

# National Drought Management Authority

## MAKUENI COUNTY

### DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2018



A Vision 2030 Flagship Project



#### FEBRUARY EW PHASE

**Drought Status: ALERT**



#### Drought Situation & EW Phase Classification

##### Biophysical Indicators

- Generally the month was characterized by dry, sunny days and hot (high temperatures) at night.
- The average 3 month Vegetation Condition Index (VCI) had progressively deteriorated with three sub counties; Kibwezi East 29.04, Kibwezi West 24.9 and Makueni 31.39 shifting to moderate vegetation deficit category.
- The quantity and quality of pasture and browse ranged from fair to poor across all livelihood zones.
- Current State of water sources was normal.

##### Socio Economic Indicators (Impact Indicators)

- The Livestock body condition was fair (for cattle) and good (for shoats).
- Milk production and consumption decreased due to the prevailing high temperatures which in return led to a decline in pasture and water for livestock.
- No cases of human and livestock death and disease reported as a result of drought.
- Cases of in-migration was reported around Malili from the neighboring Kajiado county
- Terms of trade was favorable at 87.2, an implication that from the sale of one goat one could purchase 87.2kg of maize.
- Return distances to water sources increased from 5.9Km to 6.0Km due to the prevailing high temperatures.
- Watering distances for livestock increased from 5.3Km to 6.2 km.
- The percentage of children at risk of malnutrition was within the normal range.
- The County CSI was within the normal range implying the coping mechanisms employed were normal.

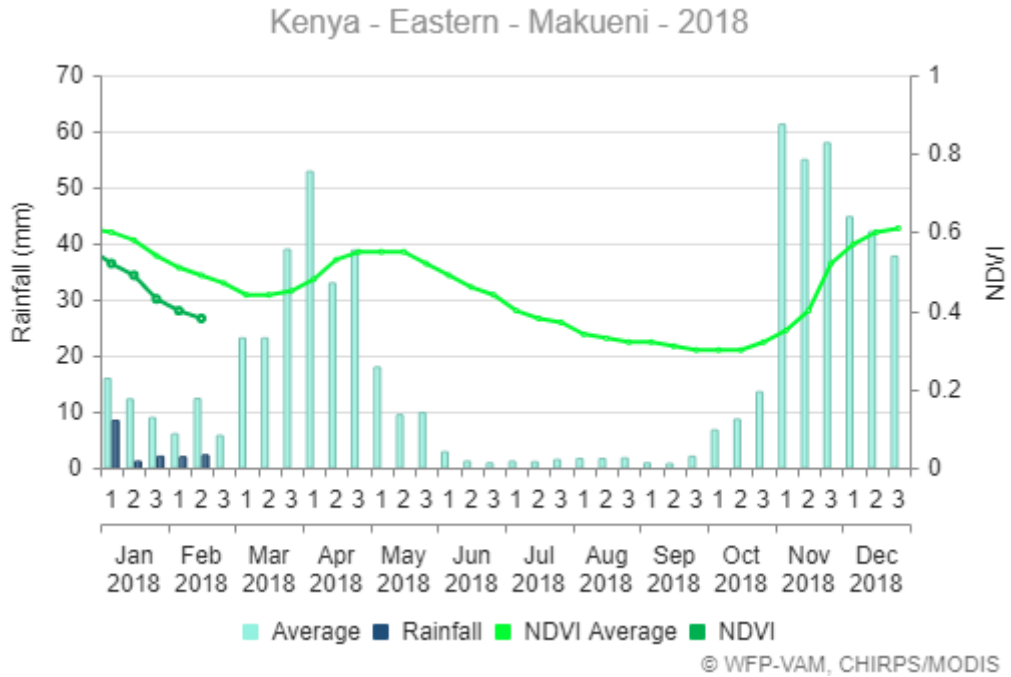
Livelihood Zone	Phase	Trend
Mixed farming coffee/dairy	Normal	worsening
Mixed farming Food Crop/Livestock	Alert	Worsening
Marginal Mixed Farming	Alert	Worsening
County	Alert	Worsening
Biophysical Indicators	Value	Normal Ranges
Rainfall (% of Normal)	25.6	80-120
VCI-3Month	33.9	>35
State of Water Sources	4	5
Production indicators	Value	Normal
Crop Condition	No Crops	Fair
Livestock Body Condition	3-4 Alert	6-Normal
Milk Production	1. 3L	1.8 Litres
Livestock Migration Pattern	Normal	Normal
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	87.2	>80
Milk Consumption	1.3L	1.2 litres
Return distance to water sources	6 Km	3.4 Km
Cost of water at source (20 litres)	Ksh 3-5	Ksh 3
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	8.3	<12.9
Coping Strategy Index (CSI)	8.65	<10

<ul style="list-style-type: none"> <li>▪ Short rains harvests</li> <li>▪ Short dry spell</li> <li>▪ Reduced milk yields</li> <li>▪ Increased HH Food Stocks</li> <li>▪ Land preparation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Planting/Weeding</li> <li>▪ Long rains</li> <li>▪ High Calving Rate</li> <li>▪ Milk Yields Increase</li> </ul>	<ul style="list-style-type: none"> <li>▪ Long rains harvests</li> <li>▪ A long dry spell</li> <li>▪ Land preparation</li> <li>▪ Increased HH Food Stocks</li> <li>▪ Kidding (Sept)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Short rains</li> <li>▪ Planting/weeding</li> </ul>								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

# 1. CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

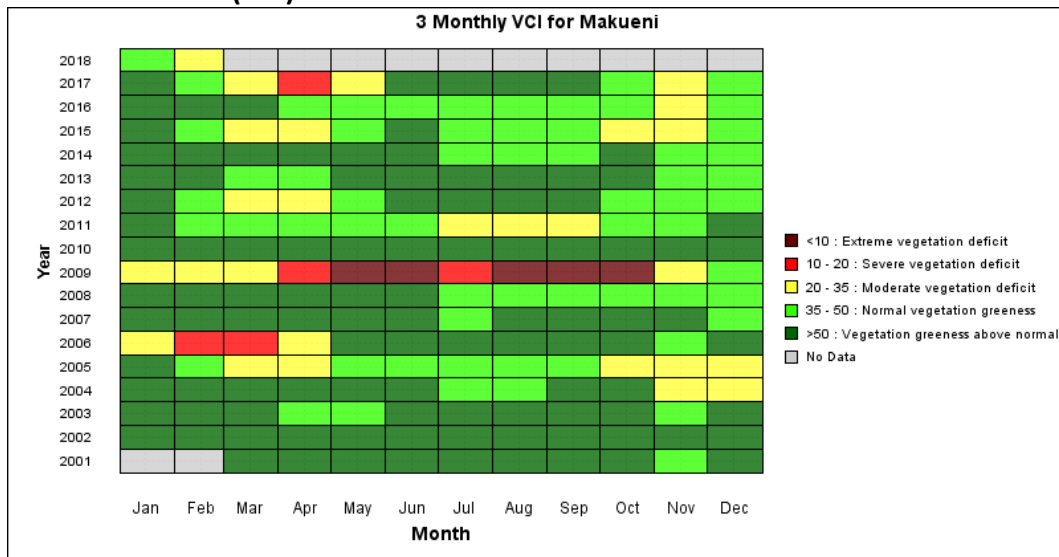
- Generally the month of January was hot and dry across all the three livelihood zones with an exemption of areas near Forests that recorded light showers in a span of one to two days.
- The amount received were 25.6 percent of the total amount expected at this time of the year.

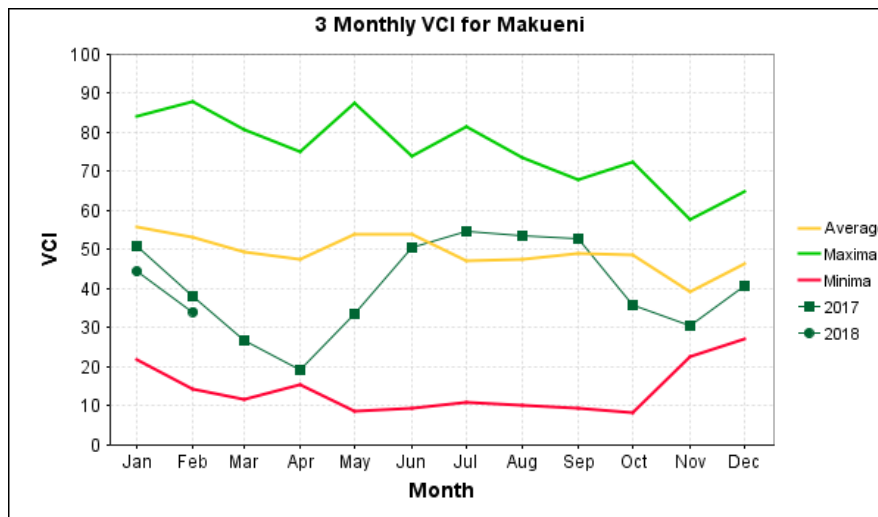


# 2. IMPACTS ON VEGETATION AND WATER

## 2.1 VEGETATION CONDITION

### 2.1.1 Vegetation Condition Index(VCI)



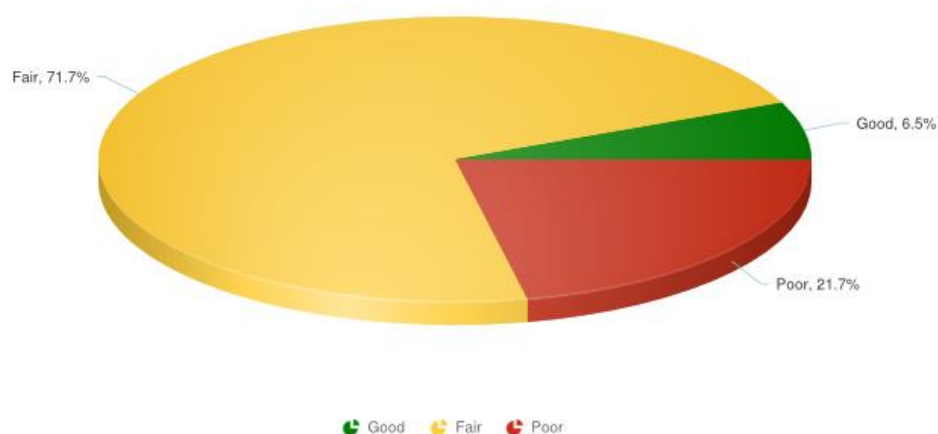


- The vegetation greenness for the County was progressively deteriorating with three sub counties shifting to moderate vegetation deficit category. The County recorded an average VCI of 33.9 from 44.29 that of last month an implication of moderate vegetation deficit.
- Makueni, Kibwezi East and West Sub counties recorded VCI of 31.39, 29.04 and 24.9 respectively however, the situation on the ground shows that this was fast changing due to the heat-waves being experienced over the last two months.

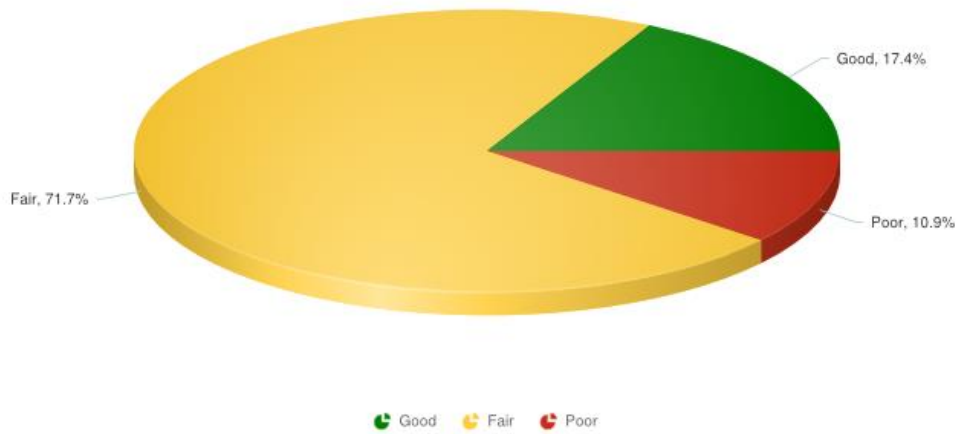
### 2.1.2 Pasture and Browse

- Pasture condition ranged from fair to poor in both mixed farming (Coffee/Dairy) and mixed farming (Food Crop/ Livestock) with an exemption of a few pockets while in the Marginal mixed farming livelihood zone it was poor.
- Browse condition ranged from good to fair and deteriorating across all the three livelihood zones.
- This pasture/fodder situation is attributed to the high temperature that were being experienced during the month.
- The available pasture is expected to last till the onset of MAM rains in the mixed farming zones and a few pockets along Mombasa road and Athi River belt in the marginal mixed farming zone.

Makueni Pasture Condition  
(Jan 2018 - Feb 2018)



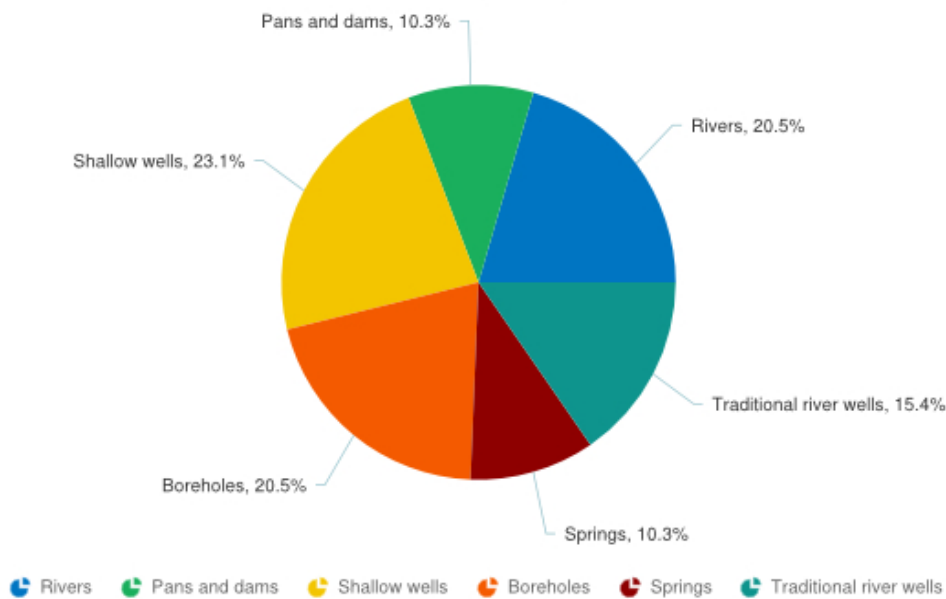
**Makueni Browse Condition**  
(Jan 2018 - Feb 2018)



## 2.2 WATER RESOURCE

### 2.2.1 Sources

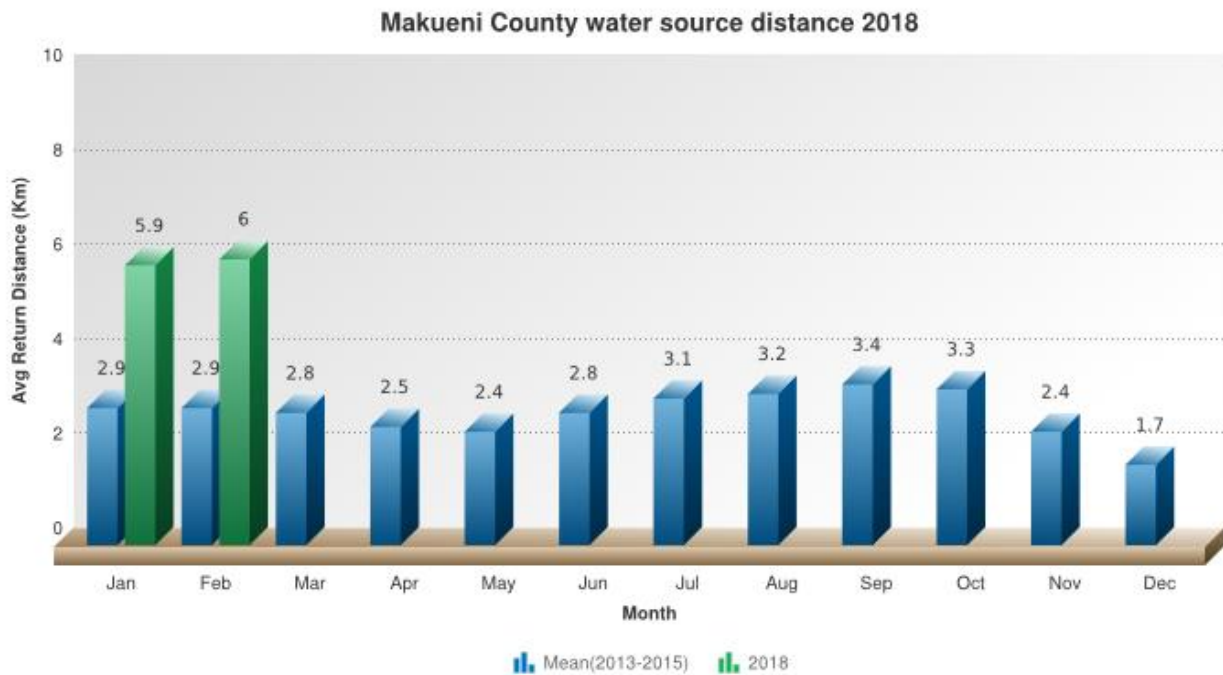
**Makueni County Water sources**  
(February 2018)



- Major sources of water for the county during the month were: shallow wells, rivers, boreholes, traditional river wells, pan and dams, and springs. These were still the major sources from the previous month. Levels have dipped, albeit marginally.
- Other water sources include piped water schemes majorly in urban centres along Mombasa road.
- Water in the mixed farming livelihood zone was readily available from the normal water sources around this time of the year (index 4) while in the marginal mixed farming livelihood zone it was declining.
- Average cost of a 20 litre Jerrican at the water kiosk was between Ksh3 to 5. Normal price is Ksh 3.
- Quantity/volume of water in the surface storage is expected to last until the onset of March April May long rains due to the off season rains received at the end of the month.

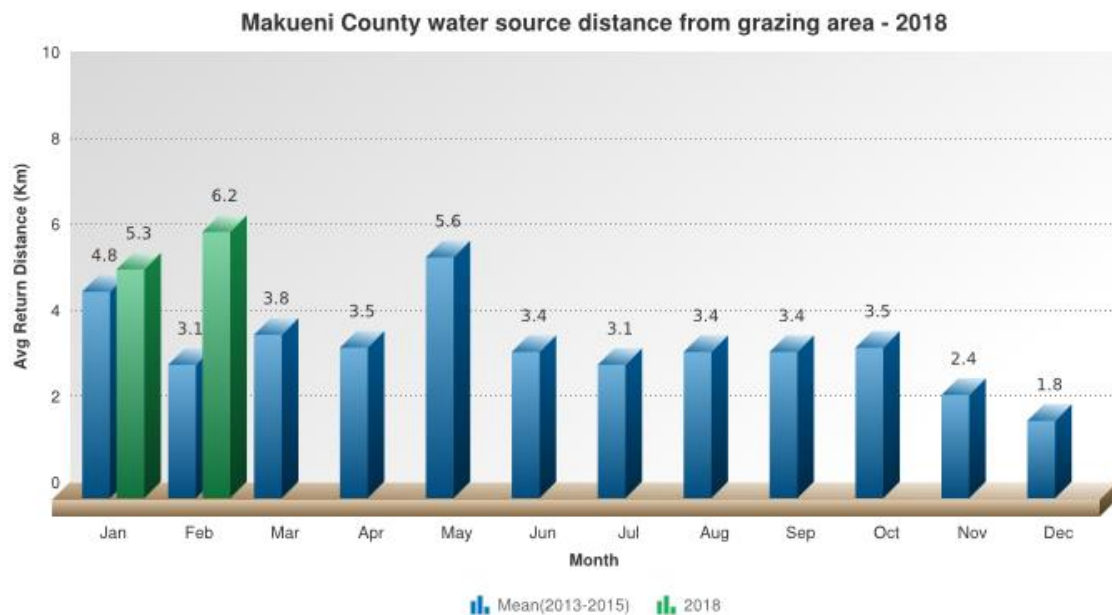
## 2.2.2 Household access and Utilization of water

### Distances to water sources for household consumption



- There was an increase in average household return distances from 5.9Km to 6.0Km
- The increase in distances can be attributed to decline in water levels in some water reservoirs hence the change for an alternative water source.
- Should the MAM rains delay the distances are expected to increase more as the water volume reduces.

## 2.2.3 Livestock access to water



- Average return distances to water sources for livestock increased from 5.3Km to an average of 6.2Km. This was attributed to decline in volume in some water sources, hence farmers seeking for alternative sources of water for their livestock.
- The distances are expected to remain stable for the next one month.

## 2.3 Implication to Food Security

- The progression of the dry period and the decline in pasture and browse condition is like to have a negative impact on livestock in terms of productivity.
- The increasing distances due to decline in water volume is likely impact negatively on the County Food security situation.

## 3.0 PRODUCTION INDICATORS

### 3.1 LIVESTOCK PRODUCTION

#### 3.1.1 Livestock Body Condition

- Current livestock body condition for cattle in most parts of the county was at the borderline (fore-ribs not visible but 13<sup>th</sup> and 14<sup>th</sup> ribs visible) with a worsening trend while that of shoats ranged from good to fair across all the three livelihood zones.
- The situation is expected to improve in the next one month with the availability of pasture and water for livestock if the Onset of MAM rains is timely. Should the rains delay the situation is likely to deteriorate more.

#### 3.1.2 Livestock Diseases

- No major livestock disease outbreaks reported.

#### 3.1.3 Milk Production

##### Milk availability

- Milk availability mostly in mixed farming livelihood zone was fair is expected to improve in the next one to two months if the onset of MAM rains is timely on the other hand if the onset is delayed the availability is likely to go down due to low milk production.

##### Marginal mixed Farming zone:

- Households in this zone were more reliant on goat milk whose yield was between 300-500mls per day against a long term of one litre per day. Local Zebu also produced 300-500mls.

##### Mixed farming (Food Crop/Livestock):

- In this livelihood zone, Zebu cattle and crossbreeds accounted for most milk produced. Availability was approximately 500-800mls compared to a normal of 1000mls.

##### Mixed Farming (Coffee/Dairy):

- The production of milk per day per household ranged from 1000-1500mls per day against a normal of 2 litres.

## 3.2 RAIN-FED CROP PRODUCTION

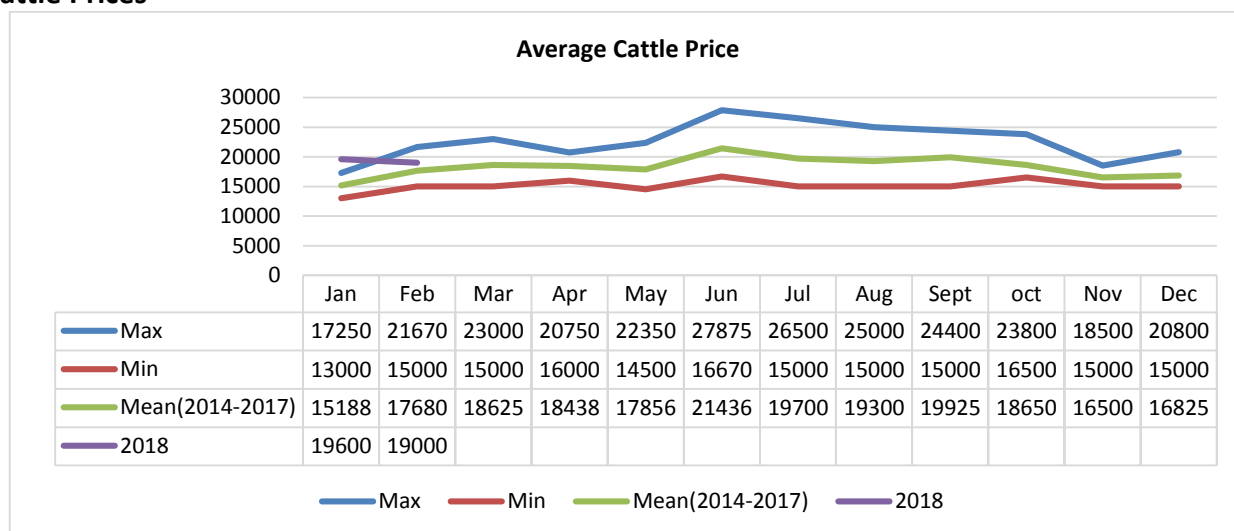
### 3.2.1 Stage and Condition of food Crops

- Minimal harvest of maize (mostly in Mixed farming livelihood zone), green grams and beans (In Marginal mixed farming livelihood zone) was ongoing.
- Performance of drought tolerant crops was dismal and near total failure for maize was experienced in the Marginal mixed farming livelihood zone.

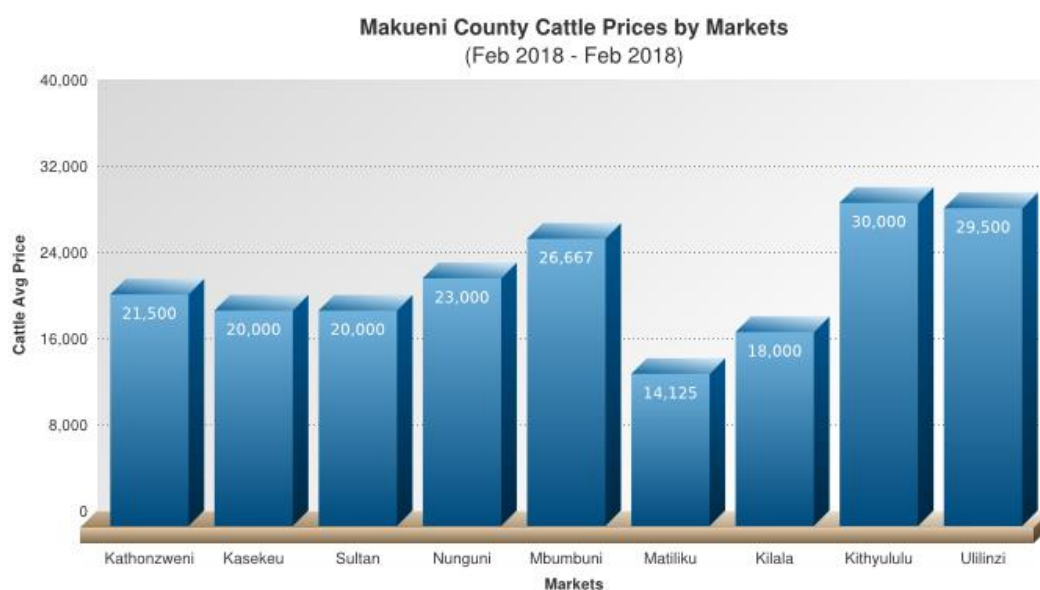
## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

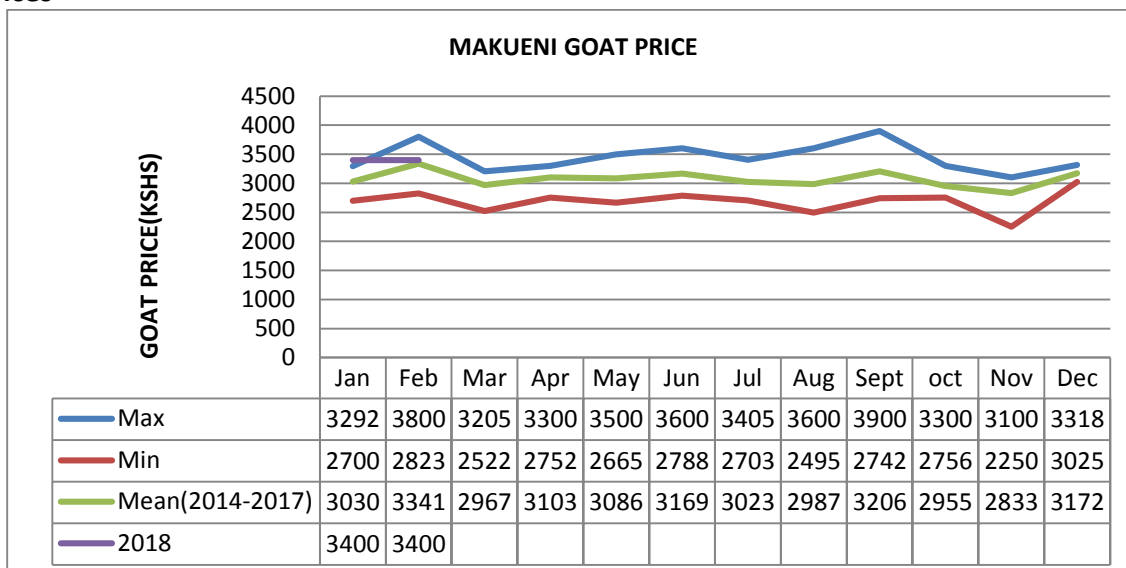
#### 4.1.1 Cattle Prices



- Average farm gate prices of cattle (2-3 year old cattle) decreased from Ksh19,600 to Ksh19,000. Compared to (2014-2017) long term average the current price was above normal.
- The decrease in price is attributed to the high supply in the market from the local harvest though minimal in search of money for school fees.
- The prices of cattle at different markets were as follows:



### 4.1.2 Goat Prices



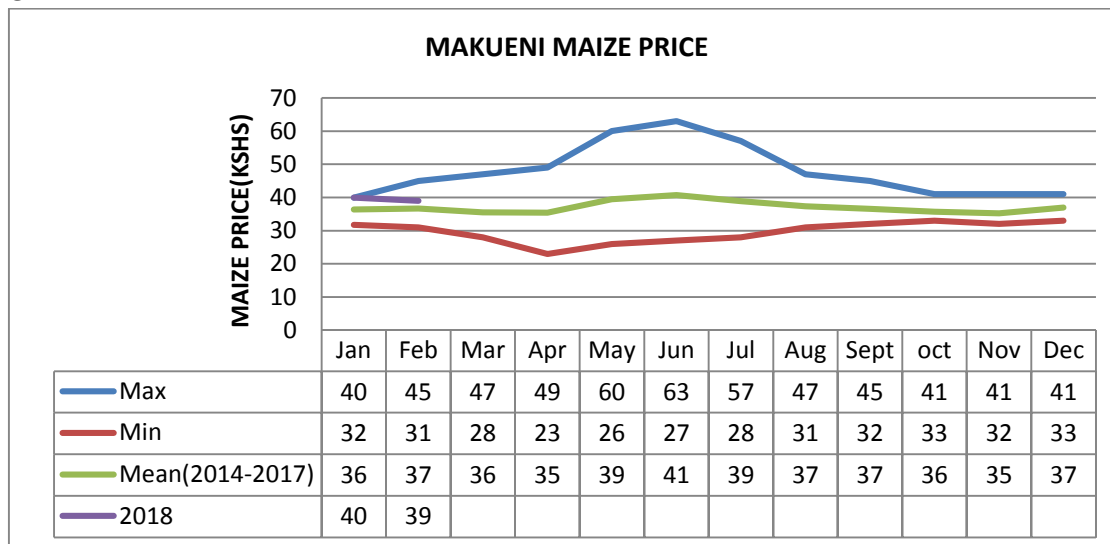
- The average farm-gate price of a goat remained stable at Ksh3,400.
- Compared to the 2014-2017 long term mean the price remained relatively high.
- The stability in price was attributed to the assessed good to fair body condition.
- Average goat market prices was as follows in the various markets.





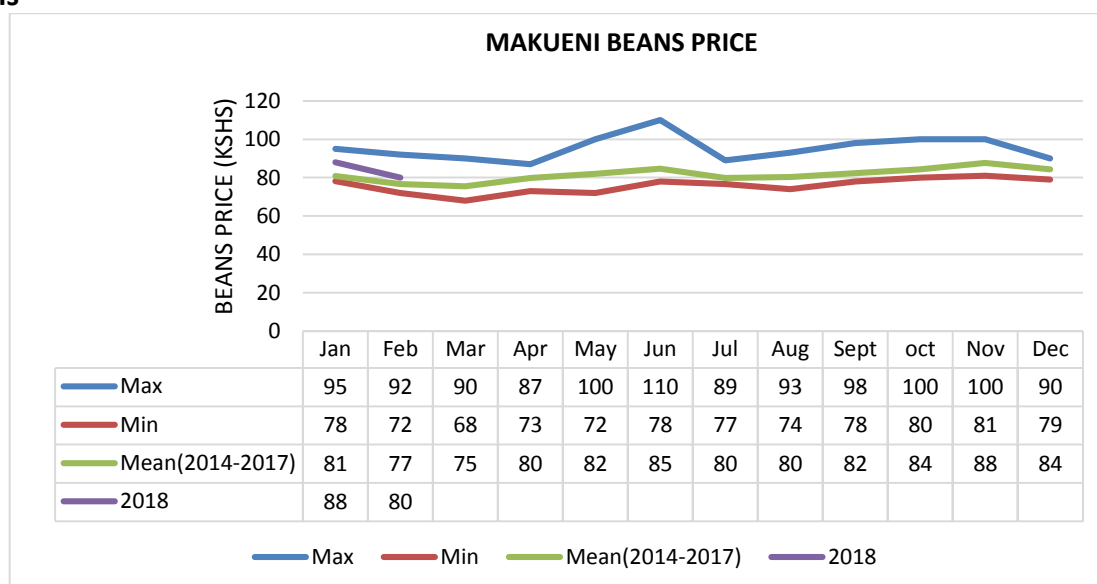
## 4.2 CROP PRICES

### 4.2.1 Maize



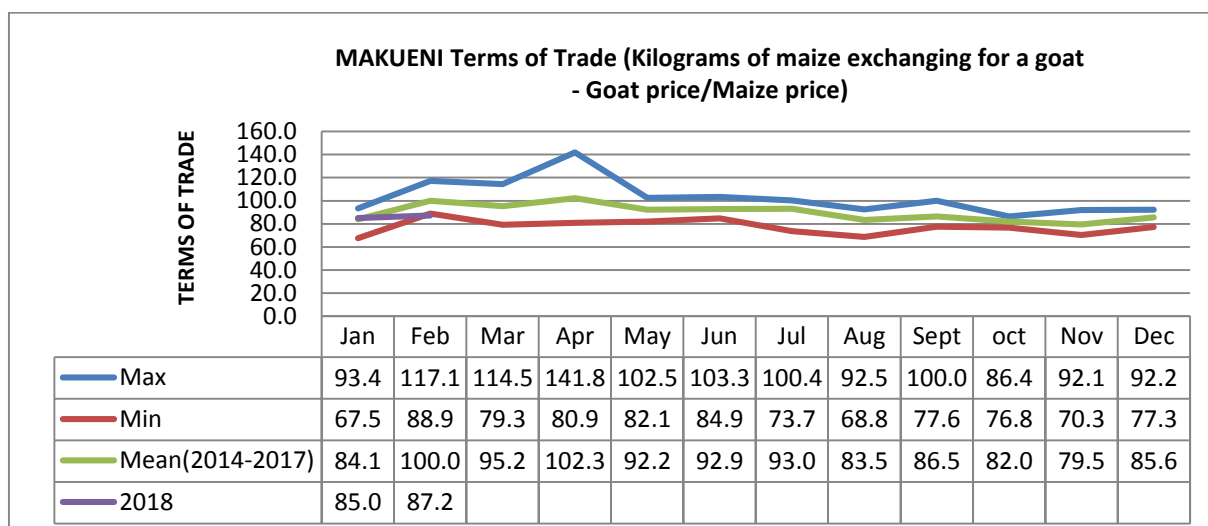
- The average market price of maize dropped by a shilling from Ksh40 to Ksh39. The prices are expected to go higher given that there was total maize failure in the wider part of the County.
- The price remained relatively higher than the long-term average.
- Compared to last month the price was higher by Ksh2.

### 4.2.3 Beans



- The average price for beans was KSh80 a decrease of 10% from that of last month.
- The prices varied from one market to another with prices being recorded in the marginal mixed farming livelihood zone following dismal harvests in this zone.
- Compared to the long term mean the current prices were above normal.

### 4.3 Livestock Price Ratio/Terms of Trade



- Terms of trade were favorable 87.2 implying that from a sale of one goat, a farmer could purchase 87.2Kg of maize.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

#### Marginal mixed Farming zone

- Milk consumption per day in this zone was between 250mls to 500mls against the long term of 750mls to 1000mls.
- The prices were high at Ksh70 per litre against the normal of Ksh55.
- Milk consumption had decreased given that there was deterioration of pasture and decline in water for livestock.

#### Mixed farming Zone (Food crop/Livestock).

- Milk consumption per day in this zone was between 400mls to 750mls.
- The current milk price was Ksh60 against the normal of Ksh45.

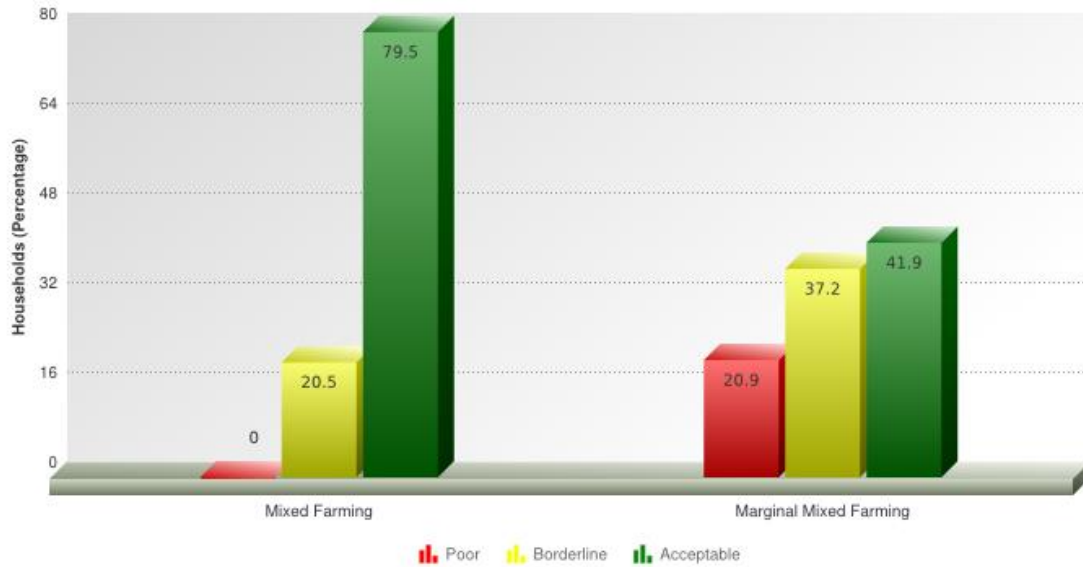
#### Mixed Farming Zone (Coffee/Dairy)

- Milk consumption is about 800mls to 1000mls. The average milk price was Ksh60 against the normal of Ksh45.

### 5.2 FOOD CONSUMPTION SCORE

- In mixed farming zone 79.5 percent of households had an acceptable food consumption score an improvement from 53.8 percent that of last month and 20.5 percent of households were at the borderline while in the marginal mixed farming zone 41.9 percent of households had an acceptable food consumption score a decline from 57.8 percent, 37.2 percent of households were at the borderline down and 20.9% had a poor consumption an increase from 4.4 percent that of last month.
- Below is an illustration of food consumption score in different livelihood zones.

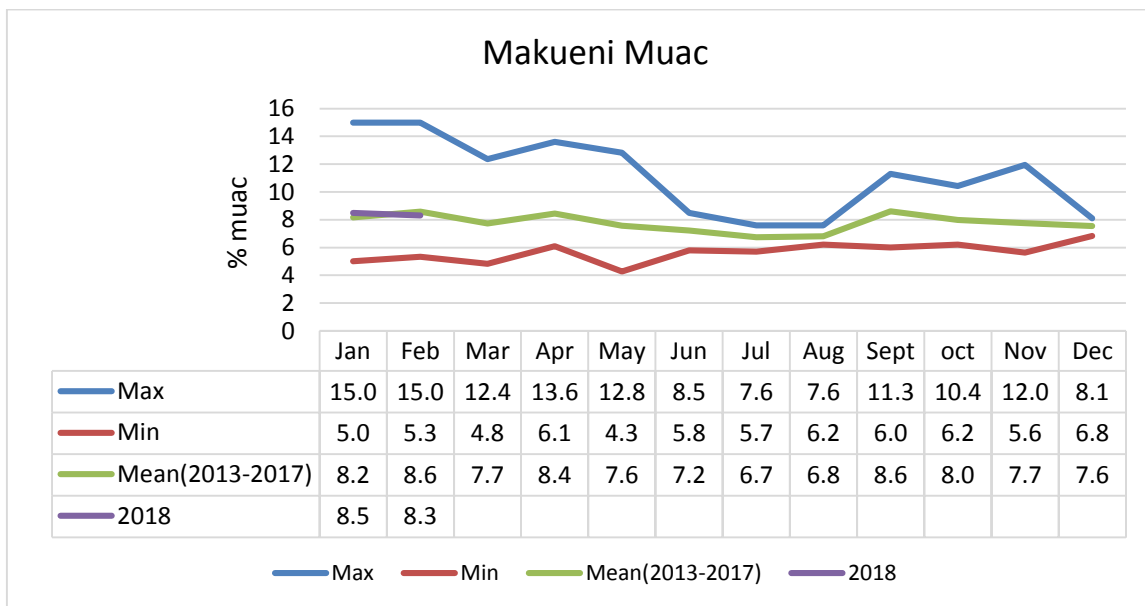
Makueni County Food Consumption Score by Livelihoodzones - February 2018



### 5.3 HEALTH AND NUTRITION STATUS

#### 5.3.1 Nutrition Status

- The percentage of children at risk of malnutrition (under-fives) was 8.3% a slight decrease though within the normal range.
- The availability of mangoes and citrus in the period December to February contributed to the relative stability in the nutritional status for the under-fives.
- Compared to the long term average the situation was slightly below normal.

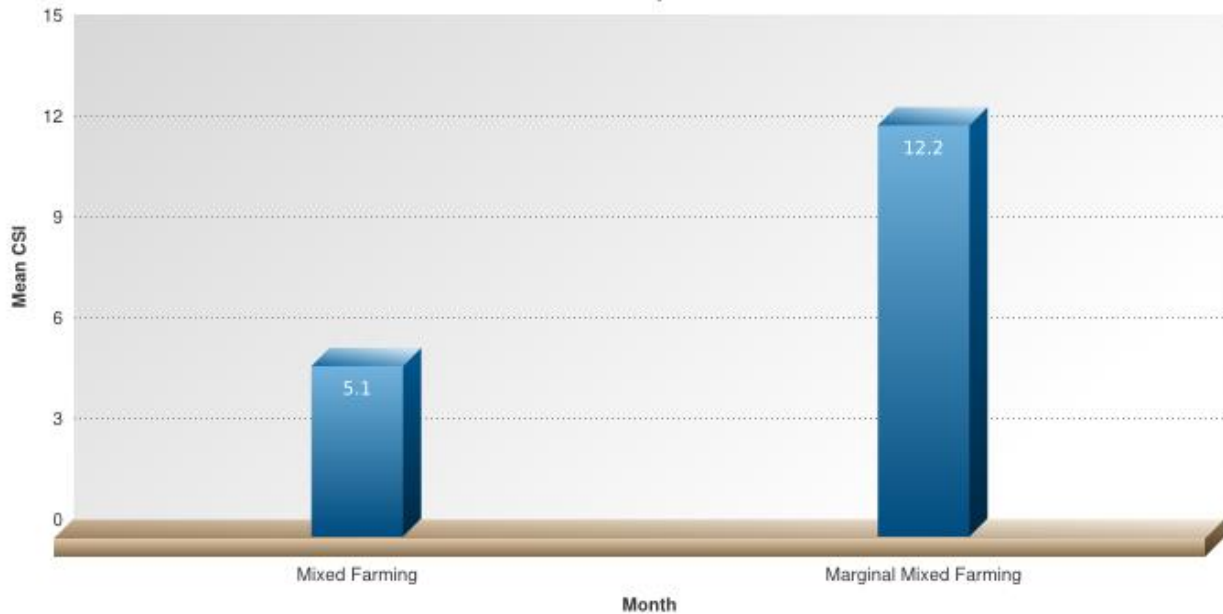


### 5.4 COPING STRATEGIES

- The CSI in Mixed farming livelihood zone was 5.1 while in the Marginal mixed farming zone it was 12.2, implying that more coping mechanisms were being employed in Marginal Mixed farming livelihood zone than in the Mixed Farming livelihood zone.
- The average CSI for the county was 8.65, an improvement from 8.9 that of last month.
- Compared to last month less coping strategies were being employed currently.

## Makueni County - Coping Strategy Index

February 2018



## 6.0 CURRENT INTERVENTION MEASURES (ACTION)

### 6.1 NON-FOOD INTERVENTIONS

- Asset Creation projects funded by WFP through NDMA and implemented by WVK in North Makueni and KRCS in South Makueni.
- Sensitization of farmers on post-harvest management of the already harvested crop.

### 6.2 FOOD AID

- Food aid allocation for January and February had not yet been received.
- Utooni Development Organization was currently undertaking a 3 month food distribution programme running from January to March covering Ngulu and Kisayani in Kathyaka sub-location. The project was targeting a 1000 households with each household receiving 4 kg of beans, 30 kg of maize and 1.5 litres of cooking oil every fortnight (after a period of two weeks)

## 7.0 EMERGING ISSUES

### 7.1 Insecurity/Conflict/Human Displacement/Human Wildlife conflict

- One person was savagely attacked and killed by a crocodile in river Athi, kanthuni village in Kathonzweni sub-county.

### 7.2 Migration.

- There were cases of livestock in-migration in Mukaa Sub County from the neighbouring County of Kajiado.

### 7.3 Food security prognosis

- The county can be classified under stressed phase of food insecurity (IPC 2) apart from few pockets in the mixed farming livelihood zone where fair harvests were re.
- The deteriorating pasture condition and increase in trekking distances will have a negative impact on livestock production.
- With the dismal performance of crops, most households will rely on the market for food commodities.
- The deteriorating livestock body condition will impact negatively on household purchasing power.
- The livestock in migration is likely to cause conflicts between the locals and the pastoralists as they compete for the available resources hampering economic activities hence impacting negatively on food security.
- According to the Kenya Meteorological Department, the MAM long rains are predicted to be normal to above normal with a timely onset.

## **8. RECOMMENDATIONS**

### **Agriculture Sector**

- Training of farmers on best Post harvest management practices
- Water harvesting structures construction, e.g. farm ponds (lined) Promotion of drought tolerant crops(production, value addition and utilization)
- Promotion and distribution of drought tolerant seeds.
- Promoting In situ water harvesting technologies
- Seed distribution and training of farmers and staff on Fall Army Worm control.

### **Livestock sector**

- Disease surveillance along the county borders and migratory routes.
- Enhance livestock medical camps at sub county level.
- Training and assisting farmers on Hay bailing.

### **Water Sector**

- Servicing and rehabilitation of broken down boreholes as well as stockpiling with spares.
- Drilling of new boreholes.
- Excavation of Earth dams.

### **Health Sector**

- Integrated health outreaches and mass screening of children under the age of 5 years.
- Sensitizing community health volunteers on nutrition education.
- Hotspot screening for malnutrition and provision of supplementary feeding.

### **Education**

- Expand HGSMP to more schools
- Introduction of ten o' clock snack for ECDE centres.