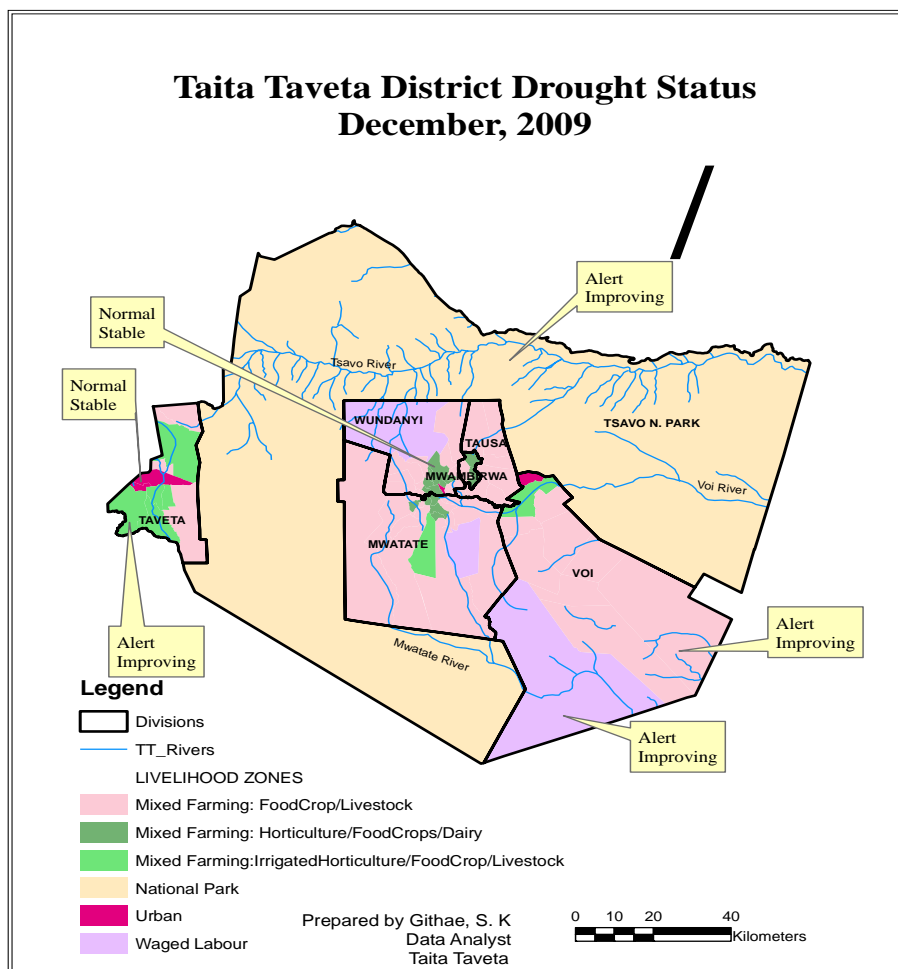




**OFFICE OF THE PRIME MINISTER**  
**MINISTRY OF STATE FOR THE DEVELOPMENT OF NORTHERN KENYA AND OTHER ARID LANDS**  
**ARID LANDS RESOURCE MANAGEMENT PROJECT II**

**DROUGHT MONITORING BULLETIN, DECEMBER 2009**



**SEASONAL CALENDAR**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Maize</b>	Harvesting	Planting	Weeding				Harvesting	Planting	Weeding			
<b>Beans</b>	Harvesting		Planting	Weeding		Harvesting				Planting	Weeding	
<b>Vegetables</b>						Sowing Transplanting	Top dressing		Harvesting			
<b>Cattle</b>	Milking											
<b>Goats</b>	Weaning		Mating/Kidding					Weaning		Mating/Kidding		
<b>Rainfall</b>			Long rains							Short rains		

## **Situation overview**

- The district received a total of 966 mm of rainfall during the month compared to 423 mm recorded the previous month. High rainfall amounts were recorded in the hill masses of Taita district. Compared to the long term average rainfall for 2000-2008, the trend was normal and the amount of rainfall high.
- Taveta district is likely to experience floods if heavy rainfall continues in areas around Mt Kilimanjaro. The floods normally cause havoc in both Bomeni and Jipe divisions. Generally all livelihood zones received substantial rainfall and maize crop was at flowering stage in most areas. Most farmers replanted maize which had failed to germinate due to lack of adequate rainfall.
- The rains resulted in recharge of springs, rivers, shallow wells and water pans. From sampled sentinel sites households' average distance to and from the water sources decreased from 4.6 km to 2.0 km while time taken to fetch water decreased from 1.8 hrs to 0.9 hrs.
- Condition of natural vegetation and pasture was good. Thick forest cover continued to dominate both ranches and Tsavo National Park.
- In both districts cattle body condition improved significantly due to availability of pasture and water. Compared with a normal year livestock body condition is good. Herders from Kajiado district and Somali community from North Eastern continued to dominate the ranches.
- Cases of human/wildlife conflict reduced due to recharge of watering points for wildlife. Elephants, buffaloes and baboons remained a menace to irrigation farmers. Wildlife destruction of food crops in all livelihood zones will impact negatively on food security.
- A few cases of army worms were reported in Mahandakini and Njukini in Challa division, Taveta district and areas of Nyangala in Voi district. However the Ministry of Agriculture contained the situation. ALRMP gave 100 litres to Voi DVO.
- Though household members registered increased livestock income, high prices of food stuff remained a constraint to improved living standards. Government of Kenya through the Ministry of State for Special Programmes continued to distribute relief foodstuff targeting vulnerable people especially the elderly, disabled persons and needy institutions.
- Based on the Mid Upper Arm Circumference (MUAC) measurement, the nutrition status of children below five years improved slightly, with the percentage of those rated at risk of malnutrition decreasing from 4.2 in November to 3.2. Availability of milk at household level impacted positively on nutrition status of the under fives.

## **Recommendations to District Steering Group and Kenya Food Security Meeting**

- Household members prone to disasters such as landslides and floods to be relocated to avoid fatal incidences.
- Protect existing springs either through fencing or planting trees given that springs are the only source of water.
- Kenya Wildlife Service to excavate water pans inside the National Park in order to harvest run off water for use by wildlife during the dry spell.
- Kenya Wildlife Service to increase surveillance to address the problem of marauding elephants and buffaloes.

## **Current interventions**

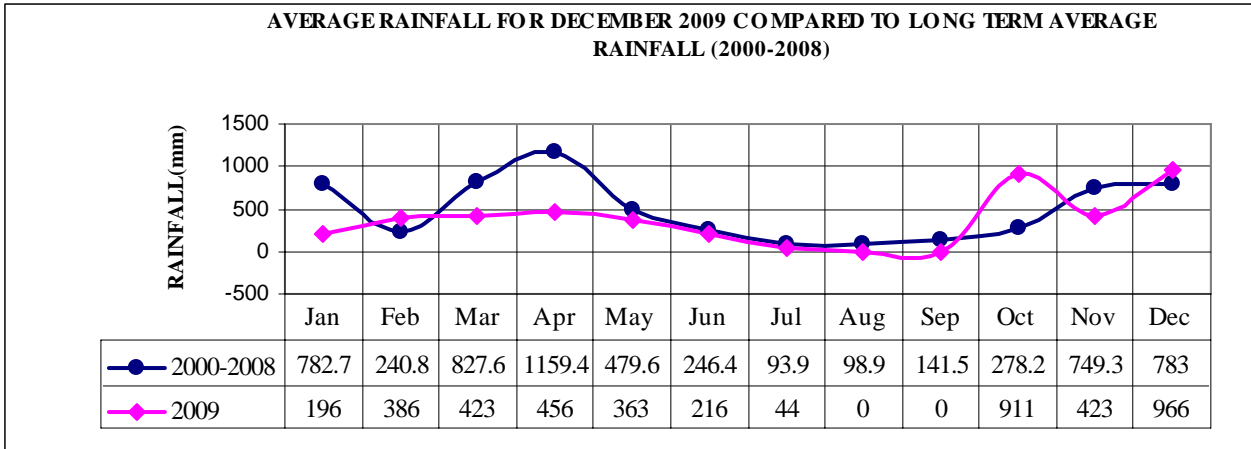
### **Non-food interventions**

- Agriculture, Irrigation and Water Sector projects

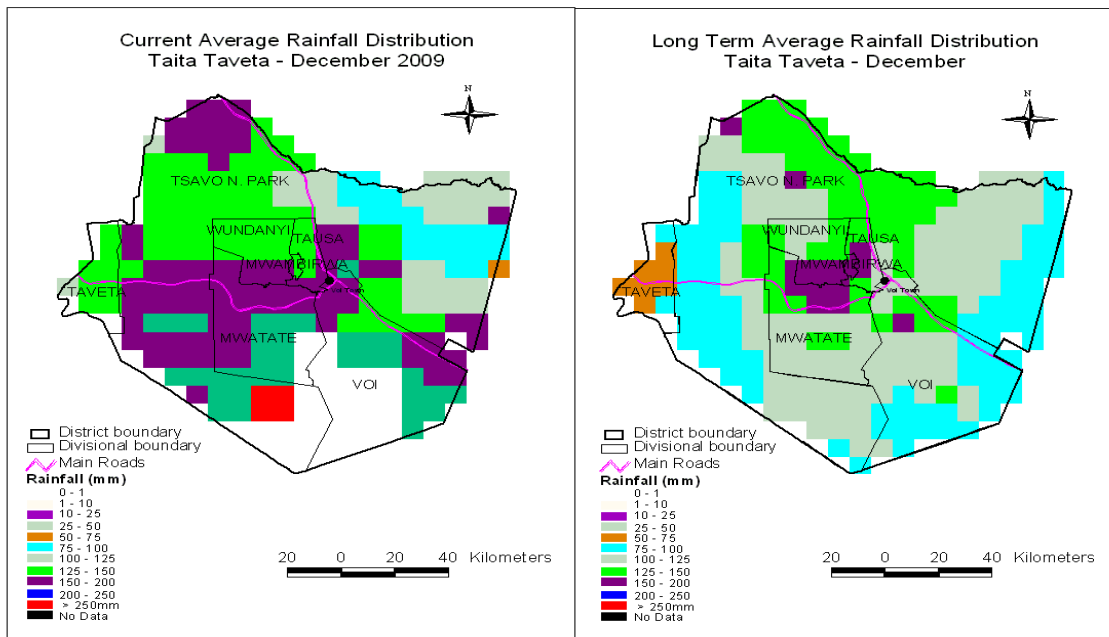
- Water trucking to areas experiencing water shortage in Kishushe, Mbololo, Sagalla, Mwatate, Kasigau and Mwatate is on going - Arid Lands Resource Management Project, Kenya Wildlife Service and Ministry of Water.

# 1.0 Environmental indicators (Stability)

## 1.1 Rainfall



- Taita Taveta received a total of 966mm rainfall amount compared to 423mm recorded in the previous month. High rainfall amounts were recorded in the hill masses of Taita district.
- If heavy rainfall continues in areas of Mt Kilimanjaro then Taveta district will experience floods which normally cause havoc in both Bomeni and Jipe divisions.
- The rains are progressing on well and most farmers have replanted maize after it failed to germinate due to lack of adequate rainfall. Generally all livelihood zones have received substantial rainfall and maize crop is at flowering stage in most areas.
- Compared to the long term average rainfall for 2000-2008 the trend is normal and the amount of rainfall is high.

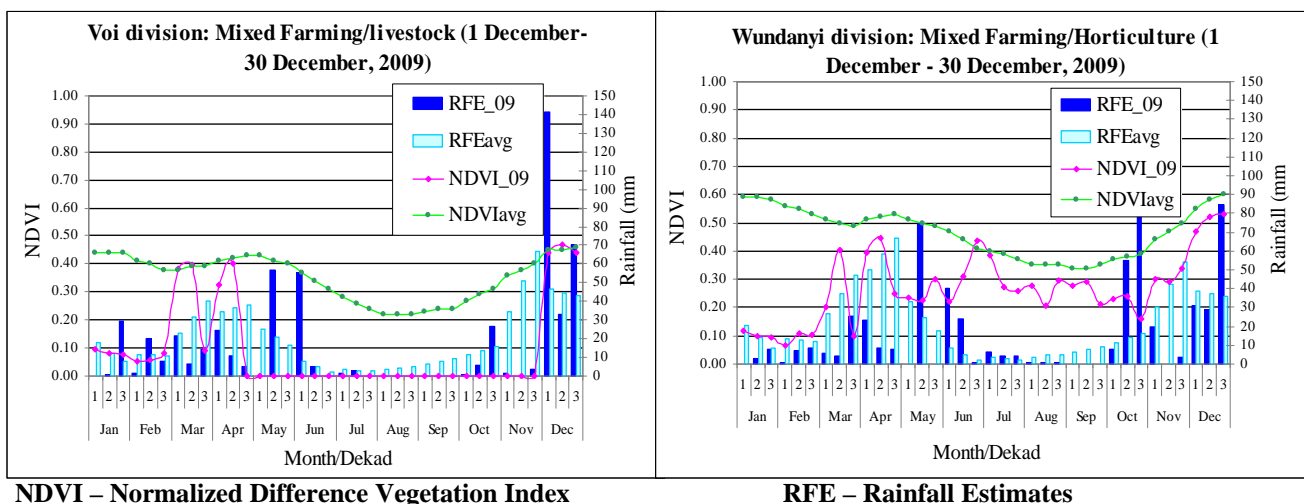


**United States Geological Survey Satellite images – Figure illustrate Comparison of Current December 2009 Rainfall Distribution with the Long Term Averages for Taita Taveta.**

- The images above indicate that Taita Taveta recorded a total rainfall amount of 1,188.78 mm, which is 371.36 mm, 205.22 mm and 612.20 mm in dekad 1, 2 and 3 respectively compared to 82.98 mm, 0.65 mm and 35.78 mm recorded in November.
- Generally Taita Taveta recorded high rainfall amount ranging between 150 – 250 mm.

- Rainfall amount greater than 250 mm was recorded in southern part of Tsavo west National park.
- Compared to Long Term rainfall map Taita Taveta received above normal rainfall amount. Current average rainfall map recorded 1,188.78 mm compared to 701.87 mm recorded in the long term average rainfall map.

## 1.2 Condition of natural vegetation and pasture



NDVI – Normalized Difference Vegetation Index

RFE – Rainfall Estimates

- Condition of natural vegetation and pasture was good.
- Voi division recorded 0.44, 0.47 and 0.44 vegetation indexes in dekad 1, 2 and 3 respectively compared to null values in the previous month. Wundanyi recorded 0.47, 0.52 and 0.53 in dekad 1, 2 and 3 respectively compared to 0.30, 0.29 and 0.34 in November. This is due to the rains received in the two districts which have resulted to thick forest cover and regeneration of pasture.
- Compared to the long term vegetation index averages both livelihood zones exhibit a normal trend.
- Compared to the previous month the average grazing distance analyzed from sampled sentinel sites remained at 6.0 km.

## 1.3 Water sources and availability

- In the month under review water sources for both human and livestock use were tap water, springs, boreholes, water pans, seasonal and natural rivers. The rains received resulted in recharge of springs, rivers, shallow wells and water pans.
- From sampled sentinel sites households' average distance to and from the water sources decreased from 4.6 km to 2.0 km while time taken to fetch water decreased from 1.8 hrs to 0.9 hrs.

## 1.4 Emerging issues

### 1.4.1 Insecurity/conflict/human displacement

- A few cases of army worms were reported in Mahandakini and Njukini in Challa division, Taveta district and areas of Nyangala in Voi district. However, the Ministry of Agriculture contained the situation. ALRMP gave 100 litres to Voi DVO.
- Cases of human/wildlife conflict reduced due to recharge of watering points for wildlife. Elephants, buffaloes and baboons still remain a menace to farmers in all sectors.

### **1.4.2 Migration**

- Herders from Kajiado district and Somali community from North Eastern continued to dominate the ranches.

### **1.4.3 Implications on food security**

- Food for Assets programme was ongoing in the rain-fed lowlands in Taita Taveta, improving food security situation.
- Government of Kenya through the Ministry of State for Special Programmes continued to distribute relief food targeting vulnerable people especially the elderly, disabled persons and needy institutions.
- Wildlife destruction of food crops in all livelihood zones will impact negatively on food security.
- Areas still facing acute food shortage and require immediate attention are Wongonyi, Msau, Mwachabo and Mwakitau in Mwatate district, Kasigau, Tausa and lower Sagalla in Voi district, Paranga, Sangenyi, Nyache, Kishushe, Kishamba, Njawuli, Mwaroko, Mlechi, Choke, Wanganga, Irido and Saghasa in Wundanyi district.
- Others were Nakruto, Kasokoni, Chokaa, Kidong'u, Challa kati, Uthiani, Kijijini, Vikwatani, Chumvini A & B, Langata, Kitondooni, Mahandakini, Machungwani and Ulawani in Challa division, Njoro, Mtakuja, Kazamoyo, Kachero, Mata village, Masaaini, Mkwajuni, Luduwani and Kimala in Jipe division and Lessessia, Kasarani, parts of Mjini, Langata, Chewa, Mahoo, Salaita, parts of Vikwatani, Mwakine, Riata, Lotima A & B, Riata Ndogo/Kubwa, Timbooni, Rassia, Malikiloriti, Ndilidau and Timbila in Bomeni division of Taveta district.

## **2.0 Rural economy indicators (Food availability)**

### **2.1 Livestock production**

#### **2.1.1. Livestock body condition**

- In both districts cattle body condition has significantly improved due to availability of pasture and water. Compared with a normal year, livestock body condition was good.

#### **2.1.2. Milk production**

- Milk production from 12 sampled sentinel sites increased from 5,010 litres to 7,407 litres. Mwarungu sample site where farmers practice zero grazing recorded the highest amount of milk production at 2,910 litres.
- Mixed farming: food crops/horticulture/dairy livelihood zone continued to dominate the dairy sector recording 77% situated in the wetlands, mixed farming: food crops/livestock livelihood zone 21% and casual waged labour: sisal farms 2% found in the rain fed lowlands.
- Mixed farming: food crops/livestock and casual waged labour: sisal farms livelihood zones low milk production could be attributed to after effects of prolonged drought.

### **2.2 Crop production**

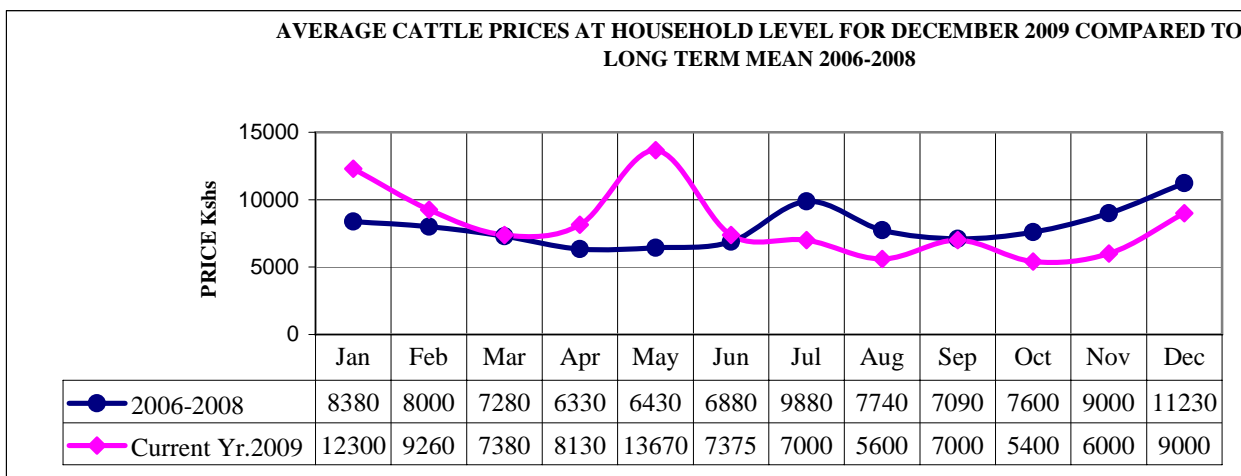
#### **2.2.1. Timeliness and condition of various crop production activities**

- In the mixed farming: food crops/livestock livelihood zone farmers who dry planted their maize is at flowering stage while those who planted late or replanted are weeding maize.
- However, in the casual waged labour: sisal farms livelihood zone some casual waged labourers are busy weeding and others harvesting the sisal crop.
- In the mixed farming: food crops/horticulture/dairy livelihood zone farmers are harvesting vegetables.
- In the mixed farming: irrigated cropping/livestock/food crops livelihood zone most farmers are harvesting maize, tomatoes and onions.

### 3.0 Access to food

### 3.1 Livestock marketing

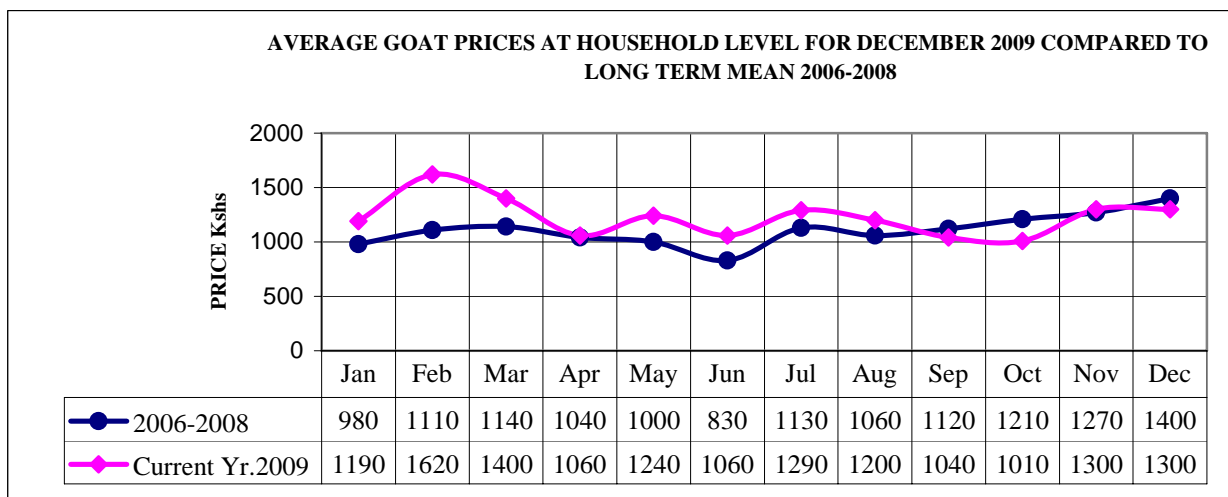
#### 3.1.1 Cattle prices



N = 360 households

- The average cattle price at household level increased from Ksh6,000 in November to Ksh9,000 in December. The rise in prices could be attributed to high demand due to improved body condition.
- Mwarungu sentinel site recorded the highest price at Ksh20,000. This could be attributed to establishment of Maziwa Taita firm which has resulted to increase in demand of dairy cattle.
- High prices were reported in the mixed farming: food crops/horticulture/dairy livelihood zone at Ksh12,000 while low prices prevailed in the casual waged labour: sisal farms at Ksh8,000 and Ksh6,000 in the mixed farming: food crops/livestock livelihood zones. Compared to the long term mean the trend was normal and the price is low.

#### 3.1.2 Goats prices



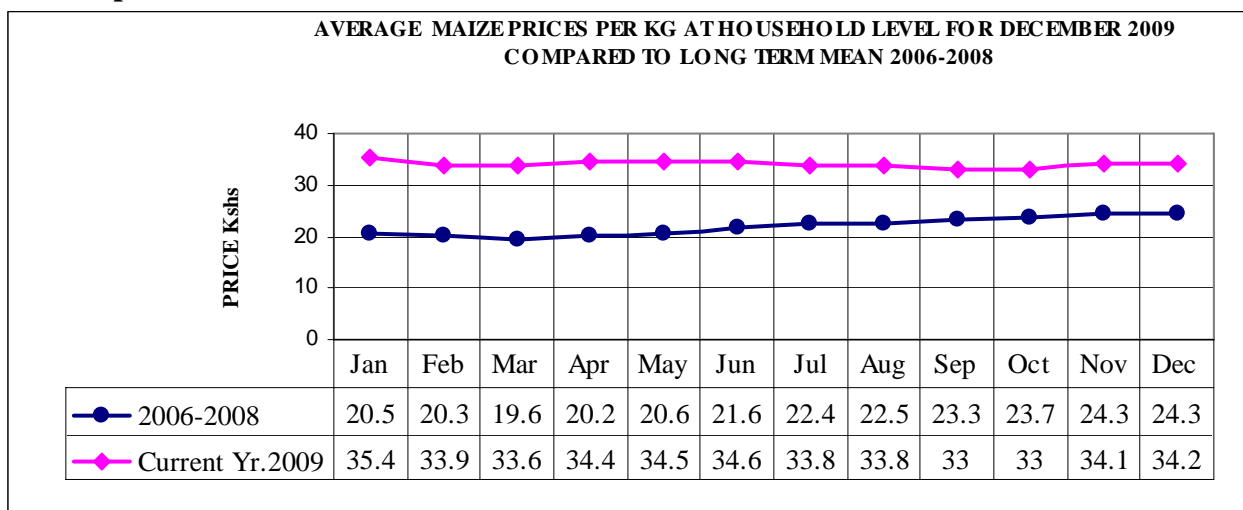
N = 360 households

- The average goat price at household level remained at Ksh1,300 in December. The high price could be attributed to increased demand of goat due to the festive season.
- High prices were recorded in Mata and Njukini at Ksh1,600 and Ksh1,500 respectively.
- Prices remained higher in the mixed farming: food crops/horticulture/dairy livelihood zone at Ksh1,900 than in both the casual waged labour: sisal farms livelihood zone at Ksh1,000 and Ksh800 in

the mixed farming: food crops/livestock livelihood zone. Compared to the long term mean trend was normal and the price low.

### 3.2 Crop prices

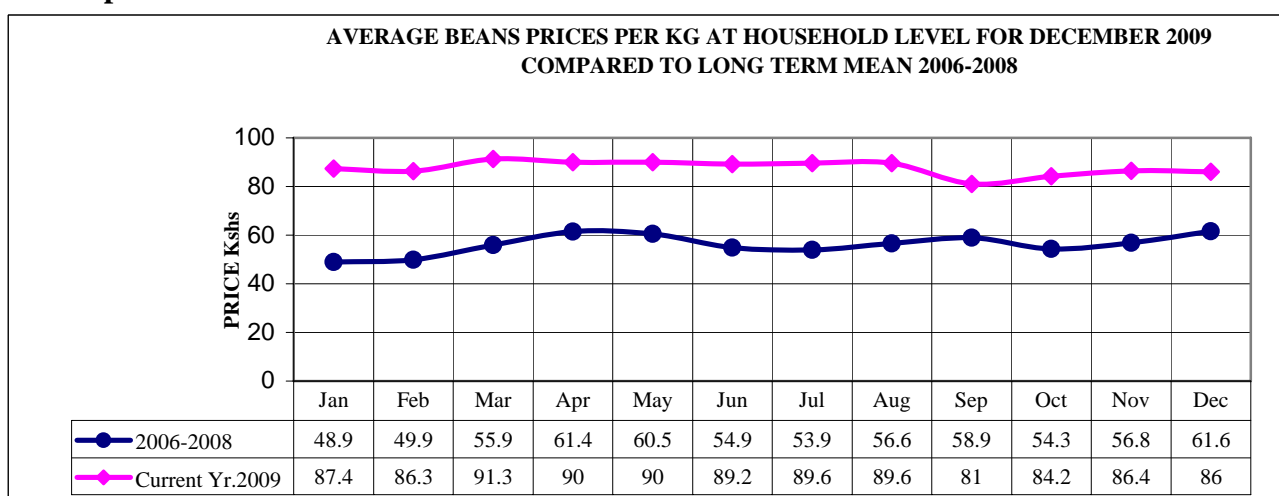
#### 3.2.1 Maize prices



N = 360 households

- In the month of December the average maize price per kg at household level increased from Kshs 34.1 to Kshs 34.2.
- The prevailing high prices are due to depleted maize stock at household level and lack of sufficient stocks at national level.
- In the mixed farming: food crops/horticulture/dairy, mixed farming: food crops/livestock and mixed farming: irrigated cropping/livestock/food crops livelihood zones average maize prices at market level are still ranging from Kshs 30 - 40.
- Compared to the long term mean the trend was normal but the price still very high.

#### 3.2.2 Beans prices



N = 360 households

- The average beans price at household level increased from Ksh86.4 to Ksh86.0 during the month. The rise in price could be attributed to lack of readily available stocks of beans in the market.

- In the mixed farming: food crops/horticulture/dairy, mixed farming: food crops/livestock and mixed farming: irrigated cropping/livestock/food crops livelihood zones average beans prices at market level are still ranging from Ksh80 - 100.
- Compared to the long term mean the trend is normal and the price is extremely high.

### 3.3 Income

#### 3.3.1 Livestock income

Livestock income obtained from 360 sampled households increased significantly. Sale of 17 cattle @ Ksh9,000; 25 goats @ Ksh1,300 and 102 chickens @ Ksh210 realised Ksh206,920 compared to Ksh48,040 in November. This significant rise in livestock income could be attributed to increase in prices of cattle and high sales achieved during the festive season.

#### 3.3.2 Other income sources

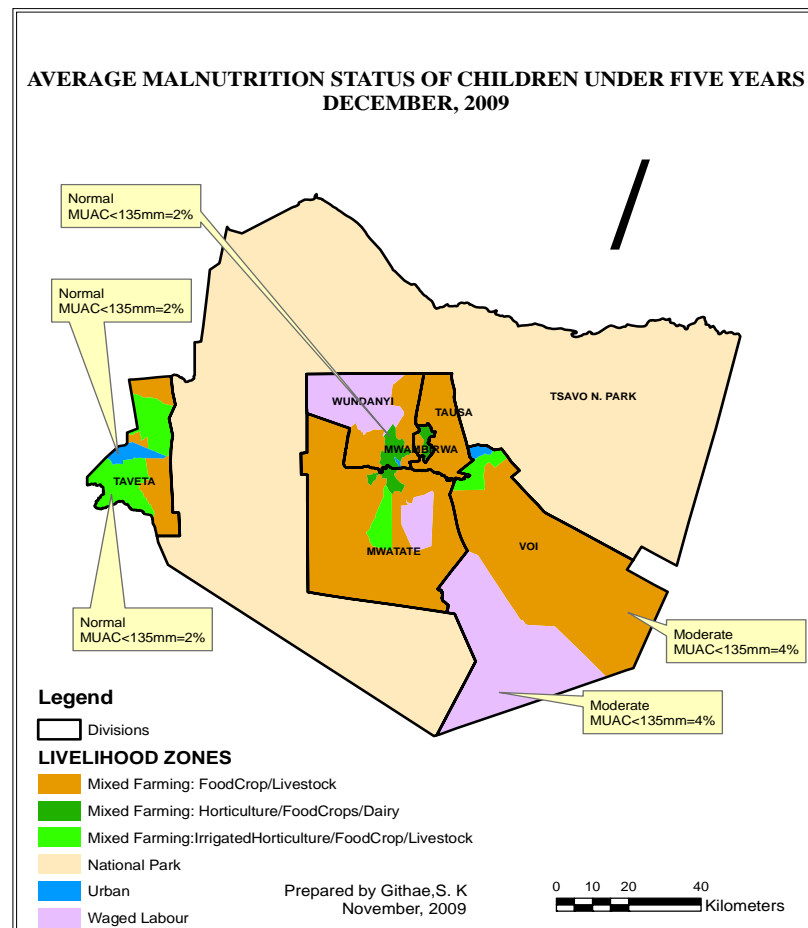
Most households in Bomeni division of Taveta district still depended on sales of ballast which they break manually. Others were casual labour, petty trade, formal employment, remittances, sell of sand, brick, charcoal, fire wood and miraa, fishing and small scale mining.

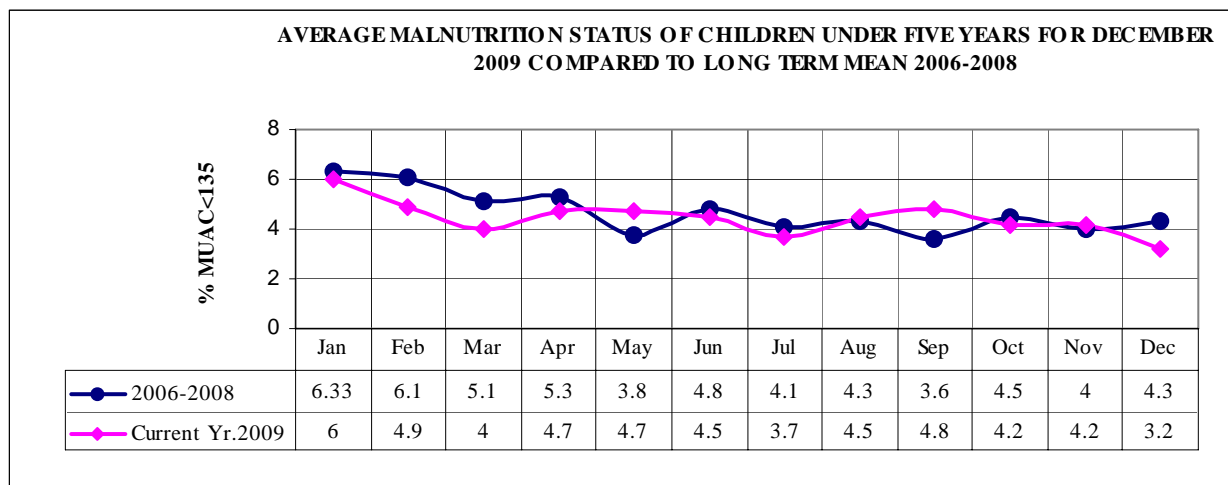
### 3.4 Implications on food security

- Increased livestock income will improve living standards of household members. Prices of food stuffs were still very high, impacting negatively on food security. Availability of milk at household level impacted positively on nutrition status of children under five years.

## 4.0 Human welfare indicators (Utilisation of food)

### 4.1 Nutrition status





N = 360 households

- Based on the Mid Upper Arm Circumference (MUAC) measurement, the nutrition status of children below five improved slightly, with the percentage of those rated at risk of malnutrition decreasing from 4.2 in November to 3.2 in December.
- Out of 1,417 children under-five sampled in 12 sample sites areas, 46 were found with MUAC < 135mm. High levels of MUAC measurement were reported in Mwakitau and Mwarungu at 6.5% and 6.2% respectively.
- Compared to long term mean the trend is not normal and the rate was low.

## 5.0 Current interventions

### 5.1 Non-food interventions

- Agriculture, Irrigation and Water Sector projects
  - Water trucking to areas experiencing water shortage in Kishushe, Tausa, Kasigau and Mwatate is on going - Arid Lands Resource Management Project, Kenya Wildlife Service and Ministry of Water.

## 6.0 Recommendations to DSG and KFSM

- Household members prone to disasters such as landslides and floods to be relocated to avoid fatal incidences.
- Protect existing springs either through fencing or planting trees given that springs are the only source of water.
- Kenya Wildlife Service to excavate water pans inside the National Park to harvest runoff water for use by wildlife during the dry spell.
- Kenya Wildlife Service to increase surveillance to address the problem of marauding elephants and buffaloes.