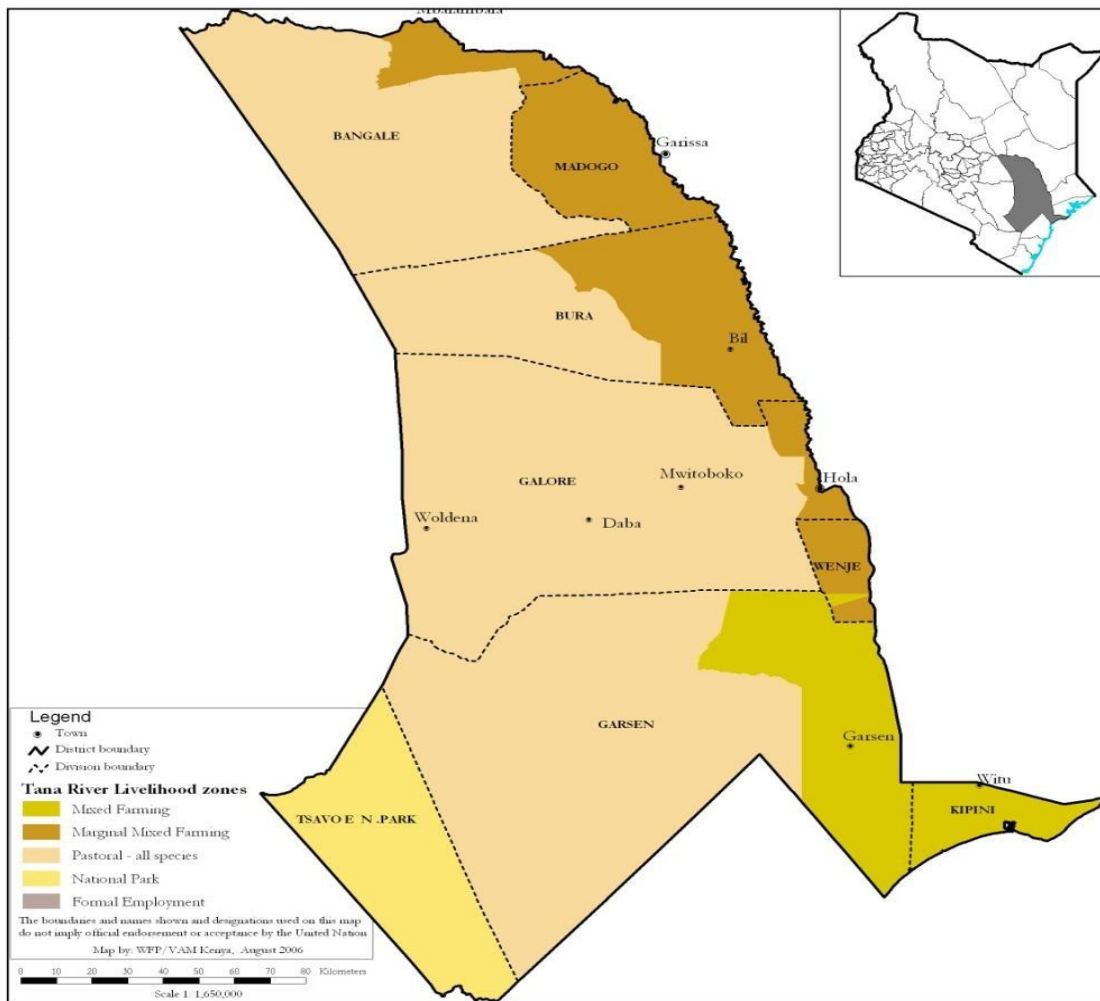


TANA RIVER COUNTY

2017 SHORT RAINS FOOD SECURITY ASSESSMENT REPORT



A Joint Report by the Kenya Food Security Steering Group¹ and the Tana River County Steering Group,

February 2018

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Executive Summary

Tana River County is classified as “Stressed” (IPC Phase 2) in the mixed farming and marginal farming zones whereas the pastoral livelihood is classified as “Crisis” (IPC Phase 3). The food consumption score in pastoral livelihood zone was 65.2, 4.5 and 30.3 for poor, borderline and acceptable food consumption score respectively. That of mixed farming livelihood zone was 50.8, 16.4 and 32.8 for poor, borderline and acceptable food consumption score respectively. Furthermore, for the marginal mixed farming, it was 5.2, 48.2 and 46.6 for acceptable, borderline and poor food consumption score respectively, marginal mixed and mixed farming livelihood zone. The mean coping strategy index was 32.3, 16.6 and 29.1 for pastoral livelihood zone, marginal mixed and mixed farming livelihood zone respectively during the current season as compared to a similar period last year that was 11.9, 7.5 and 10.6 respectively, implying that households are employing severe coping strategies and engaging less in consumption-related coping strategies.

The nutritional status is improving and the proportion of children at risk of malnutrition using Mid Upper Arm Circumference (MUAC) less than 135mm is 13 percent in January 2018 having declined from 24.5 in October 2017, as a result of better health care necessitated by increased outreach programs. The prevalence of the three most common diseases from July–December 2017 shows a decrease for children aged below five years compared to same period in 2016. The children with upper respiratory and tract infections (URTI) was at 27 percent, diarrhoea at 39 percent and malaria at 41 percent, indicating an improvement in nutrition status attributed to increased access to food and health care. Vitamin A supplementation for the period July - December 2017 was 63.1 percent for children 6 - 11 months and 37.9 percent for children 12-59 months. Fully immunized children in July – December 2017 is at 46 percent compared to the previous which was at 56.5 percent at this period. Water consumption per person per day is within the sphere standards (>15 litres/person/day).

Production for green grams, cowpeas and maize was 38, 34 and 22 percent of the Long Term Average (LTA) respectively reducing availability at the household level. Milk production declined by 50 to 100 percent due early migration thus affecting household milk production and consumption in the pastoral and marginal mixed livelihood zones. The maize and rice stocks held by farmers and traders were 91 and 74 percent of the LTA, while millers held stocks of rice and sorghum that were 35 and 20 percent above the LTA.

The terms of trade (ToT) in January 2018 are unfavourable to pastoralists as the sale of one goat is exchanging for 55 Kgs of maize thus limiting household food access in the pastoral areas. (ToT) remains 35 percent below the LTA. Maize prices are high as farmers are relying on markets for household supplies. Livestock body condition is deteriorating leading to price of goat being below the LTA. The current factors affecting food security include: late onset and low amounts of rainfall which negatively affected water and forage situation thus triggering early livestock migration that constrained household milk production and consumption negatively affecting food security. The livestock have remained in the riverine areas for a longer period resulting in reduced milk availability at household level.

1. Introduction

1.1 County background

Tana River County is located in the coast region of the country and borders the Indian Ocean to the south, Lamu to the southeast, Kitui to the west, Isiolo to the north and Garissa to the northeast. It covers an area of 38,782 square Kilometres with a population of 303,047 (KNBS, 2016 projected population). It has three main livelihood zones: marginal mixed farming, comprising 48 percent of the population, mixed farming comprising 38 percent, and pastoral all-species, comprising 14 percent (Figure 1). There are three sub-counties, namely Tana North, Tana River and Tana Delta.

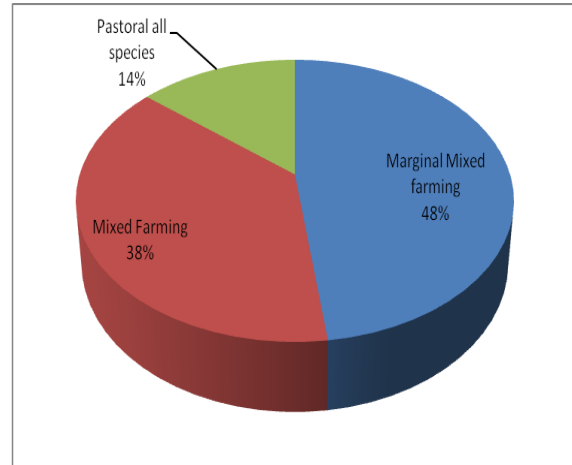


Figure 1: Proportion of population by livelihood zone

1.2 Objectives and approach

The overall objective of the assessment was to develop an objective, evidence-based and transparent food security situation analysis following the short rains season of 2017 taking into account the cumulative effect of the previous seasons; as well as provide recommendations for possible response options based on the situation analysis. The specific objective was to review existing data on the current situation analysis as provided by the various sectors and determine the food security trends for previous seasons. The assessment methodology employed included an initial county status briefing which was conducted on Monday the 5th of February 2018 and presentation of sectoral checklists from agriculture, livestock, and water, health and nutrition and education sectors. The team, comprising of Kenya Food Security Steering Group (KFSSG), and Tana River County Technical conducted transect drives across the three livelihood zones and held interviews in the following sites: Wayu, Hakoka, Bura (market), Roka, Wenje, Mukere, Garsen (market) and Asa. These sites were selected based on various criteria such as below-average performance of the short rains, areas of conflict, sites that were never visited before, farming areas, livelihood zones, and the presence of markets and health facilities.

During the fieldwork, the teams collected sector-wide food security data using community and household interviews, focus group discussions and key informant interviews. The collected primary and secondary data was analyzed during the fourth day and the county food security key findings compiled for sharing during the de-briefing in the County Steering Group meeting on the last day.

2.0 Drivers of Food and Nutrition Security in the County

2.1 Rainfall Performance

The onset of the short rains was late by 10 days and started in the first dekad of November 2017 instead of the second dekad of October normally. The pastoral livelihood zone received 25–50 percent of normal rainfall, while the mixed farming and marginal mixed farming livelihood zones received 50–75 percent of normal rains (Figure 2). However, the southern-part of the pastoral livelihood zone received 90–100 percent of normal. The temporal distribution was poor and the spatial distribution was uneven as shown by the different amounts of rain received across the livelihood zones. The cessation was early in the first dekad of December compared with the normal third dekad of December.

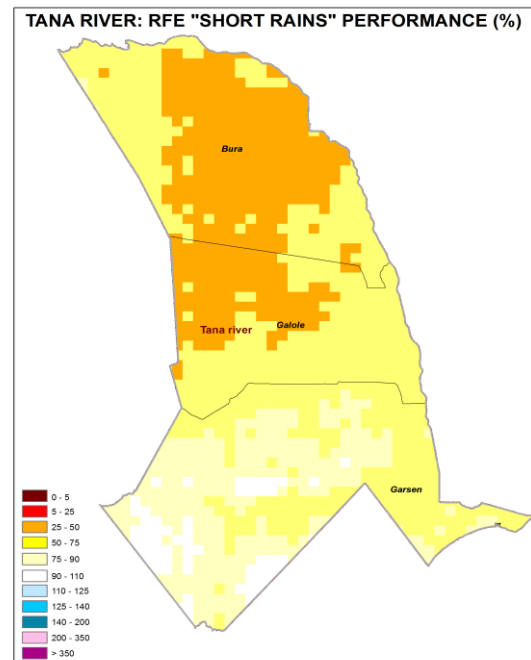


Figure 2: Rainfall performance, Tana River County

2.2 Insecurity/Conflict

Human - wildlife conflict was reported among farming communities bordering the game reserve in Wenje and Chara. Tensions in Tana Delta are on the rise due to the increased immigration of livestock as result of poor pasture in pastoral livelihood areas.

2.3 Other shocks and hazards

Fall Army Worm infestation negatively affected maize production in the mixed farming livelihood zone.

3.0 Impacts of drivers on Food and Nutrition Security

3.1 Availability

Food availability is one of the food and nutrition security pillars. It's affected by livestock and crop production as well as food stocks at household level and market supplies. In this section, the presence of pastures and browse, stocks, harvests and commodities in the market are discussed. The markets remained stable with little disruptions during the short rains.

3.1.1 Crops Production

The mixed farming livelihood zone is dependent on the long rains while the marginal mixed farming and pastoral livelihood zones are dependent on the short rains seasons. The three main crops grown are maize, cowpeas and green grams. In the mixed farming livelihood zone, green grams, bananas and mangoes contribute four, 10 and 37 percent respectively to cash income. In the marginal mixed farming livelihood zone, maize contributes 30 percent to food and 50

percent to cash income. In the marginal mixed farming livelihood zone both green grams and mangoes individually contribute 10 percent to both food and income.

The area planted was 82, 78 and 75 percent of the LTA for green gram, maize and cowpeas respectively. The area under production for the three main crops declined and was attributed to the anticipation of delayed and inadequate rains. Consequently, production was 38, 34 and 22 percent of the LTA for green grams, cowpeas and maize respectively.

Table 1: Crop Production under Rain-fed Agriculture

Crop	Area planted during 2017 Short rains season (Ha)	Long Term Average (5 year) area planted during the short rains season (Ha)	2017 Short rains season production (90 kg bags) Projected/Actual	Long Term Average (5 year) production during the Short rains season (90 kg bags)
Maize	1,400	1,800	5,910	27,000
Green gram	287	350	1,338	3,500
Cow peas	225	300	1,505	4,500

The decline in production was also attributed mainly to the late onset and low rainfall received in most parts of the county and the shortened growing season occasioned by an early onset. In addition, the Fall Army Worm affected 120 hectares of maize and 70-80 percent of the produce was lost.

Irrigated crop production

Table 2: Crop Production under Irrigated Agriculture

Crop	Area planted during the 2017 Short rains season (ha)	Short Term Average (3 years) area planted during Short rains season (ha)	2017 Short rains season production (90 kg bags/T) Projected/actual	Short Term Average (3 years) production during 2017 Short rains season (90 kg bags/T)
1. Maize	255	650	3,825	10,400
2. Green grams	171	150	1,790	1,500
3. Rice	105	421	1,750	21,050

Irrigation was mainly done in the Hola and Bura irrigation schemes. Area and production under green gram was 14 and 19 percent above the LTA respectively, attributed to farmers adopting a drought tolerant crop and anticipated poor performance of other crops. The area under maize and rice was 39 and 25 percent of the LTA respectively, attributed to reduced flood water, lack of inputs, diversion to other crops such as cowpeas and lack of adequate floods. Further, most of the irrigated crop is in the schemes where farmers get cheaper water than those who operate outside the schemes.

Cereal Stocks in the County

In pastoral livelihood zone, rice is the staple food. In the marginal mixed farming livelihood zones, maize, bananas and other livestock products are the staple food items. In the mixed farming livelihood zone, maize, rice, bananas and green grams are predominant.

Table 3 (a) Quantities held currently (90-kg bags)

Commodity	Farmers	Traders	Millers	Food Aid	TOTAL
Maize	8,510	4,440	15	2,362	15,327
Rice	3,375	650	20	550	4,595
Sorghum	160	24	0	0	184
Green grams	240	450	0	0	690

Table 3(b) long term average quantities held (90-kg bags) at similar time of the previous year

Commodity	Farmers	Traders	Millers	TOTAL
Maize	9,380	4,462	25	13,867
Rice	4590	480	58	5,128
Sorghum	185	20	0	205
Green grams	348	412	0	760

The maize and rice stocks held by farmers and traders were 91 and 74 percent of the LTA respectively. The maize stocks held by farmers are mainly from the previous season, while the rice stocks were from harvests in the irrigation schemes. Millers held 35 and 20 percent above the LTA for rice and sorghum. Green grams and sorghum are also important cereals in Tana River County.

The expected maize harvest is 22 percent while that of green gram is 38 percent of LTA. Although maize stocks held by farmers are 91 percent of the LTA, stocks of the other cereals bridge the gap for the staples. Therefore, although a variety food is not readily available at the household level, it is available in the markets.

3.1.2 Livestock Production

The main livestock species in Tana River County are goat, sheep, cattle and camel. Indigenous poultry and beekeeping is common among the marginal mixed farming livelihood zones where it is practiced as an alternative livelihood. Livestock production contributes to 20, 15 and 68 percent to cash income in the marginal mixed, mixed farming and pastoral zone respectively. Several factors are affecting livestock development in the county which include: frequent droughts, environmental degradation, incidences of livestock diseases, poor husbandry practices, inadequate access to livestock services such as veterinary services, supply of animal feeds and marketing information.

Pasture and Browse

Table 4: Pasture and Browse Condition

Livelihood zone	Pasture Condition			Browse Condition		
	Current	Normal	Projected duration to last (Months)	Current	Normal	Projected duration to last (Months)
Pastoral	Poor	Good	1	Fair	Good	1
Marginal Mixed farming	Poor	Good	1	Fair	Good	1-2
Mixed farming	Fair- poor	Good	1 - 2	Fair	Good	1-2

Pasture conditions were poor in Pastoral and Marginal Mixed livelihood zones while was fair in the mixed farming livelihood zone especially along the riverine areas (Table 4). Livestock movement has increased in the mixed farming livelihood zone as pasture and water became depleted in pastoral areas. The available pasture is expected to last for one month in the pastoral livelihood zone while browse will last for one to two months. The pasture and browse condition is expected to continue deteriorating due to high temperatures that are being experienced. Possible conflict with crop farmers may also affect access to pasture and browse.

Livestock Productivity

Livestock body condition

Table 5: Livestock body Condition

Livelihood zone	Cattle		Sheep		Goats		Camels	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	Poor	Good	Fair	Good	Good	Good	Good	Good
Marginal mixed farming	Fair	Good	Fair	Good	Good	Good	N/A	N/A
Mixed farming	Good	Good	Good	Good	Good	Good	N/A	N/A

The livestock body condition is fair to poor for cattle and sheep in the pastoral and marginal mixed farming livelihood zones and good for goats and camels in both zones. In the mixed farming livelihood zone, body condition is good for all the four species of livestock. The body condition of livestock in all livelihoods is expected to deteriorate in the next two months with depletion of pastures and increased trekking distance to water sources (Table 5).

Milk Production, consumption and prices

Milk from cattle constituted 60 percent of household milk produced, while that of goats and camels contributed about 25 and 15 percent respectively. The milk production declined for all the livelihood zones due to migration of cattle to beyond dry period grazing areas, declining

cattle body condition as a result of depleted pasture conditions and increased distance from pastures to water sources.

Pastoral zones depend on sheep, goats and cattle for milk production. During livestock migration milk production is mainly from sheep and goats. Cattle and goats are the main source of milk for agro pastoral and mixed farming livelihood zones. Milk production is 0 - 0.5 Litre as compared to a normal of two to three litres in pastoral livelihood zone , similarly, consumption is 0 - 0.5 Litre as compared to a normal of 0.5 - 1 litre. Milk consumption is prioritized in the diets of children, the elderly and herders.

Table 6: Milk Availability and Consumption across livelihood zones

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres) per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	0 - 0.5	2 - 3	0 - 0.5	0.5 - 1	80	40
Marginal Mixed farming	0 - 0.5	1 - 2	0 - 0.5	0.5 - 1	80	60
Mixed farming	0 - 1	3 - 5	0 - 1	0.5 - 1	80	50

Tropical Livestock Units (TLU's)

Table 7: Tropical Livestock Units across Livelihood zones

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
Pastoral	5	10	60 -70	120-180
Marginal Mixed farming	2	6	3	5
Mixed farming	1	4	5	8

Average livestock holding per household varies depending on the livelihood zone and the household status in terms of wealth (Table 7). Generally, the tropical livestock Unit is below normal across all livelihood zones, attributed to declining pasture and browse and the cumulative effects of dry conditions for the last three seasons. The farmers have lost animals during the last three seasons, this has decimated the herds. Livestock has further migrated to Tana delta and beyond in search of pastures and browse.

Birth rate

The status of births for all species is below normal at 10 percent. The animals have not fully recovered from the impacts of the last drought and therefore have below normal birth rates.

Livestock Migration

About 80 percent of the cattle have migrated through different routes and have remained in various destinations: Garissa – Bangale – Ukambani; Bangale – Bura– Titla– Waldena-Mutha(Ukambani); Bangale – Bura –Titla-Wayu- Dadashkori- Asa- Tsavo; Bangale-Bura-Hola-

Garsen-Lamu and Bangale-Bura-Hola-Ijara (Boni forest) attributed to intensifying drought, livestock in pastoral and marginal mixed livelihood zones. The pasture and browse where livestock has migrated cannot support the high livestock numbers.

Livestock Diseases and Mortalities

There are no major diseases reported in the county apart from a few cases of New Castle Disease (NCD), Contagious Caprine Pleuropneumonia (CCPP), *Contagious Bovine Pleuropneumonia (CBPP)*, *Trypanosomiasis* and worm infestation. The Department of Veterinary and other partners are taking preventive and control measures. No livestock mortalities were reported.

Water for Livestock

Water Sources and Availability

The main water sources for both domestic and livestock are River Tana, shallow wells and traditional watering holes along the dry river beds, water pans, and irrigation canals, which are normal sources at this time of year. The recharge level for shallow wells was 40 percent, and water pans were at 60 percent. The trekking distance from grazing areas to water sources in the pastoral areas ranges between 14 – 32 kilometres compared with the normal 12 –28 kilometres (Table 8). In the marginal mixed farming and mixed farming areas, the distances were 4 – 12 kilometres compared with the normal 2 – 4 kilometres. Trekking distances are expected to increase given the drying of water pans and the high concentration of livestock at water points. Water availability is projected to last for one to two months in pastoral livelihood zones and one month in mixed farming zones where water stress is clearly visible.

Table 8: Water for Livestock

Livelihood zone	Return trekking distances		Expected duration to last (Months)		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal
Pastoral	14-32	12 - 28	0.5-1.5	1-2	Once after two days	Once
Marginal mixed farming	4 - 12	2 - 4	1.5- 4	1- 2	Once per day	Twice
Mixed farming	4 - 12	2 - 4	2- 4	2- 3	Once per day	Twice

3.2 Access

3.2.1 Markets prices

Market operations are normal, however livestock prices are decreasing as animal body condition deteriorate with depletion of pasture. The main markets in the county are Kipini and Garsen in the mixed farming livelihood zone, Hola, Wenje, Bura and Madogo in the marginal mixed farming livelihood zone, and Wayu and Bangale in the pastoral livelihood zone. Other markets

for livestock are Garissa, Malindi, Mutha and Waldena. Traded volumes for cereals and pulses are below normal for the season. Market purchases continue to be an important source of food, thus low food commodity volumes and high prices continue to hamper household food availability and access.

Maize prices

The average price of maize in January 2018 is Ksh. 55 per Kilogramme being four percent higher than price in December 2017 which was Ksh. 53 per Kilogramme (Figure 3). The price of maize was also 34 percent above the long term average. The price of maize is currently similar compared to the same time last year. Maize price increase was associated with low production and high demand of maize. Prices are projected to remain high as farmers rely on the market across all livelihood zones and less from farm

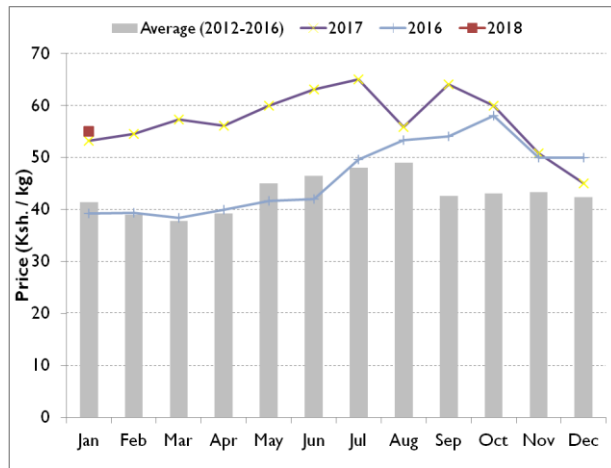


Figure 3: Maize prices trends

production and carryover stocks from the previous season. The farmers currently relying on production from other counties for their maize supply, thus the stocks held are externally sourced. The prices are therefore expected to rise due to transport and handling costs.

Goat prices

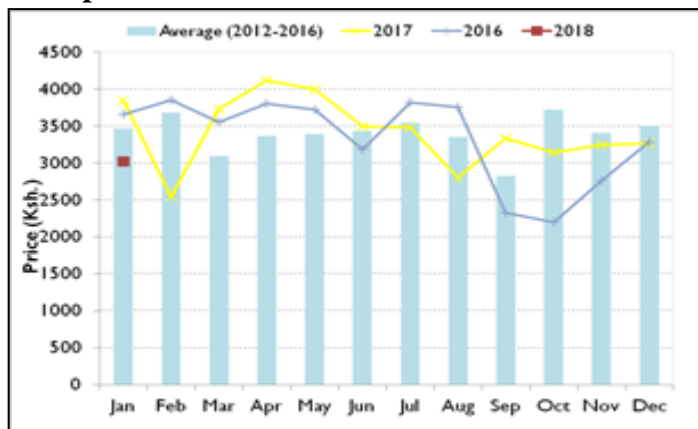


Figure 4: Goat price trends

In January 2018, the price of a goat was 13 percent below the December 2017 price and 21 percent below the long term average (Figure 4). The decline in goat prices was attributed to declining body condition. From October, goat prices gradually increased due to high demand during the festive season, but have since stabilized.

3.2.2 Terms of trade

The terms of trade (ToT) was 55 which was 65 percent of LTA for January 2018 and 76 percent of LTA in January 2017 (Figure 5). The decline was due to reduced maize prices and the declining goat prices. The Terms of Trade (ToT) were unfavorable to livestock farmers in January 2018 since the sale of a goat could purchase 55 kg of maize compared with the LTA of 58 kg hence limiting access to food.

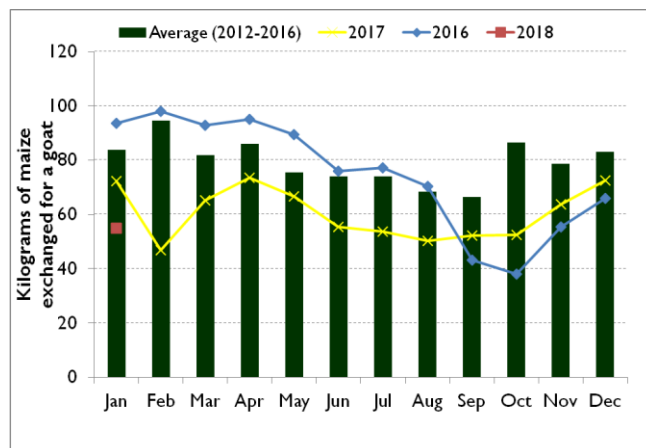


Figure 5: Terms of trade

3.2.3 Income sources

The main sources of staple food supplies were Kipini, Mombasa, Nairobi and Malindi in Kilifi. Food prices were stable but rising across all livelihood zones. The market demand for diverse food items was high attributed to low production in farming areas. The main source of income in marginal mixed farming and pastoral areas are the sale of goat, sheep and cattle. Current sources of livestock supplies are Chewani, Mikinduni, Kinakomba wards, Bura. Nanighi, sala, Madogo, Balambala and Chewele in the marginal mixed farming areas, while in the pastoral areas they are Waldena, Wayu, Chifiri, Haroresa, Gururi, Moti boka, Titila, Walsorea, Hara, Masalani and Garsen, which are normal sources. The volumes were normal for this time of year with no disruptions. For food commodities, the main income source was bananas and mangoes in the mixed farming and marginal mixed farming livelihood zones, which was normal for the time of year. With approximately 60 percent of the households in the pastoral and marginal mixed farming areas get their income from sale of livestock and livestock products, while in mixed farming areas, 40 percent of households get their income from sale of farm produce.

3.2.4 Water access and availability

Major Water Sources

The main sources of water for domestic and livestock use in the county are rivers, water pan/dams, shallow wells, piped water and boreholes. The River Tana remains the most reliable permanent water source. Pastoral households rely on water pans, dams, wells, *laggas* and boreholes, while households in the marginal mixed farming and mixed farming areas depend on shallow wells and the river. Piped water was also available in the major towns of Hola, Madogo and Garsen. The water recharge levels were below 60 percent due to below-average performance of the short rains. Approximately 95 percent of open water sources have dried up and the communities have resorted to temporary shallow wells along the dry river beds. Only 50 percent of open water sources were recharged and water is expected to last for 1–2 months. The areas hardest hits are Hurara, Onjila, Hara and Kone in Tana Delta, and Haroresa, Wayu, Titila, Waldena, Hakoka and Chifiri in Tana North. The areas with low water point concentration are areas of Asa that has three water pans that were desilted and are expected to last until the next season.

Distances to Water Sources

The return distances to water sources increased by more than 100 percent across all livelihood zones. In the marginal mixed farming and mixed farming livelihood zone the distances increased from between 0.4 to one kilometres to between two and three kilometres. With the current conditions, distances to water sources are expected to increase further due to low recharge of water sources during the short rains.

Waiting Time at the Source

Waiting time is within normal across the livelihood zones in the county, however marginal mixed farming livelihood zone of Mnazini, the waiting time is above normal.

Water consumption and cost

The cost of water in many areas is normal which is between Ksh. 2 and Ksh. 5 in mixed farming livelihood zone and Ksh 20 for a 20 litre jerrican in pastoral livelihood zone (Table 9). In Semikaro, the households pay Ksh 50 every month to access water. Water consumption in mixed farming livelihood zone is within normal of 10 - 15 liters per person per day at this time of the year. The water quality is poor as most of the water points were recharged from run-off. However, in Makere, the residents have come together and buy water treatment chemicals for domestic water. No major water borne disease cases that have been reported.

Table 9: Water for Domestic use

Livelihood Zone	Distance to water for domestic use (Km)		Cost of water (Ksh per 20L)		Waiting time at water source (Minutes)		Average HH Consumption (Litre/person/day)	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Pastoral	3	3	20	15 - 20	40 - 50	40 - 60	7-10	10 - 15
Marginal mixed farming	2 - 3	0.4 - 1	2	2 - 5	80 - 120	60 - 120	10 - 15	10 - 15
Mixed Farming	0.5 - 1	0.5 - 1	2	2 - 5	30 - 40	30 - 60	10 - 15	20 - 25

3.2.5 Food Consumption

According NDMA sentinel site data the month of January indicates that about 65 percent of the households in pastoral livelihood are having poor food consumption. In marginal mixed farming livelihood zone, 50.8 percent of the households had poor food consumption and in pastoral livelihood zone, about 65 percent of the households had poor food consumption (Figure 6). These households could not meet the

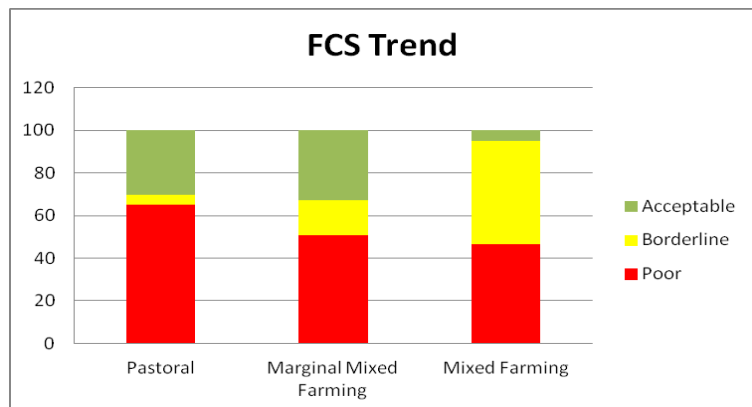


Figure 6: Food Consumption Score

required dietary diversity. The food consumption gaps could put the households at risk of malnutrition. There is a shift of households from borderline to poor FCS is indicative of declining household dietary diversity and food frequency which has resulted from decreased food production and unfavorable market prices of food commodities over the last three months. Many households across livelihood zones continued to rely on the market for supply of food items.

3.2.6 Coping strategy

The coping strategy index (CSI) was 32.3, 16.6 and 29.1 in the pastoral, marginal mixed and mixed farming livelihood zones in January 2018, with a composite CSI of 26 (Figure 7). Common consumption related coping strategies employed by households included borrowing food, relying from relatives and reducing number of meals.

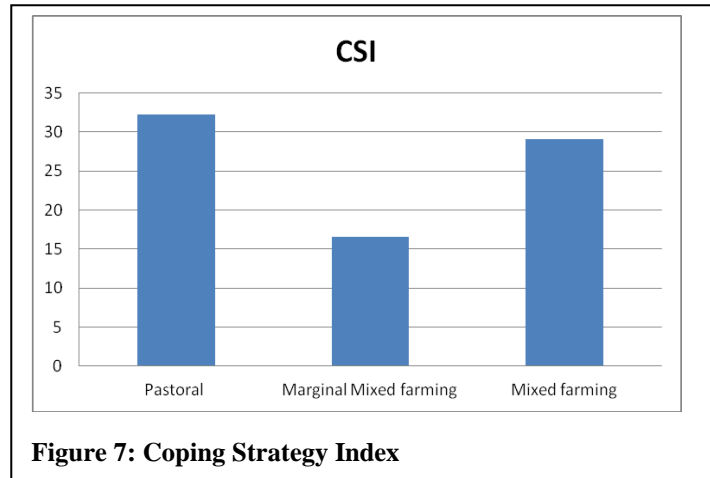


Figure 7: Coping Strategy Index

3.3 Utilization

Households have less choice of food items, thereby influencing their dietary diversity. Limited access to food has resulted to food consumption gaps at household level. Utilization of water at household level remains critical despite limited access to water sources. Household food utilization is a function of morbidity prevalence of under-fives and general population, levels of completion of immunization and vitamin A coverage, nutritional status among households and level of sanitation and hygiene practices among households.

3.3.1 Nutritional status

The proportion of children under five years at risk of malnutrition, based on mid upper arm circumference (MUAC) of <135 mm, was 35 percent above the LTA in January 2018 but 35 percent lower compared with January 2017 (Figure 8). Since October 2017, the proportion at risk has been gradually decreasing from 24 percent to 11 percent in December 2017. In January 2018 the proportion has slightly increased to 13 percent but remains stable. The decline in MUAC indicates an improvement in nutritional status attributed to increased ongoing interventions, such as outreach on vaccinations and access to

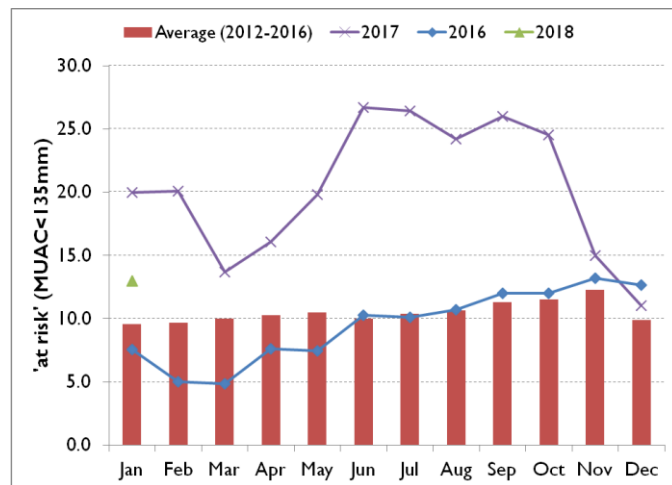


Figure 8: Proportion of children at risk of malnutrition (MUAC)

water. Crude mortality rate (CDR) was 0.36/10,000/day and under-fives mortality rate (U5DR) was 0.48/10,000/day which is below the alert cut offs.

3.3.2 Sanitation and Hygiene

The average latrine coverage in the county was low at 48.4 percent following increased health promotion through community units. Coverage and utilization is low in the pastoral areas due to low sensitization, nomadic lifestyle and cultural beliefs. Water sources may be contaminated through surface run-off, human waste and refuse, polluting water sources. There is an active cholera outbreak in the county where 201 cases of which 3 are laboratory confirmed and 4 are death have been reported so far.

3.4 Trends of key food security indicators

The county was classified in the stressed phase (Phase 2) of the Integrated Food Security Phase Classification (IPC) during the long rains assessment of July 2017 and has remained in phase (IPC Phase 2) in the current assessment. The performance of food security indicators comparing the short rains and long rains seasons are shown in Table 10.

Table 30: Food security trends in Tana River County

Indicator	Long rains assessment, July 2017	Short rains assessment, February 2018
Percent of maize stocks held by households (MMF, MF)	63	91
Livestock body condition	Fair - poor	Fair- poor
Water consumption (litres per person per day)	15-20	7 - 15
Price of maize (per kg)	45 - 80	55 - 80
Distance to grazing (Km)	3 - 8	3-16
Terms of trade (pastoral zone)	50	55
Coping strategy index	6.1	26
Food consumption score (P: B:A)	17: 36:47	65:4:31
Fall Army Worm		Affected 120 hectares of maize.
3-Month VCI		12.97 (compared to normal of >35)
MUAC(percent at mid-risk of malnutrition)		13 percent (as compared to a normal of <12 percent)
Production of green grams, cowpeas and maize		At 38, 34 and 22 percent of the LTA

3.5 Cross cutting issues

3.5.1 Education

Education is an important investment. It empowers men and women and provides opportunities for active participation in development by inculcating knowledge, skills and attitudes that are compatible with sustainable food security. The purpose of this assessment was to investigate how the 2017 short rain performance influenced the pupils' enrolment in public primary schools in Tana River County.

Enrolment

It's the number of pupils that are registered in the school. As of term I 2018, there are 94,523 learners enrolled in ECD, primary and secondary schools with an increase of 13,979 learners enrolled as compared to term III 2017 when total enrollment was 80,544. This trend has been observed at all schooling levels (Table 11). The enrolment increase at both ECD and primary levels attributed to sensitization of parents by the government through the local chiefs, ECD initiatives by the government as well as the availability of the home grown school's meals in the 170 primary schools countywide. In the Secondary levels, the enrolment increased by 3,920 students due to free day secondary education funds from the national governments and ongoing county bursaries to disadvantage students.

Table 11: Enrollment

Enrollment	Term III 2017			Term I 2018		
	No. Boys	No. Girls	Total	No. Boys	No. Girls	Total
ECD	12,365	11,308	23,673	13,971	12,811	26,782
Primary	25,568	24,317	49,885	28,503	28,332	56,835
Secondary	4,130	2,886	6,986	5,653	5,253	10,906

Dropout

The free primary education and subsidized secondary education policies inaugurated by the government of Kenya in 2003 and 2007 respectively and later reinforced by compulsory primary education as provided by the new constitution promulgated in August 2010 led to tremendous rise in enrolment rate in both primary schools and secondary schools and for boys and girls. Learners, particularly those from low socio-economic backgrounds, obtained the opportunity to participate in education due to this scheme.

The assessment findings are that 8.3 percent girls had drop out of secondary school as compared to 2.8 percent boys by the end of 2017 (Table 12). The possible reasons for the drop out according to the community interviews conducted during the assessment includes; Fees or costs, family labor responsibilities /household chores and early marriage / pregnancy . Similarly, in the primary level more girls drop out of schools as compared to boys by the end of term III 2017.

This can be attributed to households that don't see the value of schooling and migration from the school area in search for pasture and water. Some students drop out of school because of being engaged in family labor responsibilities.

Table 12: Drop out

Indicator	End of Term II 2017		End of Term III 2017	
	Boys (%)	Girls(%)	Boys(%)	Girls(%)
Students drop out from schools				
ECD	-	-	-	-
Primary	4.27	6.7	3.4	6.9
Secondary	5.6	7.3	2.8	8.3

School meals Programme

The assessment finds out that there were times where pupils missed meals because of challenges relating to lack of water in the schools and insecurity along the border to Somalia. In addition to that there was also transport/logistic constraints to delayed timely delivery of food to the schools. Currently, there was only two schools with a population of 250(160 boys, 90 girls) in the whole county that pupils not eating due to lack of water and fuel.

Table 13: School Meal Programme

Name Sub-county	No. of schools with School feeding	HGSM		Total Number of beneficiaries by gender	
		Boys	Girls	Boys	Girls
Tana Delta	70	10973	10612	10973	10612
Tana North	48	7509	7527	7509	7527
Tana River	52	10021	10193	10021	10193
Sub-total	170	28,503	28,332	28,503	28,332
Grand		56,835		56,835	

4. Food Security Prognosis

4.1 Assumptions

Prognosis assumptions are based on the following:

- The performance of the long rains will be normal.
- Resource-based conflicts are likely to arise along some boundaries in Tana Delta.
- Market prices are likely to increase for cereals.
- Agricultural farm inputs are likely to be unavailable in required quantities.

4.2 Outlook for 3 and 6 months

Food Security Outcomes (February – April)

The overall food security situation across the county is expected to decline; however we are in a short lean period as normal rains are expected in April. The maize harvest is poor and maize stocks at household level are expected to decline further. Forage is expected to deteriorate due to inadequate soil moisture content and pressure from grazing by livestock, however, with the long rains, the pasture and browse availability will improve. The livestock body condition is expected to decline in all livelihood zones, however, with onset of the long rains, it's expected to improve. Terms of trade are expected to be unfavorable to livestock keepers. The nutrition status of children under five is expected to decline due to inadequate supply of milk in the pastoral and marginal mixed livelihood zones. Food consumption patterns are expected to decline in the pastoral areas where milk availability is expected to decline and hence decreased household consumption. Frequency of meal consumption is expected to decline in all livelihood zones. However, mortality rates for both children under five and the general population are expected to remain below the alert cut off points.

Food Security Outcomes (May – July)

With normal performance of the long rains, pasture and browse is expected to improve across all livelihood zones and consequently the body condition of livestock is expected to get better. Maize stock supply in the markets will continue to decrease leading to higher market price. The goat prices will decrease further as farmers slowly release their stocks in the market to buy cereals. Therefore, the terms of trade are most likely to be unfavorable to the livestock keepers, but will change once the animal body condition improves due to increased pasture and browse.

5. Conclusion and Interventions

5.1 Conclusion

The county is classified in the stressed food security phase classification (IPC Phase 2). The situation is expected to continue until the long rains. Key factors that need close monitoring in the next six months; especially in the pastoral and marginal mixed livelihood zones, especially stocks of staples, pasture and browse situation, livestock body condition, human and livestock diseases, livestock and food prices, under-five nutritional status, distances to water sources, availability and access to forage and water, resource-based conflicts, inter-community conflicts and insecurity.

5.1.1 Phase classification

Tana River County is classified as “Stressed” (IPC Phase 2) in the mixed farming and marginal farming zones whereas the pastoral livelihood is classified as “Crisis” (IPC Phase 3).

5.1.2 Summary of key findings

Short rains harvest will be in the range of 22-38 percent of LTA, as a result of poor rainfall coupled with low stocks at the household level, loss of income and food, reduced on farm labor opportunities. This has led to majority of household to rely on markets for their food. Terms of trade are already unfavorable to the households and the trend is worsening due to low trade volumes and low demand especially for livestock. Water stress to bite across all livelihood

zones, the situation is likely to worsen until the onset of the long rains. Majority of households in the acceptable food consumption score category are likely to move to borderline food consumption score bracket and household food security will be compromised. Most households will remain in the stressed food security phase (IPC Phase 2).

5.1.3 Sub-county ranking - Tana River County

Table 14: Ranking of Sub County in order of food insecurity severity (worst to best)

Sub County	Food Security (1 – 3)	Justification
Tana North	1	Low levels of diversification, poor rains distribution, higher levels of malnutrition, high poverty levels, poor rain distribution depleted pastures, low purchasing power
Tana River	2	Low levels of diversification, water sources drying, deterioration of pasture and browse, Informal/formal employment, depend on markets, more water, higher VCI, dry water pans, dry boreholes, boreholes not functional
Tana Delta	3	Low levels of diversification, deterioration of pasture and browse, lack of adequate irrigation water and farm machinery, infiltration of salty water, seek casual labour in fishing activities, drop out of farmers.

5.2 Ongoing Interventions

5.2.1 Food interventions

County	Intervention	Location	Number of Beneficiaries	Implementers	Impact in terms of food security	Cost	Time frame
Health and Nutrition							
	Iron Folate Supplementation among Pregnant Women	All health facilities	11048	MOH/UNICEF /WV/KRCS/WFP	Improve health & Nutrition status of pregnant women		ON-GOING
	IYCN Interventions (EBF and Timely Intro of complementary Foods)	All facilities	11048	MOH/UNICEF /WV/KRCS/WFP	Improve health & Nutrition status of under 5		Ongoing
EDUCATION							
	Home grown	Countywid	50,152	MOE	Improve	162	Ongoing

	school Programme for 170 Primary schools	e	(Girls- 25,835 , boys- 24,317)		enrolment ,retention and nutritional status of the learners	M	
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5.2.2 Non-food interventions

County	Intervention	Location	Number of Beneficiaries	Implementers	Impact in terms of food security	Cost	Time frame
Livestock							
	Pilot Provision of livestock insurance	Entire County	15,000	MOLF, International Partners, CG	Improve food security situation in the county	134M	2017/2018
	Rangeland rehabilitation	Bangale, Bura, Danisa,	30% of livestock population	RPLRP,CG,State department of livestock	Establish Sustainable forage reserves	3M	2017/2018
Education							
	Home grown school Programme for 170 Primary schools	Countywide	50,152 (Girls- 25,835 , boys- 24,317)	MOE	Improve enrolment ,retention and nutritional status of the learners	162M	2018/2019
	Distribution of Water purifiers to some schools	County Wide	2000	Action Aid	Improve health and Nutrition status of the learners	10M	2018/2019
	Distribution of Sanitary Towels for 170 primary schools	Countywide	5731 girls	MOE	Improve enrolment, retention and transition rate of girls in the schools	35M	2018/2019
Water							
Tana Delta	Drilling of new shallow	Kipini west/Kipini	300HH	CG & State department of water	Improve access to clean	50M	3 Months

	wells	east		,International partners	water		
Tana River	Large Earth PANS in Kalkacha & Maderte Villages	Mikinduni Wayu	600HH	County government	Improve rain water storage for livestock & human consumption during droughts	150M	2017/2018 FY
Tana North	Bura pipeline extension	Hirimani (Bura & Hosingo)	4,700 HH	GOK	Improve water accesses	48M	8 Months
Agriculture							
Galole	Supply of fertilizer to the schemes and group irrigated farms	Kinakomba, Mikinduni, Chewani	1000	CGOTR	Production per acre to increase from 10 to 16 bags	5M	2017/2018
County-wide	Provision of agricultural extension services	All wards in MMF & MF	2400	Agriculture	Increased awareness /capacity of farmers on modern farming methods	2M	2017/2018
Galole & Tana delta	Agricultural Market access linkages (AMAL)	Burikana CBO, Makere FFA & Maziwa Dzinye	1000	German agro action, WFP, Agriculture	Improved farmers' access to market	11m	2017-2018
Health and Nutrition							
	Deworming	All health facilities	55,344	MOH/UNICEF/WV/MOE	Reduce worm infections among under 5	4M	Ongoing
	Integrated outreach	29 Facilities	11,000	MOH/UNICEF/WVI	Reduces diseases infections & Improve	2M	Continues

					nutrition status of under 5 & Pregnant women		
	Management of Acute Malnutrition (IMAM)	All health facilities	31,419	MOH/UNICE F/WVI	Reduces diseases infections & Improve nutrition status of under 5 & PLW	6M	Continues
	Zinc Supplementati on	All health facilities	55344	MOH/UNICE F/WV/WFP		4M	ON-GOING

5.3 Recommended interventions (Food related)

Population requiring food assistance

Sub-county	Percent	Min	Max
Tana North	30-40	31,259.10	41,679
Tana River	20-30	15,366.20	23,049
Tana Delta	10-20	12,201.90	24,404
		58,827	89,132

Recommended interventions (non-Food related)

County	Intervention	Location	Number of Beneficiaries	Implement ers	Impact in terms of food security	Cost (KES)	Time frame
Livestock							
	Commercial feed supplement (approximately 24,000 bags of drought pellets)	County wide	156,800	MoALF ,TNCG,UN agencies & other international partners	Improved livestock productivity and reduced mortalities	50M	2018/2019 FY
	Destocking and Slaughter	County wide	156,800	MoALF ,TNCG,UN agencies & other internation	Improved food security and reduce drought risks	104M	2018/2019 FY

				al partners			
	Mass Vaccination and treatments	County wide	30% of livestock population	MoALF ,TNCG,UN agencies & other international partners	Improved livestock productivity and reduced mortalities	70M	2018/2019 FY
Water							
Tana Delta	LMD Repair borehole Desilting of water pans	Kurawa Assa,Wachu-Oda	25,000	CGTR/CW SB/UNICEF/WSTF/ T&T,RED CROSS	Improve accesses to clean water & Sanitations	105,000 M	2 Months
Tana Delta	Repair of shallow wells	Kipini/Mnazini/Danisa	30,000	CGTR/CW SB/UNICEF/WSTF/ T&T,RED CROSS	Improve accesses to clean water & Sanitations	10M	3 months
Tana North	Water Trucking	Hirimani, Hosingo,Bangale,che wele/Dukano	15,000 people per location	TRCG, CWSB, GOK NGOs	Improve accesses to clean water & Sanitations	100M	3 Months
Agriculture							
Tana delta & Galole	Established two irrigation Schemes	Chara & Galole	4000HH	NIPB , MOA & CG	Improved agricultural productivity and incomes of farmers	400M	2018/2019 FY
Tana Delta & Galole	Provision of Drought tolerant Seeds to farmers	Tana Delta & Galole	24,000HH	MOA,CG & international partners	Increase acreage under agricultural production	10M	Immediate
Tana Delta & Galole	Farm Machinery especially tractors & other light machinery	Tana Delta & Galole	24,000 farmers	MOA,CG & international partners	Increase efficiency of farm operations	70M	2018/2019

Health and Nutrition							
	Treatment of Cholera cases, contact tracing, water sampling and decontamination of surfaces	Tana North 30 villages	30 villages	MOH/WV/ UNICEF/K RCS/GAA	Manage cholera outbreak hence save more lives	854,600	Feb – April '18
	Conduct Health Promotion Activities	Tana North 30 hot spots in the County	30 villages	MOH/WV/ UNICEF/K RCS/GAA	Promote health & Nutrition status of the under 5 & PLW	270,000	Feb – April '18
	Conduct integrated outreaches	All the 8 hotspots in the County	62676	MOH/WV/ UNICEF/N DMA/KRC S/WFP	Improve Health & Nutrition status	2,791,800	Feb – April '18
	Monitoring and Evaluation	The whole county	15 CHMT	MOH/WV/ UNICEF/K RCS/GAA	Increases efficiency & Effective service delivery	147,000	Feb – April '18
EDUCATION							
Tana River	Water Trucking for 55 primary schools	County wide	24,000	GAA/WFP /CG/NDMA	Improve learning ,retention & Enrolment of learners	1M	Immediate
	Distribution of water tanks for 83 primary schools	County wide	45,540 learners	GAA/CCG /NDMA	Sustainable water storage for schools	44M	2018/2019
	Food For Fees for 33 Secondary Schools	County wide	10,906	KRC,National & County government & International partners	Improvement of enrolment, retention ,transition rate and completion of education cycle	98M	2018 /2019 FY