

A Vision 2030 Flagship Project



## National Drought Management Authority Tana River County Drought Early Warning Bulletin for August 2020

August EW PHASE	Early Warning Phase Classification			
	LIVELIHOOD ZONE	EW PHASE	TRENDS	
<p><b>Drought Situation &amp; EW Phase Classification</b> Drought Phase: Normal-Stable</p> <p><b>Biophysical Indicators</b></p> <ul style="list-style-type: none"> <li>Most Biophysical indicators are still within the expected seasonal ranges.</li> <li>Below average amount of rainfall was received in August 2020.</li> <li>The August Vegetation Condition Index values for Tana River County are above normal and clearly indicating good vegetation conditions across all sub-counties.</li> <li>The Water levels in most water pans were above normal at (45%-70%) in all livelihood zones.</li> </ul> <p><b>Socio Economic Indicators (Impact Indicators)</b></p> <p><b>Production indicators:</b></p> <ul style="list-style-type: none"> <li>The forage condition is fair to good in both quality and quantity.</li> <li>Livestock body condition is good to fair across all livelihood zones.</li> <li>Milk production remains stable at 3.7 litres across the livelihood zones. This is attributed to access to water, fair forage and pasture conditions.</li> <li>Normal Livestock migrations were reported towards the Delta.</li> <li>Crop and livestock production is above average.</li> </ul> <p><b>Access indicators</b></p> <ul style="list-style-type: none"> <li>Terms of trade are currently above normal range.</li> <li>Distances to water sources for households currently below normal ranges.</li> </ul> <p><b>Utilization indicators:</b></p> <ul style="list-style-type: none"> <li>The number of under-fives at risk of malnutrition stood at 15.70%, which is above normal at this time of the year.</li> <li>Copping strategy index for households is within normal ranges but on an improving trend.</li> </ul>	PASTORAL	NORMAL	WORSENING	
	MARGINAL MIXED	NORMAL	STABLE	
	MIXED FARMING	NORMA	STABLE	
	COUNTY	NORMAL	STABLE	
	<b>Biophysical Indicators</b>	<b>Value for the month Tana River</b>	<b>LTA-Monthly Tana River</b>	<b>Normal ranges Kenya %</b>
	Average rainfall MM (%)	1.4 mm	28 mm	80-120
	VCI-3month	78.77		35-50
	% Of water in the water pan	4(45-70%)		5-6
	<b>Production indicators</b>			
	<b>Production indicators</b>		<b>Value</b>	<b>Normal ranges</b>
	Livestock Migration Pattern		normal	Normal
	Livestock Body Condition		3-5	4-5
	Milk Production (Ltr /HH/Month)		3.7	4.0
	Livestock deaths (for drought)		No death	No death
	<b>Access Indicators</b>			
<b>Access Indicators</b>		<b>Value</b>	<b>Normal ranges</b>	
Terms of Trade (ToT)		66.6	>=49.90	
Milk Consumption (Ltr)		1.3	>=1.9	
Water for Households-trekking distance (km)		4.1	<=6.6	
Distances to grazing for livestock (km)		9.7	<=17.6	
Seasons production (90 kg bags) (by July 2020)		61,140(maize) 15,080(green grams)	LTA (42,645(bags) LTA (10,070(bags)	
<b>Utilization indicators</b>				
<b>Utilization indicators</b>		<b>Value</b>	<b>Normal ranges</b>	
At Risk (%)		15.7%	<7.6%	
CSI		11.3%	<=15.0	

<ul style="list-style-type: none"> <li>▪ Short rains harvests</li> <li>▪ Short dry spell</li> <li>▪ Reduced milk yields               <ul style="list-style-type: none"> <li>▪ Increased HH Food Stocks</li> </ul> </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

### Rainfall station data (GROUND DATA:)

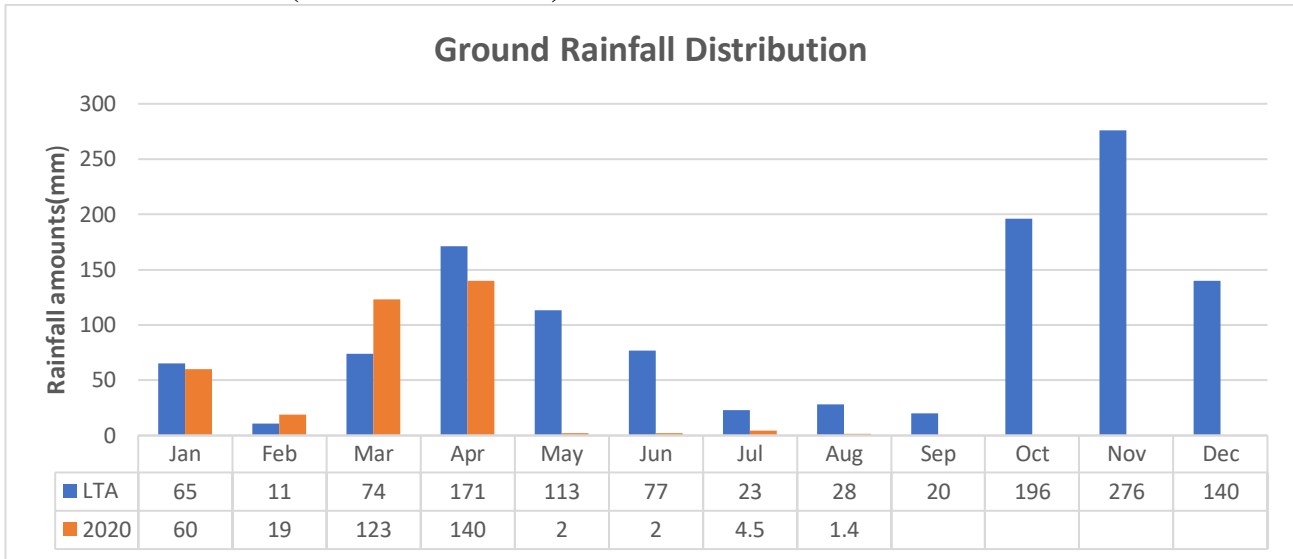
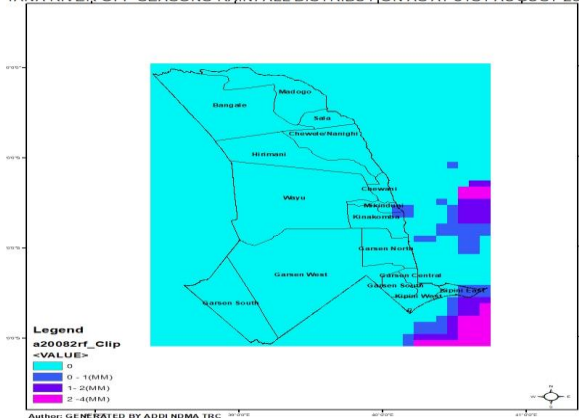


Fig .1.source: VAM-WFP

An average of 1.4 mm rainfall was recorded in August coupled with increasing temperatures and strong wind. This is below the LTA of 23mm.

## 1.2. RAINFALL TEMPORAL AND SPATIAL DISTRIBUTION

TANA RIVER OFF-SEASONS RAINFALL DISTRIBUTION AS AT 31ST AUGUST 2020



In the month of August, on average 4.2 mm of rainfall was received in 1<sup>st</sup>dekad, 0.0 mm received in 2<sup>nd</sup> Dekad and 0.0mm received in the 3<sup>rd</sup>dekad respectively. The amounts received were below normal at this time of the year. Spatial and temporal distribution was poor.

The rainfall was unevenly distributed across all the three sub-counties. Most wards reported onset of seasonal rainfall by second dekad of March.

Fig.2.source: Continental Africa Dekadal RFE.

## 1.3. TEMPERATURES

### 1.3.1. LAND SURFACE TEMPERATURE (LST)

The August 2020 land surface temperature (LST) values for Tana River County increased to 38°C by the 4<sup>th</sup>dekad of August, which is normal at this time of the year.

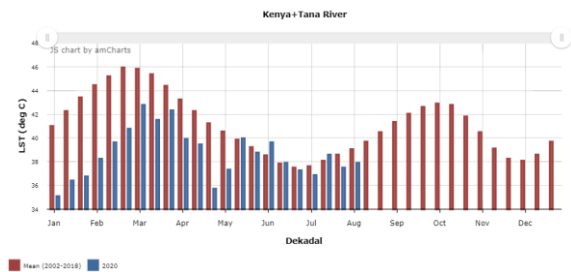


Fig.3.source: LST-C6

## 2.1. IMPACTS ON VEGETATION AND WATER

### 2.1.1. VEGETATION CONDITION INDEX (VCI)

The August vegetation cover for Tana River County shows normal vegetation cover on average for the county across all the three sub-counties. The current trend has decreased for Garsen and Galole compared to June 2020.

COUNTY	Sub County	VCI as at 31 <sup>st</sup> July 2020	VCI as at 31 <sup>st</sup> August 2020	
TANA RIVER	County	75.43	78.65	Increasing trends in vegetation conditions experienced in Bura but Galole and Garsen sub-counties remained stable. Normal vegetation cover experienced in all livelihoods
	Bura	86.16	95.6	
	Galole	71.36	71.8	
	Garsen	68.87	68.82	

Fig.4. Source BOKU

The information provided above reflects all sub-counties currently experiencing normal vegetation greenness, stable trend is observed across two sub-counties compared to the previous month.

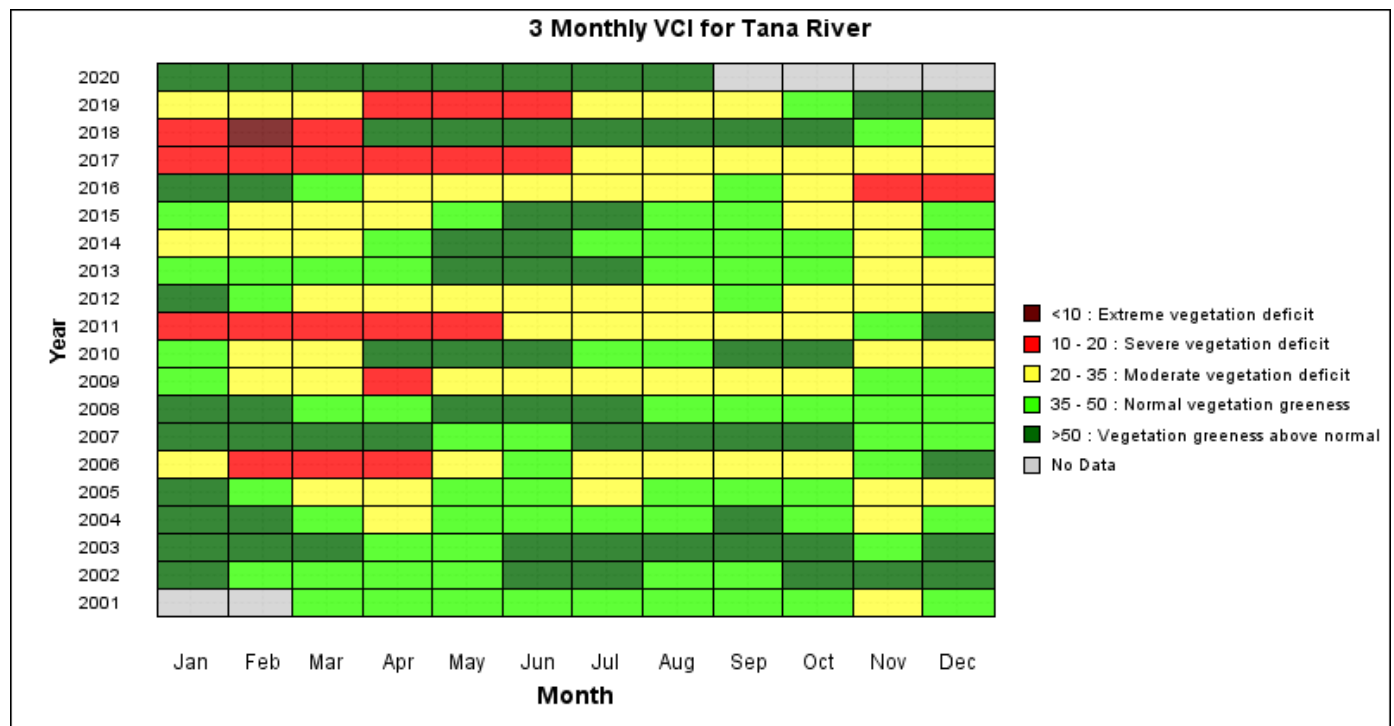


Fig.5. Source BOKU

In August the vegetation cover for Tana River County was at 78.77, which indicates good vegetation condition. In comparison to the previous month the current vegetation cover (not necessarily pasture) has increased in quantity and quality.

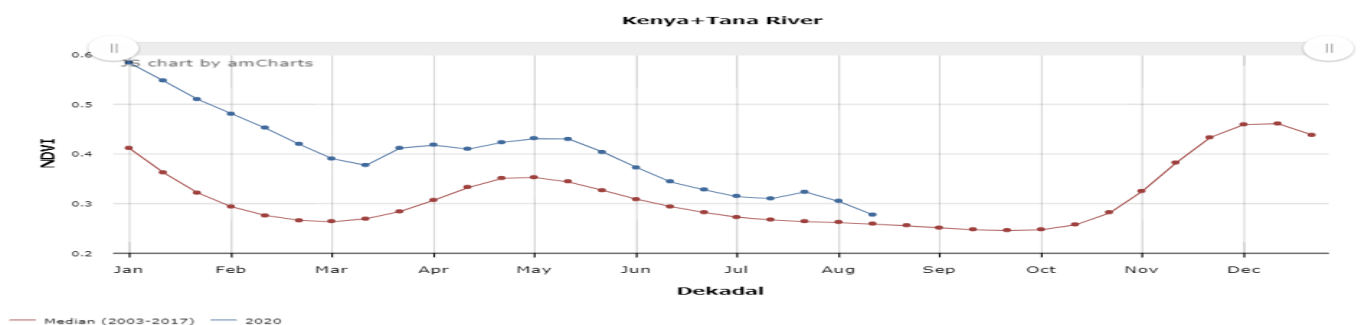
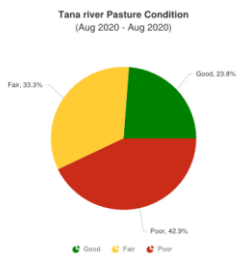


Fig.5. Source: NDVI-C6

The NDVI for Tana River County is currently showing decreasing trend in August 2020 (0.28) which is above the LTA (0.26). This is attributed to reduction in amounts of rainfall received across the county.

### 2.1.2 Pasture

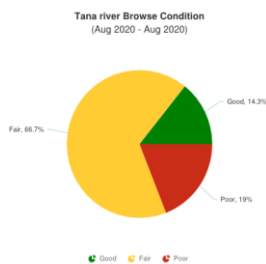


The pasture condition is fair to good in quantity and quality across all livelihood zones in the county. Pasture condition across all livelihood zones have decreased in quality due to depressed rains.

The current pasture is expected to last for two months in Pastoral and three months in the Marginal Mixed and Mixed farming livelihood zones.

**Figure 6: Tana River pasture conditions**

### 2.1.3. Browse

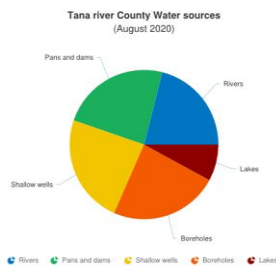


The browse condition is fair to good in quantity and quality across all livelihood zones which is normal at this time of the year.

The available browse is expected to last for 2 months in Pastoral and Marginal mixed livelihood Zones and three month in mixed farming livelihood zone.

**Figure 7: Tana River browse**

## 2.2 WATER RESOURCE



### 2.2.1 Sources

The main water sources for both livestock and human consumption across all livelihoods were Bore holes (23.7%), Pans and Dams (23.7%), Shallow wells and rivers (23.7%), Rivers (21.1%), Lakes (7.9%).

Most water pans and dams were at 45-75% of their full capacity. Most households are currently using Bore holes, Shallow wells, rivers, Pans and dams.

The current water sources are expected to last for more than two months across all livelihood zones.

**Figure 8: Tana River water sources**

## 2.2.2 Household access and Utilization

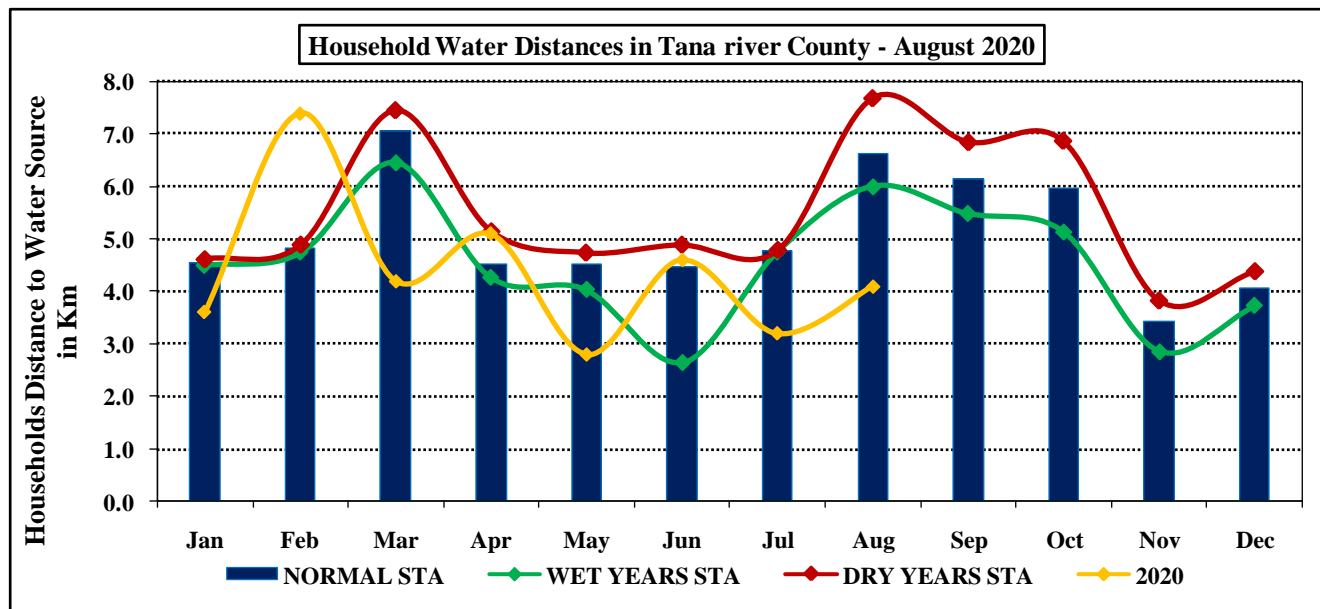


Fig.9.

- The households trekking distance increased from 3.2 km to 4.1 km. The current distance is below the Long-term average of 6.6 km. This is attributed to the fact that water levels have reduced in some open water sources.

## 2.2.3 Livestock access

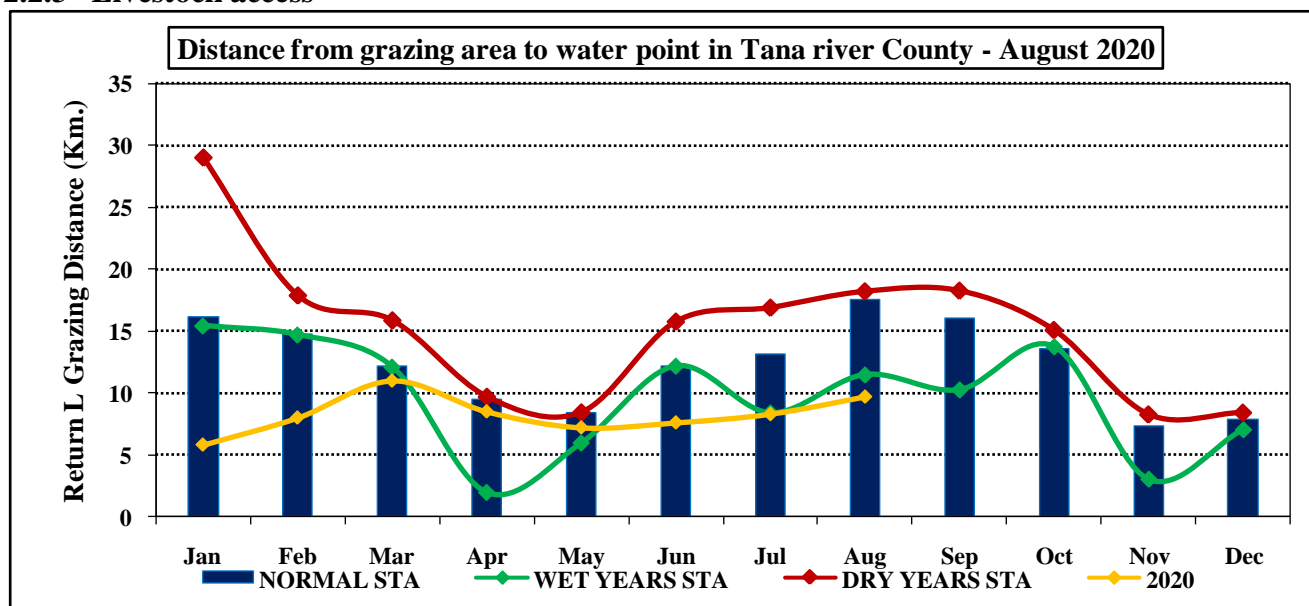


Fig.10.

- The return distance for livestock to grazing zones increased to 9.7 km.
- The situation is attributed to the end of the seasonal rains which has affected the quality of pasture and browse and therefore livestock are walking long distances in search of good pasture.

## 3.0. PRODUCTION INDICATORS

### 3.1 Livestock Production

#### 3.1.1 Livestock Body Condition

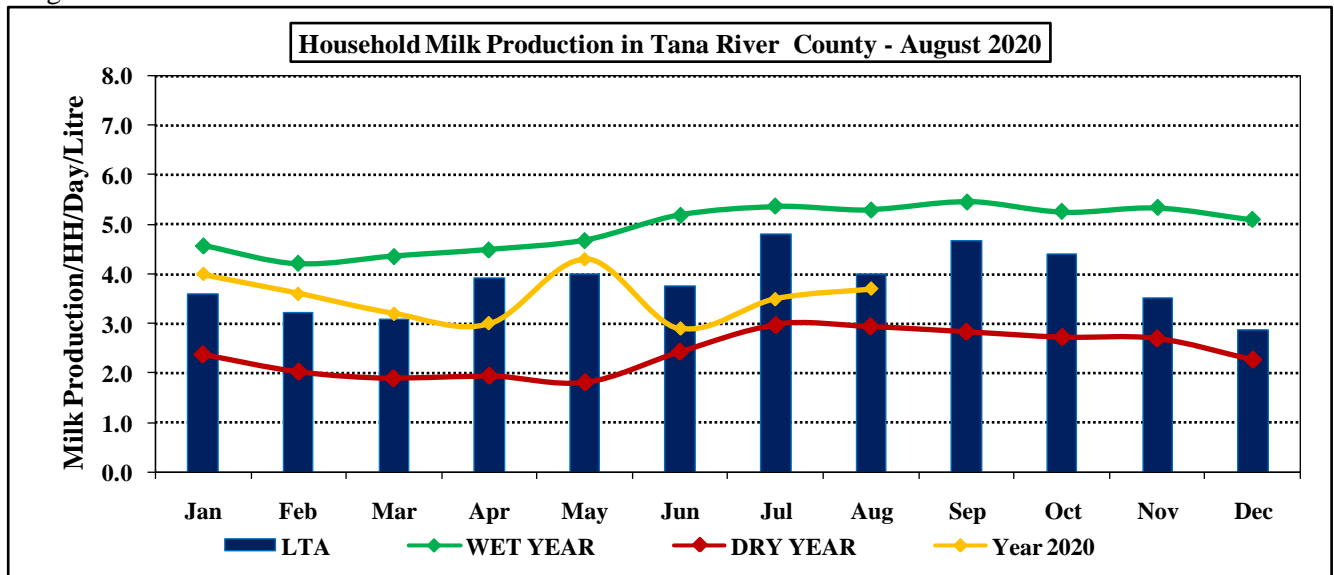
- The livestock body condition is good to fair across all livelihood zones. The situation was as result of good pasture, browse and availability of water which has led to livestock still walking within normal ranges. *(Refer to table 4 in annex)*

### 3.1.2 Livestock Diseases

- LSD,CCPP reported in Pastoral and Marginal Mixed livelihood zones.
- Trypanosomiasis, foot rot, helminthiasis, ORF, diarrhoea syndrome in Tana Delta, Garsen Central, Garsen South, Kipini East and West.
- Heavy infestations of worms across all livelihood zones triggered by rains
- Threat of Rift valley fever outbreak due to heavy rains and floods.
- No notifiable livestock diseases incidences were reported; the disease incidences were within normal seasonal ranges

### 3.1.3 Milk Production

- The average milk produced per household remained stable at 3.7 litres compared to the previous month. This is attributed to the fact that pasture and browse is still fair to good in both quantity and quality more so within the marginal mixed and mixed livelihood zones.



In comparison to the long-term average; the current amount is below. This is attributed to fair conditions of pasture in some areas in pastoral livelihood zones and inaccessibility of pasture fields in areas affected by floods.

## 3.2. RAIN-FED CROP PRODUCTION.

### 3.2.1 Stage and Condition of food Crops

- Most crops more so within the mixed and marginal mixed livelihood zones are at tussling to harvesting stages for rainfed while land preparation is going on in Bura irrigation schemes in readiness to planting in the month of August. About 50,000 hectares of crop land have been submerged in flood waters. Some farmers were unable to plant on time due to lack of farm inputs. Farmers whose crops were destroyed by floods are currently replanting using the reseeding technology.
- Cases of fall army worm infestations reported in marginal mixed and mixed livelihood zones.

Figure 11

**4. MARKET PERFORMANCE**  
**4.1. LIVESTOCK MARKETING**  
**4.1.1 Cattle Prices**

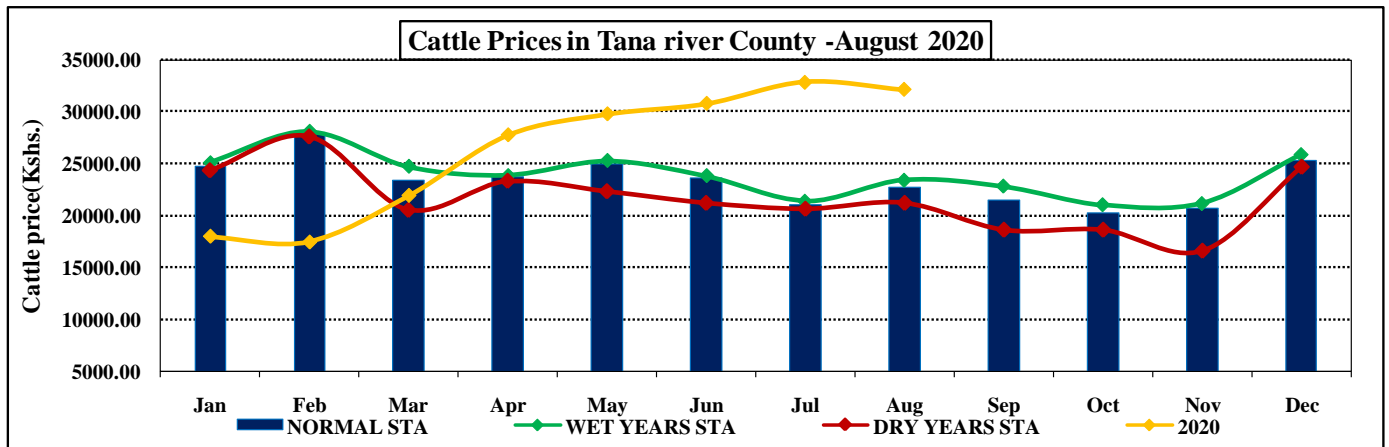


Fig.12.

- The average price for the medium sized cattle decreased by 2% to Ksh.32, 111 in the reporting month as compared to Ksh.32, 889 of the previous month. This is attributed to the dwindling quality of pasture and browse which has resulted to some livestock walking long distances to the grazing fields. This has resulted to negative impact on the body conditions of livestock market dynamics also contributed to the increase in prices given the fact that it was a season of festivities.

**4.1.2 Goat Prices**

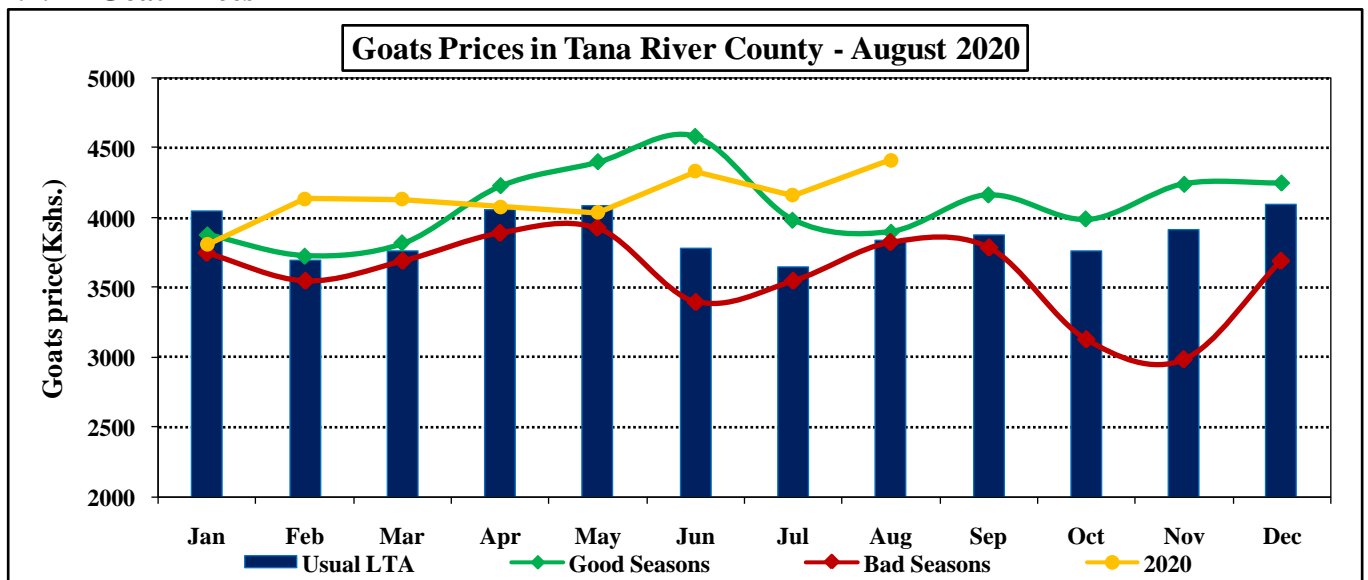


Fig.13.

- The average price of a goat increased by 6% to Ksh.4, 414 as compared to previous month. This was attributed to low supply of goats into the market during the month which pushed the price upwards.
- The average Goat prices were lowest in Marginal Mixed livelihood zone at Ksh. 4,000 and highest in Pastoral livelihood zones at Ksh.5,200.

## 4.2. CROP PRICES

### 4.2.1 Maize

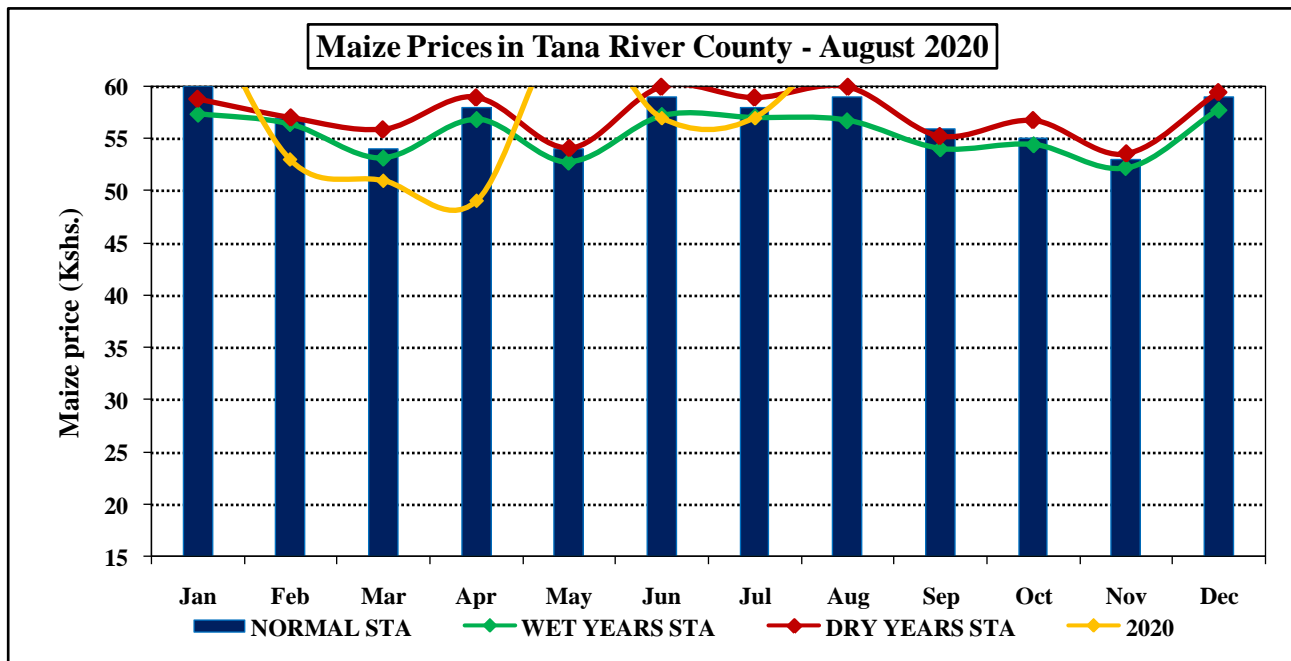


Fig.14.

- The average price for kilogram maize increased by 16% to Ksh.66 during the month compared to the previous month. This was attributed to scarcity of maize in the market due to lower prices and therefore traders are holding on stock for the prices to improve. The price was above the long-term average. The prices were higher in Pastoral livelihood zones.

### 4.3. Livestock Price Ratio/Terms of Trade

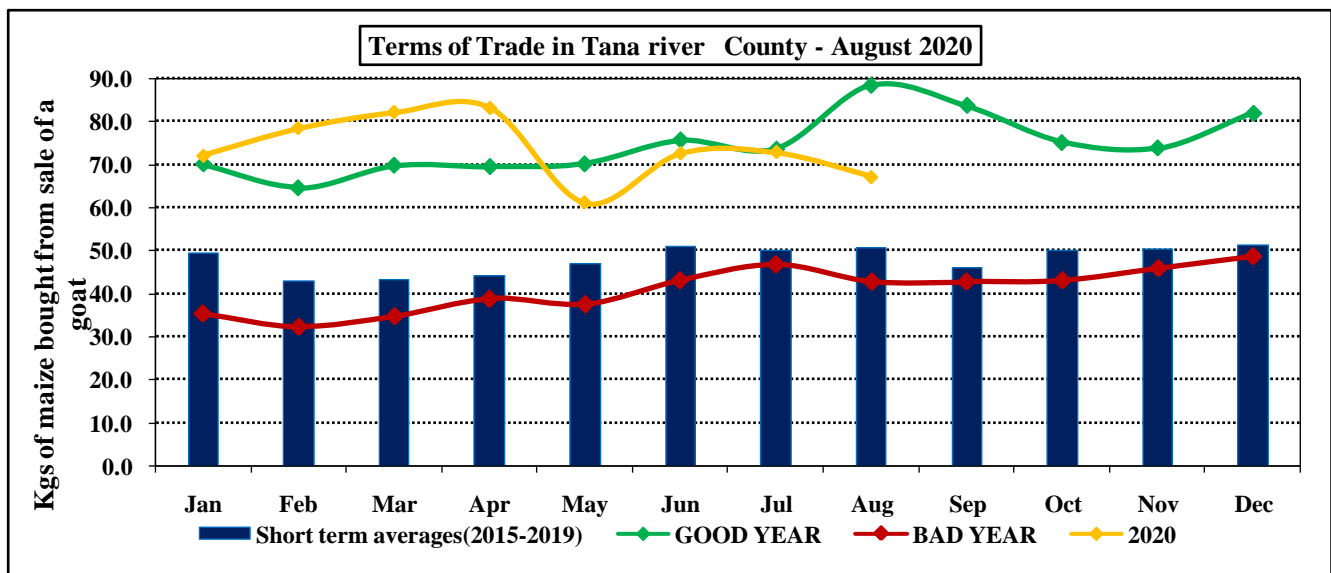


Fig .15.

- The terms of trade decreased from 72.7 in July to 66.6 in August 2020.
- The current term of trade is above the long-term average. This is attributed to high prices of maize in the market.



## 5.1. FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1.1. Milk Consumption

- The average milk consumption per household per day remained stable at 1.3 litres compared to the previous month. The amount consumed is below the long term average at this time of the year.

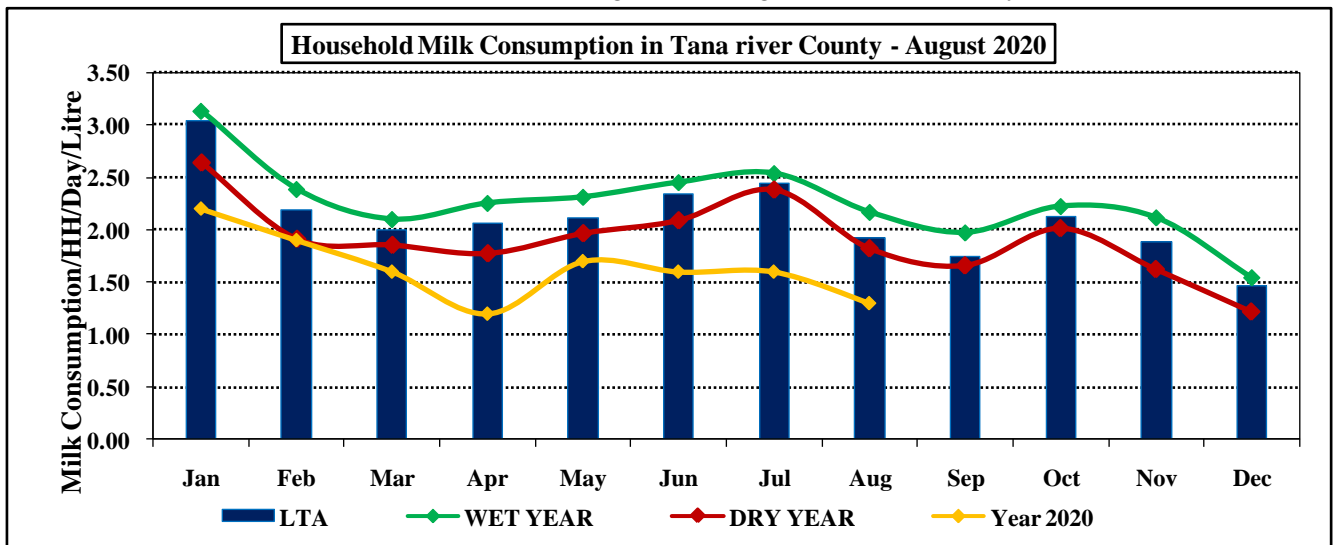


Fig. 16.

### 5.1.2. Food Consumption Score

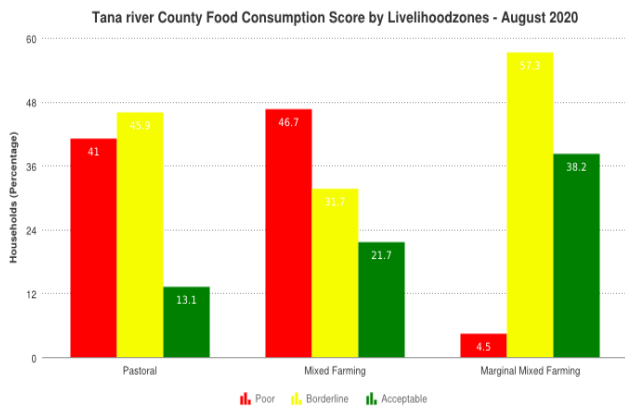


Figure 17: Tana River food consumption

There was higher proportion of households with poor food consumption gaps in Mixed Livelihood zones (46.7%) and Pastoral livelihood zones (41%). Attributed to flooding and high food prices.

The proportion of households with borderline food consumption score was high in Marginal mixed livelihood zones at 57.3%.

A proportion of 38.2% of households in marginal mixed livelihood zones have acceptable food consumption score while 13.1% in Pastoral livelihood zones have acceptable food consumption score respectively.

### 5.1.3 Health and Nutrition Status

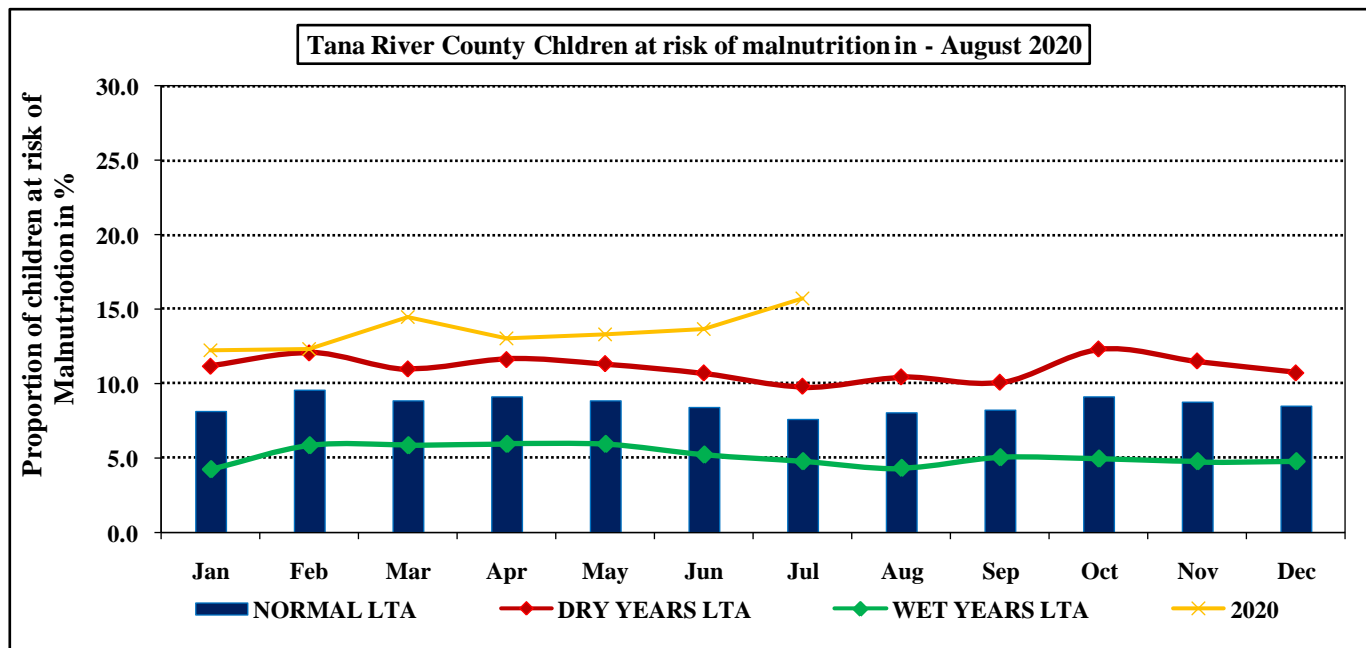


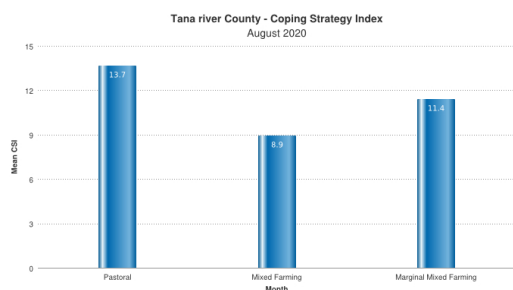
Fig.18.

- The proportion of sampled children under five years of age at risk of malnutrition increased to 15.7% compared to the previous month at 15.30%. This is attributed to minimal migrations of livestock towards the delta which has affected availability of milk at household levels more so within Pastoral and Marginal Mixed livelihood Zones.

### 5.2. Health

- During the reporting month the commonly reported illnesses were skin diseases, diarrhoeas URTI, Malaria, outbreak of water borne diseases and skin diseases in all livelihood Zones.

### 5.3. COPING STRATEGIES



#### Coping Strategy Index

The average coping strategy index decreased to 11.3 in August 2020 compared to last month. Meaning less households are experiencing stress to access food given the prevailing conditions.

Households in Pastoral livelihood zone employed most coping strategies at 13.7 followed by Marginal mixed at 11.4. The mixed farming livelihood zones employed least coping mechanisms at 8.9.

Fig.19: Tana River Coping Strategy Index

## 6. CURRENT INTERVENTION MEASURES.

### 6.1 Non-food interventions

- Distribution of NFIs and dignity kits to 4,136 households across the county by WVK/KRCS.
- WASH and COVID 19 awareness supported by MOH/ALDEF/WC/GAA/PGI/KRCS and Partners.
- Rehabilitation of dams and shallow wells by Ministry of Water /WVK/ WFP.
- Logistical support for ward level Agricultural extension services by CWW.
- support on irrigation infrastructure for minor irrigation schemes prioritized by the county through WFP
- Support of extension services by departmental technical officers to boost food production by WFP.
- Hygiene promotions and distribution of water treatment chemicals in Tana Delta (Katsangani, Safaricom, Tana Salt, Msurujani, Timboni, Vumilia and Orolle) by Samaritan Purse/NDMA.
- Cash transfer to 2271 vulnerable Households in Tana North by ALDEF Kenya.

- Integrated outreaches in hard to reach areas and provision of medical supplies to MOH supported by CWW/UNICEF/WVK/WC/KRCS.
- Provision of drought tolerance diesel and pumps and farm inputs to 4300 farmers in Tana North by CWW/MOA/Nature Kenya.
- Distribution of solar powered micro irrigation kits to farmers, establishment of kitchen gardens, provision of farm inputs like seeds to 1185 farmers –WVK/WC
- Capacity building of health workers on maternal, infant and young children nutrition-WVK
- Distribution of hand washing items to 450 households in Tana North-World Concern.
- Delivery of nutrition commodities for MAM treatment for the month of July to September were conducted in the month of July for all the facilities across Tana River County (CSB++ and Plump Sup) by WFP.
- Installation of water purifier machine at IDP camp (Mtapani, Peponi, Bandi, Gadeni Bularahma and Kijofarm) by KRCS.
- Capacity building of vet officers on disease control by CISP.

## **6.2 Food Aid**

- Relief food distribution to floods affected areas currently facing food shortages in Tana Delta, Tana North and Galole supported by KRCS/National Government/Samaritan purse/WFP/ADS/SPECIAL PROGRAMS. Tana North(660HHs targeted),Tana Delta(8000HHs targeted),Tana North(5,744 HHs targeted)
- Distribution of pulses, cereals and vegetable oil to 35,000 beneficiaries in all sub counties across Tana River by WFP/KRCS

## **7.0 .EMERGING ISSUES**

### **7.0.1.Insecurity/Conflict/Human Displacement**

- Hatching of second generation locusts in Tana North (Boka, Hirimani, Buwa, Nanighi, Sala, Bangale, Mbalambala) the impacts were minimal.
- Human wild life conflicts reported in Sala, Nanighi, Saka ,Kipini, Chara and Kilelengwani.
- Over14,404 households had been affected by the previous floods in Tana Delta(8000hh), Tana River (660hh) and Tana North (5,744hh) and about13,315 hectares under crops destroyed by floods but the displaced has since gone back to their homes.

### **7.0.2. Migration - limited to migrations of persons.**

- Normal livestock migrations towards the fall back grazing areas occurred earlier in the month and livestock have been spotted migrating towards Tana Delta. This is normal during this time of the year. Given the fair conditions of pastures, browse and water resources, most livestock are expected to remain within the wet season grazing areas through the March to May long rains season.
- Most camps hosting flood displaced households have been closed and the affected households have since gone back to their farms.

### **7.0.3. Food Security Prognosis**

- According to forecasts from USGS and NOAA/CPC, the October to December 2020 short rains season in bimodal areas of Kenya is most likely to be below average
- Based on the projected above average long rains harvest for the major crops grown, food commodity prices in general and specifically cereal prices in the county are likely to drop below the long term average prices from the month of August.
- The March to May long rains crop production around flood prone marginal agricultural areas is expected to be slightly below average following above-average rainfall that flooded and waterlogged soils leading to rotting of pulses.
- According to the Food and Agriculture Organization of the United Nations (FAO) and Intergovernmental Authority on Development (IGAD) advisory of July, 2020, exceptional rainfall and floods have enhanced and maintained suitable environmental and climatic conditions that will likely lead to the explosive proliferation of Rift Valley Fever (RVF) vectors in the region

- Livestock prices driven by above-average forage and water resources are expected to remain above-average due to favorable body conditions,
- According to the Desert Locust Global Forecast by FAO, the second-generation desert locust swarms will migrate northwards facilitated by the prevailing winds into Ethiopia and South Sudan reducing the prevalence in Kenya thus causing minor damage to crop and rangeland resources.
- Forage and water resources are expected to be above normal through September due to the above-average March to May long rains and current above-normal vegetative conditions. However, the forecast of below-average, October to December short rains will likely result in only short-lived improvements of forage and water resources which will likely remain below average from October through January.
- Based on available information from the Ministry of Health and leading local and international health experts including the WHO, the number of confirmed COVID-19 cases is likely to rise between June and September due to both the spread of the virus and increased testing thereby reinstating Covid-19 related restrictions such as ban on travel and curfews are likely to impact on household livelihoods.

#### **7.0.4. Phase Classification**

Pastoral and Marginal mixed livelihood zones are classified under stressed Phase (IPC Phase 2) while Mixed farming livelihood Zones are classified under minimal Phase (IPC Phase 1). During the month most wards received depressed rains in the month of July and this triggered negative impacts on biophysical indicators hence affecting most livelihoods. About 14,404 households across the county were affected by floods in the last two seasons which has also affected their livelihoods and left them food insecure.

The short rains, albeit below average is expected to drive regeneration of rangeland resources and prompt the return of livestock to wet season grazing areas. Although prices are expected to stabilize, improved livestock body conditions and value will improve household income. In addition, anticipated livestock births will alleviate declines in TLUs, provide milk for consumption. Food access is also likely to improve, as supplies from the above-average harvest in high and medium potential agricultural areas will begin to enter the market in November, driving food prices down and improving the goat-to-maize terms of trade. Food security is expected to remain in Stressed (IPC Phase 2).

### **8.0 RECOMMENDATIONS**

#### **8.1.1. General Recommendations:**

- a) Implementation of Covid-19 response plans by Ministry of Health.
- b) Enhance locusts control in affected areas of Tana North (Nanighi, Sala, Bangale, Hirimani, Madogo)
- c) Enhance security surveillance and peace Barazas in hot spot areas.
- d) Enhance integrated outreaches in hard to reach areas across all the sub-counties more so in flood affected areas.
- e) Upscaling of food aid to the population in need in Tana North, Tana River and Tana Delta sub-counties.
- f) Provision of water harvesting facilities by Ministry of Water.

## 8.2. PROPOSED RECOMMENDATIONS

Sub - County	Ward	Intervention	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
<b>AGRICULTURE</b>							
Tana River	All wards	Provision of Assorted farm inputs	5000	Department of agriculture and Stakeholders	Increase in Technical Experts.	Technical Experts	2016 - 2020
		Capacity Building of Farmers			Funding from the County and Other Stakeholders		
		Provision of Subsidized Tractor Mechanization Services					
<b>Medium term/Long Term interventions</b>							
Tana River	ALL WARDS	Rehabilitation and Establishment of new irrigation schemes	3000 HH	Dept. of Agriculture and other stakeholders	Technical Experts	Technical Experts	2016 - 2020
All Sub-Counties	All Wards	Provision of Subsidized Tractor Mechanization Services	3000 HH	Department of Agriculture –Tana River County Govt.	20 Tractors available and in Good Working Condition	Increase 10 More Tractors	100 M
<b>LIVESTOCK</b>							
All	All	Rangeland management training	1,000	Livestock dept,	Extension staff	Extension staff	March – June 2020
All	All	Fodder production and conservation	1000	County government and partners	funds	Extension agents	By June 2021
All	All	Livestock Feed supplements	1500	County governments and partners	funds	Ext. agents	By June 2021
<b>WATER</b>							
<b>Immediate Recommended Interventions (Including Interventions In Response To COVID-19 Pandemic)</b>							
Tana River	Chewani	Stock piling of water treatment chemicals	10,000	TRCG, GOK, CWWDA and other development partners	Funds	Technical staff	July-Oct
		(pur and aquatabs) and household water storage facilities e.g. jerricans			Transport vehicles		
Tana River	Chewani	Purchase and distribution of plastic (PVC) and collapsible water tanks	10,000	TRCG, GOK, CWWDA and other development partners	Funds	Technical staff	July-Oct
Tana River	Wayu Titila, Konekaliti, Waldena, WayuBoro	Operationalization of Boreholes	6,000	COUNTY GOVERNMENT, GOK, NGOs & OTHER DEVELOPMENT PARTNERS	FUNDS & SPARE PARTS/ FITTINGS	TECHNICAL STAFF	July-October
Tana Delta	Garsen South, North	Rehabilitation of shallow wells damaged by floods	10,000	TRCG, GOK, CWWDA and other development partners	Funds, fittings, some spare parts and technical staff	Technical staff	July-Oct

Sub - County	Ward	Intervention	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Tana Delta	Garsen South	Rehabilitation of boreholes at Idsowe pump station GWS	20,000	TRCG, GOK, CWWDA and other development partners	Technical staff, funds & spare parts/ fittings	Technical staff	July-Oct
Tana Delta	Garsen South	Rehabilitation of the water storage/supply tank at Minjila	20,000	TRCG, GOK, CWWDA and other development partners	Technical staff, funds & spare parts/ fittings	Technical staff	July-Oct
Tana North	Sala and Hirimani	Borehole Repair and Operationalization	5,800	COUNTY GOVERNMENT, GOK, NGOs & OTHER DEVELOPMENT PARTNERS	FUNDS & SPARE PARTS/ FITTINGS	TECHNICAL STAFF	JULY - AUG
TANA NORTH/	Mororo& Madogo& Sala	Distribution of collapsible tanks, jerricans and HH water treatment chemicals e.g. pur/aquatabs	3,000	COUNTY GOVERNMENT, GOK, NGOs & OTHER DEVELOPMENT PARTNERS	FUNDS & SPARE PARTS/ FITTINGS	TECHNICAL STAFF	JULY - AUG
<b>Medium And Long Term Recommended Interventions (Including Interventions In Response To COVID-19 Pandemic)</b>							
TANA DELTA	GARSEN SOUTH, WEST	Harvesting of water using 300,000 M <sup>3</sup>	5,000	TRCG, GOK, CWWDA and other development partners	Funds,	Technical staff	July-Oct
TANA DELTA	GARSEN SOUTH, WEST	Drilling of more boreholes within the sub-county	20,000	TRCG, GOK, CWWDA and other development partners	Drilling rig, funds, technical staff and fittings	Drilling rig, technical staff	Jul-21
TANA DELTA		Purchase and distribution of collapsible water tanks	25,000	TRCG, GOK, CWWDA and other development partners	Funds, technical staff	Technical staff	July-Oct
TANA DELTA	GARSEN NORTH, SOUTH	Stock piling of water treatment chemicals	20,000	TRCG, GOK, CWWDA and other development partners	Store, funds and technical staff	Technical staff	July-Oct
Tana River	Wayu Gofisa	De-silting and repair of Water Pans	33,500	County Government, GOK, NGOs & other Development PARTNERS	Funds,	Technical Staff	July-October
Tana River	KinakoMba Haroresa	Flushing, development and equipping of Strategic Boreholes	2,700	County Government, GOK, NGOs & Other Development Partners	FUNDS FOR MACHINERY OPERATORS,	TECHNICAL STAFF	July-October
Tana River	Wayu, Chifiri, Kesi	Construction of 50,000m <sup>3</sup> - 100,000m <sup>3</sup> large water pans to harvest the excess run off	7,500	County Government, Gok, Ngos& Other Development Partners	Funds, Excavation Machinery, Technical Staff Vehicles for mobility during implementation and M & E.	TECHNICAL STAFF	July-October
Tana River	Kinakomba	Construction of 50,000m <sup>3</sup> - 100,000m <sup>3</sup> large water pans to harvest the excess run off	2,700	County Government, Gok, Ngos& Other Development Partners	Funds, Excavation Machinery Technical Staff Vehicles for mobility during implementation and M & E.	Technical Staff	July - October

Sub - County	Ward	Intervention	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
All sub counties		Capacity Building of Technical officers and Community on Disaster Risk Management		County Government, Gok, Ngos & Other Development Partners	Funds Vehicles for mobility		July - Dec
<b>HEALTH</b>							
<b>Immediate Recommended Interventions</b>							
	All health facilities	Vitamin A Supplementation		MOH/UNICEF/KRCS			ON-GOING
	All health facilities	Zinc Supplementation		MOH/UNICEF			ON-GOING
	All health facilities	Management of Acute Malnutrition (IMAM)		MOH/KRCS/			ON-GOING
	All health facilities	IYCN Interventions (EBF and Timely Intro of complementary Foods)		MOH/KRCS/			ON-GOING
	All health facilities	Iron Folate Supplementation among Pregnant Women		MOH/KRCS/			ON-GOING
	All health facilities	Deworming		MOH/WORLDWIDE			ON GOING
	All sentinel sites	Family MUAC		TRCG/UNICEF/KRCS/NDMA			ONGOING
<b>Other Public Health Interventions</b>							
	All facilities/b order points	Screening and sample collection of COVID-19		MOH/TRCG			On going
CO UNT Y		Sensitization on COVID-19		MOH/TRCG			Ongoing
CO UNT Y		Handwashing and hygiene promotion		MOH/TRCG			Ongoing
	All frontline health care workers	Training of frontline health care workers on COVID-19 case management		MOH/TRCG			Ongoing
<b>Medium and Long term Recommended Interventions</b>							
	5	Family Muac	16000	TRCG/KRCS/UNICEF/NDMA	600000	Staffs/vehicles	JUL-SEP
	7	Covid-19 Community Sensitization	20000	TRCG/WVK/KRCS/WWC	1000000	Staffs	JUL-SEP
	7	Health Care Workers	500	TRCG/WVK/KRCS	2000000	staffs	JUL-SEP
	All health facilities	PROVISION OF PPEs For HEALTH CARE WORKERS		MOH/TRCG/KRCS/WVK/WWC	5000000	Vehicles	JUL-SEP
CO UNT Y	7	Covid -19 Surveillance		MOH/TRCG	500000	Staffs	JUL-SEP
	IDP camps	Intergrated Medical Outreaches		TRCG/KRCS/WVK	1000000	Vehicles/staffs	JUL-SEP

Sub - County	Ward	Intervention	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
	7	Vitamin A Supplementation Mop Up		TRCG/KRCS/UNICEF /WVK	600000	Staffs /vehicles	JUL-SEP
<b>EDUCATION</b>							
Tana River	60	Provision of Handwashing facilities	3Sub-counties	12000	MOE/TRCG/UNICEF	1.2M	5 Months
	16	Provision of clean water.	3 sub counties.	8522 pupils	MOE/WFP/TRCG/WHH	2,913,000	5 Months
	20	Provision of energy saving jikos.	3 sub counties.	52,000	WFP/MOE/TRCG/WHH	2M	5 Months
	178	Provision of Masks and sanitizers	3 SUB COUNTIES	78,042	WHO/MOE/TRCG DONORS	20M	5 Months
	35	Repair of School infrastructure.	3 sub counties	78,042	CDF/MOE/TRCG/WHH.	100M	5 Months

## REFERENCE TABLES

**Table 1: Drought Phase Classification**

Normal	Alert	Alarm	Emergency
All environmental Agricultural and pastoral indicators are within the seasonal ranges	Meteorological drought indicators move outside seasonal ranges	Environmental and at least two production indicators are outside Long term seasonal ranges	All Environmental, Metrological and Production indicators are outside normal ranges.
<b>Recovery:</b> The drought phase must have reached at least Alarm stage. Recovery starts after the end of drought as signaled by the environmental indicators returning to seasonal norms; local economies starting to recover			

**Table 2: Standardized Precipitation Index (SPI)**

Color	SPI Values	Metrological Drought Category
	> +1.5or more	Wet Conditions
	0 to +1.5	No drought
	-0.1 to -0.99	Mild drought
	-1 to -1.99	Severe drought
	<-2 and less	Extreme drought

**Table 3: Vegetation Condition Index Values (VCI)**

Color	VCI values 3-monthly average	Agricultural Drought Category
	≥50	Wet
	35 to 50	No agricultural drought
	21 to 34	Moderate agricultural drought
	10 to 20	Severe agricultural drought



**Table 4: Livestock Body Condition**

Level	Classification	Characteristics (this describes majority of the herd and not individual isolated Stock)
1	Normal	Very Fat Tail buried and in fat
		Fat, Blocky. Bone over back not visible
		Very Good Smooth with fat over back and tail head
		Good smooth appearance
2	Moderate	Moderate. Neither fat nor thin
3	Stressed	Borderline fore-ribs not visible. 12th & 13th ribs visible
4	Critical	Thin fore ribs visible
5	Emaciated	Very thin no fat, bones visible
		Emaciated, little muscle left

**Definition of Early Warning Phases**

The EW phases are defined as follow:

**NORMAL:** The normal phase occurs when **biophysical drought indicators (VCI and SPI) show no unusual fluctuations** hence remain within the expected ranges for the time of the year in a given livelihood zone, division or county

**ALERT:** The alert phase is when either the **vegetation condition index or the standard precipitation index (biophysical indicators) show unusual fluctuations below expected seasonal ranges** within the whole county/sub-county or livelihood zones.

**ALARM:** The alarm phase occurs when both **biophysical and at least three production indicators fluctuate outside expected seasonal ranges** affecting the local economy. The production indicators to be considered are livestock body condition, crop condition, milk production, and livestock migration and livestock mortality rate.

If **access indicators** (impact on market, access to food and water) move outside the normal range, the status remains at “alarm” but with a worsening trend. Proposed access indicators include ToT, price of cereals, availability of cereals and legumes, and milk consumption. The trend will be further worsening when also welfare indicators (MUAC and CSI) start moving outside the normal ranges.

**EMERGENCY:** In the emergency phase, **all indicators are outside of normal ranges**; local production systems have collapsed within the dominant economy. The emergency phase affects asset status and purchasing power to extent that seriously threatens food security. As a result, coping strategy index, malnutrition (MUAC) and livestock mortality rates move above emergency thresholds

**RECOVERY: Environmental indicators returning to seasonal norms.** The drought phase must have reached at least Alarm stage. Recovery starts after the end of drought as signaled by the environmental indicators returning to seasonal norms while production indicators are still outside the normal seasonal range but local economies start to recover. The status changes to normal once the bio physical and production indicators are back to normal range.