Drought Situation & EW Phase Classification

Biophysical Indicators
- The county experienced rainfall with a temporal distribution of 2-3 days culminating with cessation during the month under review. Notably, the cumulative rainfall for the 6-month period covering July to December 2018 represents only twenty nine percent of the rainfall normally received within that duration.
- The county was experiencing moderate vegetation deficit especially during the first half of the month as supported by the shift in VCI-3month from 42 to 32. Nevertheless, some slight recovery was witnessed toward the end of the month.
- Some sites in the county more so those not well served with boreholes were experiencing water inadequacy.

Socio Economic Indicators (Impact Indicators)
- Body condition of all livestock species was fair and the household return distance to water source decreased thereby remaining within the normal range for the month of December.
- Milk production and consumption improved slightly but was outside the normal monthly range.
- Terms of trade dropped but was above the normal range. Migration was taking place with no cases of death reported.
- Proportion of children ‘at risk’, coping strategy index and the food consumption score all remained stable in relation to the previous month and were within their respective monthly normal ranges. However, proportion of households with a poor FCS across all the three livelihood zones rose slightly.

Early Warning (EW) Phase Classification

<table>
<thead>
<tr>
<th>LIVELIHOOD ZONE</th>
<th>PHASE</th>
<th>TREND</th>
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<tbody>
<tr>
<td>PASTORAL-ALL SPECIES</td>
<td>ALERT</td>
<td>STABLE</td>
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<td>AGRO-PASTORAL</td>
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<td>STABLE</td>
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<tr>
<td>FISHERIES</td>
<td>ALERT</td>
<td>STABLE</td>
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<tr>
<td>COUNTY</td>
<td>ALERT</td>
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Biophysical Indicators

<table>
<thead>
<tr>
<th>indicator</th>
<th>Value</th>
<th>Normal Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainfall (% of Normal)</td>
<td>29</td>
<td>60-100</td>
</tr>
<tr>
<td>VCI-3 month (County)</td>
<td>32</td>
<td>&gt;35</td>
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<tr>
<td>VCI-3 month (T.West)</td>
<td>21</td>
<td>&gt;35</td>
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<tr>
<td>State of Water Sources</td>
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<td>5-6</td>
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Production Indicators

<table>
<thead>
<tr>
<th>indicator</th>
<th>Value</th>
<th>Normal Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock Migration Pattern</td>
<td>Normal</td>
<td>Normal</td>
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<tr>
<td>Livestock Body Condition</td>
<td>Fair</td>
<td>Good</td>
</tr>
<tr>
<td>Milk Production</td>
<td>1.6 Litres</td>
<td>&gt; 3.1 Litres</td>
</tr>
<tr>
<td>Livestock deaths (attributed to drought)</td>
<td>No Deaths</td>
<td>No Deaths</td>
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</table>

Access Indicators

<table>
<thead>
<tr>
<th>indicator</th>
<th>Value</th>
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<tr>
<td>Terms of Trade (ToT)</td>
<td>49.3</td>
<td>&gt;35</td>
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<tr>
<td>Milk Consumption</td>
<td>1.6 Litres</td>
<td>&gt; 2.9 Litres</td>
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<tr>
<td>Return distance to water sources</td>
<td>4.2 km</td>
<td>&lt;6.0 km</td>
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<tr>
<td>Cost of Water(Ksh/20L)</td>
<td>Ksh.10</td>
<td>&lt;Ksh.10</td>
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Utilization Indicators

<table>
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<tr>
<th>indicator</th>
<th>Value</th>
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<tr>
<td>Nutrition Status, MUAC (% at risk of malnutrition)</td>
<td>18.6</td>
<td>&lt;19.7</td>
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<tr>
<td>Food Consumption Score (FCS)</td>
<td>35</td>
<td>&gt;35</td>
</tr>
<tr>
<td>Coping Strategy Index (CSI)</td>
<td>15.9</td>
<td>&lt;17.2</td>
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</table>

Short rains harvests
- Short dry spell
- Reduced milk yields
- Increased HH Food Stocks
- Land preparation

Planting/Weeding
- Long rains
- High Calving Rate
- Milk Yields Increase

Long rains harvests
- A long dry spell
- Land preparation
- Increased HH Food Stocks
- Kidding

Short rains
- Planting/weeding
1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- During the month under review, most parts of the County experienced rainfall with a temporal distribution of 2-3 days. However, rainfall received in Turkana south sub county, some parts of Turkana west (Letea, Nanam and Kakuma wards), Turkana north (Lake zone ward), Turkana east (Lokori and Katilia wards) and Loima (Loima ward) was slightly depressed.

![Rainfall Graph]

Source: VAM (World Food Programme)

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Amount of rainfall recorded at Lodwar meteorological station during the period under analysis exceeded what is normally received for the month of December by four times. Spatially, the distribution was relatively even.
- Cumulative rainfall for the period July 2018 to December 2018 is lower than the 11-year long term average cumulative rainfall for the same cycle by 81.9mm and therefore represents twenty nine percent of the latter.

![Cumulative Rainfall Graph]

Source: Meteorological Department (Turkana County)

- Compared to the cumulative rainfall for the previous year (July 2017 to December 2017), the current year’s cumulative rainfall is lower by a significant margin of 150mm.
- Based on the 11-year period, the period between July 2016 to December 2016 is considered to be the segmental bad year historically as illustrated above.

1.3 OTHER EVENTS

- During the month under review, there were no other notable events such as floods, hailstorms nor wildfires reported.
2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- Below is a County matrix that depicts how months have been categorized based on the level of vegetation deficit.
- As illustrated, the County was experiencing moderate vegetation deficit especially during the first half of the month. Deterioration in vegetation condition was witnessed during the aforementioned segment of the month as evidenced by the shift in VCI-3month to 32 from 42 recorded previously.
- Therefore, the level of vegetation greenness during that period was outside the normal level for the period.

A negative trend in the condition of vegetation was witnessed across all the sub counties during the first half of the month with some recovery being evident during the second half of the month following receipt of rainfall during the second dekad.

- Notably though, the level of deterioration in the condition of vegetation was highest in Turkana central (TC) and Turkana south (TS) sub counties as illustrated below (from November to December) with Turkana north(TN) experiencing the least following receipt of rainfall in the sub county during the first dekad of December.
- The level of recovery remains low in Turkana west (TW), some parts of Turkana north, Turkana east (TE) and Loima (LM) sub counties.
- The deteriorating condition of vegetation during the first half of the month could be attributed to inadequate rainfall with receipt of rainfall especially during the second dekad contributing immensely towards the recovery witnessed later in the month.
2.1.2 Pasture
- During the month under review, the condition of pasture was poor but tending to fair albeit below the level normally witnessed for the month of December. The observed condition could be ascribed to receipt of rainfall during the second dekad of the month across most parts of the County.
- The available pasture in the areas that have experienced regeneration is anticipated to last up to the end of January with a possibility of February in some Agro Pastoral sites like Katilu and Kaitese.
- Currently, pasture remains depleted in some parts of Lake Zone, Letea, Lokichar, Kalapata, Kalobeyei, Kakuma, Kerio, Loima and Nanaam wards.
- Livestock diseases transmitted by the migrating herd, water availability and insecurity along the border areas were the major deterrents to pasture access during the month under review.
- During the month under review, no significant variation was observed in terms of the quality and quantity of pasture across the three livelihood zones.

2.1.3 Browse
- During the month under analysis, the condition of browse was generally fair across all sites in the County but below the level normally witnessed at such a time of the year across the three livelihood zones. The observed condition could be attributed to receipt of rainfall during the month under review that slowed further deterioration as witnessed previously.
- Available edible and quality browse is projected to last up to the end of February as opposed to April normally across all the livelihood zones.
- The major constraints to browse access during the month under review were insecurity in some areas, livestock diseases and Locusts that continued infesting some areas in the County.
- Across the Pastoral, Agro Pastoral and Fisheries livelihood zones, no significant variation in terms of browse quality and quantity was observed during the month under review. However, browse in select sites in Turkana south such as Kakong and Lokichar, Turkana west (Letea and Kakuma), Turkana central (stretch between Loturerei and Gold), Turkana north (along the lake) was of poor condition.
2.2 WATER RESOURCE

2.2.1 Sources

- Boreholes, shallow wells and traditional water wells were the three major sources of water in use by the community during the month under review.
- A further increase (by seven percent) in the number of households resorting to use of shallow wells as their source of water was recorded with boreholes remaining the most preferred source of water for majority of the households during the month of December.
- Notably, usage of pans was nil implying that the rainfall received during the month under analysis could not suffice in recharging the pans.

Seasonal rivers including Tarach, Kospir, Kawalase, Kalemgorok and Natira remained dry for the better part of the month. However, the water situation was stabilized by the rainfall received for the 2-3 days that led to reduced depth of traditional river wells.

- Normally at such a time of the year, besides the use of boreholes, household water needs are supplemented through use of water pans hence a significant variation currently being witnessed.

2.2.2 Household access and Utilization

- Household return distance to water source decreased from that recorded previously by 2.8km and was lower than the normal range for the month of December by thirty percent.
The trekking distance for households’ in search of water was longest in the Agro Pastoral livelihood zone with those in the Fisheries livelihood zone covering a relatively shorter distance.

The average waiting time at water source for households’ in the Agro Pastoral, Pastoral and Fisheries livelihood zones was 45 minutes, 30 minutes and 15 minutes respectively.

Household water consumption per person per day averaged 15 litres, 20 litres and 25 litres across the Agro Pastoral, Pastoral and Fisheries livelihood zones and thus improved slightly in relation to the month of November.

Water at source was cost free but water kiosks along major urban centres such as Kakuma and Kalokol were dispensing a 20 litre jerry can at ten shillings. The price was within the normal range for the month under review.

2.2.3 Livestock access

The return trekking distance to water source from grazing areas reduced by 1.2km from that reported during the month of November. The distance was lower than the long term average distance for the month under review by twenty four percent.

The shortest distance was reported along the Fisheries livelihood zone with the Pastoral zone reporting the longest.

The reduced distance could be attributed to the improved water situation during the month following receipt of rainfall that promoted water availability within most shallow well aquifers that were in close proximity to grazing sites.

The watering frequency for cattle across the three livelihood zones was five times per week, shouts and camels four times in the Pastoral and Agro Pastoral livelihood zones during the month under review.

Improved frequency in watering animals in relation to the previous two months could be attributed to water availability in the boreholes (including those that had been affected by a low water table previously) and reduced depth of traditional river wells that meant easy access.
3.0 PRODUCTION INDICATORS
3.1 LIVESTOCK PRODUCTION
3.1.1 Livestock Body Condition

- The body condition of livestock during the month under review was generally fair across the three livelihood zones. The borderline fore-ribs in cattle along the Pastoral and Agro Pastoral livelihood zones were not visible with soorts being neither fat nor thin across the three livelihood zones. Camels had a smooth appearance.
- Livestock body condition is anticipated to remain stable across January owing to availability of forage that would have regenerated albeit to a slight extent before it would start deteriorating as the condition of the rangeland starts deteriorating too.
- Notable though is the fact that the current livestock body condition lies outside the normal range for the month under review and this would be majorly attributed to forage in availability over the past two months owing to the poor performance the short rains countywide.

3.1.2 Livestock Diseases

- High worm load was reported across most sites in the County with some incidents of Contagious Caprine Pleuropneumonia (CCPP) being reported in Nachukui and Lorugum during the month under review.

3.1.3 Milk Production

- Quantity of milk produced during the month under analysis improved slightly in relation to the previous month with goat being the leading producer across the three livelihood zones.
- Despite the recorded increase, the current production level remains lower than the normal production level for the month of December by forty nine percent.
- Pasture and water availability within reduced trekking distances coupled with some calving were the factors influencing the observed positive trend in milk production during the month under review.

3.2 RAIN-FED CROP PRODUCTION
3.2.1 Stage and Condition of Food Crops

- Majority of the farmers mainly along the Agro Pastoral livelihood zone practice Maize, Sorghum and Cowpeas production during the short rains season.
- During the preceding short rains season however, no planting took place owing to the dismal performance of the short rains.
4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- During the period under analysis, the market price of a 4-year old medium sized bull dropped by twenty two percent from the price reported in November.

  ![Cattle Prices Graph]

  - The deteriorating body condition of cattle witnessed during the early part of the month was the major factor behind the decrease in price.
  - The highest price was reported along the Agro Pastoral livelihood zone with the Pastoral livelihood zone returning the least.
  - The current price of cattle is lower than the short term average price of cattle for the month under review by thirteen percent and therefore lies outside the normal range.

4.1.1 Small Ruminants Prices (Goat price)

- During the month under review, a 2-year old medium sized goat traded at an average price of Ksh. 2,950 and this was a drop from that recorded previously.
- The slight decrease in price could be ascribed to the deteriorating body condition of goat during the month under analysis occasioned by the poor browse condition especially along the Agro Pastoral and Fisheries livelihood zones before receipt of rainfall later in the month.

  ![Goat Prices Graph]

  - The Pastoral livelihood zone reported the highest price of Ksh. 3,420 followed by the Agro Pastoral livelihood zone at Ksh.2, 900 with the least price of Ksh. 2,670 being reported along the Fisheries livelihood zone.
  - The current price of goat is at par with the short term average price for the month under review.
4.1.4 Camel Prices

- During the month of December, the price of a 4-year old camel remained relatively unchanged from that reported during the month of November.

- The observed stability could be attributed to absence of any significant production pull/push factors that could influence the price during the month under analysis.
- The highest price of Ksh.26,555 was reported in the Pastoral livelihood zone with the least price of Ksh. 25,000 being reported along the Agro Pastoral livelihood zone.
- The current price of camel is lower than the short average price for the month under review by ten percent.

4.2 CROP PRICES

4.2.1 Maize

- The price of maize remained unchanged from that reported over the past two months and was lower than the short term average for the month under review by twenty five percent.

- The Pastoral livelihood zone reported the highest price per kilogram of maize at Ksh. 71 with the Fisheries and Agro Pastoral livelihood zones reporting Ksh. 60 during the month of December.
- Continued flow of Maize mainly from the external market in Kitale supplemented by additional imports from Uganda were the major factors influencing the observed stability.
4.2.2 Beans

- The price of beans per kilogram decreased by seven percent from that reported during the month of November. The decrease in price could be attributed to enhanced availability occasioned by inflow of the commodity from Uganda.

![Turkana County Beans Prices - 2018](image)

- The highest price of Ksh. 118 was reported along the Pastoral livelihood zone with the Agro Pastoral and Fisheries livelihood zones posting Ksh. 108 and Ksh. 100 respectively during the period under review.
- Compared to the short term average price of beans for the period under analysis, the prevailing market price was lower by fifteen percent.

4.3 Livestock Price Ratio/Terms of Trade

- The terms of trade dropped from those recorded during the month of November but still remained favourable to pastoral households’ dependent on markets for food supplies.
- The prevailing terms of trade during the month under review was higher than the short term average terms of trade for the month of December by forty one percent.
- Consequently, the number of kilograms of maize obtained from sale of a goat similar to that sold during the month of November was less by eight kilograms.

![Terms of Trade - Turkana County](image)

- The drop in the terms of trade could mainly be associated with the decrease in the price of goat during the month under review given the price of Maize remained relatively stable.
- The terms of trade is projected to remain stable across January before assuming a negative trend over subsequent months owing to the high likelihood of the price of goat dipping further with a probable rise in that of maize over that period.
5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- From the sampled two hundred and nine households, only twelve percent of them reported to have consumed milk during the month under review, this being a drop from the number in November.
- However, the level of milk consumed rose slightly from that reported during the previous month.

- Improved yield per animal owing to pasture availability in some sites coupled with the calving taking place during the month were the factors influencing the improved consumption level.
- The current consumption is lower than the normal consumption at such a time of the year by forty five percent.

5.2 FOOD CONSUMPTION SCORE (FCS)

- Thirty three percent of the sampled two hundred and nine households during the month of December were categorized as having an acceptable food consumption score with twenty eight percent of them falling within the borderline class while the remaining constituting thirty nine percent were classified under the poor food consumption score band.
- Food consumption at household level remained stable in relation to the preceding month as evidenced by the unchanged FCS of 35 for the month under analysis.

- Comparative analysis of the consumption patterns across the three livelihood zones indicated that most of the households with a poor FCS were resident in the Pastoral zone whereas those with an acceptable one were mainly found in the Fisheries and Agro Pastoral livelihood zones.
- Turkana west and Loima Sub Counties returned the highest number of households classified as having a poor food consumption score at sixty three percent and fifty two percent respectively during the month under review.
5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- Sixty one percent of the sampled children whose mid upper arm circumference measurements were taken constituted males with the remaining thirty nine percent being females.
- During the month under review, the proportion of children rated as being ‘at risk’ of malnutrition remained stable in relation to the month of November.

![Mid Risk Children 2016 - Turkana County](image)

Sample size, n=1027

- The current proportion of children ‘at risk’ is lower than the long term average proportion of children normally rated as being ‘at risk’ of malnutrition by six percent for the period under review.
- Improved milk availability coupled with absence of significant shocks that would influence the nutrition status of children under five negatively were some of the drivers behind the observed stability during the month under review.

5.3.2 Health

- Among the sampled children, the most commonly reported ailment during the period under analysis was fever with chills like malaria.

5.4 COPING STRATEGY

5.4.1 Coping Strategy Index (CSI)

- Coping strategies applied during the month under review were similar to those utilized during the preceding two months as evidenced by the unchanged CSI of 15.9.
- Households’ resident in the Pastoral and Fisheries livelihood zones remained the most constrained in accessing food or money to buy food during the month under review as illustrated below.
- Reduced portion size and Reliance on less preferred/less expensive food were the prevalent coping strategies employed by most households during the month under review.
6.0 CURRENT INTERVENTION MEASURES (ACTION)

6.1 FOOD
- During the period under review, no relief food distribution was conducted.

6.2 NON-FOOD

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Sub-County/Ward/Location</th>
<th>No. of Beneficiaries</th>
<th>Implementers/Organization</th>
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<tbody>
<tr>
<td>Vaccination, deworming and treatment of shoats</td>
<td>Loima-Turkwel ward (Nachuuro, Lokatul,Kaapus,Nakaabar an,Lomil,Loroo and Nasiger)</td>
<td>695 HHs</td>
<td>Turkana County Government-Veterinary services &amp; CRS/Caritas Lodwar</td>
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<tr>
<td>Vaccination, deworming and treatment</td>
<td>Kibish-Merikuka,Kokuro,Meiyan ,Lokamarinyang, Koyasa,Lobulono and Kaitede</td>
<td>78 HHs</td>
<td>Turkana County Government-Veterinary services &amp; Afya Timiza-Kimormor</td>
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<tr>
<td>Shelter reconstruction</td>
<td>Napetet, Kerio, Kalobeyei, Letea, Lokangae,Lokichoggio, Elelea,Lokori,Kainuk,Loy apat,Kakong,Kaptir,Lokir iama</td>
<td>400 HHs</td>
<td>Kenya Redcross</td>
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<tr>
<td>CHVs and CHEWs training on Vulnerability and Risk Assessment and Mapping</td>
<td>Township,Kang’athosa,K alokol,Kainuk,Katilu,Lokichoggio,Kataboi and Lowarengak</td>
<td>219 People</td>
<td></td>
</tr>
</tbody>
</table>

7.0 EMERGING ISSUES

7.1 INSECURITY/CONFLICT/HUMAN DISPLACEMENT
- No major incidents of insecurity were reported in the County during the month under review.

7.2 MIGRATION
- Migration from Kapus, Lomil, Pelekech, Letea, Nachukui, towards Kotaruk, Nakitong’o and Lapur hills was reported during the month of December. An estimated twenty five percent of the herd had moved from their normal areas of residence in search of pasture.

7.3 FOOD SECURITY PROGNOSIS
- The county received some rainfall in December but the overall performance of the short rains season was below normal and therefore over the next three months the under listed outcomes are anticipated.
- Household food stocks (cereals and pulses) will most likely deplete following the minimal agricultural activity that was witnessed over the just ended season.
- The possibility of the rainfall received in December stabilizing the rangeland conditions in the short term exists. However, it’s highly probable that livestock productivity (in terms of animal body condition, market price and milk production) will be impacted negatively over subsequent months as the rangeland conditions start deteriorating during the second month of the aforementioned duration.
The possibility of the household nutrition status being affected shall remain high given the terms of trade are projected to go down marginally translating to a poor purchasing power especially for pastoral households heavily reliant on the market for replenishing their food stocks.

Proper and normal market functionality with sufficient supplies from external markets in Kitale and Uganda coupled with improved security along the conflict hotspots shall suffice in cushioning households against the food gaps that will most likely occur across all the livelihood zones over the next 2-3 months.

Therefore, the likelihood of a number of households remaining within the ‘crisis’ phase of food insecurity shall be high with another significant proportion being ‘stressed’ over that span of time.

8.0 RECOMMENDATIONS

Health and Nutrition: Scale up mass screening and integrated medical outreaches while providing health education on sanitation to sites that have been identified to be having high disease incidents and malnutrition rates across the county.

Veterinary: Intensify disease surveillance efforts in areas prone to CCPP and other endemic diseases while focussing on animal health by providing essential veterinary services through mass vaccination drives and treatment where applicable.

Water: Enhance water availability to vulnerable population in the county through repair of broken down water facilities such as boreholes especially in areas with high livestock concentration along migratory corridors.

Livestock: Reduce pressure on grazing resources and protect livelihoods by offering advisory support (capacity strengthening) on community utilization of dry season grazing reserves while conducting rehabilitation of market infrastructure.