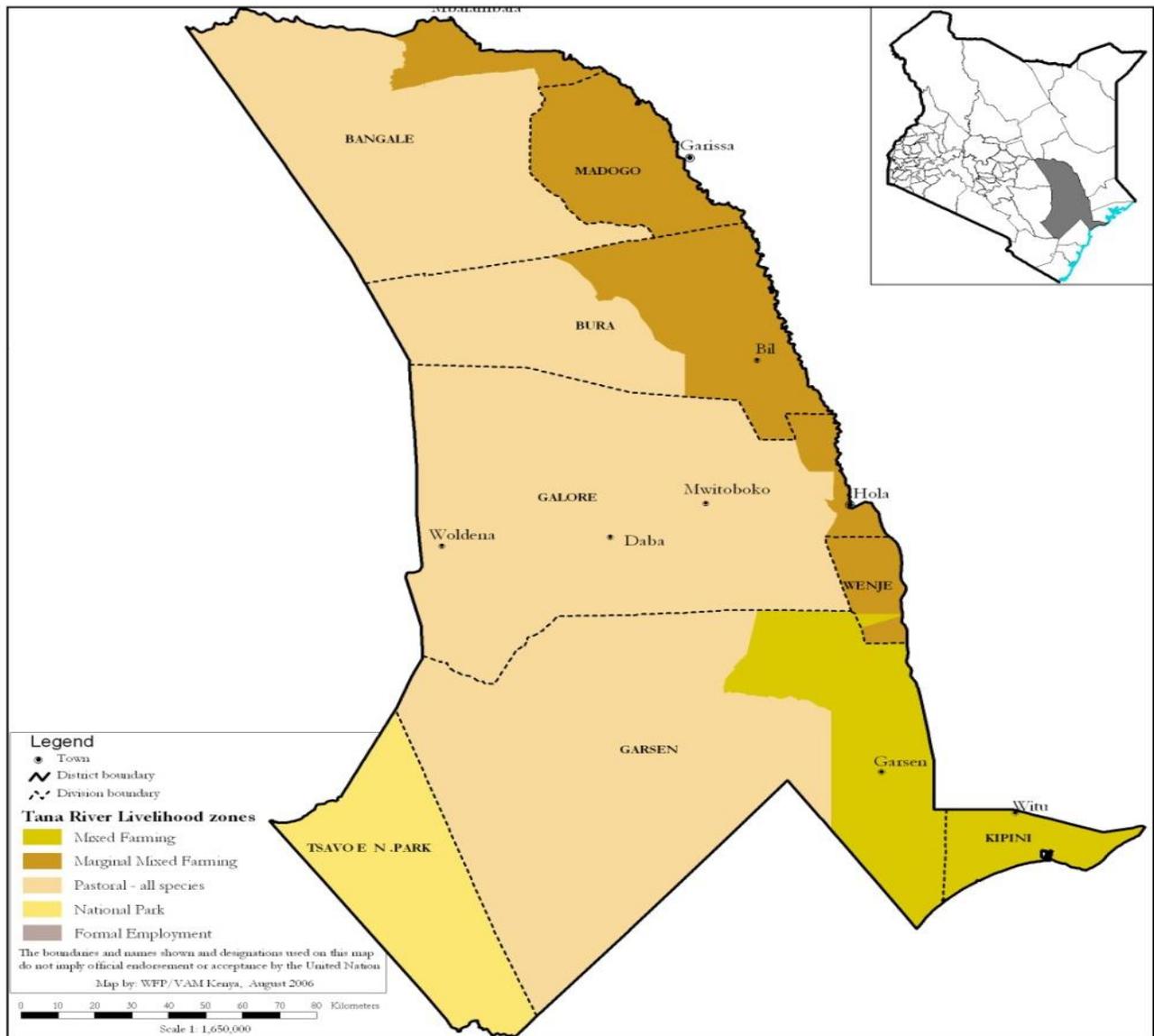


TANA RIVER COUNTY 2016 SHORT RAINS FOOD SECURITY ASSESSMENT REPORT



A Joint Report by the Kenya Food Security Steering Group (KFSSG)¹ and the Tana River County Steering Group (CSG)

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Executive Summary

Tana River County is classified under “Stressed” Phase (IPC Phase 2) across all livelihood with localized parts of the marginal mixed farming areas such as Harolesea, Wayu, Chifiri, Titila and Hakoka classified under “Crisis” (IPC Phase 3) of food security phase classification. More than 50 percent of the households are faced with food consumption gaps. Overall 18 and 63 percent of the households in the county were at poor and borderline food consumption scores respectively. In the same period, proportion of children at risk of malnutrition according to MUAC increased to critical (12.42%) from serious (9.2%) last year same period. The GAM rate was at serious (13.7 %).

The county has had three successive rainfall seasons whose performance was below average. The 2016 short rains performed below average characterized by a late onset, early cessation and poor distribution in both in time and space. Consequently, the county experienced low crop production affecting household stocks especially in mixed and marginal mixed farming zones. Diminishing pasture and drying water sources have contributed to low access to milk for household consumption especially in pastoral livelihood zone, consequently, reducing tropical livestock units, due to deteriorating livestock body condition and limited sales, have compromised the household purchasing power, hence limited access to food supplies. The households are now taking 1–2 meals per day as opposed to the normal 2–3 meals per day. Most of the meals are composed of ugali and Sukuma wiki and sometimes indigenous/local vegetables.

Major contributing factors to food insecurity include increased distances to water sources, which have increased from 1–2 kilometres to 5–15 kilometres for livestock and by more than 100 percent for domestic use. In other areas the trekking distances has increased up to 30 kilometres. Households are able to access 72 kilograms of maize from a sale of goat in January 2017 compared with 66 kilogrammes of maize in December 2016. The improvement in terms of trade was attributed to stable maize prices and increasing goat prices. Projected crop production was lower than the previous seasons and the households have depleted their stocks thus, depending fully on market supplies.

1.0 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 kilometre 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.

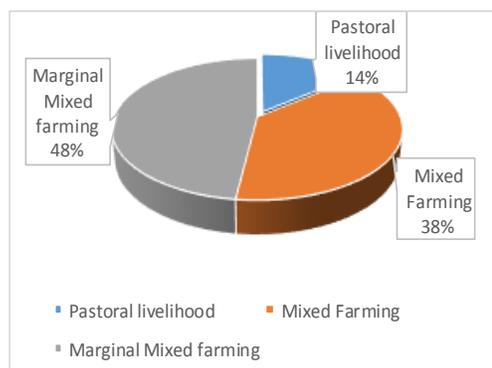


Figure 1. Population distribution by livelihood

1.2 Objectives and Approach

The main objective of the short rains assessment was to develop an objective, evidence-based and transparent food security situation analysis. The Kenya Food Security Steering Group (KFSSG), the National Drought Management Authority (NDMA) and Tana River County Technical Working Group used various methodologies and approaches in coordinating assessment. Data was collected from various sites using sectoral checklist tools, including livelihood baseline data, sectoral reports, price data, nutritional smart surveys, and the monthly drought early warning bulletins before the national team arrived. An initial County Steering Group (CSG) meeting was conducted to share preliminary information with other partners and the national team. The assessment team made a transect drive to conduct interviews in the following sites: Wayu, Hakoka, Bura (market), Mukera, Haloresea, Sera, Garsen (market) and Wema. 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.

The assessment carried from 16th to 20th January 2017 where, the team conducted a minimum of two communities, two key informants and two market interviews in each of the sample sites across the livelihood zones. The team also visited schools and health facilities for further triangulation of the available data. Visual inspection techniques were used during the transect drives to obtain qualitative data. The field data was collected, reviewed, analysed and triangulated to verify its validity. The assessment process adopted a multi-sectoral and multi-agency approach covering the agriculture, livestock, health and nutrition, water and sanitation, education and food assistance sectors. Livelihood zones were used as a focal point to understand the changes in food security and identify populations affected and in need of assistance. The results from the sampled sites were discussed in the CSG and used to make inferences about areas not visited. The findings and recommendations were provided for planning purposes.

2.0 Drivers of Food and Nutrition Security in the county

2.1 Rainfall Performance

The onset of the short rains was late in the second dekad of November 2016 compared with the second dekad of October normally. The pastoral livelihood zone received 50–90 percent of normal rainfall, while the mixed farming and marginal mixed farming livelihood zones received 25–50 percent of normal (Figure 2). However, the northern part of the marginal mixed farming zone received 90–100 percent of normal. The temporal distribution was uneven and the spatial distribution was poor. The cessation was early in the second dekad of December compared with the normal third dekad of December.

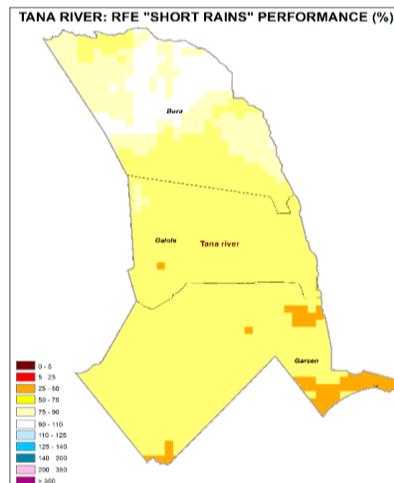


Figure 2: Rainfall Performance

2.2 Insecurity and Conflict

Cases of conflicts have been reported among pastoralists in Kiariakungu and Kalkacha. Tensions in Tana Delta are on the rise due to the increased in-migration of livestock as result of poor pasture in pastoral areas. Continuous peace meetings and the heavy presence of security officers have suppressed the situation. The possibility of conflict has been triggered by past attacks in Lamu, Mpeketoni and Garissa, but security has been beefed up since then to curb such incidents. Tension is still high in the county over fear of terror attacks.

2.3 Other Shocks and Hazards

There was a cholera outbreak in areas around Tana Delta; 12 cases were reported and three of these confirmed. No deaths were reported. Human-wildlife conflict has also been reported in areas bordering the Tsavo East National Park, where elephants are searching for water and pasture.

3.0 Impacts of drivers on Food and Nutrition Security

3.1 Availability

Performance of rainfall was below average resulting to low crop production especially in the mixed farming areas, thereby reducing the household stocks. Most household continue to rely on market supplies. Livestock migration and poor body condition has resulted to reduced milk consumption at household level.

3.1.1 Crop 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. Other crops include bananas, mangoes, tomatoes, kale and rice. In the mixed farming livelihood zone, maize, green grams, bananas and mangoes contribute one, 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. Green grams and mangoes in the marginal mixed farming livelihood zone each contribute 10 percent to both food and income.

Rain-Fed Crop Production

The acreage under maize, green grams and cowpeas was below the long-term average (Table 1). The reduction in acreage was attributed to the late onset of the short rains as farmers kept waiting for the onset. Production of maize, green grams and cowpeas is expected to reduce by almost the same margin as area planted. Poor distribution and reduced acreage led to reduced production of all crops.

Table 1: Rain fed Crop Production

Crop	Area planted during 2016 Short rains season (Ha)	Long Term Average area planted during the Short rains season (Ha)	Percent change in the area planted	2016 Short rains season production (90 kg bags) Projected	Long Term Average production during the Short rains season (90 kg bags)	Percent change in crop production
1.Maize	1,240	1,550	20	12,400	17,960	31
2.Green grams	237	354	33	1,659	2,749	40
3.Cowpeas	249	317	21	1,743	2,672	35

Irrigated Crop production

Irrigation was mainly done in the Hola and Bura irrigation schemes. The area under maize, green grams and cowpeas reduced as compared to the long term average (Table 2). Production of maize, green grams and cowpeas also reduced compared to the long-term averages. The reduction in acreage under maize was mainly due to the low price of maize compared with the price of seed maize offered by seed companies. Maize production is expected to decline due to the reduced acreage and the lack of flooding waters from the River Tana. Green grams and cowpea production are expected to reduce due to decreased areas under production as result of the promotion of maize seed by seed companies which pay better prices.

Table 2: Irrigation Production

Crop	Area planted during the 2016 Short rains season (ha)	Short Term Average (3 years) area planted during Short rains season (ha)	Percent change in area planted	2016 Short rains season production (90 kg bags) Projected	Short Term Average (3 years) production during 2015 Short rains season (90 kg bags)	Percent change in crop production
1.Maize	639	1,687	62	12,780	38,801	67
2.Green grams	71	333	79	568	2,997	81
3.Cowpeas	55	236	77	440	2,124	79

Maize Stocks in the county

Households maize stocks are 85 percent below the long-term average due to reduced production over consecutive years (Table 3). The current stocks held by traders are eight percent above the long-term average due to an increase in maize prices given increased demand and low production, especially in the mixed farming livelihood areas. Household stocks in the mixed

farming livelihood zones are expected to last less than a month while in the marginal mixed farming and pastoral livelihood zones, households depend on market supplies.

Table 3: Maize Stocks in the County

Maize stocks held by	Quantities held currently (90-kg bags)	Long Term Average quantities held (90-kg bags) at similar time of the year
Households	1,640	11,700
Traders	8,850	8,200
Millers	0	0
NCPB	0	2,000
Total	10,490	21,900

3.1.2 Livestock Production

Livestock production contributes 20, 15 and 68 percent to cash income in the marginal mixed farming, mixed farming and pastoral livelihood zones respectively. The main livestock types kept are camels, sheep, goats and cattle.

Forage condition

Pasture conditions were fair in all livelihood areas except the pastoral, where they were fair to poor (Table 4). Areas such as Chifiri, Titila, Hakoka, Wayu, Bura and Ass Kone have poor pasture. Livestock movement was expected to increase once pasture and water became depleted in pastoral areas. The influx of livestock from Garissa County was expected to use up the available pasture before moving towards the riverine areas.

Table 4: Forage Conditions by livelihood

Livelihood zone	Pasture condition			Browse condition		
	Current	Normally	Projected Duration to last (Months)	Current	Normally	Projected Duration to last (Months)
Pastoral	Fair-poor	Good	One month (end of January)	Fair	Good	1 month
Marginal Mixed farming	Fair	Good	1	Fair	Good	1-2 months
Mixed farming	Fair	Good	1- 1.5 months	Good	Good	1-2 months

Livestock Productivity

Livestock body condition

The livestock body condition of cattle and sheep was fair to poor in pastoral areas, while that of goats and camel was good across all livelihood zones (Table 5). The body condition of cattle and sheep was likely to deteriorate further in 1–2 months with the depletion of pasture and increased trekking distance to water sources.

Table 5: Livestock Body Condition by livelihood

Livelihood zone	Cattle		Sheep		Goat		Camel	
	Current	Normally	Current	Normally	Current	Normally	Current	Normally
Pastoral	Fair - poor	Good	Fair - poor	Good	Good	Good	Good	Good
Marginal Mixed farming	Fair	Good	Fair	Good	Good	Good	No camels	No camels
Mixed farming	Fair	Good	Fair	Good	Good	Good	No camels	No camels

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 average production of milk per household was 2.5 litres compared with the normal 3–5 litres. Household milk consumption ranged between 0.5–1 litres compared with the normal two litres at this time of year (Table 6). The reduction in production and household consumption was attributed to the fair to poor cattle body condition because of fair pasture conditions and increased distance from pastures to water sources. Increased pasture to water sources has also reduced milk in households.

Table 6: Milk Production, Consumption and Cost

Livelihood zone	Milk Production (Litres) /Household		Milk consumption (Litres)/Household		Prices (Ksh)/Litres	
	Current	LTA	Current	LTA	Current	LTA
Pastoral	1	2-3	0.5-1	2	60	40
Marginal Mixed farming	1-1.5	1-2	0.5-1	2	50	60
Mixed farming	2-3	3-5	0.5-1	2	50	50

Birth rates and Tropical Livestock Units

The birth rates are below normal at this time of year. The average household livestock size in the pastoral zone had 24 TLUs (15 cattle, 18 goats and 15 sheep) while in the marginal mixed farming zone, the average livestock size was 8 TLUs (3 cattle, 21 goats, 14 sheep) (Table 7).

Table 7: Tropical Livestock Units

Livelihood zone	Average TLUs/Household	
	Current	Normal
Pastoral	24	28
Marginal Mixed farming	8	8
Mixed farming	5	5

Livestock Migration

Livestock migration has been reported from Garissa County to the Tana Delta areas where there are a few pockets of pasture and browse. Livestock are grazing in the usual areas in the pastoral zones. Livestock movement has gradually started towards fall-back areas where there is available pasture. The fall back or dry grazing areas in the Delta have fair to poor conditions, which is forcing livestock to move to the hinterland (pastoral areas) and outside the county towards Meru National Park, Tsavo East National Park and Lamu County. Increased livestock migration is expected before the end of the month once the water points have been depleted, especially in the pastoral areas towards the riverine areas where cases of conflict are likely.

Livestock Diseases and Mortalities

There are no major diseases reported in the county apart from a few cases of Contagious Caprine Pleuropneumonia, *Contagious Bovine Pleuropneumonia*, *Trypanosomiasis* and worm infestation. The Department of Veterinary and other partners are taking preventive and control measures. No livestock mortalities have been reported.

Water for Livestock

The current sources of water for livestock are the 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 trekking distance from grazing areas to water sources in the pastoral areas ranges between 5 – 12 kilometres compared with the normal 3–7 kilometres (Table 8). In other areas such as Titila – Waldena, Chifiri – Bura, Gururi- Hola and Assa Koone, Haroresa – Boji, livestock move distances of 15 – 25 kilometres from grazing areas to water sources. In the marginal mixed farming and mixed farming areas, the distances were 2 – 5 kilometres compared with the normal 1–2 kilometres. Trekking distances are expected to increase given the drying of water pans and the high concentration of livestock at water points.

Table 8: Water for Livestock by livelihood

Livelihood zone	Return trekking distances (Km)		Expected duration to last (Months)		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal
Pastoral	5-12	3-7	1	1-2	Cattle, sheep and goats are watered two times a week	Watered three times in a week
Marginal Mixed farming	2-5	1-2	1-1.5	1-2	Cattle are watered once a day while sheep and goats are watered once in two days	Normal
Mixed farming	2-5	1-2	1-2	2-3	Cattle, sheep and goats are watered once in 1-2 days	Normal

3.2 Access

Market operations were normal without any disruption. Food commodities were available in the market despite increase in prices. Diminishing livestock sales, low wage from own farm opportunities has resulted to low purchasing power for households thereby affecting food consumption.

3.2.1 Market Prices

Market operations and prices

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 Malindi, Mutha and Weldena. All markets were functioning normally with no disruption. The food commodities available in the markets were maize, beans, green grams, cowpeas and rice. Food prices were higher in Hola due to poor infrastructure, while along the highway to Garissa they were fair. Livestock available in the markets were sheep, goats and cattle.

Maize Prices

The average price of maize in January 2017 Ksh.53 per kilogramme being six percent higher than price in December 2016 which was Ksh.50 per Kilogramme (Figure 3). The price of maize was also 26 percent above the long term average. Maize price increase was associated with low production and high demand of maize. The price of maize is expected to increase further due to low production, especially in the mixed farming areas.

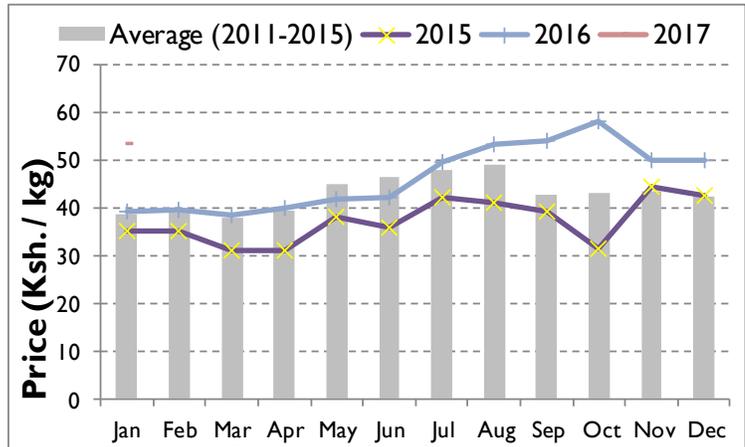


Figure 3: Maize prices in the county

Goat Prices

In January 2017, the price of a goat was 17 percent above the December 2016 price and 12 percent above the long term average (Figure 4). The improvement in goat prices was attributed to good body condition and low supplies in market demand. From October, goat prices gradually increased due to high demand during the festive season.

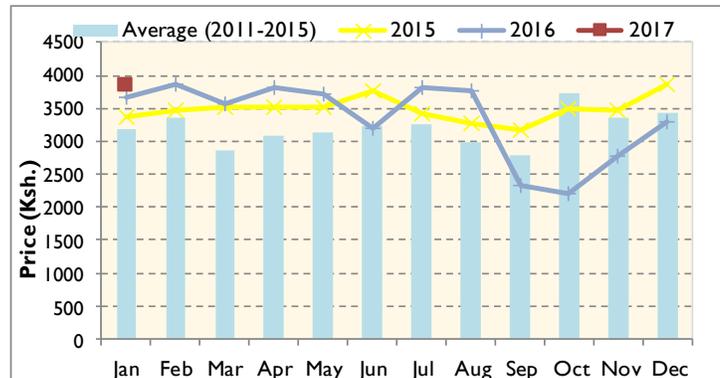


Figure 4: Goat prices in the county

3.2.2 Terms of Trade

In January 2017, the terms of trade were 10 percent above the December 2015 but below the long term average by 10 percent. The improvement in terms of trade was attributed to stable maize prices and increasing goat prices. The terms of trade are expected to continue increasing.

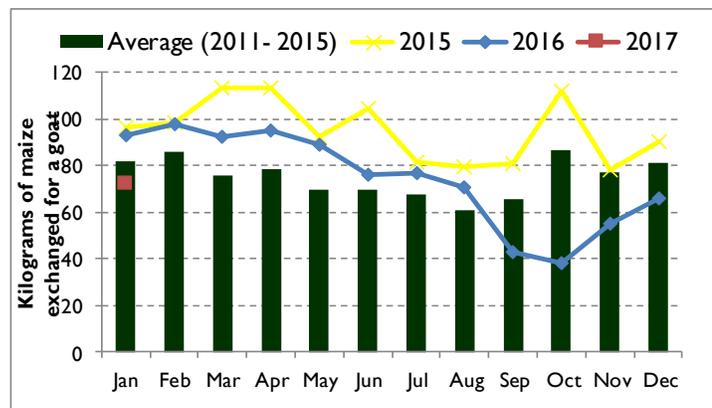


Figure 5: Terms of trade

3.2.3 Income Sources

The main sources of staple food supplies were Mpeketoni, Kipini, Mombasa, Nairobi and Malindi. Food prices were stable, especially in the mixed farming areas, while in the pastoral and marginal mixed farming areas, the prices were high. The market demand for varied food items was high due to low production in farming communities. The main source of income in marginal mixed farming and pastoral areas are the sale of goat, sheep and cattle. The 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 also normal for the time of year. About 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 crops.

3.2.4 Water access and availability

The main sources of water are rivers, seasonal rivers, water pan/dams, shallow wells, piped water and boreholes. The River Tana remains the most reliable 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 50 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, Assa, 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 Hirimani west, Hamares and Mitiboma.

Distance to Water Sources

The return distances to water sources increased by more than 100 percent. The worst affected regions were in the marginal mixed farming zone where distances increased from between 0.4 and one kilometre to between four and 30 kilometres. The current distances are not normal at this time of year due to low recharge of water sources during the short rains.

Waiting Time at the Source

Waiting time increased by almost 100 percent across the livelihood zones except for areas where the river passes through, such as Mbalambala, parts of Madogo and parts of Bangale. In some areas of Tana River Sub-County, such as Chifiri, Hakoka and Titila, the waiting time was as long as five hours.

Water Consumption and Cost of Water

In the pastoral and marginal mixed farming areas, water consumption reduced to 10–15 litres/person/day from 30–35 litres/person/day, while in mixed farming areas the consumption averaged 25 litres/person/day compared to normal of 40 litres/person/day. The reduction in water consumption across the county has compromised hygiene and sanitation. The cost of a 20-litre jerrican ranged between Ksh.15 and 50 depending on the livelihood zone compared with the normal Ksh. 3 – 5 (Table 10). The cost of water was higher in the marginal mixed farming zone where waiting times and distances had increased significantly. The costs given are for the water vendors and do not consider areas where communities pay a small fee for maintenance. The cost of water has risen beyond normal due to the shortage of water across the county. In the marginal mixed farming and mixed farming zones, the cost of water has risen by more than 200 percent.

Table 9: Water Availability and access

Sub county / livelihood zone	Distance to Water for Domestic Use (Km)		Cost of Water (Ksh./20litres)		Waiting Time at Water Source (Minutes)		Average HH Use (Litres/person/day)	
	Normal	Current	Normal	Current	Normal	Current	Normal	Current
Pastoral	1	13	3-5	15-20	20-30	40-60	30-35	10-15
Marginal Mixed farming	0.4-1	4-30	3-5	30-50	20-30	60-120	25-30	10-15
Mixed farming	0.5-1	1-25	3-5	15-30	15-20	30-60	40	25

3.2.5 Food Consumption

According to NDMA and WPF’s Food Security Outcome Monitoring (FSOM) data, Food Consumption Score (FCS) for the month of January indicates that more than 50 percent of the households are facing food consumption gaps. In marginal mixed farming livelihood zone, 20.7 percent of the households were at poor and in pastoral livelihood zone, about 55 percent of the households were at borderline (Figure 6). These households could not meet the required dietary diversity. The food consumption gaps could put the households at risk of malnutrition.

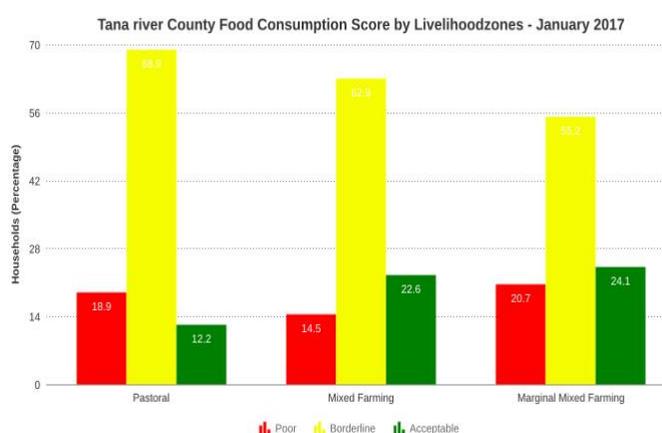


Figure 6: Food Consumption by livelihood

3.2.6 Coping Strategy

In mixed farming livelihood zone, it appears households were employing more severe coping mechanism to be able to achieve the required FCS (Figure 7). According to the trend between October 2016 and January 2017, different livelihood zones have been employing different coping mechanisms (Table 11). It appears in mixed marginal farming zone households are gradually exhausting their coping strategies and could start employing more severe coping strategies to meet their food consumption gaps.

Table 10: Coping Strategy by livelihood

Livelihood zone	October 2016	November 2016	December 2016	January 2017
Pastoral	8.5	10	9.3	10.6
Marginal Mixed farming	16.2	19.1	14.3	11.9
Mixed farming	26.2	25	22.2	7.5

3.3 Utilization

Households are relying more on preferred diets 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.

3.3.1 Nutritional Status

Morbidity and mortality patterns

The most prevalent disease in the general population was Upper Respiratory Tract Infection (URTI) as result of dust and wind. URTI was also the most prevalent disease among the under-fives followed by diseases of the skin, attributed to low sanitation and hygiene practices. According to a survey in July 2016, about 65 percent of the population in the county practice open defecation with only 22 percent owning latrines. Up to 80 percent do not treat their drinking water. These are some of the factors, which have led to the increase of diarrheal cases in the county.

Out of 12 cholera cases reported, three were confirmed by laboratory tests while the rest tested negative. There was some water contamination in Boka wells in Tana North; the water samples found vibrio cholera. The communities around the catchment area were barred from drinking the water without boiling it, while aquatabs and pur were issued to treat it. Vitamin A supplementation coverage has improved to 50.5 percent compared to 26 percent 2016 same period due to health awareness campaigns. Fully Immunized Child (FIC) coverage from July to December 2016 reached 55.8 percent, which was an increase on 47.9 percent in the previous year, due to improved documentation and availability of cold storage to store the antigens.

Nutrition Status and Dietary Diversity

The proportion of children at risk of malnutrition (MUAC < 135 mm) was 12.65 percent in December 2016, which was 3.25 percent higher than the LTA and 6.13 percent higher than same time in 2015, an indication that more children are at risk this year than in the same period last year (Figure 8). The worsening in malnutrition was mainly due to low milk production and low household food stocks.

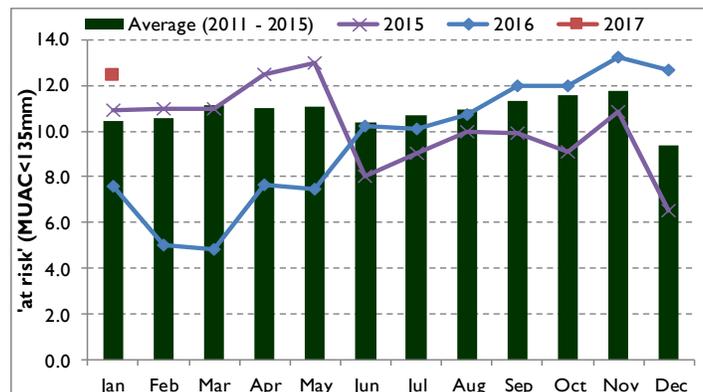


Figure 7: Proportion of children at risk (MUAC)

3.3.2 Sanitation and Hygiene

More than 50 percent of open water sources are protected from the threat of contamination by fencing and indirect abstraction. Latrine coverage was low at 49 percent, since most households practice open defecation. The Department of Water embarked on constructing two VIP toilets for every open water source, inclusive of pans, with the aim of reducing water contamination. Tanks used for water trucking had been contaminated with petrol or diesel. Water supplied to Hola Mission, Laza, Kibuyu and some areas of Mwangaza had been contaminated with tar, which was

caused by the sealant used on leaking overhead supplies. Cholera outbreaks were reported in Chara in Tana Delta.

3.4 Trends of key food security indicators

Table 11: Trends of key food security indicators

Indicators	Long rains assessment, July 2016	Short rains assessment, Feb 2017
% of maize stocks held by households (mixed farming)	No stocks at household level across the livelihood zones. Households continue to rely on market supplies.	85% below the long term averages (LTA). Households continue to rely on market supplies.
Livestock body condition	Good for all types of livestock in mixed and marginal mixed farming livelihood zones Good to fair for all types of livestock in pastoral areas	Pastoral areas – body condition is fair to poor Marginal mixed and mixed farming area fair body condition
Water consumption (litres per person per day)	15 litres per person per day in marginal mixed farming and mixed farming areas 5-10 litres per person per day in pastoral areas	10 - 15 litres per person per day in pastoral and marginal mixed farming 25 litres per person per day in and mixed farming areas
Price of maize (per kg)	Ksh.42	Ksh.50
Return distance to grazing	5 – 10 km in the pastoral areas 0.5 – 3 km in mixed farming and marginal mixed farming	5 – 12 km in the pastoral areas 2 – 5 km in the marginal mixed and mixed farming areas
Terms of trade	76kg	66kg
Coping strategy index	26.8	Pastoral areas – 9.3 Mixed farming – 22.3 Marginal mixed farming – 14.3
Food consumption score	Poor - 2.7 Borderline – 5.5 Acceptable – 91.8	FCS by livelihood zone in December 2016 Pastoral (poor – 9.9, borderline – 71.1 and acceptable – 18.7) Mixed farming (poor – 18.5, borderline – 36.9 and acceptable – 44.6) Marginal mixed farming (poor – 46.3, borderline – 40.7 and acceptable – 13) FCS by sub counties in December 2016 Tana Delta (poor – 18.5, borderline – 36.9 and acceptable – 44.6) Tana River (poor –24.1, borderline – 65.5 and acceptable – 10.3) Tana North (poor – 23, borderline – 56.3 and acceptable – 20.7)
Proportion of children at risk of malnutrition (MUAC)	10%	12.65%
Global Acute Malnutrition (measures the percent of children who suffer from acute malnutrition)	14%	14%

3.5 Education

Although enrolment was still on in most schools, quite a number in the pastoral livelihood zone are experiencing low attendance caused by migration and shortage of water. Malkadende ECD has not registered any attendance since the schools opened. Chifiri, Hakoka, Waldena and Titila primary schools are also experiencing low turnout of children since some have migrated with livestock. Apart from the low turnout, children reporting late and leaving early, since they are now spending more hours fetching water for domestic use, also disrupted learning. Water is fetched in the morning between 4.00am and 9.00am and in the evening between 4.00pm and 7.00pm. Transition from ECD to primary has been hampered by the delay in commencement of school feeding programmes in primary schools. The households also mentioned delayed reporting of form one children due to households' economic related constraints.

4.0 Food Security Prognosis

4.1 Prognosis Assumptions

The prognosis will likely depend on the following assumptions:

- The March to May 2017 long, rains are likely to start late and might be below average in performance.
- Market supplies are likely to continue supporting most households with prices relatively higher than last season.
- Livestock migration will likely gradually increase before March and could spread disease.
- Livestock movements in search of pasture and water may likely ignite recurrent conflicts.

4.2 Food Security Outlook

Food Security Outlook (February - April 2017)

The negative effects of the short rains are likely to be severe before the start of the long rains assessment. Livestock migration is likely to increase due to faster depletion of rangeland resources, thereby affecting livestock sales and milk availability. Deteriorating livestock body condition might result in less income from sales, thereby affecting the purchasing power of households. Given two consecutive failed seasons, the forecasted March – May long rains will not adequately improve rangeland resources especially water, pasture and browse. Household food access might be constrained. Livestock-related conflicts are likely to intensify, especially with farmers in the riverine areas. Livestock products such as milk and meat might remain scarce, thereby affecting household food consumption and resulting in an increase in the prevalence of malnutrition. Reliance on charcoal and firewood is likely to increase to bridge the income gaps. Most households are likely to remain in Stressed (IPC Phase 2), with localized parts of the hinterland areas of Tana River sub-county in Crisis (IPC Phase 3).

Food Security Outlook (May – July 2017)

Marginal improvements are expected through May, although malnutrition levels will persist. Livestock productivity may likely to recover with the improvement of rangeland resources, and livestock may move back to wet grazing areas. Household food access might improve as livestock move back to settlements thereby making meat and milk available. Livestock labour-related activities could recover and improve household income. The sale of livestock with good body condition should increase income. Conflicts over water, browse and pasture are likely to

lessen as livestock move back to their wet season grazing areas. Households in the mixed farming livelihood zone will improve their consumption, as early maturing crops are likely to be available by July. Most households are likely to remain in Stressed (IPC Phase 2).

5.0 Conclusion and Interventions

5.1 Conclusion

The food security situation is likely to worsen in short term and could push the county into a crisis phase. Several key factors need to be monitored as responses are activated, including:

- Levels of conflict among pastoralists, especially in Kiariakungu and Kalkacha or with farmers in the riverine areas.
- Livestock migration.
- Distances to water for both human and livestock.
- Malnutrition levels in children.
- Human disease outbreaks such as cholera.
- Price of food items in the market and market function.
- Livestock pests and diseases.

5.1.1 Phase Classification

The county was classified in the Stressed Food Security Phase (IPC Phase 2) across all livelihood zones with pockets of Crisis food security phase (IPC Phase 3) such as Harolesea, Wayu, Chifiri, Titila and Hakoka.

5.1.2 Key findings

Below-average rainfall performance over three seasons has led to poor crop conditions resulting in loss of income and food, especially from own-farm production, and reduced on-farm labour opportunities. The challenges will likely escalate, thereby affecting household food security and intensifying coping mechanisms. Most households will remain in Stressed (IPC Phase 2) although more will move into Crisis (IPC Phase 3) between January and April 2017, especially in the marginal mixed farming areas of Tana River and Tana North sub-counties.

5.1.3 Sub-County Ranking

Table 12: Sub County Ranking

Sub-County	Food security rank (1-10worst to best)	Main food security threat (if any)
Tana River	1	<ul style="list-style-type: none"> • Below average rainfall • Livestock influx in Weldena, • Declining livestock prices • Resource based conflicts • Increased trekking distances to water sources • Reduced water consumption • Limited access to milk • Low crop production • Increasing food prices
Tana North	2	<ul style="list-style-type: none"> • Deteriorating pasture and browse • livestock diseases • inadequate water sources • livestock concentration

Sub-County	Food security rank (1-10worst to best)	Main food security threat (if any)
Tana Delta	3	<ul style="list-style-type: none"> • Crop failure • human-wildlife conflict

5.2 Ongoing interventions

5.2.1 Food Interventions

The Food for Assets (FFA) Programme reaches 45,900 beneficiaries while the government social protection programmes are reaching 3,975 (Table 14).

Table 13: Social Safety Beneficiaries

Sub-County	FFA	GOK Social Protection
Tana River	21939	1191
Tana North	8261	1140
Tana Delta	15700	1644
Total	45,900	3,975

The school meals programme supports 165 public primary schools with 44,224 pupils (23,066, boys and 21,158 girls). However, 17,080 ECD pupils (9,105 boys and 7,975 girls) are not in the school meals programme.

5.2.2 Non-Food Interventions

Table 14: Non-food interventions

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
Livestock							
Fodder production conservation and construction of hay store.	Reduction of drought effects on Livestock by maintaining body condition and milk production.	Hola irrigation scheme, Chewani CDC, Bondeni shikaadabu, sala korio farm	500 households	5.0 M	500 households	October – December 2016	SNV, KLMC, Dept of Livestock, FAO
Early warning systems and weather advisory	For farmer preparedness and enhancing mitigation measures.	Gafuru Koticha Daku Lenda Delta Tana North	500 households	3.0 M	500 households	October, November and December 2016	ASDSP, Dept. of Veterinary, Livestock and Fisheries, Agriculture.
Promotion of institutional grazing plans	Improved pastures and grazing land management	Wayu	300HH	1.5 M	300 HH	July2016-june 2017	FAO/Department of livestock production

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
Range reseeding and bush clearing	Improved grazing land	Bura madogo bangale	3000HH	5M	3000 HH	July – June 2017	Resilient Project
Promotion of livestock marketing infrastructure	Improved market facilities	Hola and madigo tana delta	300HH			June 2017	County government ASDSP
Agriculture							
Supply of fertilizer to the schemes and group irrigated farms	Increasing production per unit area	Kinakomba, Mikinduni, Chewani	1000HH	5.0 M	1000HH	Nov 2016-17	CGOTR/Partners
Climate Change adaptation	Resilience building	Kipini & Kilelengwani, Shirikisho	13200H H	20.0 M	13200	2017	MOA/Community/ KACCAL
Health and Nutrition							
Vitamin A, Zinc, Deworming and Iron Folate among pregnant women supplementation	Reduces morbidity and mortality rates	Countywide	177100	50.0 M	177100	2016-2017	MOH/UNICEF/IMC
IYCN Interventions (EBF and Timely Intro of complementary Foods)	Reduce morbidity and mortality rates among the under fives	Countywide	11068	20.0 M	11068	2016-2017	MOH/UNICEF/IMC
Management of Acute Malnutrition (IMAM)	Reduce morbidity and mortality rates among the under fives	Countywide	5500	20.0 M	5500	2016-2017	MOH/UNICEF/IMC
Education							
Energy saving jikos	Improve food preparation and save	countywide	161 public primary schools	10.0 M	48330	2016-17	GAA MoEST & UNWFP

Intervention	Objective	Specific Location	Activity target	Cost	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
	energy						
Water							
Water pan construction, borehole drilling and water pipeline extension	Reduction of water borne diseases. Reduction of conflicts on animal/human/wildlife	Assa Bilisa Kilelengwani Wachu-Oda	Garsen/ Kipini/T arasaa	50.0 M	15,000	July 2016-2017	TRGC, Coast Water Services
Water pan construction, borehole drilling and water pipeline extension	Improved access to water and reduction on both water borne diseases and conflicts	Chewelee, Hirimani, Bura, Nanghi, Doka, Sala, Bangale	Bangale , Madogo , Bura	150.0M	35,000	August 2016- July 2017	TRGC, Coast Water Services

5.3 Recommended Interventions

5.3.1 Food Interventions

Table 15: Proposed population in need of assistance

Sub-county	Population by county	Pop in need (% range min – Max)
Tana River	82,545	45-50
Tana North	60,866	40-45
Tana Delta	96,664	35-40

5.2.2 Non-food interventions

Table 16: Non-Food interventions

Sub-County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Security							
County wide	Capacity building for peace committee (sub county peace committee)	Countywide	County wide	County commissioner, County Govt, Local leaders and security partners	0.5M	0	2017
Agriculture							

Sub-County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Tana River	Farmers training on agronomic aspects	All wards	4,000	Agriculture Department of Agriculture, German Agro Action, Samaritan Purse, ASDSP	4.0M	1.0M	2016/2017
Tana North	Agricultural marketing and linkage	Bura	2000	German agro action	3.0M	0.2M	July 2016-2017
Tana Delta	Food relief, Seed relief	All wards	21,000 farm families	County & state govt, Kenya Red Cross, NDMA, UNDP, MOA	100M	0	March-August 2017
Livestock							
County wide	Destocking	Bura Hola and Garsen	3000HH	County government/NGOs	200.0M	0.2M	2017-2018
County wide	Livestock Off take	Tana north, Tana River and Tana Delta	3000HH	NDMA, NGOs	200.0M	0.2M	2017-2018
County wide	Feed supplementation and establishment of feed reserves	Tana north, Tana River and Tana Delta (Hola, Bura and Delta)	3000HH	County government NGOs NDMA	200.0M	0.2M	2017-2018
County wide	Livestock support on disease surveillance and vaccination	All sub counties	60% of livestock and 150 HH	Government of Tana River	55M	1M	2017
Health and Nutrition							
Countywide	Conduct integrated outreaches and health promotion activities	All the 21 hotspots in the County	218,828	MOH/IMC/U NICEF/NDMA/KRCS	2.5M	0	Jan-March 2017
Countywide	Treatment of Cholera cases,	Delta(all the affected sites)	100,000	MOH/IMC/U NICEF/NDM	3.0M	0	Jan-March 2017

Sub-County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
	water sampling and decontamination of surfaces			A/KRCS			
Countywide	Active case finding and provision of food supplements	All facilities	58,828 and 47 facilities	MOH/IMC/UNICEF/NDMA/KRCS	2.0M	0	Jan-March 2017
Education							
Countywide	School meals programme	Increase in enrolment, Retention, Transition Improved performance	48,330	161 public primary schools	100.0M	0	2017-18
Water and Sanitation							
Countywide	Desilting of water pans, rehabilitation of shallow wells, pipeline extensions, water trucking	Assa, Wachu-Oda, Shirikisho, Kikomo, Kipini, Ndera, Mwina, Kipao, Kurawa	20,000	TRCG, NDMA Coast water services board external/internal NGOs coast development authority	100.0M	0.5M	2months
Bura, Bangale Madogo	construction of 2 (50,000m3) capacity large dams	Hirimani, Bangale, Boka Madogo	20,000	TRCG, NDMA Coast water services board external/internal NGOs coast development authority	100.0M	0.5M	2015 - 2017