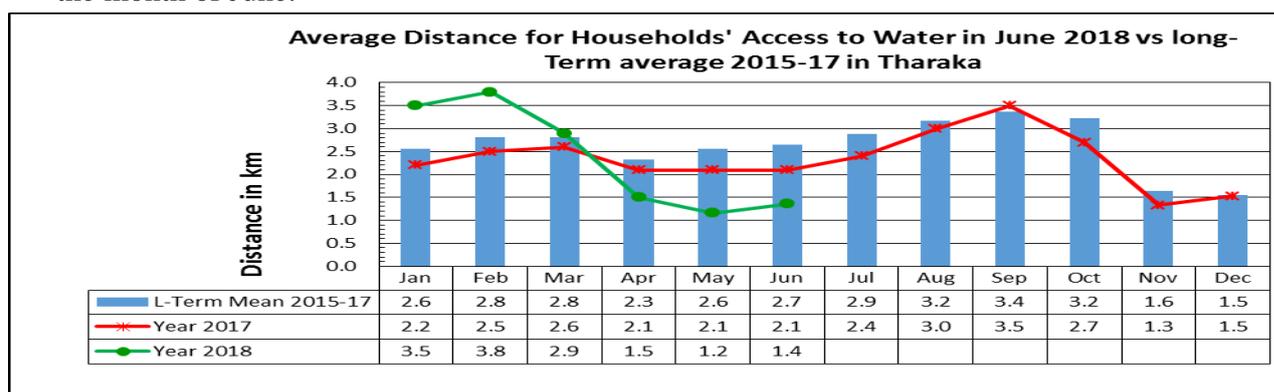


Figure 16 : Household Water Distance Graph

5.2 UTILISATION INDICATORS

5.2.1 Health and Nutrition Status

5.2.2 MUAC

- The proportion of children between 6 to 59 months at risk of malnutrition whose MUAC measurement was below 135 mm increased from 1.6 percent in May to 2.7 percent in June but it was within the normal range.
- The proportion of children at risk of malnutrition whose MUAC measurement was below 135mm was below the long-term average of 7.9 percent.

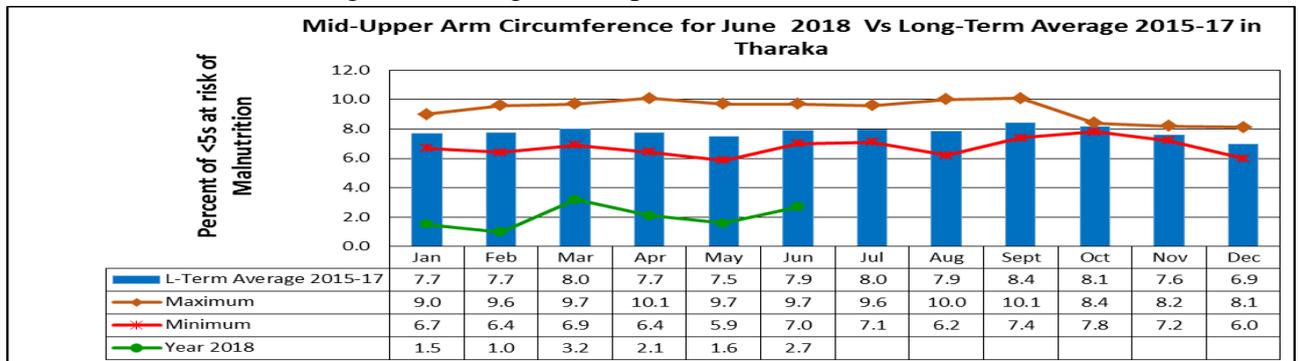


Figure 17: MUAC Graphs

5.2.3 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.

5.2.4 Coping Strategy Index

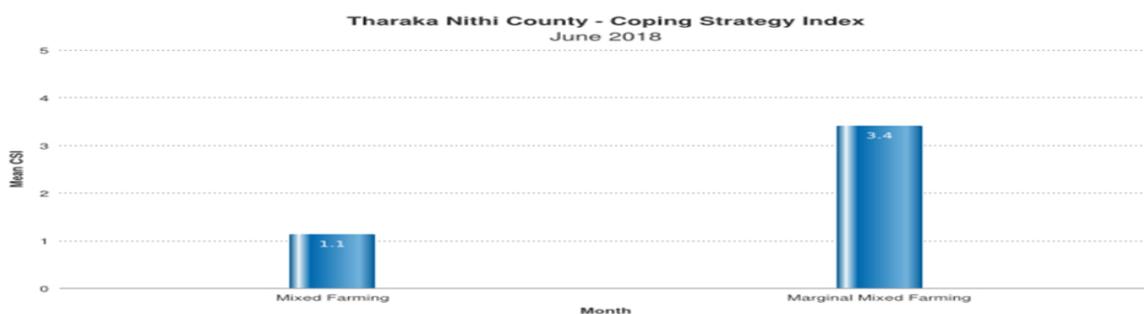


Figure 18: CSI Chart

- The Coping Strategy Index (CSI) decreased from 8 in May to 1.5 in the month of June 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 3.4, followed by 1.1 for Mixed Farming Livelihood Zone while no CSI was recorded in the Rain Fed Livelihood Zone.
- The most commonly employed coping strategy mechanisms during the month of June were: - Obtaining of goods on credit, Reliance on less preferred and less expensive food.
- 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

i. Maize

- 20 bags of maize to be distributed per location for the seven locations in Tharaka North Sub-County amounting to 140 bags of beans.
- 40 bags of maize should be distributed in the 8 primary schools and 6 special need schools.
- 20 bags of maize to be contingency in case of any eventuality

ii. Beans

- 10 bags of beans to be distributed per location for the seven locations in Tharaka North Sub-County amounting to 70 bags of beans.
- 60 bags of beans should be distributed in the 8 primary schools and 6 special need schools.
- 20 bags of beans to be contingency in case of any eventuality

iii. Cooking Oil

- 4 cartons of cooking oil to be distributed in each location for the seven locations amounting to 28 cartons.
- 10 cartons of cooking oil to be distributed in the 8 primary schools and 6 special need schools.
- 5 cartons of cooking oil to be contingency

iv. Bales of Fortified Healthy Food

- 5 bales of Fortified Health Foods were given to the Officer in Charge of the Hospital to be distributed in Health Centers.

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	9,000	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	3,400 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 South and North	Upgrading of 15 water facilities, construction of elevated tower for storage tanks and solar panels and a distribution line	Gatunga-3no. Marimanti-2 no., Chiakariga-3 no, Igambang'ombe -3, Mukothima-2no. Nkondi -2no	Gatunga-700, Mari- 450 Chiaka- 650 Igamba- 800 Mukothima-450 Nkondi -400	County Government	5 Million	3 months
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.

- 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.
- Pasture condition is good but the condition is likely to reduce however, increased feeding of livestock with crop residue is 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 and the situation is likely to continue for the next one month.
- Households in the County are likely to remain Food sufficient for the next 1 month.

8.0 Recommendations

- Capacity building of farmers on post-harvest management to avoid contamination of cereal and post-harvest loses.
- 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.