

# National Drought Management Authority

## WEST POKOT COUNTY

### DROUGHT EARLY WARNING BULLETIN FOR NOVEMBER 2017



A Vision 2030 Flagship Project



#### NOVEMBER EW PHASE



#### Early Warning (EW) Phase Classification

LIVELIHOOD ZONE	EW PHASE	TREND
AGRO PASTORAL	<b>NORMAL</b>	STABLE
PASTORAL	<b>NORMAL</b>	STABLE
COUNTY	<b>NORMAL</b>	STABLE

#### Drought Situation & EW Phase Classification

##### Biophysical Indicators

- The county experienced rainfall during the first and second dekad of the month with a temporal distribution of 6-8 days in the lowlands and 10-13 days over the highlands. Based on a fourteen year long term average, the cumulative rainfall received over the 6-month period (Jun–Nov 2017) represents 118% of the total rainfall received normally for the same period.
- Continued improvement in the condition of vegetation was observed as manifested by the upward fluctuation in VCI-3month from 65 previously to 72.84 for the entire county. Forage condition was good with above normal vegetation greenness being witnessed across the two livelihood zones.

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

- Currently the body condition of all livestock species is good and improving. Household access distance to water source reduced marginally and remains within the normal range for the month. Improvement in milk production and consumption was recorded with both exceeding the normal range albeit slightly.
- Terms of trade shifted upwards by eight units and there was no migration reported during the month under review.
- The CSI for the month dropped to 7.5 with majority of households falling under the acceptable FCS class. Proportion of children 'at risk' of malnutrition remained stable at 3.9% and within the normal range for the month of November.

Biophysical Indicators	Value	Normal range
Rainfall (% of normal for Nasukuta Station)	118	90-110
VCI-3month (County)	72.84	>35
VCI-3month (Pokot North )	72.62	>35
Forage Condition	Good	Good

Production Indicators	Value	Normal range
Livestock Body Condition	Normal	Normal
Milk Production	1.6 Litres	>1.4 Litres
Livestock Migration Pattern	Normal	Normal
Livestock deaths (attributed to drought)	No deaths	No deaths

Access Indicators	Value	Normal range
Terms of Trade (ToT)	98.2	>96
Milk Consumption	1.5Litres	>1.2Litres
Return distance to water sources (household)	2.1 km	0.0 -2.7km
Cost of water at source (Ksh /20 litres)	Kshs.5	<Kshs.5.0

Utilization Indicators	Value	Normal range
Nutrition status, MUAC (% at risk of malnutrition)	3.9	0.0- 7.2
Coping Strategy Index (CSI)	7.5	<9.0
Food Consumption Score (FCS)	41	>35

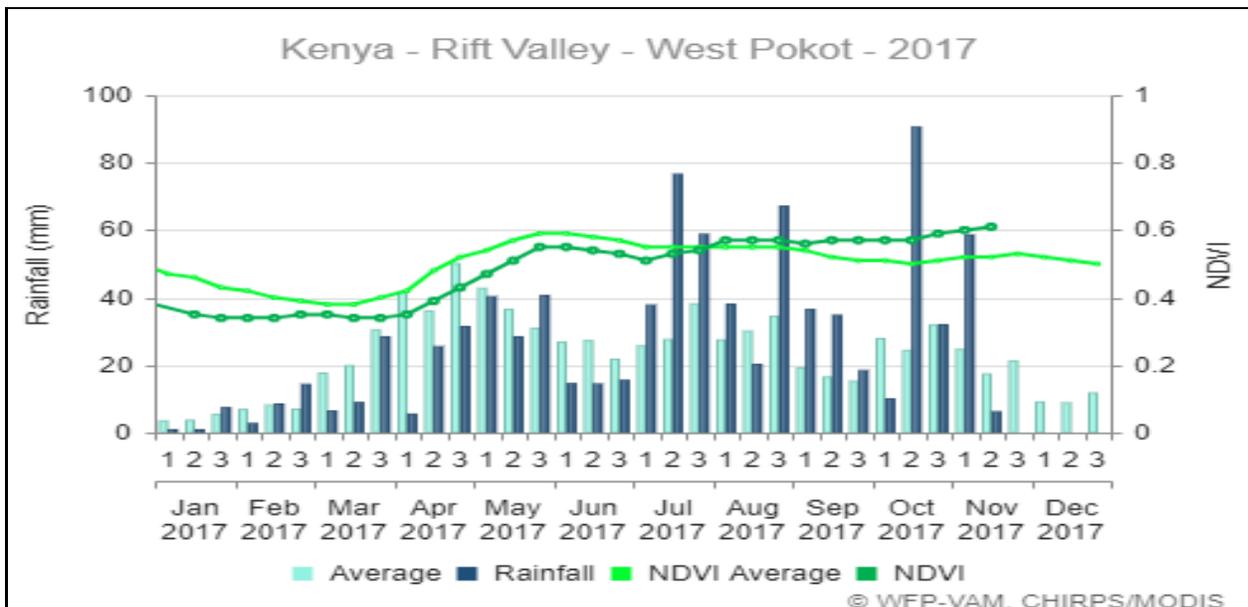
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|--|---|--|--|
| <ul style="list-style-type: none"> <li>▪ Short rains harvests</li> <li>▪ Short dry spell</li> <li>▪ Increased HH Food Stock</li> <li>▪ Land preparation</li> </ul> | <ul style="list-style-type: none"> <li>▪ Planting/Weeding</li> <li>▪ 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 stock</li> </ul> | <ul style="list-style-type: none"> <li>▪ Short rains</li> <li>▪ Planting/weeding</li> <li>▪ (Irish potatoes, Cabbages and Onions)</li> </ul> |
|--|---|--|--|

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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## 1.0 CLIMATIC CONDITIONS

### 1.1 RAINFALL PERFORMANCE

- Notable decrease in amount of rainfall received was witnessed from the first dekad of the month to the second dekad eventually culminating in cessation during dekad three. Most areas experienced rainfall of high intensity during the first dekad.
- During the month under review, most lowland areas reported a distribution in time of 6-8 days with that of highland areas being 10-13 wet days.



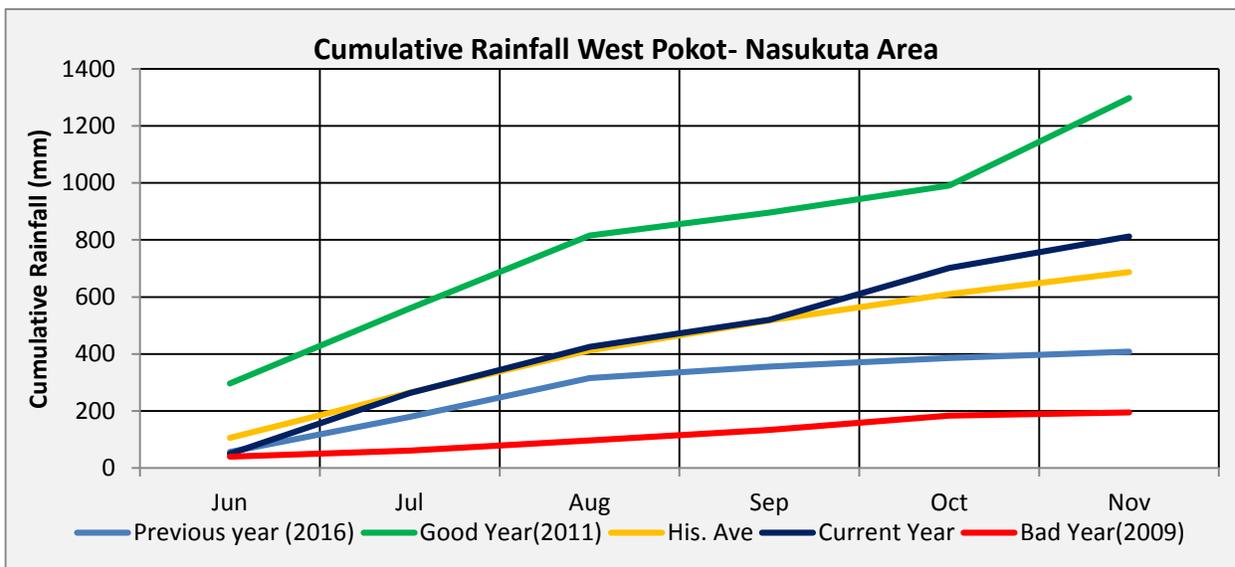
Source: VAM-World Food Programme

- From the graph above, rainfall (58.4mm) received during dekad one of November was higher than the average (24.6mm) amount received normally for the same period as opposed to dekad two whose performance was below normal.
- In relation to the historical normalized difference vegetation index (NDVI) values, the current NDVI values are higher and thus indicative of an improved situation.

### 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Substantial amount of rainfall was received during the first dekad with subsequent dekads experiencing depressed rainfall whose spatial distribution was significantly uneven especially in the Pastoral zone.
- Citing Nasukuta rainfall station as the reference centre for analysis of rainfall performance, the recorded amount of rainfall for the month under review whose temporal distribution was 8 days exceeded the expected amount normally received of 76.7mm by 34mm.

- Additionally, as per data from the aforementioned station, the cumulative fourteen year rainfall average for the period June to November is inferior to the cumulative rainfall for the same six month period within the current year totalling to 811.9mm by 125.3mm.
- The preceding amount for the six month within the current year therefore, represents 118 percent of the average rainfall normally received for the period and hence lies above the lower limit of the normal range by 28 percent.
- Comparative analysis of the current cumulative rainfall for the subject reference period indicates that its double the amount received over the same period during the previous year.
- In terms of rainfall performance, as illustrated below graphically, the period between June to November 2009 based on archived data is regarded as the segmental bad year.



- Rainfall stations located in the highland areas of the county including Kapenguria yard, Tapach, Kaibos, Kaibichbich, and Kishaunet recorded 307.4mm, 197.8mm, 156.9mm, 136.3mm and 82.4mm of rainfall respectively.
- Sebit, Mariny, Sigor, Mtembur, Alale and Kongelai rainfall stations all located in the lowland recorded 165.4mm, 139.7mm, 129.9mm, 66.1mm, 64.4mm and 32.2mm of rainfall during the month under analysis accordingly.

(Source: Meteorological Department-West Pokot County)

### 1.3 OTHER EVENTS

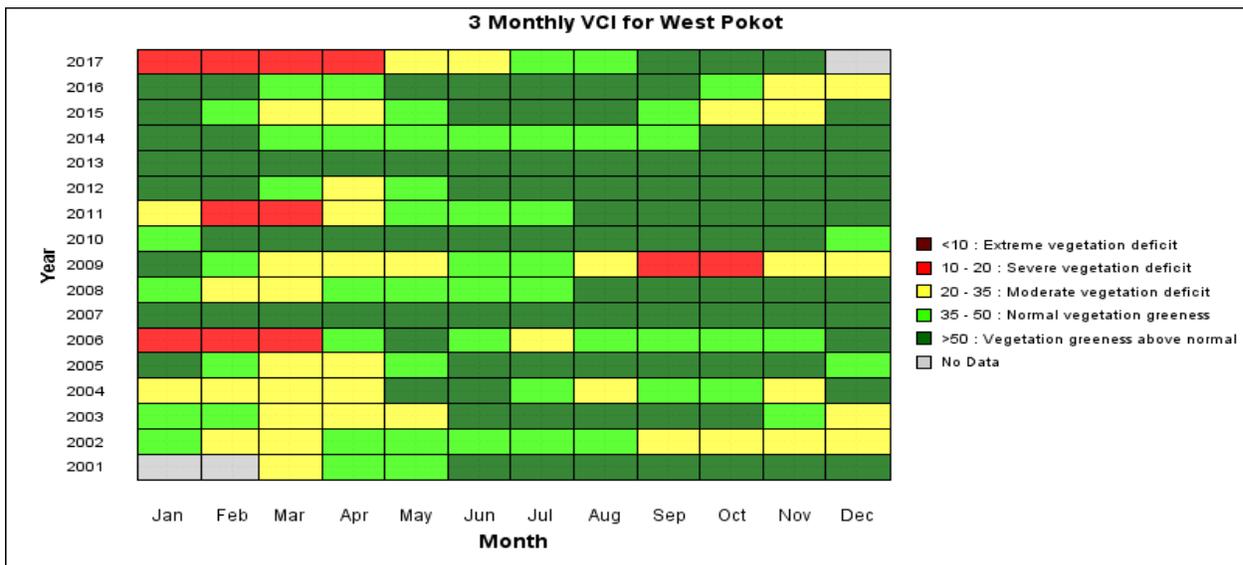
- During the month under review there was no notable event such as land/mud slides, lightning strikes or hailstorms that took place.

## 2.0 IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

#### 2.1.1 Vegetation Condition Index (VCI)

- In reference to agricultural drought, below is a county VCI matrix, that depicts how months have been categorized based on relevant VCI thresholds. Each month has been placed under an appropriate vegetation deficit category upon conducting a retrogressive analysis of the vegetation condition.
- Vegetation condition index is based on comparative NDVI change with reference to minima and maxima archived NDVI value.



Source: Boku University

- Vegetation greenness throughout the entire county was above normal during the month under review as backed up by the VCI-3month of 72.84.
- VCI-3month shifted upwards from 65.23 documented previously for the entire county to 72.84 hence continued improvement in the condition of vegetation. The scenario was replicated across all sub counties with for instance, the VCI-3month for Pokot north and central (both dominantly pastoral) adjusting upwards to 72.62 and 76.77 from 63.8 and 64.6 respectively.
- The observed positive progress in the condition of vegetation is as a consequence of receipt of above normal rains over the July, August and September (JAS) season coupled with the assertive influence of the timely short rains whose performance was above normal especially between the second dekad of the previous month and the first dekad of the current month.

### **2.1.2 Pasture**

- During the month under review, pasture condition across the two livelihood zones was good and comparatively above the normal pasture level (in terms of quantity and quality) during a normal year. Considerable improvement was observed even in some pockets of the pastoral zone where regeneration had not attained optimality and that was as a consequence of the adequate rainfall received more so in dekad one.
- Due to cessation that has been witnessed, the condition of pasture is forecasted to remain stable across December and then start deteriorating from January 2018.
- No major limitation to pasture access was reported during the month under analysis across all livelihood zones.
- Across the Pastoral and Agro Pastoral livelihood zones, uniformity in terms of pasture quantity and quality was observed during the month under assessment.

### **2.1.3 Browse**

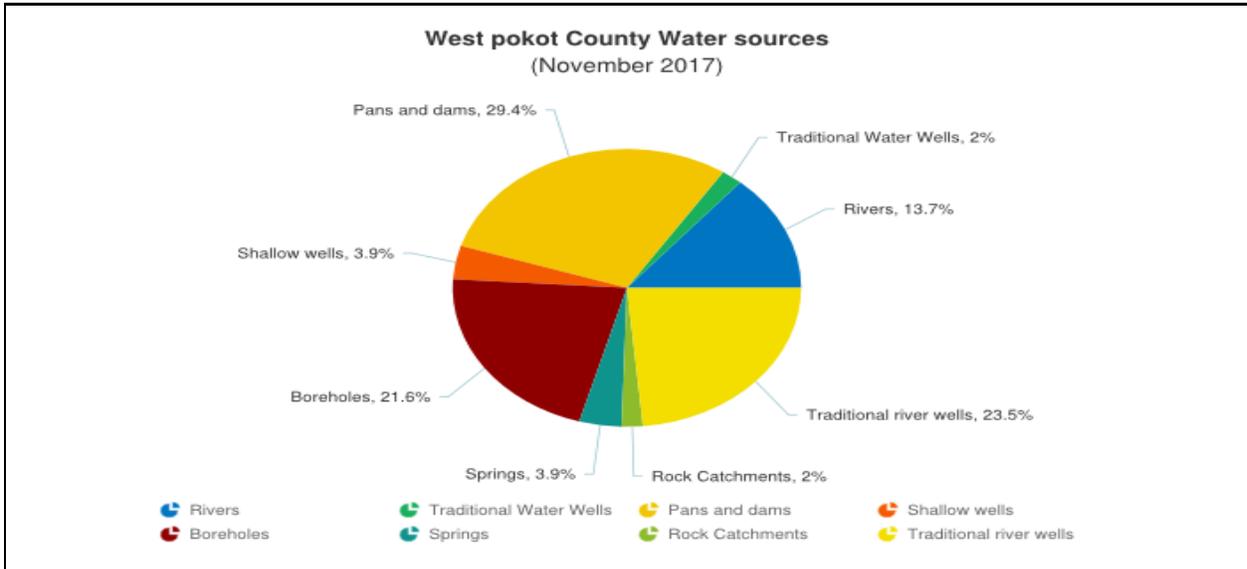
- The condition of browse remains significantly good in both livelihood zones and in comparison to the level at such a time in a normal year, the current level rates above. Continued receipt of sufficient rainfall more so in dekad one of the month under review further promoted massive regeneration of the shrub land species from the level witnessed in October.
- Across the Pastoral and Agro Pastoral livelihood zones, no major deterrent to browse access was reported during the period under analysis.
- In reference to browse quantity and quality within the Agro Pastoral and Pastoral livelihood zones, there was no significant variation observed in November.

## **2.2 WATER RESOURCE**

### **2.2.1 Sources**

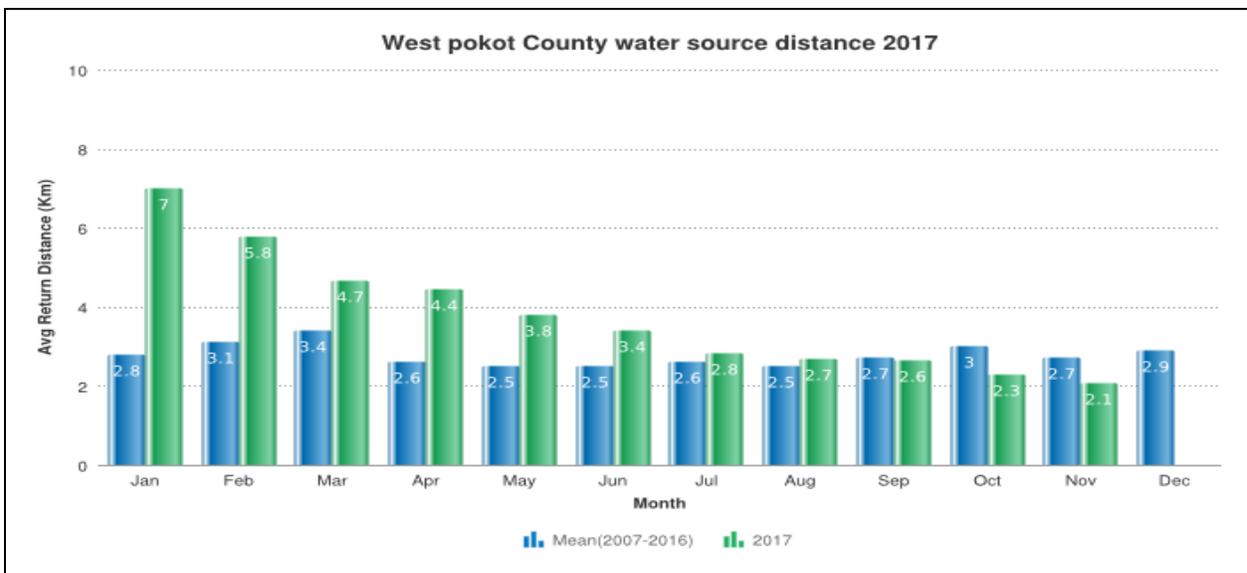
- During the month under review, household water needs were met mainly through use of Pans and dams, traditional river wells, boreholes and rivers. A significant proportion of the households monitored (29.4 percent) reported to be using Pans; 23.5 percent of them fetched from traditional river wells with 21.6 percent and 13.7 percent drawing water from boreholes and rivers respectively.
- In comparison to October, the water situation in open sources (at approximately 75% capacity) was much improved as a consequence of the rainfall experienced earlier in the month.

- The aforementioned form the major sources of water for households during this time of the year with notably the usage of pans going up due to their close proximity and having recharged well.
- Normal flow was witnessed along seasonal rivers such as Kanyangareng and Lomut. On the other hand, the three permanent rivers (Suam, Muruny and Wei Wei) boosted high volumes. This scenario is significantly better to that witnessed normally at such a time of the year.



### 2.2.2 Household Access and Utilization

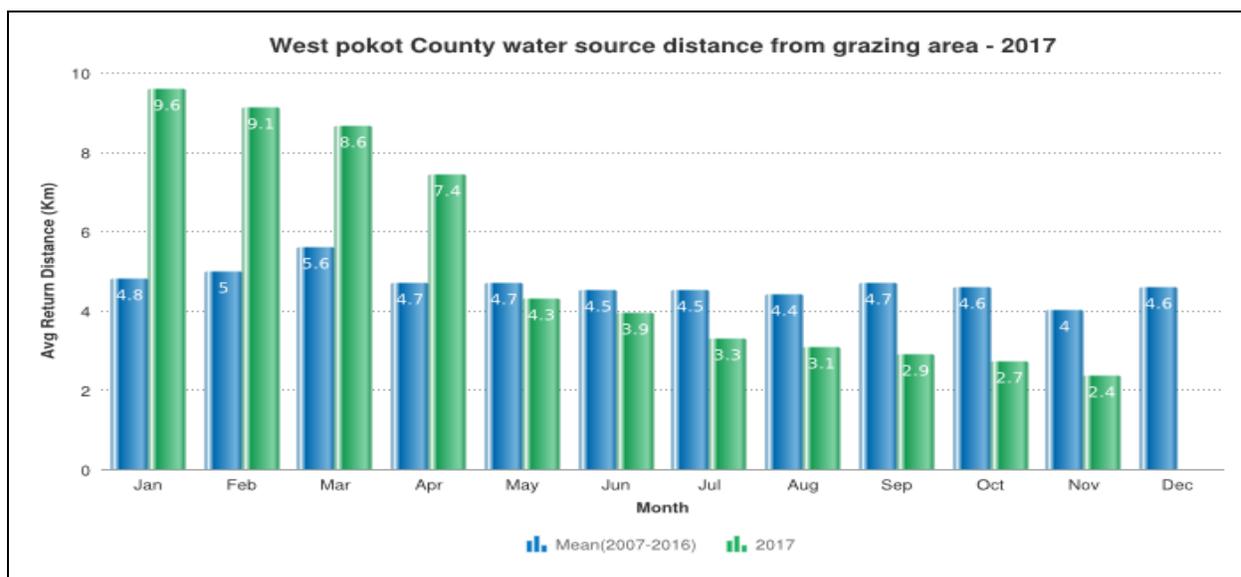
- Currently the household return distance to water source stands at 2.1 Km and this is a decrease from the 2.3 Km recorded in October. This distance is significantly lower than the long term average distance for the month by 22.2%.



- During the month under review, the trekking distance to water source was longer in the Pastoral zone than the Agro Pastoral zone. Adequate recharge of open water sources that are within the vicinity of households was the main factor that led to the decrease in distance.
- Across the two livelihood zones, waiting time at water source during the month was 0-5 minutes.
- Household water consumption in the Agro Pastoral and Pastoral livelihood zones currently averages 40-45 litres and 30-55 litres per person per day accordingly.
- Water at source is cost free whereas kiosks in urban centres were charging five shillings per 20 litre jerrican. The current charges are within the normal range for the month under analysis.

### 2.2.3 Livestock Access

- Return distance from grazing areas to water source for livestock reduced by 0.3 Km from the 2.7 Km reported in October. Compared to the long term average trekking distance, the current distance is lower by forty percent.
- Animals in the Pastoral zone covered a longer distance to access water than those in the Agro Pastoral zone during the month under review.



- Availability of pasture in surrounding areas of open water sources that were well recharged was the key influencing factor leading to the decrease in distance.
- During the month under review, the watering frequency for all livestock species in the two livelihood zones was seven times in a week.

## **3.0 PRODUCTION INDICATORS**

### **3.1 LIVESTOCK PRODUCTION**

#### **3.1.1 Livestock Body Condition**

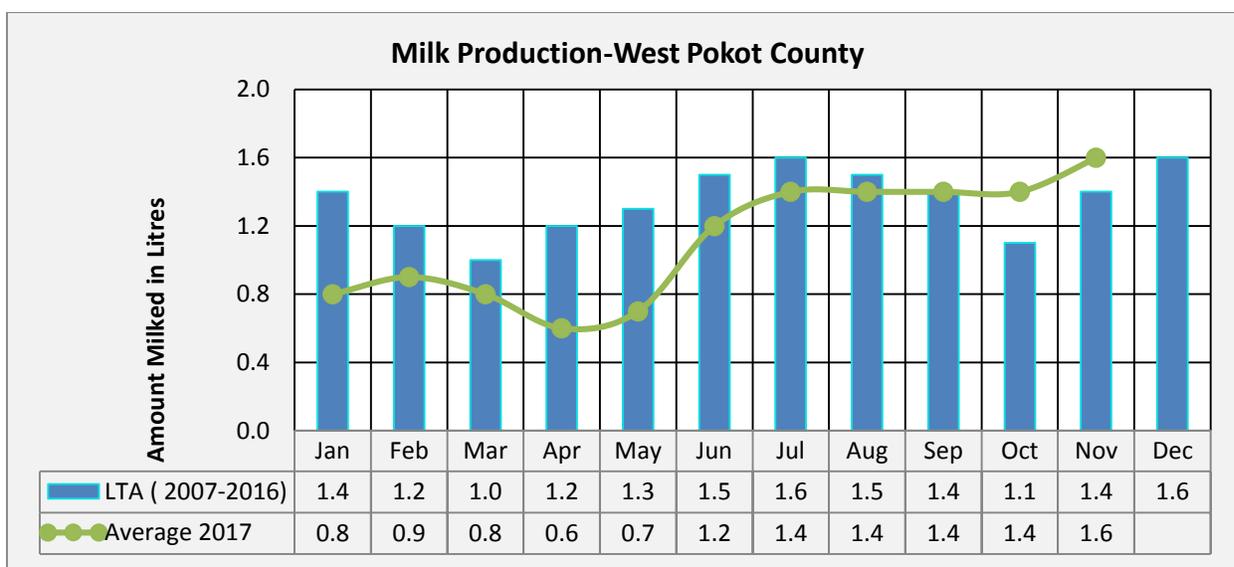
- The body condition for all livestock species across the two livelihood zones was evidently good in November. Sheep in both zones are blocky with the bone at the back not visible whereas the cattle exhibit a smooth body with fat over back and the tail head for bulls. Additionally, the hump in camels along the Pastoral zone is thick with a very fat tail buried and in fat.
- Body condition for all species is anticipated to improve further across December with stability likely to be witnessed in January before it starts deteriorating over the next dry spell as pasture starts depleting with the trekking distance to water source getting elongated.
- In comparison to similar periods during previous years, the body condition of all species is above normal and this is attributed to improved pasture and browse availability in areas in close proximity to water points and households.

#### **3.1.2 Livestock Diseases**

- Incidents of lumpy skin disease (LSD) and diarrhea in goats were reported in Kongelai with contagious caprine pleuropneumonia (CCPP) in goats being reported in Konyao.
- Cases of pest petis ruminantes (PPR) in goats and foot and mouth in cattle were reported in Pserum, Kiwawa and along the Turkwel belt during the month under review.

#### **3.1.3 Milk Production**

- Quantity of milk produced in the Agro Pastoral and Pastoral livelihood zones increased slightly to an average of 1.6 litres per household per day from the 1.4 litres reported over the last four months. Cattle is the leading producer of milk in the county.
- In comparison to the long term average of milk produced for the month, the current household milk production level exceeds it by fourteen percent.
- Increase in size of milking herd, high calving rate and existence of better rangeland conditions such as quality pasture and water within a shorter distance from households were the major drivers behind the observed trend in production above during the month under review.



### 3.2 RAIN-FED CROP PRODUCTION

#### 3.2.1 Stage and Condition of food Crops

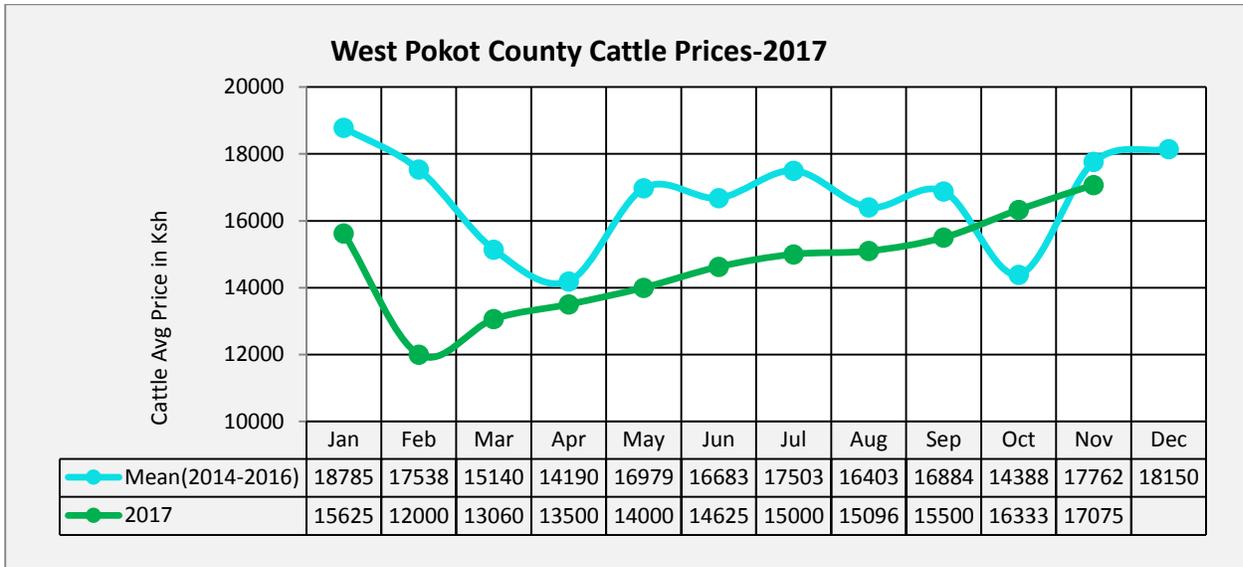
- During the long rains season, most farmers (approximately 50 percent of households) mainly in the highland areas of the county plant Maize, Beans and Irish Potatoes for food and income purposes. On a small scale, other crops such as Green grams and Sorghum are cultivated in the lowlands during the short rains season by a few farmers.
- Most farmers in the highland zones of the county had completed harvesting the Maize crop and were actively engaged in processing, packaging and storing.
- Farmers in the lowland areas such as Ortum and Wei Wei that had planted beans at the onset of the short rains were engaged in weeding. A similar scenario was replicated amongst farmers in the highlands that had planted Irish Potatoes.
- Horticultural production entailing fruits such as Mangoes, Paw Paw and Water melon was booming with intensive market activity being witnessed more so along the production zones of Sebit, Wakorr, Wei Wei, and Lomut.
- Other agricultural production activities going on during the month under review included bulb onion harvesting (in areas such as Kokwotendwo and Kerelwa) and supply to Ortum market for distribution to other centres within and outside the county.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle prices

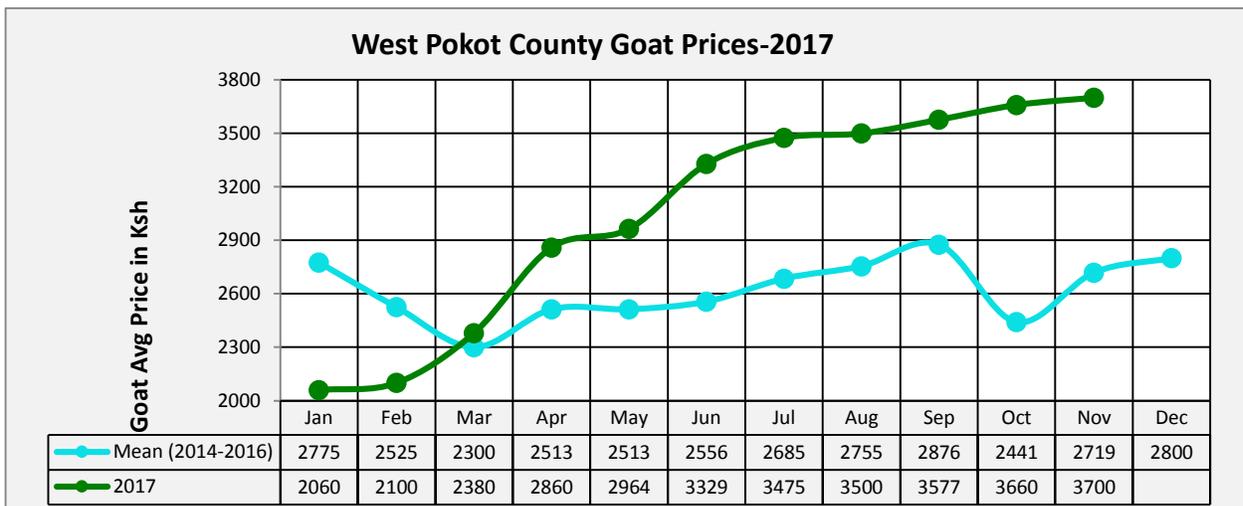
- Cattle price adjusted upwards during the month under review to Ksh.17,075 from the Ksh.16,333 recorded during the previous month.
- The increase in price could be attributed to the improved cattle body condition influenced by availability of pasture and water in adequate quantity within the county.



- Compared to the short term average price for the month, the price above lies below by 4%.

#### 4.1.2 Goat Prices

- The market trading price for goat during the month under review was Ksh. 3,700. This was an increase from the Ksh. 3,660 recorded in October across the two livelihood zones.

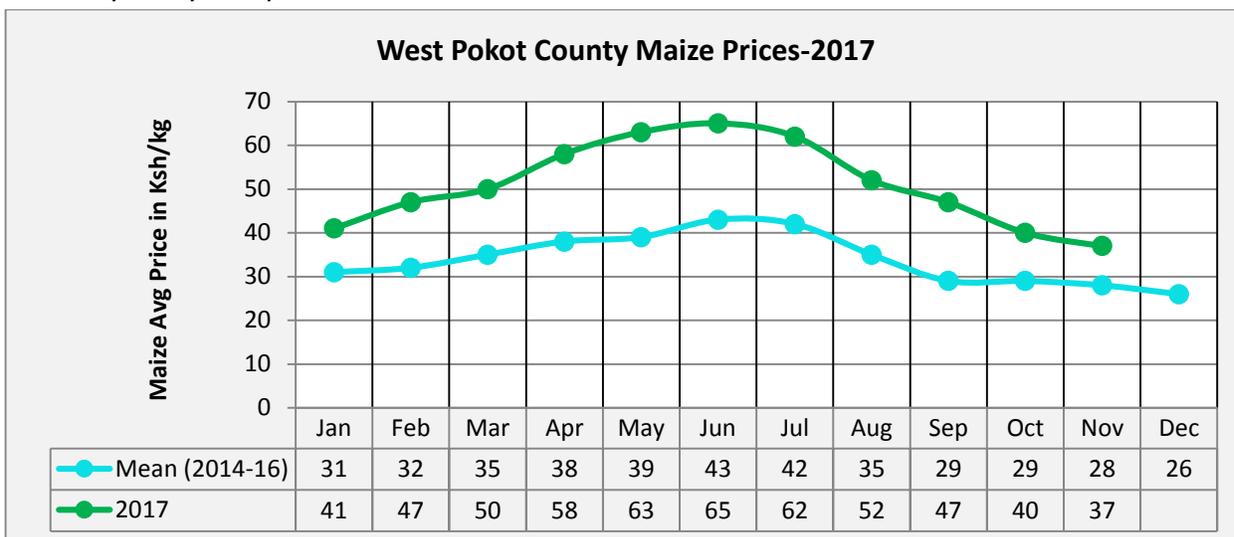


- Availability of quality browse in sufficient quantities coupled with ease of access to water within a shorter trekking distance facilitated improvement in goat body condition hence the rise in price.
- In comparison to the short term average price for the month, the prevailing market value of goat exceeds it by thirty six percent.

## 4.2 CROP PRICES

### 4.2.1 Maize

- The price of Maize per kilogram dropped slightly to Ksh.37 from the Ksh.40 recorded in October.
- Compared to the three year short term average for the month, the current price lies significantly above by thirty two percent.

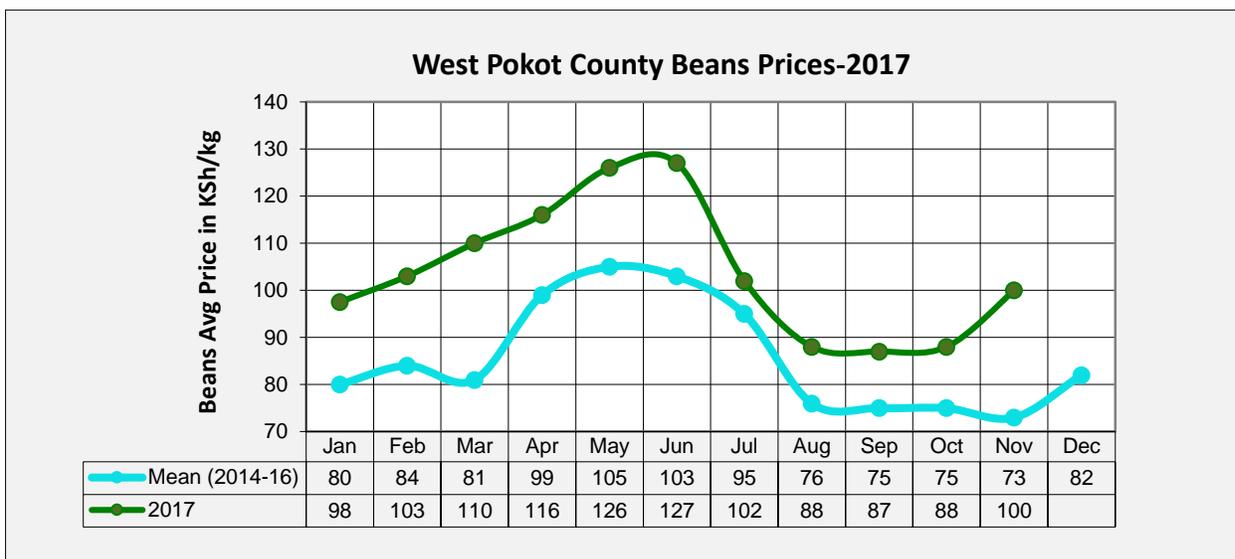


- Supply of Maize from the Mixed Farming zone where harvesting has been taking place to the major markets along the Pastoral and Agro Pastoral livelihood zones is the major factor influencing the drop in price and thus no variation exists between the two latter livelihood zones.
- The price above is anticipated to drop slightly over the next month before it starts rising beginning January as the market stocks start dwindling.

### 4.2.2 Beans

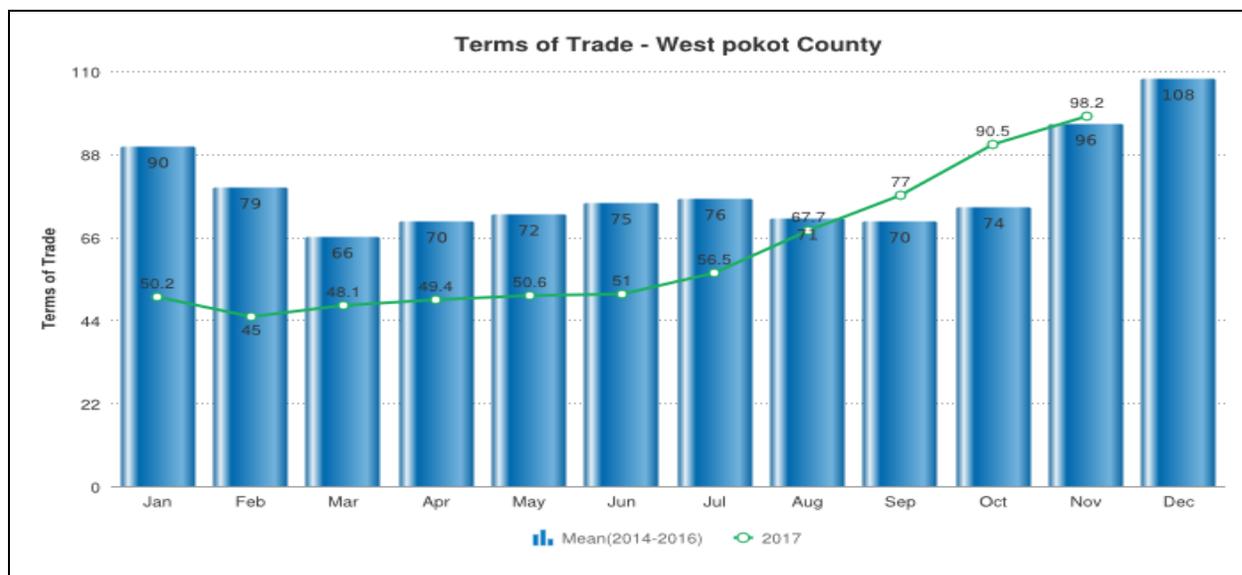
- The price of beans per kilogram increased from Ksh. 88 recorded in October to Ksh. 100.
- The increase in price has been occasioned by stock outs internally with the external sources also not supplying adequately to meet the market demand.
- All markets along the Agro Pastoral and Pastoral livelihood zones reported the same price and this could be attributed to the fact that they were dependent on the same external sources during the month under review.

- The current price is considerably high in comparison to the three year short term average price for the month under review by a margin of thirty seven percent.



#### 4.3 LIVESTOCK PRICE RATIO/ TERMS OF TRADE (TOT)

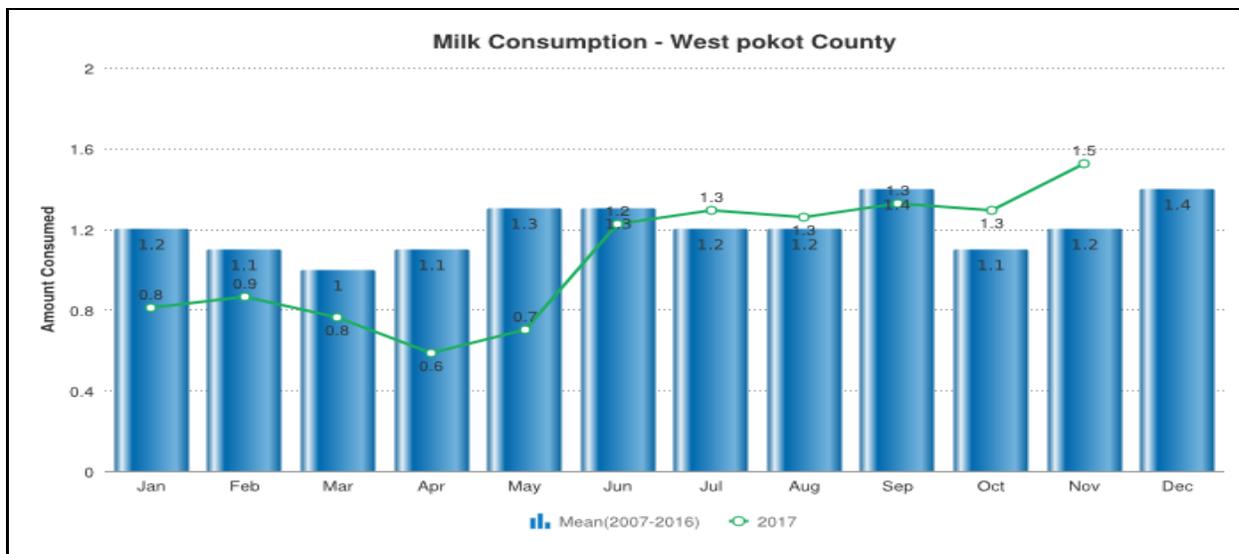
- The ToT for the month under analysis was 98.2 hence favourable to pastoral households who could purchase eight more kilograms of maize on top of what they could obtain in October from sale of an identical goat. The ToT above is slightly higher than the short term average ToT for the month by two percent. The drop in maize price bracketed with the slight rise in the price of goat is what contributed to the improvement in ToT.
- The ToT is expected to improve slightly in December before it assumes a negative trend as the price of maize starts increasing in January with that of goat remaining stable or decreasing.



## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

- The amount of milk consumed during the month under review rose slightly from the 1.3 litres recorded previously to 1.5 litres.



- The increase above could be ascribed to improved milk availability at household level for consumption arising from rise in production level due to the high calving rate that was witnessed during the month under review.
- Noteworthy, the current consumption exceeds the normal consumption ceiling for the month by a remarkable twenty five percent.

### 5.2 FOOD CONSUMPTION SCORE

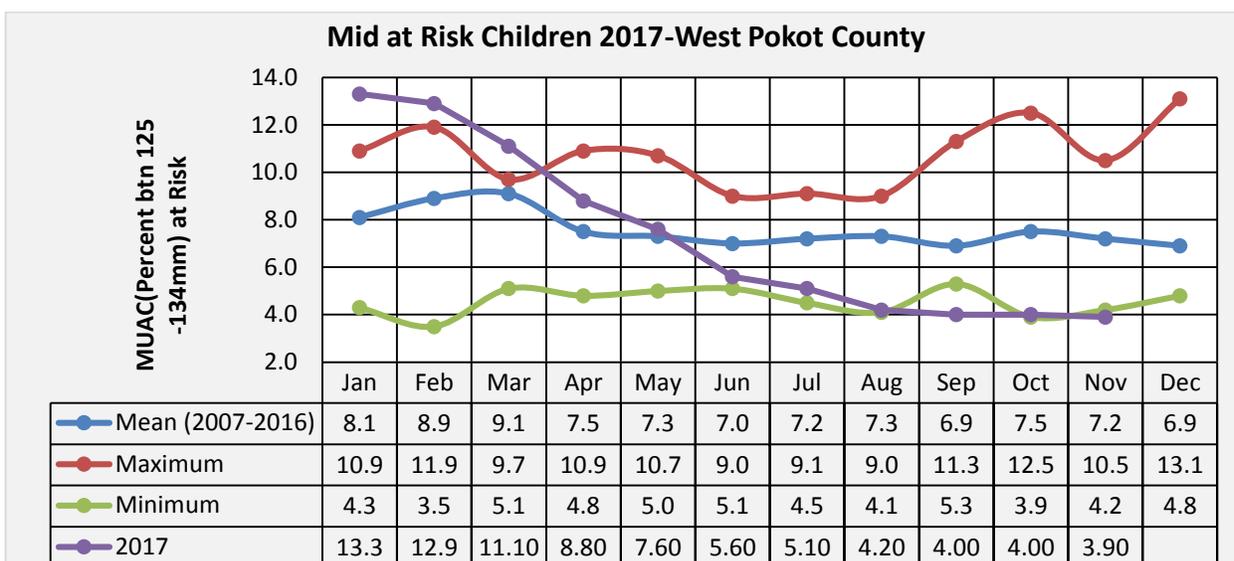
- A total of 6%, 45% and 49% of households fell within the poor, borderline and acceptable food consumption score classes respectively in November.
- The FCS for the month just like in October remained stable at 41 across the two livelihood zones.
- Noticeable variations between the two livelihood zones included the percentage of households falling under each category with for instance 66.7% of households in the Agro Pastoral zone being classified as having acceptable FCS as opposed to 37.8% of households under the same class in the Pastoral zone. Majority of households in the Pastoral livelihood zone (52.2%) fell under the borderline band with the remaining 10% being classified as having a poor FCS.

## 5.3 HEALTH AND NUTRITION STATUS

### 5.3.1 Nutrition Status

- Proportion of children rated being 'at risk' of malnutrition during the month under review was 3.9% and thus remained unchanged from the previous month.

- In comparison to the long term average for the month of children rated being ‘at risk’ of malnutrition, the current proportion lies below by a considerable margin of 46 percent.



- Improved milk consumption among under-fives, provision of essential nutrition supplements through integrated medical outreaches to hotspots matched with improved dietary diversity at household level owing to the expanded purchasing power were some of the positive causal determinants influencing the observed stability in number of under-fives falling outside the normal range of children at ‘risk’ of malnutrition.

### 5.3.2 Health

- The prevalent ailments reported among the sampled children under monitoring during the month under review included malaria with fever chills and diarrhea.

## 5.4 COPING STRATEGY

### 5.4.1 Coping Strategy Index (CSI)

- The CSI shifted from the 8.3 recorded previously to 7.5 in November implying application of fewer and less severe coping mechanisms in bridging food gaps by households owing to improved food availability during the month under analysis in comparison to the previous month.
- Pastoral CSI adjusted downwards to 7.3 with that of the Agro Pastoral dropping to 7.8 and this could be attributed to the significant improvement in livestock productivity more so in the former zone during the period under assessment.
- Majority of households practised reliance on less preferred/less expensive and borrowing as their appropriate means of coping during the month under review.

## **6.0 CURRENT INTERVENTION MEASURES (ACTION)**

### **6.1 FOOD**

- The national government distributed 500 (50kg) bags of maize, 50 (90kg) bags of beans, 50 (18 litre) cartons of cooking oil and 5 (25kg) sachets of nutripop to every sub county during the month under review.

### **6.2 NON-FOOD**

#### **Health**

- Integrated medical outreaches covering twenty nine sites including Sina, Chepkopegh, Nachecheyet, Kauriong, Amakuriat, Ng'otut, Wassat, Oruro among others supported by Kenya Red cross and Action against Hunger (ACF) were on going during the month under review.

#### **Cash Transfer**

- A total of 1,600 households in Kositei, Kaptolomwo and Parkoyu locations benefitted with Ksh. 3,000 under the cash transfer programme being implemented by Kenya Redcross during the month under review.
- A total of 16,165 households (Pokot west-2945, central-3592, north-8234, south-1394) registered under the Chakula Kwa Jamii cash transfer programme implemented by world vision with support from world food programme (WFP) and the government of Kenya (GoK) benefitted with Ksh. 3,000 during the month under analysis.

## **7.0 EMERGING ISSUES**

### **7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT**

- There was no notable incident of insecurity or conflict reported during the month save for over thirty cattle stolen from Orwa but recovered.

### **7.2 MIGRATION**

- During the month under review, no migration was taking place into or outside the county.

### **7.3 FOOD SECURITY PROGNOSIS**

- Livestock body condition is expected to remain stable and in some areas improve across December due to improved access to quality pasture within a limited distance to water source. As

a consequence, an upward shift in livestock productivity (improved milk production and better market return value) will thus be the highly likely scenario across that period.

- However, limited agricultural activity is likely to be witnessed due to the early cessation of the short rains but household food per capita shall remain within desirable levels as most households continue utilizing stocks from the long rains harvest.
- The purchasing power for pastoral households shall remain relatively above average occasioned by the improved terms of trade and hence malnutrition rates are likely to remain at the optimal minimum owing to improved household dietary diversity by way of accessing nutritious foods through markets over the next 1-2 months.
- Generally, the food insecurity situation in the county is anticipated to remain within the minimal band across December with selected households that may be experiencing shortages being well positioned to meet their needs via markets.

## 8.0 RECOMMENDATIONS

- **Veterinary:** Improve animal health by conducting mass vaccination in areas such as Kongelai, Konyao and Pserum where cases of PPR, CCPP, LSD and foot and mouth have been reported while upscaling disease surveillance efforts to cover sites along the county borders.
- **Water:** Enhance water availability for humans and livestock during scarcities by drilling and equipping strategic/ contingency boreholes.
- **Health and Nutrition:** Provision of essential health education to communities on water quality improvement to minimize the risk of water borne diseases such as cholera outbreak while expanding the reach of the on-going medical outreaches to cover all areas reporting high rates of malnutrition.
- **Livestock:** Increase pasture level for livestock through rehabilitation/conservation of strategic grazing areas, rangeland reseeding and advocating for hay production through provision of pasture seeds to farmer groups in addition to promoting conservation and storage of crop products for utilization during the dry spell.