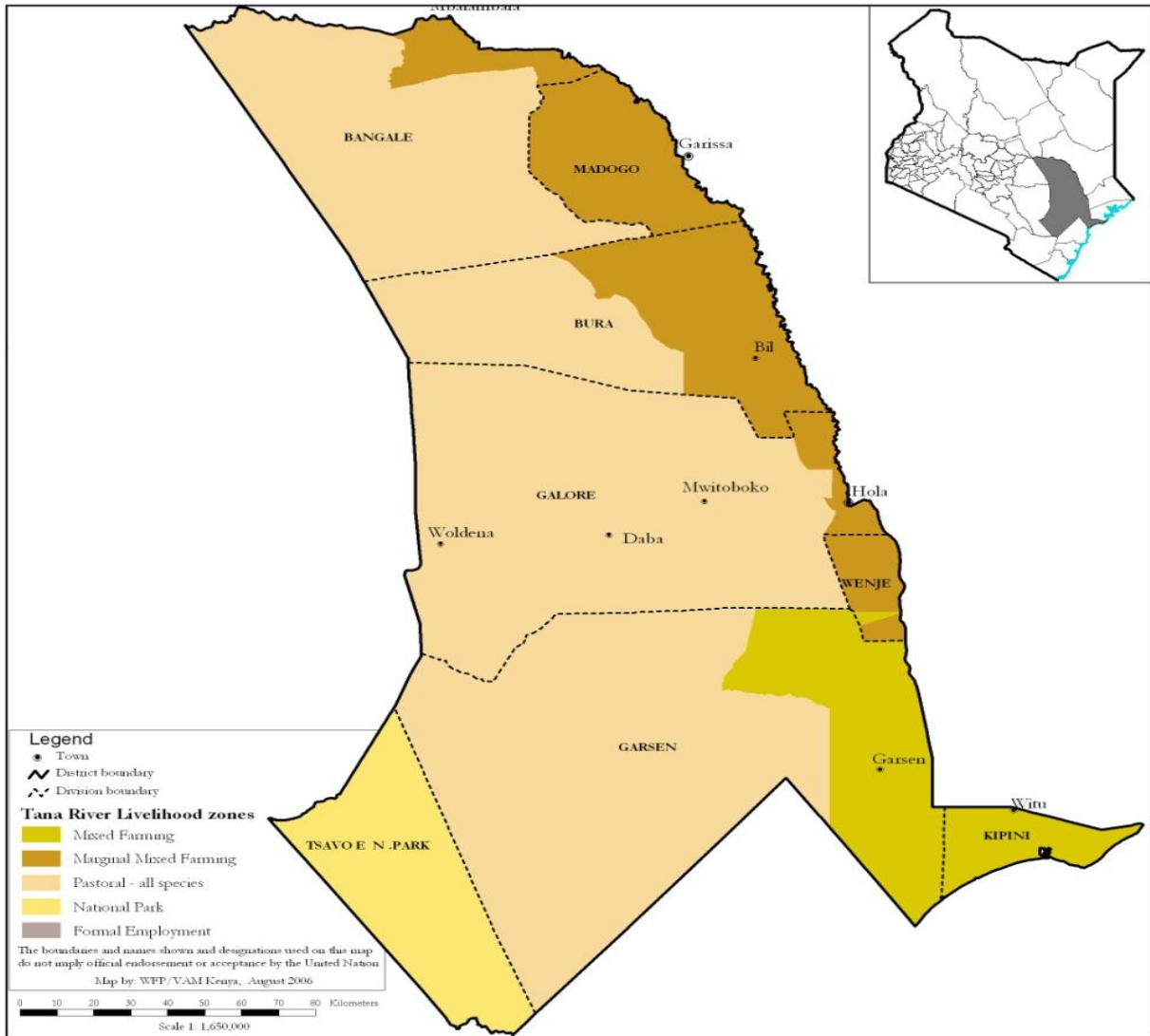


TANA RIVER COUNTY 2015 SHORT RAINS FOOD SECURITY ASSESSMENT REPORT



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

February 2016

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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 South East, Kitui to the West, Isiolo to the North and Garissa to the North East. The county covers an area of 38,782 square kilometers with a population of 240,075 (KNBS, Census 2009). It has three main livelihood zones namely: marginal mixed farming comprising 48 percent of the population, mixed farming comprising 38 percent and pastoral all species comprising the remaining 14 percent (Figure 1). It is divided into three sub counties namely; Tana North, Tana River and Tana Delta.

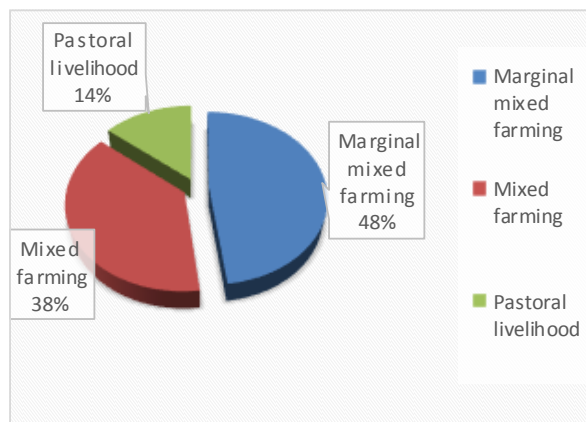


Figure 1. Population distribution by livelihood zones

1.2 Current Factors Affecting Food Security

The factors affecting food security in the county include;

- Increasing morbidity trends
- Crop destruction in the flood plains

2.0 COUNTY FOOD SECURITY SITUATION

2.1 Current Food Security Situation

The county was classified in the **Minimal** (IPC Phase 1) across all livelihood zones. In December 2015, the food consumption scores (FCS) for the poor, borderline and acceptable categories were two percent, 20 percent and 78 percent respectively. Therefore, an implication that the majority in the county (78 percent) were consuming at least a staple and vegetables on a daily basis which were complemented by pulses and oil. The coping strategy index (CSI) was 17 in December 2015 compared to 28 in September and 22 in December 2014 which implied that households were not frequently engaging in consumption based coping strategies. The proportion of children at risk of malnutrition was 5.15 percent in January 2016, below the LTA by 10.8 percent.

Households in the pastoral all species livelihood zone were consuming meals three times a day which was normal while those in the marginal mixed farming and mixed farming livelihood zones were consuming two meals a day compared with three normally. The projected production for maize was expected to decreased by 35 percent while green grams and cowpeas both reduced by 37 percent compared to their LTA respectively. Terms of trade (TOT) improved by 25 percent compared to the LTA of 77 kilograms. The TOT was favourable to pastoralists who were able to get 96 kilograms of maize from a sale of one goat. Livestock body condition was good and normal across all livelihood zones. Milk availability was also normal and averaged to two litres per household per day. The distances to water for households averaged two kilometres across the county while in the pastoral all species, marginal mixed farming and mixed farming

livelihood zones, the distance was two, three and one kilometres respectively which was normal for this time of the year. The cost of water was also normal and ranged between Ksh 3 - 5 except in the pastoral all species livelihood zone where water was not sold. Water consumption in the pastoral all species, marginal mixed farming and mixed farming zones was 10, 30 and 60 litres per person per day respectively which was normal.

2.2 Food Security Trends

The county was classified under the Stressed food security phase (IPC Phase 2) during the long rains season assessment. In February 2016, the county improved from stressed food security phase to **Minimal** food security (IPC Phase 1) across all the livelihoods. The food security phase remained for all the livelihood zones. In December 2015, the food consumption improved to 78 percent for acceptable from 33 percent in May 2015 indicative of improvement in dietary diversity, food frequency and nutritional content. The coping strategy index also relatively improved from 23 in May 2015 to 17 in December 2015 implying that households are not frequently engaging in consumption based strategies. The proportion of children at risk of malnutrition has improved by 48.5 percent from 10 percent in August 2015 to 5.15 percent in January 2016. Maize production in February 2015 declined by 32.3 percent compared to the production in August 2015. Production of green grams and cow peas improved by 8.8 percent and 28 percent respectively during the same period. The terms of trade improved from 80 kilograms of maize in August 2015 to 96 kilograms of maize in February 2015 from a sale of one goat. Livestock body condition improved from fair to good while the average milk availability at household remained the same at two litres per day. Distances to water sources for households had reduced from between 5 - 10 kilometres in August 2015 in the pastoral and marginal mixed farming livelihood zones to approximately two and three kilometres respectively in January 2016. The cost of water had remained the same at Ksh 3 - 5 across all livelihood zones similar to August 2015 except in the pastoral livelihood zone where water from vendors was Ksh 15 – 30 per 20 litre jerrican.

2.3 Rainfall Performance

The onset of short rains was early in the first dekad of October compared with the second dekad (10 days period) normally. Temporal distribution was fair as almost all dekads received above normal rains in the pastoral all species and marginal mixed farming livelihood zones. In the mixed farming areas received rainfall within a short time that resulted in flooding along the Tana River. Spatial distribution was even as most areas in the county received above average rainfall of 110 - 125 percent of normal (Figure 2). A few areas in the mixed farming livelihood zone received below average rainfall of between 75 - 90 percent of their normal rainfall. Cessation was early in the second dekad of December compared to the normal in the third dekad (10 days period).

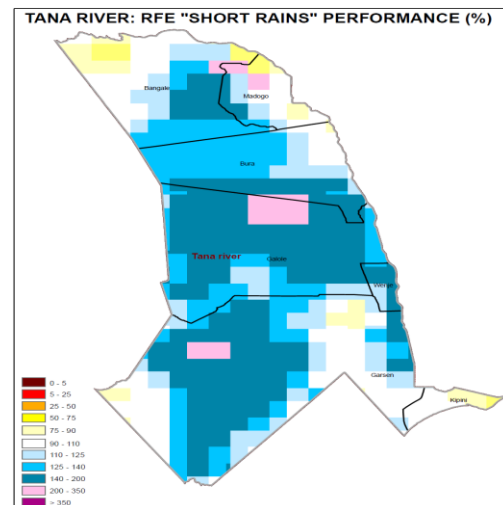


Figure 2. Rainfall performance

2.4 Current Shocks and Hazards

Shock and hazards experienced in the county include;

- Human disease outbreak - cholera out-break in areas around Kipini where 141 cases and one death were reported.
- Flooding of the banks around River Tana destroyed crops in the mixed farming and marginal mixed faming livelihood zones.

3.0 IMPACT OF RAINFALL PERFORMANCE, SHOCKS AND HAZARDS

3.1 Crop Production

Introduction

Short rains season was the main season in the pastoral all species and the marginal mixed farming livelihood zone while the mixed farming livelihood areas relied mainly on the long rains. The three major crops grown in the county included maize, green grams and cowpeas. Other food and fruit crops were mangoes, onions, kales, bananas, rice and tomatoes. In the marginal mixed farming livelihood zone, maize contributed 30 percent to food and 50 percent to income, green grams contribute 10 percent to both food and income, and mangoes contribute 10 percent to both cash income and food. In the mixed farming livelihood zone, maize, green grams, mangoes and bananas contributed one, four, 37, and 10 percent to cash income respectively and 41, eight, three, and 20 percent to food respectively. Tomatoes also contributed 20 percent to cash income in this zone.

a. Rain-fed (3 major crops)

The acreage for all the crops grown this season was below the long-term average (LTA). The acreage under maize, green grams and cowpeas was 22, 19 and 37 percent lower than the LTA respectively (Table 1). Reduction in acreage was associated with lack of farm input (subsidized fertilizers and certified seeds) support by both county and national government as previous done in 2014. The projected production for maize will be likely reduced by 35 percent of the LTA. The actual production for both green grams and cowpeas was 37 percent below their respective LTA. Lower production was also attributed to below average rainfall in the area around the Delta and crop destruction due to flooding in the mixed farming and the marginal mixed farming livelihood zones.

Table 1. Main rain-fed crops

Crop	Area planted during 2015 Short rains season (Ha)	Long Term Average area planted during the Short rains season (Ha)	2015 Short rains season production (90 kg bags) Projected	Long Term Average production during the Short rains season (90 kg bags)
1.Maize	1,280	1,640	12,800	19,680
2.Green grams	309	382	2,163	3,438
3.Cowpeas	265	368	1,855	2,944

b. Irrigated

The major irrigation schemes in the county at Hola and Bura where maize, green grams and cow peas are mostly grown. Tana and Athi River Development Authority also had rice irrigation scheme but was not operational. The acreage planted for maize, green grams and cowpeas grown was 61, 39 and 20 percent respectively below LTA (Table 2). The production of maize, green grams and cowpeas decreased by 66, 46 and 29 percent respectively compared to the LTA. The flooding experienced in the marginal mixed farming and mixed farming livelihood zones caused water logging, fungal diseases and flower abortions which reduced the production.

Table 2. Irrigated crop production

Crop	Area planted during 2015 Short rains season (Ha)	Long Term Average area planted during the Short rains season (Ha)	2015 Short rains season production (90 kg bags) Projected	Long Term Average production during the Short rains season (90 kg bags)
1.Maize	658	1,687	13,160	38,801
2.Green grams	204	333	1,632	2,997
3.Cowpeas	189	236	1,512	2,124

Maize stocks

The maize stocks held in the county were 34 percent below the LTA (Table 3). Households stock were 52 percent below the LTA as result of reduced projected production and poor performance in previous seasons. Traders stocks were 12 percent below the LTA, but their stocks are expected to increase after harvesting. Below average projected production also led to reduced traders stocks. The stocks held at household level are expected to last less than a month in the mixed farming livelihood zone and one month in the marginal mixed farming livelihood zone as households had obtained some harvests from the Hola and Bura irrigation schemes. Stocks were depleted in the pastoral livelihood zone and households were relying on markets for food.

Table 3. Available maize stocks

Maize stocks held by	Quantities held currently (90 kg bags)	Long Term Average quantities held (90 kg bags) at similar time of the year
House Holds	5,562	11,700
Traders	7,190	8,200
Millers	0	0
NCPB	1,758	2,000
Total	14,510	21,900

3.2 Livestock Production

Introduction

The main livestock species are camels, sheep, goats and cattle. Camels are reared mostly in the north of the pastoral all species livelihood zone. Poultry keeping is also practiced mostly in the

north and acts as an important source of income particularly for females especially when livestock have migrated and access to milk and its products is limited. Livestock production generally contributes 20, 15 and 68 percent to cash income in the marginal mixed farming, mixed farming and pastoral all species livelihood zones respectively.

Pasture and Browse

The condition of pasture was generally good across all livelihood zones as there were sufficient rains for rejuvenation across the county. The available pasture was projected to last for two months up to March compared to three months normally in the marginal mixed and mixed farming livelihood zones. In the pastoral all species livelihood zone, pasture was projected to deplete in less than a month by the end of February while normally it would last until March. Browse condition was good across all livelihood zones and the trend was likely to remain stable. The available browse was likely to last two months up to March in the pastoral livelihood zone. In the marginal mixed farming and mixed farming livelihood zones, it was likely to last for three months up to April when the long rains would have started. Livestock influx from Garissa is likely as the county is migration route towards the delta in the marginal mixed farming livelihood zone to access water from the Tana River and water canals. The migration may result in conflicts around that region. Crop residues have contributed only approximately 30 percent to livestock feed this season since the harvest was below average.

Livestock Productivity

Livestock Body Condition

The livestock body condition for cattle, goats, sheep and camels was good across all livelihood zones. The body condition was normal across the livelihood zones as this was expected for this time of the year. Camels, sheep, cattle and goat's body condition in the marginal mixed farming and mixed farming livelihood zones was likely to remain good and stable up to March due to the availability of water and pasture and browse along the canals and River Tana.

Milk availability

Cattle are the main producers of milk contributing approximately 60 percent of the milk production at household level, while goats and camels contribute 25 percent and 15 percent respectively. On average, two litres were produced per household per day in the pastoral all species livelihood zone mainly from cattle and camels. In the marginal mixed farming livelihood zone, 0.5 - 1 litres was produced mainly from goats and in the mixed farming livelihood zone, one litre from both cattle and goats. Milk production in all livelihood zones was normal for this time of the year.

Milk Consumption and price

All the milk was consumed in the pastoral and marginal mixed farming livelihood zones. The cost of milk was Ksh 30 per litre in the pastoral livelihood zone and Ksh 80 per litre in the marginal mixed farming and mixed farming livelihood zones. The prices were normal for this time of the year. Pastoral livelihood areas posted a lower price of milk due to high production was higher than in either the marginal mixed farming or the mixed farming livelihood zones.

Tropical Livestock Units (TLUs)

The average household livestock size in the pastoral all species livelihood zone was 28 TLUs (21 cattle, 28 goats and 21 sheep) while in the marginal mixed farming zone, the average livestock size was 8 TLUs (3 cattle, 21 goats, 14 sheep). The TLUs were normal for this time of the year.

Water for Livestock

The current sources of water for livestock in the county are Tana River, hand dug shallow well along the *lagas* (seasonal rivers), irrigation canals and water pans which are the normal sources at this time of the year. The trekking distance from grazing areas to water sources in the pastoral areas ranging between 5 – 10 kilometres. In the marginal mixed farming and mixed farming area, the distance was 2 – 5 kilometres which are normal at the time of the year. The trekking distance was lower than normal for the season at this time of the year. All species were watered daily across all livelihood zones except camels which were watered every 8 - 10 days. Watering frequency was likely to reduce as distances to water sources from grazing areas increase due to the on-going dry spell particularly in the pastoral all species livelihood zone. The available water in the water pans was projected to last for approximately two months until March.

Livestock Migration

Most livestock were in their normal grazing fields in the pastoral livelihood zone as forage and water were available. However, livestock had begun moving from Assa Kone in the hinterlands of Tana Delta towards the river. Herders in Assa Kone were using this as a strategy to preserve the forage and browse for the dry spell that was expected towards March.

Livestock Diseases and Mortalities

There were no major disease incidences reported in the county except Trypanosomiasis and worm infestation. Mitigation measures in treatment and control are being undertaken.

3.3 Water and Sanitation

Introduction

The main water sources in the county are rivers, *laggas* (seasonal rivers), water pans/dams, shallow wells, piped water and boreholes. The River Tana remained the most reliable water source. Households in the pastoral all species livelihood zone rely mostly on water pans, dams, *laggas*, shallow wells and boreholes while those in the marginal mixed farming and mixed farming livelihood zones rely mainly on some shallow wells near the river banks and the River Tana. Piped water supply was present in the major towns of Hola, Madogo and Garsen.

Major Water Sources

Approximately 95 percent of the open water sources were sufficiently recharged by the short rains and were likely to hold water for 2 - 3 months up to March/April. Ground water sources such as boreholes were not affected by the rains although a few shallow wells were rendered inaccessible during the rainy season. Over 95 percent of the shallow wells were likely to hold water between 1 - 3 months up to March. Piped water supply was inadequate with poor and old design. The World Bank funded the rehabilitation of a new treatment plant, which will likely serve about 25,000 people. In pastoral all species areas (Bangale, Waldena (Doke), Haroresa, Wayu, Kurawa and Hara) and mixed farming zone (Chifiri and Boji) had low water point concentration.

Distance to Water Sources

The distance to domestic water sources were two kilometres in the county. In the pastoral all species livelihood zone, the distance was two kilometres and 1 - 3 kilometres in the mixed farming and marginal mixed farming livelihood zones respectively, which were the normal distances for this time of the year.

Waiting Time at the Source

Waiting time reduced across the county in all the livelihood zones. Households in the pastoral all species livelihood zone were not waiting at all to fetch water from water pans. However, a few exceptions were noted in Galole North where households were waiting for 30 minutes compared with 60 minutes normally. The waiting time was 10 minutes in the marginal mixed farming livelihood zone compared with 30 minutes normally and ranged between 20 - 30 minutes in the mixed farming livelihood zone.

Cost of Water

The cost of a 20 litre jerrican ranged between Ksh 3 - 5 at shallow wells and boreholes which were normal in the marginal mixed farming and mixed farming livelihood zones. In the pastoral all species livelihood zone where water pans were the main source of water such as Bangale, Mbalambala, Bura West, and Galole West, Galole North and Galole South and East, water was neither sold nor bought. In Roka in Galole North, a peri-urban area in the marginal mixed farming livelihood zone, water from vendors was Ksh 30 per 20 litre jerrican which was normal.

Water Consumption

In the pastoral areas, water consumption was 10 litres per person per day which was normal at this time of the year. In the marginal mixed farming areas, water consumption was 30 litres per person per day while in the mixed farming areas, consumption was 60 litres of water per person per day.

Sanitation and Hygiene

Only 50 percent of the open water sources were protected from the threat of contamination through fencing and indirect abstraction. Latrine coverage was low in the county at 52 percent as most households used open defecation to dispose off human waste. A few areas such as Kipini have had their water sources contaminated and water-borne diseases such as diarrhoea also increased significantly during the period of the short rains season from October through to December. There were also 141 cases of cholera and one death reported during this period. (Cholera situation report, 25th January 2016). Water treatment chemicals were available at household level as they were distributed when the River Tana flooded. The most common water collection and storage mode was the use of jerry cans which are transported by rolling on the ground and ferrying by donkeys. Food handling practices was controlled only at market centres where the public health department conducts sporadic food inspection.

3.4 Markets and Trade

Market Operations

Hola, Mandingo, Madogo, Bangale, Waldena, Kipini, Garsen and Bura are the main markets in the county. Markets were performing normally although some disruptions were reported in November 2015 in Bura and Hola markets due to floods in the laggas and flood plains of River

Tana. The roads to two major towns were impassable and the disruption resulted in temporally low supply of food commodities to the markets. However, the markets function was normal by normal by December. Other markets remained operational as they are served by all-weather roads. The main sources of food supplies to the county include Nairobi, Mombasa and Mwingi while the main sources for livestock include Chewani, Mikinduni, Kinakomba wards, Bura. Nanighi, Sala, Madogo, Balambala and Chewele which were the normal sources for this time of the year in the marginal mixed farming livelihood zone. Waldena, Wayu, Chifiri, Haroresa, Gururi, Moti boka, Titila, Walsorea, Hara, Masalani were the main sources in the pastoral livelihood zone which was normal. There were no distress sales or unusual purchases although the proportion of households relying on markets was higher than normal because of below average harvests. Market functions were likely to remain stable across the county.

Market Prices

Maize Price

The average price per kilogram of maize was at Ksh 39 which was seven percent higher than the long-term average of Ksh 37 (Figure 3). Maize price, in January 2016 was 10 percent above the January 2015. High maize prices were attributed to reduced maize harvest. In the pastoral areas maize was posted Ksh 45 per kilogram. In mixed farming and marginal livelihood areas, the prices were Ksh 40 and 38 per kilogram respectively. Maize prices are expected to remain stable in the next three months up to March as inflows of maize comes from other counties.

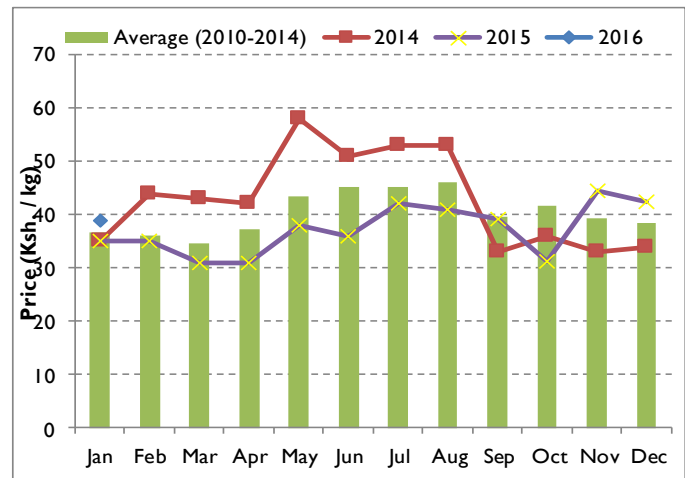


Figure 3. Maize prices in the county

Goat Price

The average goat price was Ksh 3,733 which was 32 percent above long-term average of Ksh 2,827. Goat price was also 11 percent higher than the price posted at a similar time in 2015 of Ksh 3,371 (Figure 4). Goat prices in the pastoral and marginal mixed farming livelihood zones were Ksh 3,228 and Ksh 4,238 respectively. Goat prices are expected to remain stable in the next three months as browse was still abundant in all livelihood zones.

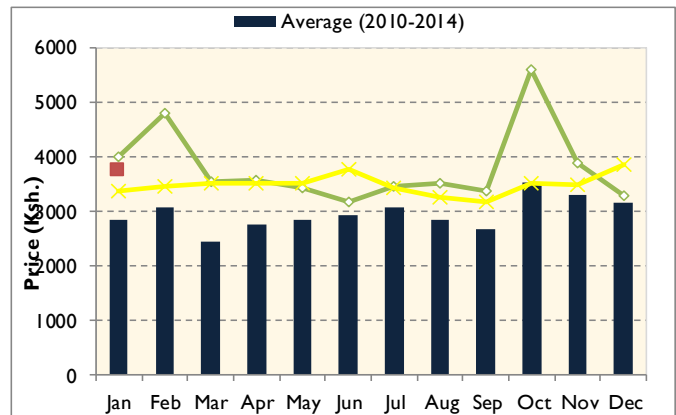


Figure 4. Goat prices in the County

Terms of Trade

Household terms of trade in the county were 25 percent above the LTA of 77 kilograms of maize. Households were able to purchase 96 kilograms of maize compared with 77 kilograms of maize (Figure 5). They were also the same as a similar period in 2015. Higher TOT was recorded in the marginal mixed farming livelihood zone at 113 while the lowest was posted in the pastoral livelihood zone at 71.7. Terms of trade are likely to remain stable in the next three months.

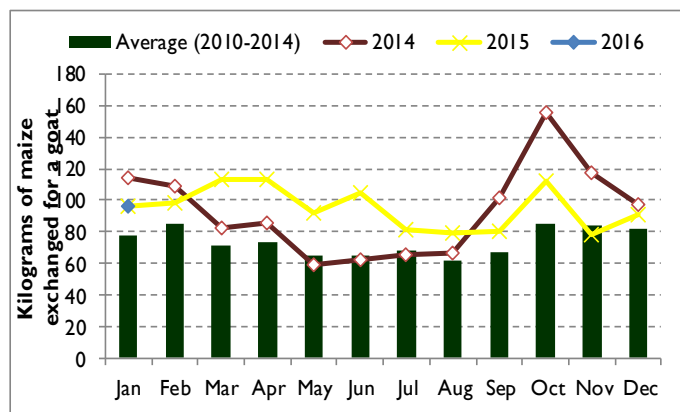


Figure 5. Terms of trade

3.5 Health and Nutrition

Morbidity and mortality patterns

The major diseases for children aged below five years and the general population include respiratory tract infections, diarrhea, diseases of the skin, pneumonia and malaria. There was an increase in the morbidity trend of all these diseases with the exception of malaria which registered a significant decrease for the period between July and December 2015 compared with a similar period in 2014. The decrease in the trend in malaria was attributed to the distribution of treated mosquito nets. Epidemic diseases such as measles, cholera and dysentery were reported during the period from July to December 2015 and were generally similar to the same period in 2014. There were 10 measles cases compared to nine last year, 141 confirmed cholera cases with one death (Cholera situation report, 25th January 2016) and 57 cases of typhoid compared with 877 cases the previous year. Dysentery cases remained stable during the period under review with 352 cases reported compared with 343 last year (DHIS, December, 2015).

Immunization and Vitamin A supplementation

The coverage of the fully immunized children in the county between July and December 2015 was 26 percent having increased slightly by 3.5 percent from 25.1 percent during the same period in 2014. However, the coverage was still below the national target of 80 percent. The immunization coverage for Oral Polio Vaccine OPV 1, OPV 3 and measles at 9 months was 98.5 percent, 92.8 percent and 88.3 percent in the period between July and December 2014. For the same period in 2015, the coverage was 97.8 percent, 96.5 percent and 89.9 percent respectively (Integrated SMART survey, February 2015) which depicted a stable trend. Vitamin A supplementation coverage reduced in 2015 for all age cohorts compared with 2014. For the age cohorts of children aged below one year and between one to five years, reduced by 35 percent and 67 percent respectively which was attributed to the withdrawal of medical outreach support and lack of proper documentation of the supplementation provided.

Nutrition Status and Dietary Diversity

The majority of households in the pastoral all species livelihood zone were consuming three meals per day which was normal for this time of the year for both adults and children. The meals were mainly composed of maize, vegetables, beans and milk. However, households in the marginal mixed farming and mixed farming livelihood zones were consuming two meals per day. The proportion of children at risk of malnutrition (MUAC < 135 mm) was 5.15 percent (Figure 6) in January 2015 (NDMA early warning bulletin) which was lower than the long-term average 2010-2014 of 10.8 percent. The pastoral and marginal mixed farming livelihood zones posted the percentage of children at risk at 1.9 percent and 8.4 percent respectively while there were minimal children at risk in the mixed farming livelihood zone.

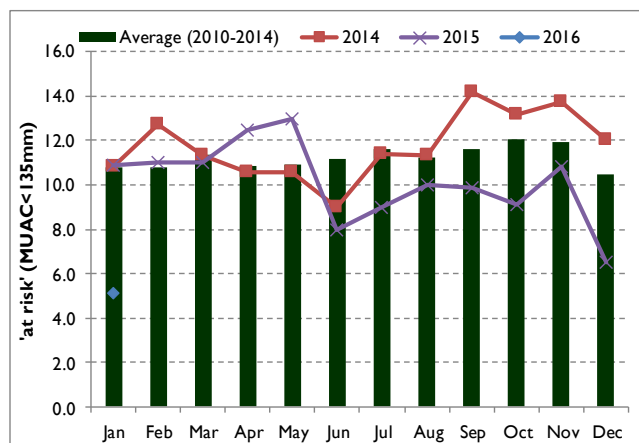


Figure 6. MUAC proportions

Food consumption score was two percent, 20 percent and 78 percent for poor, borderline and acceptable categories respectively in December 2015 (FSOM). The implication of this situation was that the majority of households (78 percent) were consuming a staple and vegetables on a daily basis complemented by a frequent consumption of oil and pulses. There was a slight deterioration in food consumption compared with a similar time in 2014 as the food consumption score then was two percent, seven percent and 91 percent for the same categories respectively. The most likely cause of malnutrition was disease, poor health environment and poor infant and young child feeding practices.

3.6 Education

Enrolment and attendance

There was minimal increase of 0.4 percent in the primary schools' enrolment from 70,640 in February 2014 to 70,900 in February 2015. In 2015, there were 30,189 boys and 26,282 girls enrolled. In Early Child Development Centres (ECDE) 7,642 boys and 6,757 girls were enrolled in February 2015. School attendance improved to 95 percent in Term three of 2015 (99.1 percent in boys and 97.4 percent in girls) due to school meals program being delivered in time to schools

Drop out

In Term three 2015, the dropout rate of boys was 21 percent while that of girls was nine percent. Dropout in boys was attributed to casual labour especially mango harvesting when boys leave school to aid their parents in harvesting and sale of mangoes for income. Girls dropped out mainly due to early marriages, lack of sanitary towels and pregnancies. Dropout rates were minimal in ECD at 10 percent for boys and eight percent for girls.

Transition

The transition rate from primary to post-primary decreased for both boys and girls in the county. In boys, it reduced by seven percent from 67 percent in 2014 to 62.3 percent in 2015 while in girls it decrease by 10.5 percent from 54.5 percent to 48.8 percent during the same period. The low transition rate in girls was attributed to early marriages and pregnancies. Boys preferred to engage in income-generating activities such as ferrying passengers on motor-cycles (*boda boda*) bought from the sale of mangoes after the harvesting season in December. Transition rates from ECD to primary however improved from 94 percent in boys in 2014 to 97 percent in 2015, while in girls it improved from 96 percent to 98 percent during the same period.

School Meals Programme (SMP)

A total of 161 public schools (Tana Delta- 63, Tana River- 51 and Tana North- 47 schools) are under regular schools meals programme targeting 49,408 beneficiaries (26,004 boys and 23,404 girls). ECDCs attached to primary schools also benefit from the school meals programme except ECDs in Tana Delta Sub-County. Pupils missed meals especially when the meals are delivered late in schools.

3.7 Coping Mechanisms

The coping strategy index for December 2015 was 17 compared with 23 in May 2014 implying that households were not employing more coping strategies more frequently. More than 80 percent of the households were employing insurance and consumption-based coping strategies. The strategies employed included reliance on less preferred and/or less expensive food, borrowing food or reliance on social networks to access food, reduction of the number of meals eaten per day, reduction of the portion sizes of meals, redistribution of portions allocated in the school meals programme and the food for asset program.

3.8 Ongoing Interventions

Non- food interventions

Table 4. Ongoing interventions

Intervention	Objective	Specific Location	Activity target	Cost (Ksh Millions)	No. of beneficiaries	Implementation Time Frame	Implementation stakeholders
Health and Nutrition							
Vitamin A Supplementation	Reduces morbidity and mortality rates	All immunizing Health facilities and ECD Centers		0.11	32,879	On-going	MOH/UNICEF
Zinc Supplementation	Reduce mortality rates among under-fives due to diarrhea	All health facilities		0.26	32,879	On-going	MOH/UNICEF

Management of Acute Malnutrition (IMAM)	Reduce morbidity and mortality rates among the under fives	All health facilities		OTP-0.24 SFP-4.4	OTP-3089 SFP-4009	On-going	MOH/KRC/WFP/A+IMARISHA
IYCN Interventions (EBF and Timely Intro of complementary Foods)	Reduce morbidity and mortality rates among the under fives	All health facilities in the three sub counties		0.5	9248	On-going	MOH/UNICEF/IMC/A+IMARISHA
Iron Folate Supplementation among Pregnant Women	Reduce mortality rates among pregnant women	All health facilities in the three sub counties		0.31	9248	On-going	MOH/UNICEF/IMC
Deworming	To reduce morbidity rates among under-fives due to worm infestations	All health facilities in the three sub counties		0.26	32879	On-going	MOH/UNICEF/GCN/A+IMARISHA
Food Fortification	Ensures fortification of all flours, oils and fats sold in the markets	All health facilities in the three sub counties		0.35	All trading markets and shops All children <5years 99,769	On-going	MOH ACF
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		20	1,200	October – December 2015	SNV, KLMC, Dept of Livestock, FAO
Rangeland Reseeding	Improve pasture and browse production	Tana North Tana River		0.64	1,800	October, November and December	MoL&F SNV

						2015	
Promotion of chicken rearing as an alternative livelihood.	Improved nutrition for the school pupils Increased incomes and improved nutrition.	AMMA Primary Lisa Primary Ndura Secondary Nelly Children Centre. Malindi ya Ngwena, VC Group, Bu the Farmers		0.15	1,097 pupils & students ,72 households	On-going	GAA Livestock Veterinary APHIA Plus, KARITAS,NMK, livestock
Education							
Construction of energy jikos & water tanks	Food is being cooked in well hygienic place & Energy conserved	Kalkacha, Laini, Mikindumi		3	1,820	On-going	Germany AGRO Action
Agriculture							
Construction and rehabilitation of minor irrigation schemes	Increase food production through increased acreage under irrigation	Makere		10	2,400	2015-2016	County government Catholic Diocese of Wenje
Construction of grain-drying facility	To reduce aflatoxin attacks in grains	Hola		6.15	4,800	2015-2016	Department of Agriculture NIB Regional Pastoral Livelihood Resilience Project
Construction of Maize Grain Storage	To improve the quality of grains , To store for future use, To stabilize prices	Hola		5.6	3,000	2015-2016	Department of Agriculture German Agro-Action
Water							

Improvement of Hola water supply	Improved access to safe water	Hola township (Zubaki, Chewani, Mikinduni & Kalkacha loc)		11	25,600	On-going	County Government
Supply of PVC water tanks in villages of in Galole divisions	Improved access to safe water during emergency	Bangale loc		20	25,600	On-going	County Government
Bura Water Works Rehabilitation	Reduce distance on water accessibility	Bura		100	19,000	On-going	CWSB/World Bank
Sinking of shallow wells, pipeline construction and extension, construction of water pans	Time spent searching for water will be Reduced.	Kipini, wachu-oda, assa Chardende Nanighi/Dokanotu		100	2500 5,000 5,000	On-going	MTAP County Government

3.9 Sub-County Ranking

Table 5. Sub County food security ranking (worst to best)

Sub County	Food security rank (1-10-worst to best)	Main food security threat (if any)	Remarks
Tana North	1	Deteriorating pasture and browse, livestock diseases, destruction of water sources, low latrine coverage, flooding in the plains,	Maramtu, Madogo, Mbalambala, Korati, Asako, Anole, Buwa, Kamagur, Nanighi, Subo, Hirimani, Shikaadabu, Kamagur, Lakole, Hakoka, Chifiri, Walesorhea
Tana River	2	Deteriorating pasture and browse, livestock diseases, destruction of water sources, flooding in the plains,	Wayu, Waldena, Daba, Titila, Kalalani, Wenje, Vukoni, Maroni, Chewani, Mikinduni, Kinakomba
Tana Delta	3	Crop destruction, low harvests, human-wildlife conflicts, flooding in the plains, water-borne diseases	Garsen West, Garsen North, Kipini west, Garsen South, Garsen Central

4.0 FOOD SECURITY PROGNOSIS

4.1 Prognosis Assumptions

The food security situation of the county is based on the following assumptions;

- The long rains are expected to be normal and above normal.
- Food commodity prices are likely to remain stable through to April then marginally increase through to July.
- Rangeland conditions are likely to deteriorate in the pastoral and marginal mixed farming livelihood zones due to the on-going dry spell.
- Open water sources in the pastoral and marginal mixed farming livelihood zones are likely to dry up as evapo-transpiration rates increase due to the current high temperatures.
- The long rains harvests will replenish the depleted food stocks in the mixed farming livelihood zone.

4.2 Food Security Outcomes (February – April 2016)

Although the harvests during the season have been below average, imports from neighbouring counties are likely to keep food commodity prices stable. However, the cattle body condition is likely to deteriorate through to March 2016 as pasture deteriorates and distances to water sources increase due to the on-going dry spell particularly in the pastoral all species livelihood zone. As livestock move further and further away from the homesteads, households are likely to access less of the milk and its products which will compromise food consumption particularly for pastoralists in the pastoral all species and marginal mixed farming livelihood zone for whom milk is a staple food. The nutritional status of children is therefore likely to worsen especially in the two zones. Conflicts are also likely to ensue in the delta of the mixed farming livelihood zone as livestock have already started flocking there in order to preserve their pasture, browse and water in the North for the dry spell that is bound to continue. Most households in the county are therefore likely to remain in the Minimal phase (IPC Phase 1) through to March. Nevertheless, the rains are expected towards the end of March that will rejuvenate pasture and browse and recharge water sources, thus reversing the negative trend.

4.3 Food Security Outcomes (May – July 2016)

The long rains season is likely to be normal/above normal which would will rejuvenate the pasture and browse. Open water sources will likely to be replenished and thereby resulting to decreased distances. As livestock return to their wet season grazing areas, milk production is likely to increase at household level which will likely improve the nutritional status of children particularly in the pastoral all species and marginal mixed farming livelihood zones. Milk surplus will likely to be offered for sale in exchange for food whose prices are likely to have registered minimal increases occasioned by interruptions in supply as a result of possible destruction of infrastructure from the rains. It is therefore unlikely that pastoralists will have significant food consumption gaps during this period. Conflicts over water, browse and pasture are also likely to lessen as livestock move back to their wet season grazing areas. Livestock prices are also likely to register increases as water stress reduces and pasture and browse availability improves resulting in better body conditions. Domestic incomes are likely to be boosted as a result of this. For households in the mixed farming livelihood zone, early maturing crops are likely to be available by July. It is also likely that households in this zone will increase the acreage under crop production as they are long rain-dependent with the current season having performed

dismally. It is therefore expected that production will be above average for the long rain season and that some households will move to minimal food insecurity (IPC Phase 1).

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The county was classified in the Minimal food security phase (IPC Phase 1) and will likely remain in the Minimal food security (IPC Phase 1). The pastoral all species and the marginal mixed farming livelihood zones are classified in the Stressed phase while the mixed farming livelihood zone is in the Minimal food insecurity phase. Key factors to be monitored include; human disease outbreaks especially Cholera, market functions, increase in morbidity trends of water borne diseases, rangeland conditions and distance to water especially in the pastoral areas. Other factors are livestock diseases and resource conflicts.

5.2 Summary of Recommendations

Key recommendation proposed by different sector in the county included;

- Provision of school meals program, provision of sanitary pads and learning materials.
- Conduct integrated outreaches services and provision of food supplements.
- Provision of seed assistance and construction of two grain stores.
- Livestock feed processing by use of crop residues and establishment of feeds reserves.
- Sand bagging and desilting of water pans, construction of large dams and rehabilitation, repairs of water pans, boreholes and shallow wells.

6.0 ANNEXES

6.1 Annex 1. Food Intervention Required

Table 6. Proposed population in need of food assistance

Sub county	Population in the Division	Pop in need (% range min - Max)	Proposed mode of intervention	Remarks
Tana North	82,545	10-15%	CFA	Maramtu, Madogo, Mbalambala, Korati, Asako, Anole, Buwa, Kamagur, Nanighi, Subo, Hirimani, Shikaadabu, Kamagur, Lakole, Hakoka, Chifiri, Walesorhea
Tana River	60,866	5-10%	CFA	Wayu, Waldena, Daba, Titila, Kalalani, Wenje, Vukoni, Maroni, Chewani, Mikinduni, Kinakomba
Tana Delta	96,664	5-10%	CFA	Garsen West, Garsen North, Kipini west, Garsen South, Garsen Central

6.2 Annex II: Non-food Interventions

Table 7. Specific Food Security Recommended Intervention – Medium to Long Term

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources (Ksh M)	Available Resources (Ksh M)	Time Frame
Education							
All schools	RSMP	All schools in the county	49,408	County Government		Water Firewood	2015/2016
Tana Delta, Tana River & Tana North	Provision of sanitary pads and learning materials for girls	All Schools with Girls	23,404	MOH/UNICEF	3	Human resource	2016/2017

Health and Nutrition							
Tana Delta, Tana River & Tana North	Conduct integrated outreaches	All health facilities in the county	46807	MOH/IMC/KR CS	0.81	Personnel Logistical Support	2016/2017
Tana Delta, Tana River & Tana North	Provision of food supplements	All facilities in the county	4009	MOH/IMC/KR C/WFP	0.9	Personnel, Logistical Support	2016/2017
Agriculture							
Tana Delta	Construction of 2 grain stores	Wurara Roka	2000	German Agro Action	1.3	Land Inputs Technical skills	Oct 2015- June 2016
All sub-counties	Provision of relief seed	All	21,000	County & MOA state govt, Kenya Red Cross, NDMA, UNDP,	9.6	Personnel, funds	March-August 2016
Livestock							
T/River	Processing of crop residues for livestock feeds	Hola	6,000	NIB, CDF County Government	Milling machine Mixers Chaff cutters Tractor	Crop residues	2015-2016
T/River	Establishment of feed reserves	Hola	12,000	County Government	Seeds Finance Irrigation equipment	Land Water Conserved hay Expertise	2015-2016
Water							
Tana Delta Sub county	Sand bagging of Matomba brook Desilting of water pans	Tana Delta	35,000 3,000	County Government	50 Technical personnel, funds, tools and equipment	Technical personnel	12moths

Tana North Sub county	Construction of 50,000m3 Capacity large dams	Hirimani, Bangale, Boka	15,000	County Government	100	Land,	2015 - 2017
All Sub counties	Rehabilitation and repairs of water pans, borehole & shallow wells	Garsen ,Bura, Chamwan amuma Hola,Tarrasa		County Government	Adequate Technical personnel 100	Lands,	24 months