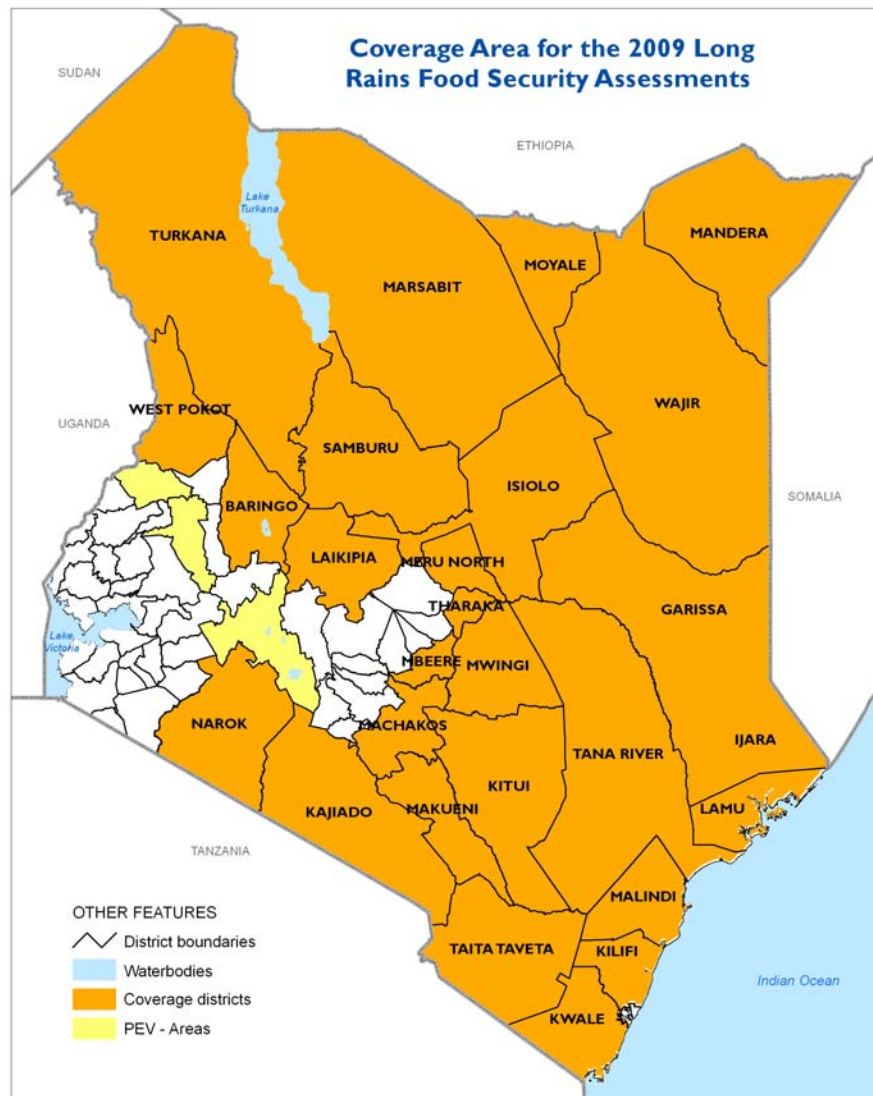




Government of Kenya

THE 2009 LONG RAINS SEASON ASSESSMENT REPORT Kenya Food Security Steering Group (KFSSG)



A collaborative report of the Kenya Food Security Steering Group: Office of the President, Office of the Prime Minister, Ministries of Development of Northern Kenya and other Arid Lands, Agriculture, Livestock Development, Fisheries Development, Water and Irrigation, Public Health and Sanitation, Medical Services, and Education, WFP/VAM, FEWS NET, UNICEF, FAO, OCHA, Oxfam GB, UNDP, World Vision; with financial support from the Government of Kenya, FAO, UNICEF and WFP.

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1.0 Executive Summary

1.1 Background

The Kenya Food Security Steering Group (KFSSG) conducted the 2009 long rains food security assessment in late May and July 2009 covering 30 districts. Twenty seven drought prone Arid and Semi Arid districts in the pastoral, agro pastoral and marginal agricultural livelihood zones were covered in July while the post election violence (PEV) affected districts (Trans Nzoia, Uasin Gishu and Nakuru) in the high potential mixed farming livelihood were assessed in late May. The 2009 long rains assessment was a follow up to the short rains food security assessment conducted in February 2009.

1.2 Objective

The objective of the assessment was to determine the food security situation at national and district/household levels in the various livelihoods; factors influencing the food security situation; and the necessary interventions.

1.3 Findings

1.3.1 National Maize Supply And Demand

The expected 2009 long rain season maize production is estimated at 1.84 million MT, which is 28 percent below normal. There is a growing apprehension that the estimated production could further be revised downwards due to insufficient and erratic rains in some parts of the main maize producing areas in North Rift.

At the beginning of August 2009 the country had about 500,000 MT of maize against a monthly requirement of 300,000 MT, suggesting possibilities of serious shortfalls by end of September. Continued export bans in neighbouring countries of Tanzania and Uganda is likely to reduce cross border maize inflows by 46 percent. The reduced levels of production and imports are likely to compound the tightening maize supply situation.

High food prices persist through out the country with average price of maize at 100-130 percent above normal. As a result, terms of trade of pastoralists, agro pastoralists and marginal agriculture farmers and purchasing power of urban households have deteriorated significantly given that over 70 percent of the population in Kenya is net buyers of maize.

1.3.2 Food Security at District/Household level

Factors that have affected food insecurity at district/household level include, successive poor performance of the rains in the previous three seasons; significant decline in crop production; inadequate livelihood diversification; deterioration of terms of trade for the pastoralists and agropastoralists; sustained high food commodity prices; insecurity particularly in pastoral areas; widespread land degradation; livestock diseases and ensuing quarantines; and perennial water scarcity.

Areas at risk of falling into Humanitarian emergency

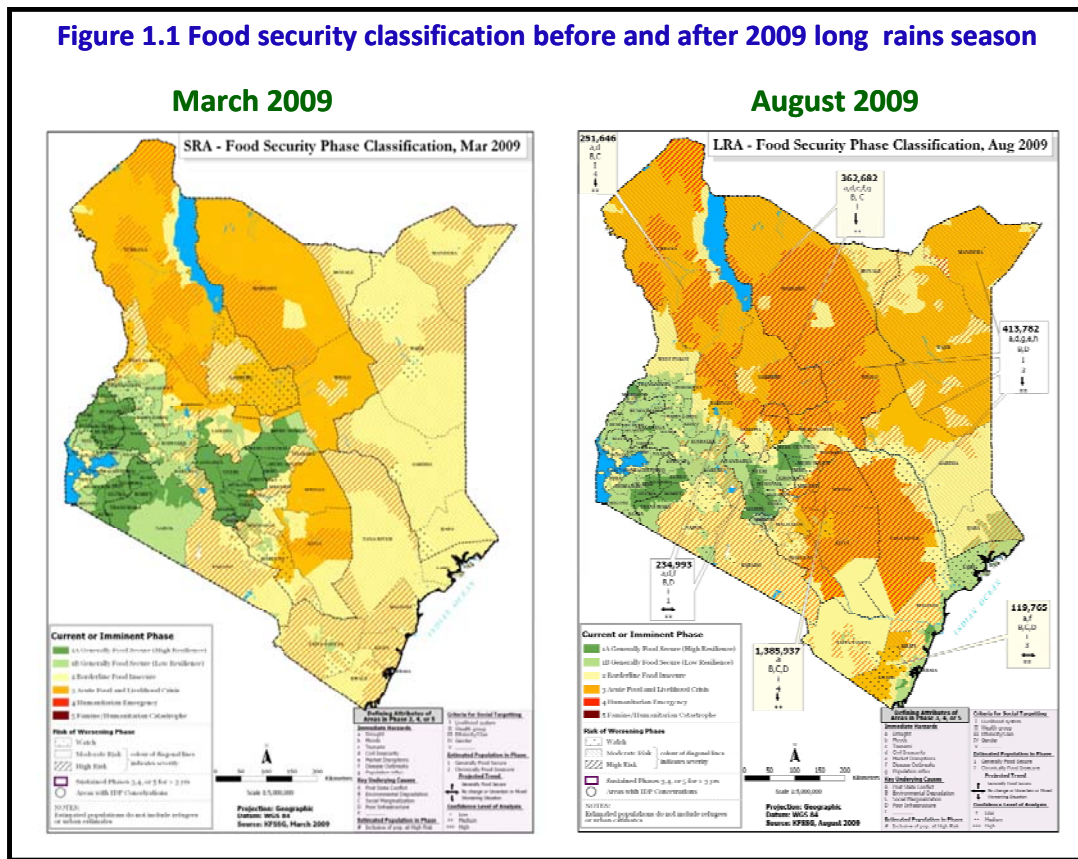
Districts classified as being under Acute Food and Livelihood Crisis (AFLC) and at high risk of falling into humanitarian emergency include Marsabit, Isiolo, Mandera, Wajir, most parts of Tana River, Baringo, Laikipia, Turkana, Samburu and northern parts of Garissa. Other districts are Mwingi, Kitui, Makueni, Mbeere, Tharaka, as well as parts of Machakos, Kilifi and Kwale. See figure 1.1.

Areas at risk of falling into Acute Food and Livelihood Crisis

Districts that are borderline food insecure with a moderate or high risk of sliding into acute food and livelihood crisis include Kajiado, Narok, Ijara, west of Malindi, parts of Garissa, Baringo, Samburu, Laikipia, Moyale and West Pokot. See figure 1.1.

Areas at low risk of falling into Acute Food and Livelihood Crisis

Marginal improvement in food security has only been witnessed in localized areas. Districts that have reported some improvements include Lamu and other areas along the coastal strip. The improvement reported in Lamu district is as a result of the expected 23 percent above normal maize harvest. See figure 1.1. Annex 2 also shows current food insecurity classification map



1.4 Affected Population

1.4.1 Drought Affected Population in Need of Emergency Humanitarian Assistance

Assessment findings indicate that 3.8 million pastoralists, agro pastoralists and marginal agricultural farm households require urgent humanitarian food assistance. Additionally, 1.5 million primary school children in drought-affected areas have also been affected and require food assistance.

1.4.2 Food Insecure Population Affected by other Factors

The category of food insecure populations affected by other factors who require emergency humanitarian assistance include, 2.5 million persons in urban areas, who are unable to meet 50 percent of their daily food requirements; 2 million vulnerable poor people in rural areas, who are affected by HIV/AIDS; and 100,000 persons displaced by the post-election crisis whose livelihoods have not fully recovered.

1.5 Recommendations

To achieve desired impact, food and non-food interventions need to be implemented concurrently. The non-food interventions should address both the immediate and underlying causes of food insecurity. Table 1.1 below indicates the appropriate food and non-food interventions.

Table 1.1 Summary of Priority Interventions by Sector – Sept., 2009 to Feb., 2010

	SECTOR	INTERVENTION	COST (Kshs)
1	AGRICULTURE SECTOR	Provision of drought tolerant seeds; promote production of drought tolerant crops, water harvesting & expansion of irrigation infrastructure for irrigated agriculture; construction of soil and water conservation structures; seed bulking of drought tolerant crops; Promotion of high value crops under irrigation; provision of subsidized farm inputs.	Kshs.1.1B (\$14.3M)
2	LIVESTOCK SECTOR	Vaccinations, deworming and disease surveillance; Feeds Supplements; Livestock off-take	Kshs. 5.6B (\$72.7M)
3	HEALTH AND NUTRITION	Management of moderate and severe acute malnutrition; capacity strengthening; strengthen disease and nutrition surveillance; support and protect infant and young child feeding practices; provision of immunization services; provision and stocking of essential drugs; Scale up Micronutrient supplementation; deworming of school going children; Procurement and distribution of Long Lasting Insecticide Treated Nets	Kshs. 543.6M (\$7.1M)
4	WATER SECTOR	Water bowsers; provision of gensets; drilling and equipping of boreholes; provision of fuel subsidy; water trucking; construction and de-silting of water sources; construction of latrines and hygiene promotion; rehabilitation of water sources; provision of storage tanks; conversion of borehole pumping systems; promotion of rainwater harvesting; construction/rehabilitation of irrigation schemes.	Kshs. 653.3M (\$8.5M)
5	EDUCATION	Provision of water tanks for roof catchment and rainwater harvesting; water trucking; shallow well rehabilitation; grants for most vulnerable children and provision of sanitary towels in primary schools.	Kshs. 5.0B \$(64.9M)
6	FOOD SECTOR	Food and associated costs for 3.8 million people affected by drought; 1.5 million school children ¹ ; an estimated 398,000 MT of food commodities will be required from September 2009 to February 2010	Kshs. 27B (\$353M)
	GRAND TOTAL		Kshs. 40B (\$520.5M)

¹ The 1.5 million school children include 625,000 already covered by the joint Ministry of Education/WFP school meals programme.

2.0 Food Security Assessment Methodology

2.1 Background

The multi-sectoral and multi-agency 2009 long rains assessment was conducted by the KFSSG in May and July 2009. 30 districts were covered, including 27 drought prone districts in pastoral, agro pastoral and marginal agricultural livelihood zones and 3-post election violence affected districts. 10 field teams covered the following six livelihood clusters:

- Northern Pastoral Cluster (Turkana, Moyale, Marsabit and Samburu districts).
- Eastern Pastoral Cluster (Mandera, Wajir, Garissa, Isiolo, Ijara and Tana River districts).
- Agro-Pastoral Cluster (Baringo, West Pokot, Laikipia, Kajiado and Narok districts).
- Southeastern Marginal Agricultural Cluster (Tharaka, Mbeere, Makueni, Mwingi, Kitui, Meru North and Machakos districts).
- Coastal Marginal Agricultural Cluster (Taita Taveta, Malindi, Kilifi, Lamu and Kwale districts).
- Post Election Violence cluster (Nakuru, Trans Nzoia and Uasin Gishu districts)

The main objectives of the assessment were to determine the food security situation at national and district/household levels in the various livelihoods; factors influencing the food security situation; and the necessary interventions.

Specific objectives were to determine: the impacts of the long rains season on the various sectors such as water and sanitation; health and nutrition; agriculture and livestock; and the education; the resultant food security situation at household level and necessary food and non-food interventions for the pastoral, agro pastoral, marginal agriculture, urban and those affected by post election violence.

2.2 The Approach

The assessment used methodologies and approaches developed by the KFSSG. The process involved wide consultation with stakeholders to define the problem, issues, methods and tools necessary for analyzing food security. The methodologies have been strengthened following the KFSSG's lessons learnt workshop where all issues related to assessments were reviewed, good practices, shortcomings and way forward were agreed upon.

Preparation for the assessment included review of secondary information which was collected, collated, analyzed and organized into briefing packs. A multi-agency, multi-sectoral team whose capacity has been continually developed was selected and trained on the following: food security concepts, analysis and reporting; sectoral checklists; integrated phase classification; assessment techniques and logistics.

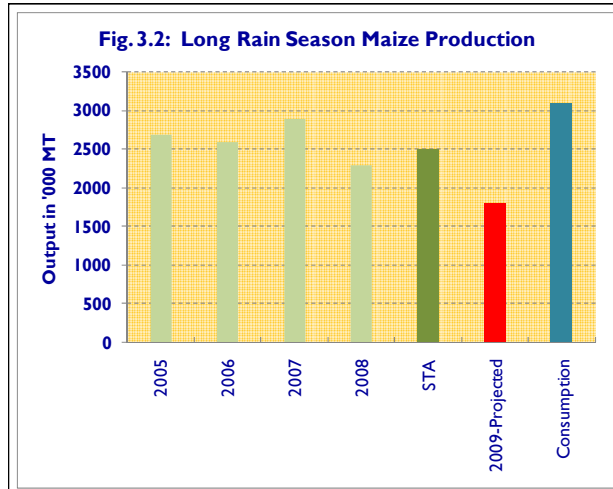
In the field, the teams briefed the District Steering Groups (DSG) to explain objectives and methodologies so as to get a full district buy-in into the process. Assessment teams proceeded to analyze technical data from sectors, selected areas of focus for assessment

covering all livelihoods within the district and used visual inspection techniques, detailed interviews and focus group discussions at the district, community and market levels.

Analyses of the findings were undertaken in two stages, at district and at national level for verification and triangulation. At the district level, the assessment team analyzed the data and produced a district report whereas at the national level a select multi-sectoral and multi agency team of the KFSSG produced the cluster and national reports. While the analysis was conducted at the livelihood zone level, findings and recommendations were provided at the district and divisional level for planning purposes. The findings of the assessment were peer reviewed by the wider KFSSG.

3.1.2 Overall National Maize Supply Situation

The long rain season is most important in Kenya, accounting for about 85 percent of annual average national maize output, which is about 3.06 million MT. Normal long rains maize production in Rift Valley, Western and Nyanza is 2.24 million MT., which accounts for 86 percent of national long rains output indicating importance of these regions to national food security.



While the area under 2009 long rain maize is normal at about 1.24 million hectares, expected production is will be 1.84 million MT which is 28 percent below normal because of insufficient rains. Figure 3.2 illustrates significant 2009 long rain maize output shortfalls. There is growing apprehension following successive downward revisions of expected 2009 long rain maize harvest from the initial 2.34 million MT.

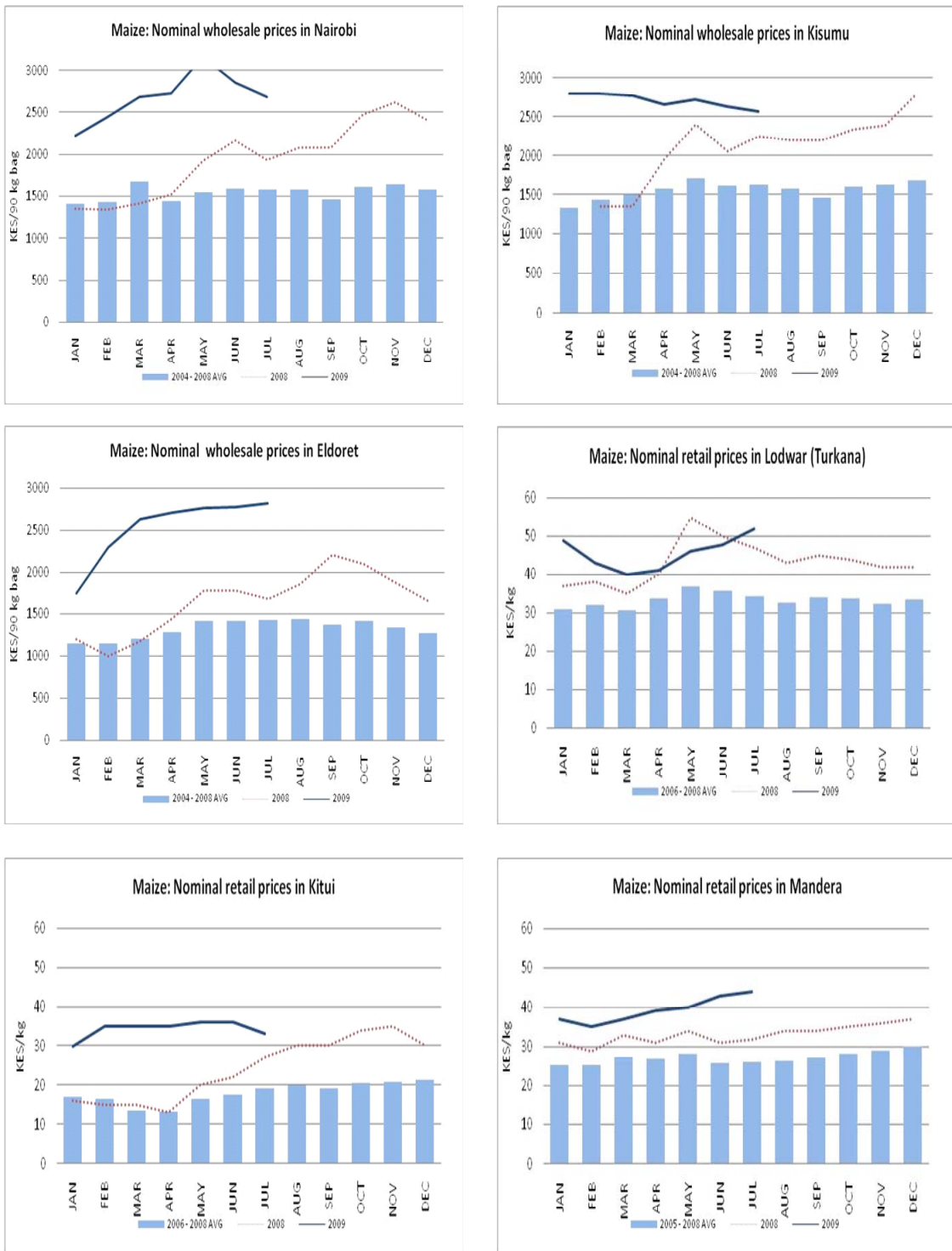
Reduced maize production is likely to exacerbate an already tight national supply situation. National maize stocks as at the beginning of August 2009 included, 178,000 MT held by National Cereal Produce Board (NCPB) of which 163,000 MT was Strategic Grain Reserve and 15,000 MT for relief Food; 230,000 MT held by farmers across the country, of which 78 percent is mainly in Rift Valley, Western and Nyanza provinces; and 92,000 MT held by traders and millers. Therefore, the country had about 500,000 MT of maize at the beginning of August against a monthly requirement of 300,000 MT, suggesting likelihood of serious shortfalls by end of September.

Continuing export bans in neighbouring Tanzania and Uganda will significantly impact on cross border inflows which average 121,000 MT monthly. Consequently, the decision by the Government of Kenya to extend duty free import of maize should be supported with other deliberate interventions to ensure sustained supply of maize into the country.

3.1.3 Food Price Trends

High food prices have persisted through out the country with average price of maize at 100-130 percent above normal. Given that over 70 percent of the population of Kenya are net buyers of maize, high prices have compounded food insecurity as a result of significant deterioration of terms of trade for worst affected populations including households in pastoral, agro-pastoral, marginal agriculture and urban areas. Figure 3.3 illustrates higher than normal price of maize in select markets in Kenya.

Figure 3.3: Above normal maize prices in key reference markets

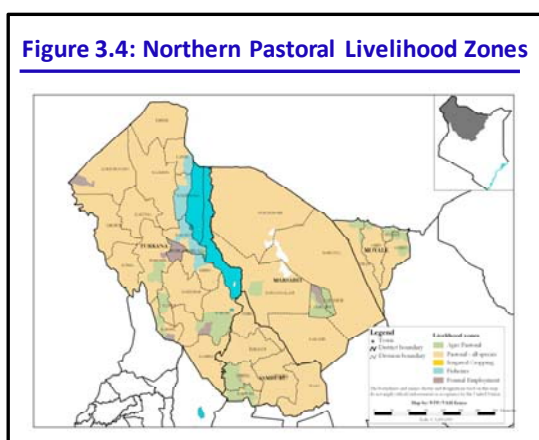


3.2 District/Households Level

Generally, food security situation has deteriorated in all districts except localized areas of the coastal strip as depicted in figure 1.1. Details of food security situation at district level are described in the following clusters.

3.2.1 The Northern Pastoral Livelihood Cluster

The northern pastoral cluster consists of four districts namely Turkana, Moyale, Marsabit and Samburu with an estimated population of 835,357 persons (1999 census projection). The pastoral livelihood zone accounts for 60 percent; agro pastoral, 20.8 percent; formal employment, 10.9 percent; and Fisheries 8.7 percent of the population in the cluster. See figure 3.4.



Livestock is the main source of food and income and contributes about 80 percent of household income while over 90 percent of non-livestock related food is sourced from the market.

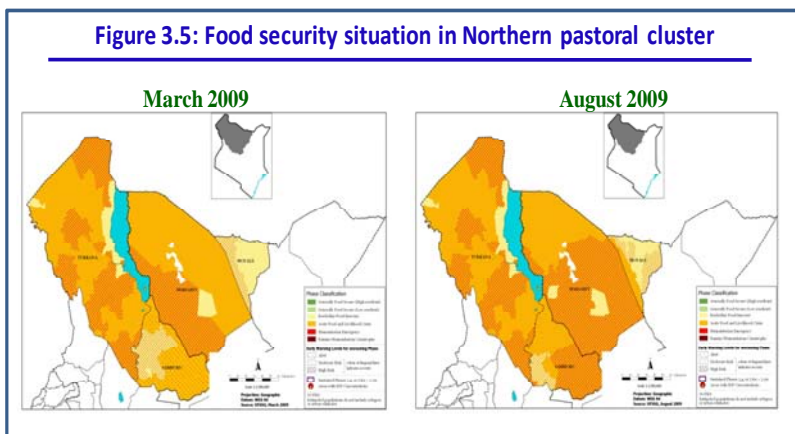
Food Security Trend

In general, food security is worsening in most parts of the cluster as pasture continues to deplete, livestock migrations intensify and conflicts escalate particularly in the pastoral livelihoods. Near total crop failure in the agropastoral zones is also

adversely affecting the food security situation.

Factors Affecting Food Security

The main factors affecting food security include acute water scarcity in all areas; widespread environmental degradation that is affecting pasture regeneration; forage depletion; livestock diseases; civil insecurity as a result of intense cattle rustling particularly in Samburu and Turkana; and significant deterioration of terms of trade. Other factors impacting on food security include, escalating food and non-food prices amidst plummeting livestock prices; water borne diseases; human wildlife conflict; and high levels of malnutrition.



Overall Food Security Situation

In general, the cluster is classified as being in acute food and livelihood crisis with a high likelihood of deteriorating to humanitarian crisis. However, exceptions include parts of Moyale district, pockets of Marsabit,

southwestern part of Samburu and fishing livelihood in Turkana which are all borderline food insecure with high risk of deterioration to acute food and livelihood crisis phase. Figure 3.5 shows current food security situation compared to March 2009.

Current Shocks and Hazards

Rainfall

The onset of 2009 long rains was characterized by a delay of 3-4 weeks; low amounts averaging 20-80 percent of normal; and poor distribution both temporally and spatially through out the cluster. The rainfall amount received in most parts of the cluster averaged 20-50 percent of normal except in parts of Turkana district that received between 80-160 percent of normal rains while northern part of Marsabit district received 50-80 percent of normal rains. The rains ceased earlier than normal by 2-3 weeks across the cluster except in a few areas in the highlands of Samburu that continue to receive continental showers.

Impact of the Shocks and Hazards on Food Security

Crop Production

The late onset of long rains, low amounts, early cessation and poor distribution had a devastating impact on crop production. This led to a marked decline in expected yield by up to 80 percent of normal in agro pastoral livelihood in Samburu and near total crop failure in agro-pastoral livelihood of Marsabit and Moyale. Low soil fertility, use of uncertified seeds, wildlife menace and perennial insecurity have greatly contributed to low crop yields.

Livestock Production

Pasture condition is poor and depleted in many parts except in isolated pockets of Samburu, Marsabit and Turkana while browse condition range from fair to poor. The depletion of pasture has caused migration of 60-90 percent of livestock towards pockets with pastures in Samburu North, Hurri-hills in Marsabit, Oropoi in Turkana and to Ethiopia. Trekking distance to water points for livestock have increased across all livelihood zones from the normal 3-10 to 15-25 kilometers while extreme trekking distances of up to 70 kilometers have been reported in Marsabit.

Livestock body condition ranged from good to fair for goats and camels; and fair to poor for sheep and cattle. Most households are unable to access milk as usual due to migration of livestock away from settlements. Increased concentration of livestock in localized areas raises the risk of disease outbreak across the cluster. Already, cases of Contagious Caprine Pleural Pneumonia (CCPP), sheep and goat pox, Contagious Bovine Pleural Pneumonia (CBPP), Foot and Mouth Disease (FMD) and Peste des Petit Ruminants (PPR) have been reported in various districts within the cluster. The mortality rates are increasing in Marsabit and Samburu and average 20 percent, with cattle and sheep most affected.

Water and Sanitation

An acute water shortage is prevailing within the cluster due to poor long rains and the prolonged drought. There was virtually no recharge of temporary water sources for both domestic and livestock particularly in Marsabit and over 90 percent of pans, dams and shallow wells have dried. Emergency water trucking is being undertaken through out the cluster except in Turkana.

Distances to water points have increased significantly through out the cluster. In the pastoral livelihood zones average distance to water points for domestic use is 25-30

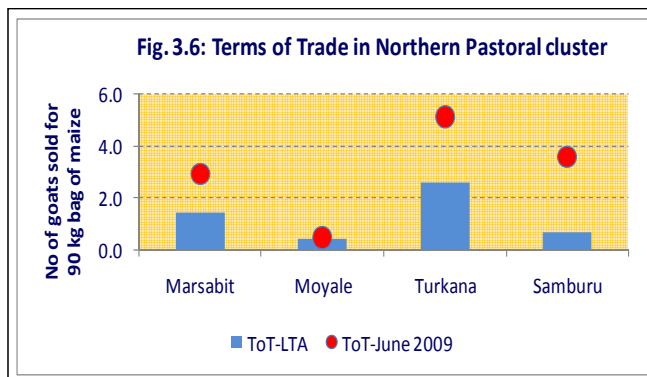
kilometers against the normal seven kilometers. Meanwhile, distances to water sources in agro-pastoral livelihood average 15-18 kilometers compared with the normal 9-10 kilometers.

Water scarcity has led to reduced usage currently averaging 3-5 liters per person per day compared to the normal average of 5-10 liters per person per day. Increased distances and cost of water are among the factors influencing water use level. The price of water in urban centers average Ksh 50 for 20 liters and is sold by private water tankers. The normal price is Ksh 30 for 20 litres.

Market Performance

Within the pastoral livelihood zone, markets account for 65 percent of food consumed by households while only 18 percent is from own production. Maize marketed within the cluster is sourced from neighbouring countries including Tanzania through Isebania, for Samburu; and Ethiopia for Moyale and Marsabit through cross border trade. About 40 percent of maize in Moyale market is sourced from Ethiopia.

The price of maize ranges between 96 and 150 percent above normal with a kilogram selling for Ksh 40, up from the normal Ksh 16. However, Moyale district recorded the lowest price change of maize, Ksh 35 per kilogram, from the normal Ksh 28, which can be partly attributed to enhanced supply from Ethiopia.



Livestock contribute 78 percent of household income in the pastoral livelihood zone. However, imposition of quarantine and conflicts precipitated near total collapse of livestock markets. As a result, the price of goat has reduced by 52 percent of normal in Marsabit and Samburu. Nevertheless, in Turkana and Moyale, average price of goat is eight and 13 percent above normal

respectively. Consequently, terms of trade has deteriorated significantly, by between 16 and 400 percent as shown in figure 3.6 particularly in Samburu and Marsabit. Household have to sell four goats in Samburu and three goats in Marsabit compared to the normal one goat in order to purchase a 90-kilogram bag of maize.

Health and Nutrition

Malaria, Acute Respiratory Infections (ARI), diarrhea, pneumonia, skin diseases and urinary tract infections remained the main causes of morbidity. Outbreaks of water hygiene and sanitation related diseases were observed including, cholera in Marsabit; cholera and dysentery in Samburu; and dysentery in Turkana. Measles and polio outbreak were also reported in Samburu and Turkana respectively. Mortality rates remained at acceptable levels of less than one which is below World Health Organization threshold of two deaths per 10,000 per day.

The trend of proportion of children at risk of malnutrition as measured by Mid Upper Arm Circumference (MUAC < 135 mm) depicts a consistently deteriorating situation across the cluster with the pastoral livelihoods of Marsabit and Samburu the most affected. The

Global Acute Malnutrition (GAM) rates remain unacceptably high and are above WHO emergency levels in Turkana, Marsabit and Samburu at 24, 22.2 and 20.4 percent respectively. Similarly, Severe Acute Malnutrition (SAM) rates were high, above two, an indication of high likelihood of mortalities. Dietary diversity was equally poor with consumption of one or two meals a day consisting mainly of cereal and pulses while milk consumption remained lower than normal.

Education

Enrolment levels in this region average 70 percent, while attendance rates average 75 percent. Though, enrolment rates are on the increase, attendance especially of boys is said to be on the decline due to herding. Drop-out cases were reported to be moderate. Drop out levels remain high in Turkana district mainly due to insecurity, prolonged drought, negative attitude towards girl-child education and child labour. Transition rates from primary to secondary schools average only 46 percent and are associated with early marriage and long distances to schools especially day secondary schools.

Coping Strategies

Main coping strategies include increased borrowing; reduction in number and size of meals; increased involvement in casual labour such as sale of water; rural to urban migration; consumption of wild fruits; herd splitting; charcoal burning and firewood selling; sharing of relief food; slaughtering of calves to save lactating herds; and purchase of food on credit.

Food Security Prognosis

Food security situation is expected to continue deteriorating and will be much worse in six months if recommended interventions are not taken up adequately. Poor performance of the long rains has led to widespread acute water shortage; increased trekking distance to water sources; poor pasture and browse conditions, and poor livestock body conditions. Livestock deaths and increased livestock raids in Samburu has eroded the pastoral livelihood resilience.

On-going Interventions

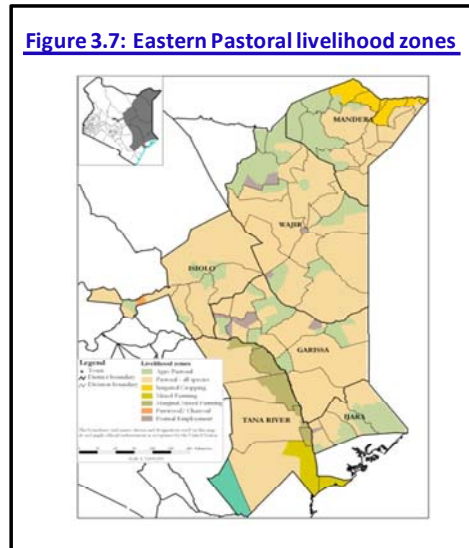
Various stakeholders have been implementing different interventions and probably this explains the reason why food security situation has not deteriorated to emergency levels despite successive poor seasons.

Recommended Non-food Interventions

Although short term food interventions are necessary to cushion households from sliding to humanitarian emergency, implementation of non-food intervention is the only sure way of enhancing the resilience of households against future shocks and hazards to food security. Annex 1 lists immediate and long term interventions necessary to address chronic and transitory food insecurity in this cluster.

3.2.2 The Eastern Pastoral Livelihood Cluster

The eastern pastoral cluster consists of Mandera, Wajir, Garissa, Isiolo, Ijara and Tana River districts. It has an estimated population of 1,589,523 with majority, 47 percent, being pastoralists. Other important livelihoods within the cluster, include, agro-pastoralism, 20 percent; various forms of formal and informal employment, casual labour and business, 16 percent; and marginal and mixed farming, 13 percent of the population. See figure 3.7.



Trend of Food Security

Overall, the trend of food security is worsening through out the cluster particularly in pastoral livelihoods in Isiolo, Mandera, Wajir, northern parts of Garissa and Tana River districts. However, moderate deterioration in food security is evident in remaining livelihoods within the cluster.

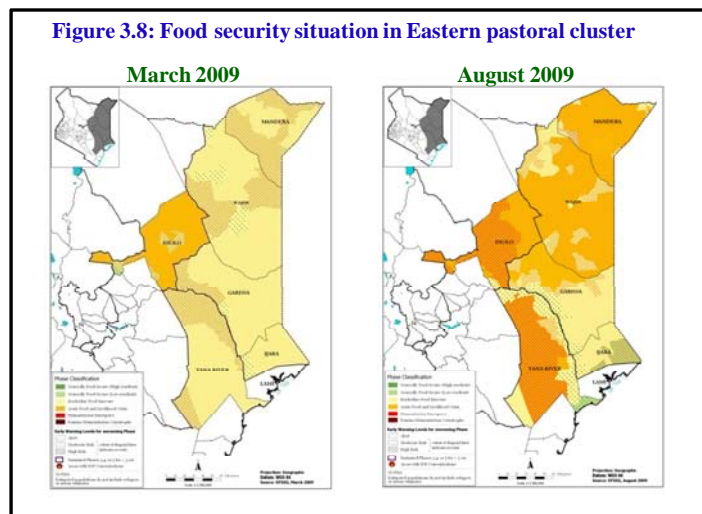
Factors Affecting Food Security

The main factors affecting food security include, poor pasture and browse availability, following poor performance of the long rains; significant

deterioration in terms of trade; near total crop failure in agro pastoral livelihood; and acute water shortage in most areas. Significant deterioration of terms of trade results from disruption of market operations due to migration of livestock. As a result, the number of market actors has reduced leading to low market competition which has driven livestock prices down despite sustained high cereal prices.

Other factors affecting food security include: rampant insecurity particularly along the border with neighbouring Somalia especially in Mandera; local animal concentration in Isiolo and Wajir; conflict in parts of Isiolo; increasing human and wildlife conflict over water and risk of livestock diseases in Ijara.

Overall Food Security Situation



The Pastoral livelihood is in acute food and livelihood crises with the exception of the southern parts of Garissa, most parts of Ijara and pockets in Wajir district which are borderline food insecure. The marginal mixed farming livelihood zones are also in acute food and livelihood crisis while the mixed farming and irrigated livelihood zones are borderline food insecure. The agro pastoral livelihood zone in Ijara district is the only

generally food secure area within the cluster.

The risk of food security situation deteriorating to the next phase is high through out the cluster and close monitoring of key food security indicators including food prices, malnutrition rates, rainfall, and livestock prices among others will be necessary. Figure 3.8 shows the evolution of food security situation within the eastern pastoral cluster.

Current Shocks and Hazards

Rainfall

Rainfall performance was generally erratic and was also poor in amounts, temporal and spatial distribution. Onset was 2-4 weeks late and cessation early by a month. The characteristic high intensity down pours led to surface run-off in the heavily denuded areas with no vegetation cover particularly in Isiolo. The amount of rainfall received averaged 20-80 percent of normal except in south-eastern Wajir and Liboi, Jarajila and Bura Garissa which received 80-120 percent of normal rains. The rains were also moderate in parts of agro-pastoral livelihood zone in the west including parts of Mbalambala, Danyere and Benane which received an average of 50-160 percent of normal rains, however, temporal distribution was poor.

Impact of the Shocks and Hazards on Food Security

Crop Production

Crop production is not a major livelihood activity due to recurrent and prolonged droughts. It contributes to only 17.5 percent of household income. The erratic nature of the rainfall caused haphazard and delayed planting in most agro-pastoral livelihoods. As a result, about 30 percent of the planted seeds did not germinate while the rest that germinated dried due to the low rainfall amounts which were also poorly distributed.

Low water levels in River Tana further complicated irrigated crop production which largely depends on flooding. In addition to poor rains, other challenges to agricultural production include, low adopting rate of modern technologies; high costs of farm inputs; high fuel costs for irrigation and overdependence on relief supplies.

Livestock Production

Livestock production contributes over 70 per cent of household income. Overall, pasture condition in the whole cluster is poor except in pockets which received some better long rains. On the other hand, browse condition throughout the cluster range from fair to poor in most districts.

Available forage is expected to sustain livestock for the next 1-2 months. On average, trekking distances to water have increased from the normal 5-10 to 15-40 kilometers. Livestock body condition generally range from good to fair for goats, sheep and camels; and fair to poor for cattle throughout the cluster and the conditions are likely to deteriorate as distances to water from pastures increase.

Poor pasture has caused migration of 70-90 percent of the livestock into southeastern Wajir. The livestock are from Marsabit and Isiolo; northern parts of Garissa, mainly Hagadera and all parts of the larger Wajir district. Livestock have also migrated to western parts of Mandera and into Ethiopia from Bute, Buna and Gurar divisions of Wajir.

Livestock from Garissa moved to Liboi, Jarajilla and Bura in southeastern parts of Garissa. Migrations have also occurred from Shimbir and Mbalambala in northern parts of Garissa, to Galmagala, Guamuge and Hulugo in northern parts of Ijara district; to Boni forest; and to Witu in Lamu. In Tana River movement is to Lamu district. Additionally livestock have migrated to Ethiopia and Somalia from Mandera. Also, in-migration of livestock from Wajir and Marsabit to Yamicha in Isiolo has taken place. Annex 3 illustrates migration of livestock.

Most households are unable to access milk normally across the cluster districts. Milk production from camels, the main source currently, has reduced by about 70 per cent from normal 1-litre to 0.3 liters due to inadequate browse. Prevalent livestock diseases include CCPP, CBPP, FMD, PPR have been on the rise in most districts. However, mortality rates are low averaging seven percent but are expected increase.

Water and Sanitation

The major sources of water are pans, earth dams, boreholes, shallow wells, springs and piped water in urban centres. There was only 20-50 percent recharge of water sources and most pans and earth dams are currently dry. In Isiolo all the pans and earth dams are dry while in Ijara only the large dams serving towns have water. In Sericho division of Isiolo district shallow wells have become deeper averaging 15 metres (50 feet) compared to normal average of three metres (10 feet). In parts of Modagashe and Benane area in Garissa district have shallow wells which are expected to last to the next rain season.

The cluster is under water stress and emergency water trucking is ongoing in areas of acute water shortage. Distances to water sources in Wajir district for domestic use is currently 17 kilometers from a normal average of six kilometers while for livestock the current average trekking distance is 30 kilometers compared to normal average of 10 kilometers. In Pastoral livelihood of Isiolo the current average trekking distance to water is 5-10 kilometers compared to the normal 2-5 kilometers for domestic water and average 18-38 kilometers compared to the normal 15-20 kilometers for livestock. There is crowding at boreholes which have lead to long pumping hours and frequent breakdowns. It has also doubled the waiting time.

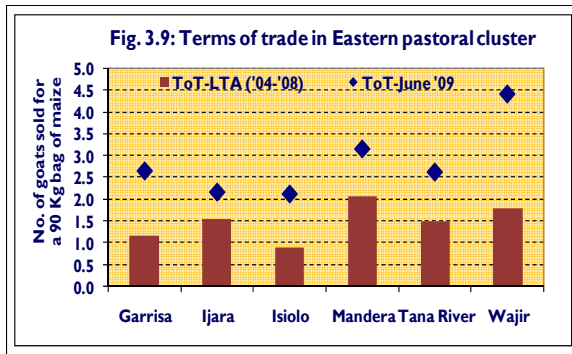
The quantity of water used per person per day in the cluster is generally low and below the Sphere standard of 15 litres per person per day. It is also on decline with the increasing distances to water sources. In Tana River district the average water use is currently 6-10 litres per person per day while in Garissa district it is 3-6 litres per person per day. There is an increase in the cost of water in some areas such as in Ijara where a 20 litres jerry can is selling for five shillings up from two shillings while in Tana River the same is going for Ksh 14-20. Provision of fuel subsidy to boreholes has contributed to keeping water prices low thus cushioning households against high water prices. However, very poor households are still unable to access adequate water in the face of competing demands for cash.

Market performance

In general, supply of maize is normal except in Wajir, Garissa and remote markets due to poor infrastructure and insecurity. Maize is mainly sourced from outside the cluster. Although the main markets have continued operating, level of trade has reduced markedly due to low livestock supply and demand. Additionally, livestock assembly markets in the hinterland have literally collapsed after many livestock migrated. The increased sale of food on credit has seriously disrupted business operations for stockists who have had to reduce the frequency of sourcing new stocks to only once per month due low working

capital. As a result, supply of food in most remote areas has been seriously affected. However, demand for cereal has increased in pastoral livelihood to compensate for reduced milk supply occasioned by migration of livestock to distant locations.

Overall, the average price of maize is higher than normal by 79 percent at Ksh 20-24 per kilogram. The price of a kilogram of dry maize is highest in Wajir at Ksh 54 and lowest in Ijara at Ksh 24. However, the highest increase has been recorded in Garissa at 135 percent and lowest in Ijara at 33 percent.



The price of goat reduced by an average of eight percent, with the highest reduction noted in Isiolo at 32 percent. However, average prices have increased in Garissa by about 5 percent. Figure 3.9 illustrates deteriorating terms of trade within the cluster.

Currently, a household has to sell an average of three goats to purchase a 90 kilogram bag of dry maize grain compared to normal one and a half goats. Terms of trade are poorest in Wajir where about four goats are required in order to purchase a bag of maize compared to Isiolo where two goats are required. On average terms of trade has deteriorated by 95 percent with the highest in Wajir, 147 percent and Ijara 40 percent.

Health and Nutrition

Malaria, upper respiratory infections and diarrhea are the leading causes of morbidity among children less than five years. Increasing trend in diarrhea is observed in all the districts. This is associated with the use of poor quality of water at household level with very low rate of water treatment. Crude and under five mortality rates are below emergency levels.

With exception of Ijara district, the nutrition situation remains of critical concern. The GAM rates from surveys conducted in June 2009 range from 7.9 in Ijara to 25.3 percent in Wajir. Mandera and Wajir districts and urban livelihood of Garissa district registered very high GAM rates above emergency thresholds of 15 percent.

The peak of malnutrition is normally expected between the months of March–April and therefore the high GAM rates reported in June are unexpected. The MUAC trends in Isiolo, Garissa, Wajir and Ijara districts are above long term average while in Mandera and Tana River they are below the long term average but on rising trend. The increasing food insecurity, as a result of reduced milk availability at the household level; poor dietary diversity; inadequate quantities of food; and other underlying factors like poor hygiene, child care and feeding practices are identified as the forces driving high rates of malnutrition. The low under-5 mortality rates further suggests that high malnutrition is caused by food insecurity as opposed to diseases.

Education

There is a general increase in enrolment rates at secondary and primary school levels. The current attendance levels average 88 percent in primary schools, while drop-out rates average 11 percent. It was also noted that transition rate is above average, standing at 53 percent. Increase in enrolment, attendance and transition levels is attributed to free

primary education, free secondary tuition and provision of meals in schools. Influx of day-scholars to available boarding schools has over-stretched existing facilities due to prolonged drought which has forced parents to move far in search of water and pastures for their animals. Pastoralism, early marriages and negative attitude towards girl child education have been reported as contributing factors to drop-out cases.

Coping Strategies

Main coping strategies include, sharing food aid; increased borrowing and buying food on credit; skipping meals and reducing the size of meals to lengthen the period that food aid lasts; sale of firewood and water in trading centres; sending underage children to schools to benefit from the school meals program; asset stripping; consumption of wild fruits; migration to areas near water points and trading centres; sale of gum raisin; petty trade; charcoal burning and engaging in casual labour as is the case in Garissa where about 60 percent of men from El-humow and Jarajila in Garissa division have migrated in search of labour opportunities.

Other coping strategies include herd splitting and livestock migration and slaughter of calves to save the lactating animals in Mandera and Wajir. In Ijara 198 households have been reported to have migrated to Lamu district in June 2009; and in Tana River the pastoralists are engaging in hunting and gathering.

Food Security Prognosis

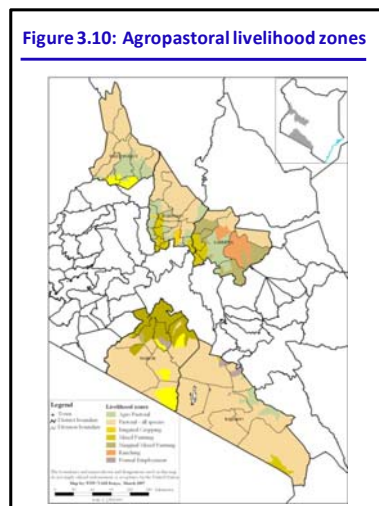
Food security situation has deteriorated to acute food and livelihood crisis in most parts of the cluster except in Ijara district, mixed farming LZ of Tana River and the east and south-eastern parts of Garissa, including Liboi, Jarajilla and Bura divisions which are moderately food insecure.

On-going Interventions

Various stakeholders have been implementing different interventions within the cluster, and probably the only likely reason why food security situation has not deteriorated to emergency levels despite successive poor seasons.

Recommended Non-food Interventions

Although short term food interventions are necessary to cushion households from sliding to humanitarian emergency phase, implementation of non-food intervention is the only sure way to enhancing the resilience of households against future shocks and hazards to food security. Annex 1 lists immediate and long term interventions necessary to address chronic and transitory food insecurity in this cluster.



3.2.3 The Agropastoral Livelihood Cluster

The agro pastoral cluster covers Kajiado, West-Pokot, Baringo, Laikipia and Narok districts and has an estimated population of 1,599,026 persons. The predominant livelihoods include pastoral/agro-pastoral and marginal agriculture which accounts for 40 and 50 percent of the population respectively. See figure 3.10.

Livestock production contributes 50 percent of all household incomes compared to marginal farming which contributes 30 percent. Market purchases constitute the largest proportion of food source, 60 percent, while own

productions constitute only 30 percent of food consumed at household level.

Food security trends

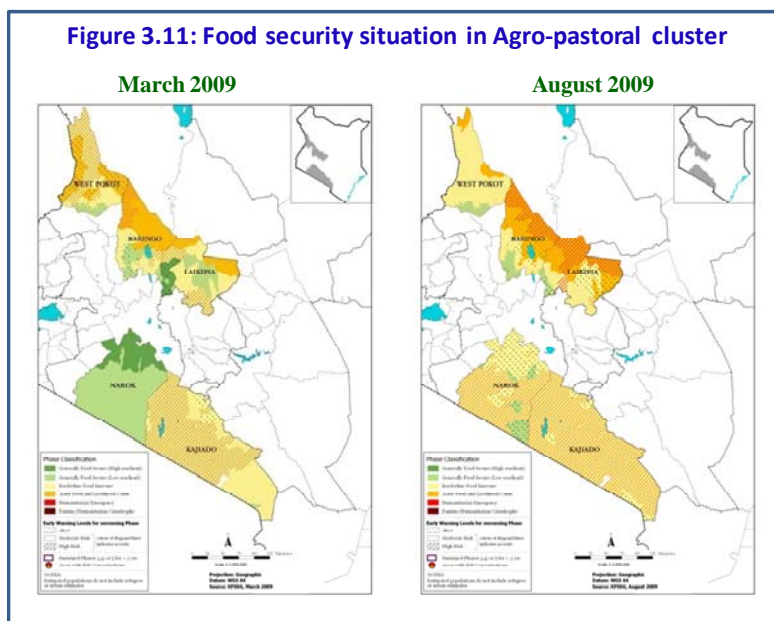
Overall, food security is deteriorating in the cluster particularly southern pastoral livelihood where livestock mortality has been recorded. However, the situation is precarious in the northern parts of the cluster and is likely to degenerate as the drought intensifies.

Factors affecting food security

The main factors affecting food security include poor performance of long rains; significant deterioration of terms of trade; insecurity particularly in West Pokot, Baringo and Narok districts; near total crop failure; and widespread land degradation. Closure of markets due to livestock diseases, particularly in Laikipia and inappropriate market policy in Baringo (doubling of livestock market cess), have further affected capacity of households to access food from sale of own livestock.

Other factors affecting food security are, escalating food and non-food prices; dwindling livestock prices; perennial water scarcity in Laikipia; and livestock diseases in Kajiado and West Pokot.

Overall Food Security Situation



The cluster is generally borderline food insecure except the northern parts of Baringo; and northern and eastern parts of Laikipia districts which depict acute food and livelihood crisis. However, most other parts including whole of Kajiado, southern part of Narok and most parts of West Pokot districts are at high risk of deteriorating to acute food and livelihood crisis. Figure 3.11

shows current food security situation compared to the period after the short rains 2008.

Current and Hazards

Rainfall

Onset of long rains was late by up to three weeks. The rains were poorly distributed both temporally and spatially and averaged 50-80 percent of normal except in Mashuru and Namanga divisions of Kajiado which received the lowest average range of 10-20 percent of normal rains.

Impact of the Shocks and Hazards on Food Security

Crop Production

Widespread crop failure has been reported through out the cluster. The only recorded harvest within the cluster is of beans, in the northern parts of Kajiado district. In addition, about 40 percent of irrigated crop is expected to be harvested in Baringo district, in Kapkuikui, Tirion and Perkerra irrigation Schemes. Low water levels, low usage of appropriate inputs like certified seeds and fertilizers; wildlife menace; low soil fertility; and communal land ownership are factors that contribute to low crop yields within the cluster. For instance, in Narok maize yields have dropped from normal 10-15 bags to about 2-5 bags per acre. At the same time, long rain maize harvest in Loitokitok are much below normal with only 9,770 bags, 44 percent below normal of 22,251 bags.

Livestock Production

Pasture and browse conditions range from fair to poor through out the pastoral livelihoods. As a result, migration of livestock to the dry season grazing areas ensued earlier than normal to other parts of the cluster including, towards Uganda to Alale, Kacheliba, Kongalei border and towards Lomelo, Kainuk on the border with Turkana from West Pokot; towards Mount Kenya Forest, Aberdares, Ol Kalaou and Gilgil from Laikipia; into the Tsavo and subsequently to coast province and Tanzania from Kajiado; and to Mara division, Trans Mara and Tanzania from Narok. Consequently, conflicts have occurred over grazing resources in parts of the cluster in parts of Baringo and the border between West Pokot and Turkana.

Livestock body condition range from good to fair for browsers and poor for grazers. In some areas of Baringo, grazers are starting to show signs of emaciation and some mortality, averaging less than one percent, have been reported. Additionally, productivity has reduced significantly with a cow producing only 60 percent of normal, 0.6 litres, compared to a liter per day. However, milk is largely unavailable to households due to migration of livestock.

Foot and Mouth Disease has been reported in Laikipia district greatly impacting on livestock production. No other notifiable livestock disease has been reported in other districts. However, there is need for continued surveillance and vaccinations against endemic livestock diseases.

Water and Sanitation

Low recharge of water sources due to the poor rains has resulted into acute water shortages in some parts, including, northern divisions of Baringo and in Magadi Division of Kajiado District. Over 50 percent of water pans and earth dams have dried and the remaining ones are expected to last the next two to three months. Distances to water for both domestic and livestock have increased by 100-150 percent from 4-5 to 8-10 kilometers in Baringo, and from 10-15 to over 30 kilometers in Chyulu area of Loitokitok.

Further, water usage has reduced significantly with over 85 percent of population using less than 15 litres per person per day. The situation is worse in Kajiado district where a person uses an average of 3-4 liters per day against the normal 8-10 liters. Similarly, in West Pokot, a person uses 5-7 litres per day compared to the normal 10 liters. Cost of water has also gone up due to scarcity, for example, in Laikipia district, 20 litre of water is selling for Ksh 10 from the normal Ksh two.

Health and Nutrition

Malaria, URTI, diarrhea, pneumonia and intestinal worm infections are the most prevalent diseases reported. Isolated cases of guinea worm in West Pokot, brucellosis in Narok and polio outbreak in Baringo were reported. Kalazaar remains endemic in West Pokot and requires urgent intervention as it impacts negatively on food security. Mortality rates are within reasonable levels except in West Pokot where crude mortality was 2.1 per 10,000 per day in the last three months, the leading cause being cattle rustling.

The rate of child malnutrition as depicted by proportion of children at risk of malnutrition, with MUAC less than 135 mm, are increasing and are above long term mean across the cluster. GAM rates are serious in Kajiado and West Pokot at 11.8 percent and 12.7 percent respectively. However, GAM rate in Baringo are above WHO threshold of fifteen percent at 15.5 percent. High malnutrition rates could be attributed to poor dietary diversity, especially in pastoral livelihood where majority are depending on two food groups, cereals and milk consumed at most twice per day.

Education

The enrollment rate is 64 percent and the attendance is 82 percent while transition rate is 55 percent. The drop-out rate is six percent in primary schools. The enrolments, attendance and transition rates are below national targets. Reasons attributed to low rates include, withdrawal of expanded school meals, delayed roll-out of home grown school meals programme, teenage pregnancies, early marriages and search for casual labor opportunities. In secondary schools, high food prices, water shortages and inability to pay school fees due to prolonged drought that has impacted negatively on the main livelihoods were indicated as the main challenges.

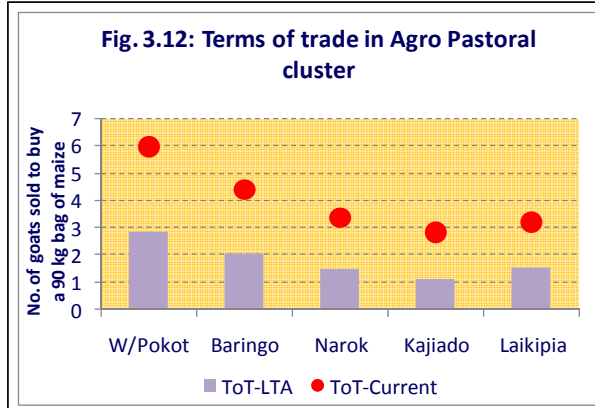
Market performance

Supply of maize is normal except in remote markets which have poor infrastructure and insecurity particularly, Narok and West Pokot. Due to migration of cattle, households are unable to access milk as usual and have resorted to maize based meals, increasing demand.

Livestock markets operations were normal except in Laikipia where markets were closed between March-May due to quarantine caused by an outbreak of FMD. In Baringo, 100 percent increase in market cess disrupted trade and reduced number of traders willing to participate. Insecurity further constrains livestock trade and reduces market efficiency.

Retail price of maize is significantly higher than normal ranging from 93 to 132 percent above normal price of Ksh 20-24 per kilogram. Maize inflows into Kajiado from Tanzania resulted into marginally lower prices in recent months as harvesting of maize peaked. However, goat price is generally declining and are 7-16 percent below normal except in Baringo where they are higher by nine percent. In Narok, increased sales of immature female goats, probably for breeding, has been observed and are selling at Ksh 1,400, compared to the normal Ksh 1,000.

Terms of trade



Currently, a household requires an average of four goats to purchase a 90 kilogram bag of dry maize compared to the normal two goats as illustrated in figure 3.12. The terms of trade are worst in West Pokot where about six goats are required to purchase a bag of maize compared to Kajiado where three goats are necessary instead of normal two. On average, terms of trade within the cluster, has deteriorated by over 100 percent.

Coping strategies

The main coping strategies being employed include, increased borrowing to access food; reduction of number and sizes of meals; involvement in casual labour, such as sale of water; rural urban migration; consumption of wild fruits; asset stripping; reliance on social networks; charcoal burning and firewood selling; and sharing of relief food. Also noted are slaughtering of new born calves to save lactating herds and chronic absenteeism from school particularly in Laikipia district. In Narok pastoralists are grazing in the parks at night.

Ongoing Interventions

In order to address food insecurity within the cluster, various organizations are involved in numerous activities including, supplementary feeding and immunization; promotion of alternative and emerging crops; support to market development; rehabilitation of water sources and protection of water springs; and livestock disease surveillance and treatment. To some extent, these interventions have had some impact of cushioning households from sliding deeper into emergency food insecurity. Consequently, more enhanced interventions will be necessary to forestall an emergency and build resilience of households against future shocks.

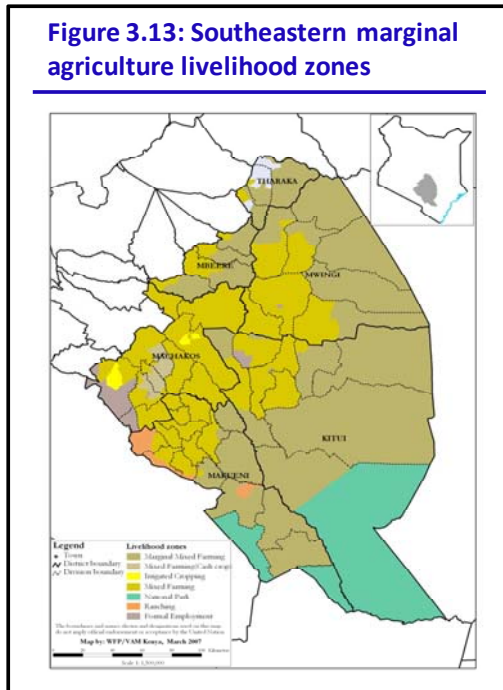
Recommended non-food interventions

Although short term food interventions are necessary to cushion households from sliding to humanitarian emergency phase, implementation of non-food intervention is the only sure way to enhancing the resilience of households against future shocks and hazards to food security. Annex 1 lists immediate and long term interventions necessary to address chronic and transitory food insecurity in this cluster.

3.2.4 The Southeastern Marginal Agriculture Livelihood

The southeastern marginal agriculture cluster comprises of Tharaka, Mbeere, Mwingi, Machakos, Kitui, Makueni and Meru North districts with a total population of 4,012,533 persons.

Figure 3.13: Southeastern marginal agriculture livelihood zones



The predominant livelihood zones as shown in figure 3.13 include mixed farming, marginal mixed farming and formal employment/trade/casual employment which account for 65, 26 and 9-percent of the population, respectively.

Crop production and livestock are most important source of income contributing 40 and 35 percent of household incomes respectively. Other important income sources are employment related activities which contribute 25 percent.

Food security trends

The food security situation is deteriorating following a series of poor rain seasons. In particular, food security is rapidly deteriorating in the marginal mixed farming

livelihood especially in parts of Mwingi district including, Ngomeni, Nguni and Tseikuru; in Mutongoni, Yatta district; and in Ikutha, Kitui district.

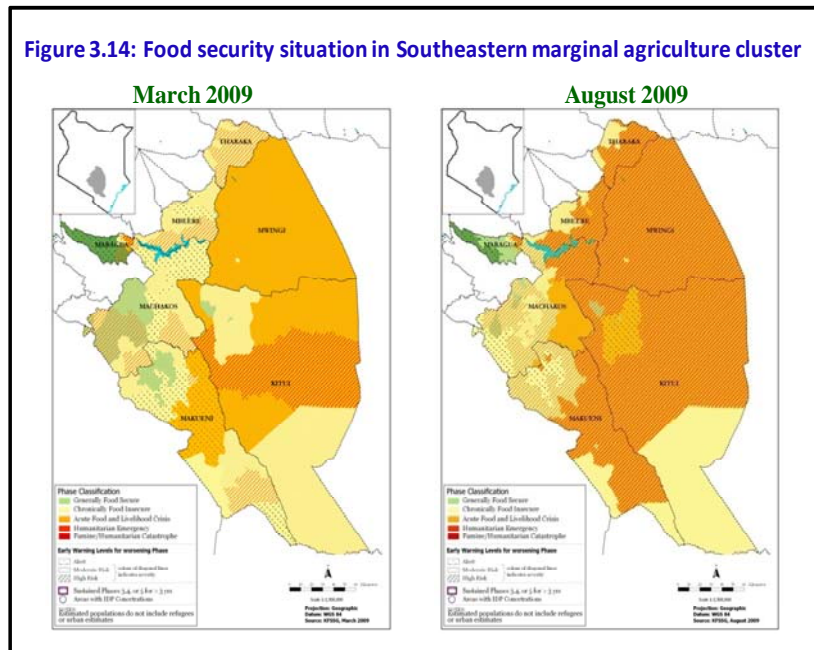
Factors affecting food security

The main factor affecting food security include, erratic rainfall which is manifested by the cumulative failed rains; low soil fertility due to degraded soils; production of unsuitable crops which are not drought tolerant; use of low yielding uncertified seeds; frequent and severe water shortages; sustained high food prices; and unrelenting rise in prices of fuel.

Additionally, food insecurity is exacerbated by low purchasing power of households due to chronic poverty; poor market infrastructure which hampers efficient market operations; poor road networks especially in marginal mixed farming livelihood; and over reliance on rain fed farming.

Overall Food Security Situation

The poor performance of the long rains has accentuated food insecurity within the cluster. See figure 3.14. Most parts of the cluster including are in acute food and livelihood crisis



with a high risk of deteriorating to humanitarian crisis. Areas in borderline food insecurity are at a high risk of moving to acute food insecurity. Only pockets in Machakos district are still food secure but at high risk of becoming borderline food insecure.

Food security situation is expected to improve February 2010, after next rains season, which are

the most important in these areas.

Current Shocks and Hazards

Rainfall

The rains were characterized by late onset, starting 10-30 days late in April. The rains ceased early in the first week of May, instead of the normal first week of June resulting into significantly lower total rainfall amounts. The rains were characterized by poor spatial and temporal distribution through out the cluster with most areas receiving 50-80 percent of normal rains. However, the rainfall performance was worst in most parts of Mwingi and Makueni district; and in northern and southern parts of Kitui district, averaging only 10-20 percent of normal.

Impact of the Shocks and Hazards on Food Security

Crop Production

Crop production is overwhelmingly rainfall dependent with only about 2-percent irrigated. The poor rains affected the marginal mixed farming livelihood more severely, resulting into poor crop germination and extensive wilting which occasioned widespread repeat plantings. Coupled with previous failure of short rains, biannual crops such as pigeon peas, cassava and sweet potatoes have been particularly affected.

Consequently, less than 20 percent of normal harvest is expected this season especially in mixed marginal livelihood. However, moderately better harvest, about 10-40 percent of normal, is expected in mixed farming livelihood.

Livestock Production

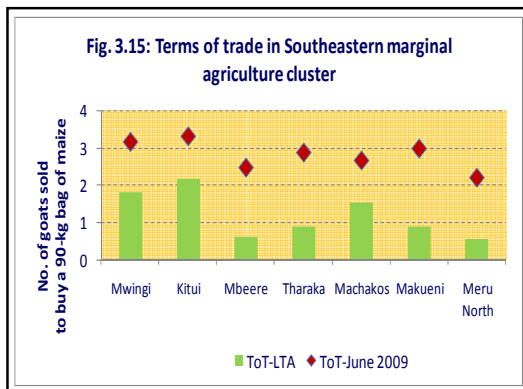
Pasture and browse regeneration was inadequate. As a result livestock productivity has reduced as manifested by poor body conditions of cattle. The situation is demonstrated by the decision of sedentary farmers to trek their livestock to distant places which have ample pasture, for example, in Tharaka and Meru North. Migration of livestock has caused tensions which are already evolving into conflicts. In addition to intra cluster livestock migration, cattle from neighbouring Kajiado district have also moved into the cluster. About 10,000 cattle from Kajiado, and marginal agriculture livelihood zones of Yatta, Mwala, Kalama and Yathui are now concentrated in Athi River, Ndithini and Lukenya ranch in Machakos district.

The pasture shortage is evidenced by increased trade in fodder especially in mixed farming livelihood zone. Households are sourcing hay from as far as Nairobi, Eldoret and Kitale, over 200 kilometres away. Due to desperation, some households in marginal mixed farming livelihood zone within the cluster have resorted to buying hay illegally acquired from Kyulu game reserve and Tsavo, East and West, National parks. In extremely desperate cases, households in Makueni are using grass from their house roofs to feed livestock.

Water

Poor long rains resulted to low recharge of surface water sources. Only 10-50 percent of all pans, earth dams and shallow wells recharged. Due to high temperatures already 60 percent of the sources in Machakos and 100 percent in Mwingi are dry. The remaining pans and dams are expected to last only 1-3 months. As a result, trekking distances to water for both domestic and livestock has increased by 66-90 percent except in Tharaka where they remain normal, 3-4 kilometers due to wide river coverage. In Makueni the distances have doubled from an average of 4-5 kilometers to 8-10 kilometers one way while in Mwingi some people are trekking as far as 31 kilometers in search of water.

Additionally, water consumption has reduced to 50 percent of normal to 3-5 litres of water per person per day. Boreholes are currently the main source of water and high demand for water has increased waiting time from the normal average of 5-10 minutes to more than one hour as yields decrease inversely with pumping hours. Increase in hours of use is causing frequent breakdowns, further impacting on water access. The cost of water has also gone up; in Meru North a 20 litre jerry can is going for Ksh 25 to 50 from the normal five shillings while in Kitui the same is going for Ksh 5-10 from the normal average of two shillings. For the first time, Yatta Furrow in Machakos, an important source of irrigated crop, has completely dried and the Athi River flow reduced by 60 percent



Markets

Operations in cereal markets are normal and traded maize is mainly sourced outside the cluster, from Uganda through Busia; from Tanzania; and from Western Kenya. The price of maize is significantly higher than normal and a 90-kilogram bag is selling for an average of Ksh 2,970 in Kitui and Ksh 3,330-3,600 in Mbeere compared to the normal average of Ksh 1,600.

Livestock contribute to 30 percent of household income and are thus important to

food security. Goats, the most traded livestock species are selling for an average of Ksh 900 in Mwingi and Ksh 1,520 in Meru North compared to the normal Ksh 2,000. Sustained high maize prices have significantly eroded household terms of trade within the cluster as illustrated in figure 3.15.

Health and Nutrition

No disease outbreak was reported through out the cluster. However, MUAC and CHANIS depict a worsening trend. Unavailability or reduced access to milk due to drought has limited meals intake to cereals and vegetables or cereal and pulses only. Most households consume 1-2 meals per day as compared to the normal three meals.

Education

A steady drop in attendance has been noticed in schools within the cluster since beginning of the year. Poor school attendance is associated with prolonged drought and lack of school meals programme. Drop-out rates in primary and secondary school average six percent and is largely associated with search for casual labour, miraa business; phase-out of school meals programme; and teenage pregnancies.

Coping strategies

Increased charcoal burning; reduced sizes and number of meals per day; purchasing of food on credit; migration to urban centres in search of casual labour; petty trade; increased reliance on remittances; and sand harvesting along the river banks are some of the coping strategies increasingly employed by households within the cluster. Other emerging coping strategies which are indicative of serious food insecurity problem include, unusual feeding and dependence on wild fruits; and increased asset stripping to buy food. Slaughter of new born calves so as to save the lactating animals has also been noted.

Food Security Prognosis

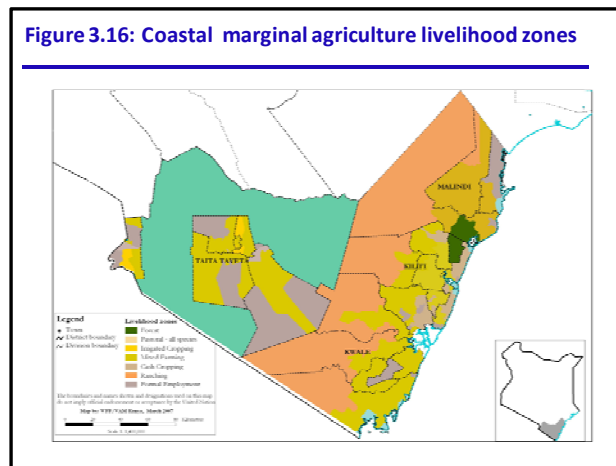
Food security in the next six months will continue deteriorating through out the cluster. Households in marginal mixed farming livelihood, already highly food insecure, show the greatest risk of tipping over to humanitarian emergency if urgent food and non-food interventions are not instituted. However, households in mixed farming zones are expected to continue being borderline food insecure despite minimal harvest that is expected. Good performance of the more reliable short rains provides the most reliable option of improving food security in the cluster. Extensive charcoal burning within the cluster is increasing land degradation and is a major risk for long-term food security in the cluster.

Ongoing interventions

Currently, various organizations are engaged in various interventions within the cluster including, provision of food aid, supplementary feeding and immunization and provision of vitamin-A by Ministry of Health, World Food Programme, Action Aid, Kenya Red Cross, Arid Lands Resource Management Programme (ALRMP) and Catholic Diocese; provision of drought tolerant seed crops like cowpeas, green grams, sorghum and other orphan crop seeds by Ministry of Agriculture, German Agro-action and world Vision Kenya; livestock off-take, destocking, disease surveillance and vaccination against Foot and Mouth Disease and Peste des Petit Ruminante by ALRMP, Ministry of Livestock Development; and drilling, equipping and rehabilitation of boreholes, dams and pans by Ministry of Water and Irrigation, ALRMP, various Constituency Development Funds and partners among others.

It is important to note that the food security situation would be more critical without the ongoing interventions, which have been key in cushioning households from tipping over to an emergency situation. However, it will be necessary to continue with most of the ongoing interventions and propose additional ones that would ensure the resilience of households within the cluster. Annex one gives a summary of the proposed interventions in the cluster.

3.2.5 The Coastal Marginal Agricultural Cluster



The coastal marginal agricultural cluster consists of Malindi, Kilifi, Taita Taveta, Kwale and Lamu districts. The cluster covers an area of 34,412 Km² (excluding 10,680 Km² occupied by Tsavo National Park) with an estimated population of 1.98 million. The predominant livelihood zones in this cluster are, mixed farming which has 61 percent of the population; formal employment / casual labor/ business with 18 percent; marginal mixed farming and livestock farming each accounting for eight percent of the population. Other livelihoods within the cluster include fishing and mangrove cutting. See figure 3.16.

accounting for eight percent of the population. Other livelihoods within the cluster include fishing and mangrove cutting. See figure 3.16.

Food security trends

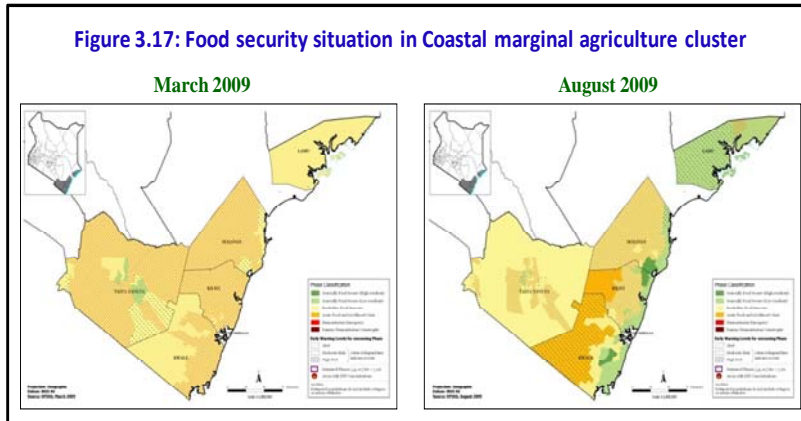
The general food security trends vary and have markedly improved in mixed farming livelihood zones along the coastal strip and in Taita Taveta as well as the whole of Lamu district. The trend is deteriorating in the hinterland areas and the low-lying areas of Taita Taveta. The situation in areas reporting food security deterioration is expected to improve only in February 2010 subject to good performance of the 2009/2010 short rains.

Main Factors Affecting Food Security

The poor performance of 2009 long rains coupled with poor agronomic practices; poor and low application of farm inputs; pronounced wildlife menace; and potential post-harvest losses have considerably affected food security in this cluster. The prevailing high food prices, compounded by high poverty and illiteracy levels together with high influx of livestock from bordering districts have exacerbated the situation.

Overall Food Security Situation

The food security situation of the cluster deteriorates from the north, Lamu, to the south, Kwale. Lamu district and the entire coastline are generally food secure albeit with low resilience. The situation changes from moderate food insecure to acute food and livelihood crisis from the coast line into the hinterland of Malindi, Kilifi and Kwale districts as figure 3.17 shows.



The Western areas of Malindi, the central parts of Kilifi and Taita Taveta have a high risk of deteriorating into acute food and livelihood crisis. The central parts of Kwale are borderline food insecure with moderate risk of sliding to acute food

and livelihoods crisis.

Current Shocks and hazards

Rainfall

The onset of rains delayed by 10-20 days; were below normal in amounts; and poorly distributed temporally and spatially, particularly in the hinterland divisions of Malindi, Kilifi and Kwale districts. Similarly, areas outside the hills in Taita Taveta district experienced poor rains performance averaging 20-50 percent of normal. Lamu district and the coastal strip received poor long rains but much better off season rains in July.

Impact of the Shocks and Hazards on Food Security

Crop Production

Crop production in the cluster is 90-100 percent rainfall dependent. The fair to good performance of long rains especially along the coastal strip and hill masses have resulted into moderate maize harvest averaging 60-80 percent of long term average. In Lamu district, maize harvest is expected to reach 250,000 bags compared to long term average of 203,000 bags. Low soil fertility; low soil moisture retention capacity; use of poor seeds; low usage of soil fertility enhancers; and wildlife menace are factors that constrain realization of full agricultural potential within the cluster.

The achieved harvests are expected to last up to six months in some areas. The negative impacts of low and erratic rainfall in mixed marginal livelihood included expansive repeat plantings, poor germination of planted seeds and wilting of crops. In these areas there will be near total crop failure or the harvest will be less than 20 percent of the long-term average.

Livestock Production

Livestock production accounts for about 30 percent of household income. Most parts, except the hinterland areas of the cluster, have fair to good pasture and browse resulting in generally good livestock body condition across all livelihood zones. However, unusually large influx of livestock from North Eastern Province, Tana River and Kajiado districts and parts of Northern Tanzania, threaten sustainability of available pastures and water, with high likelihood of resource-based conflicts. See annex 2. While available browse is likely to sustain browsers until next short rains, rate of pasture utilization may result into depletion within the next three months. FMD outbreak is reported in Malindi district

which is now under quarantine. Increased influx of livestock into the cluster is likely to result in more outbreaks of livestock diseases.

Water and Sanitation

Wide variation in performance of the long rains has led to poor recharge of most water sources especially in the hinterland divisions within Malindi, Kilifi and Kwale districts causing earlier than normal drying of water pans and earth dams. In Bamba, Vitengeni and Ganze divisions of Kilifi district over 90 percent of pans and dams have dried up and only one pan still has water, while in Kinango and Samburu divisions, no pans have water. In Taita Taveta the current distance to water for domestic and livestock use averages six kilometers and 6-10 kilometers respectively compared to normal average of 0.5 kilometers and two kilometers respectively. Meanwhile in Malindi current distance to water averages 5-15 kilometers against the normal 2-8 kilometers. Acute water shortage is evidenced by inability of some schools to prepare meals provided under the school meals programme.

In general, increased distances to water coupled with steeply rising prices is constraining water use within the cluster. The cost of water has significantly increased, especially in parts of Taita Taveta where a 20 litres jerry can is selling for Ksh 30-40 against the normal one shilling. Poor management of community water supplies; high maintenance cost of overworked boreholes; and high siltation of pans and earth dams have been identified as compounding water problem within the cluster. Water trucking is also implemented in Kilifi mainly to institutions including schools and health facilities and communities in Magarini division of Malindi district.

Health and Nutrition

The only disease outbreak reported within the cluster is Cholera, in Kwale district. However, the situation was promptly contained. An upsurge of diarrheal diseases has been noted in Malindi district which has recorded a 188 percent increase compared to similar period of the previous year. Increase in diarrhea cases is likely linked to poor water quality due to prevailing acute water shortage and poor sanitation conditions. Other diseases are within seasonal ranges in the cluster and mortality rates for the general population and the under-fives are below emergency levels.

Trends in child malnutrition indicate a mixed situation according to ALRMP surveillance data. The proportion of children at risk of malnutrition, with MUAC < 135mm increased by 3.4 percent to 8.9 percent in Malindi compared to only two percent increase to 7.7 percent in Lamu. Latest nutrition surveys, conducted in May 2009, indicate poor nutrition situation in Kilifi, Kwale and Taita Taveta with GAM rate of 6.5, 9.0 and 5.4 percent respectively. The rates are below WHO emergency levels of 15 percent, the rising trend is worrisome. Dietary diversity is equally poor among populations in the cluster with majority of households consuming only 1-2 meals per day compared to the normal three. Further, dietary diversity is poor with meals mainly composed of cereals and pulses.

Education

The re-introduction of school meals programmes especially in public primary schools has led to above normal enrolment of pupils in primary and secondary schools across the cluster. Additionally, attendance rates in primary schools are above normal and average 84 percent. However, transition rates in primary and secondary schools are still low averaging 48 and 65 percent respectively. High drop-out rates and low transition levels are attributed to early marriages, teenage pregnancies, negative attitude towards girl-child education and search for casual labor.

Market performance

Markets are currently the main sources of food commodities contributing to 62 percent of maize consumed at household level. Food prices of staples have remained high due to a combination of factors including, lower than normal cross border imports from Tanzania due to prevailing export bans in the country; and wildlife menace in the mixed farming and irrigated areas of Taveta which resulted into extensive crop damages. Additionally, poor infrastructure constrains food supply in remote areas of the cluster leading to high transport costs which are inevitably transferred to the final consumers.

Overall retail prices of maize are significantly higher than normal by over 80 percent. See

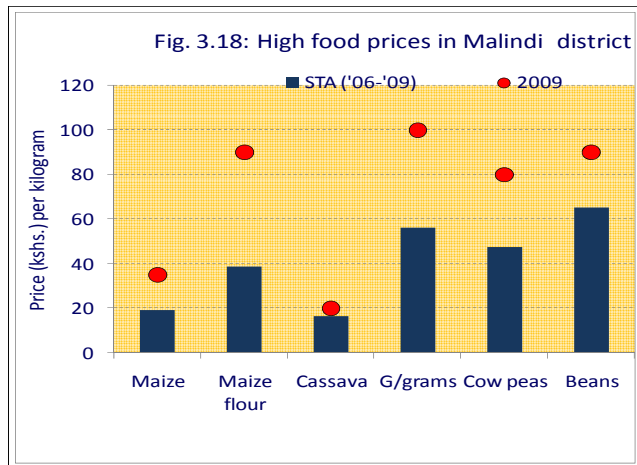


figure 3.18. The highest increase of 110 percent is reported in Lamu while the lowest increase of 44 percent is reported in Kilifi district. Kwale district reports highest price of maize, Ksh 45 per kilogram while Kilifi reports the lowest price of Ksh 36.

Average prices of goat are higher than normal in Kilifi, 16 percent and Lamu, 10 percent, probably as a result of low market supply. Terms of trade have deteriorated

significantly and household have to sell about four goats compared to the normal two goats in order to raise enough cash needed to purchase a 90-kilogram bag of dry maize. The terms of trade are worst in Kwale where four and a half goats are required to purchase a bag of maize. However, Lamu reports lowest deterioration of terms of trade.

Coping strategies

Main coping strategies being employed include, increased borrowing of cash and food; reduction in number and sizes of meals; dependence on social networks; involvement in casual labor and trade activities such as sale of water; migration from rural to urban areas in search of casual labor; hunting of small game and wildlife for food, especially in Kilifi; increased asset stripping; restricted consumption of food by adults to allow enhanced consumption by children; burning and selling of charcoal; sharing of relief food; and purchase of food on credit

Food security prognosis

Food security situation in mixed farming livelihood zone of Malindi near the coastal strip; cash cropping/dairy and food cropping farming livelihood zone in Kilifi; and mixed farming livelihood in Lamu is expected to improve in the next six months as a result of improved harvest projections. In marginal mixed farming and ranching zones of Kilifi; and livestock livelihood zones of Kilifi, Kwale, and Taita Taveta, food security is expected to worsen in the next six months. The food security situation in affected areas is expected to improve after the 2009 short rains season.

Ongoing Interventions

The cumulative negative effects of poor rains over the previous three seasons have been considerably cushioned by on going interventions across all sectors. Whereas these interventions have been critical in alleviating the status of food insecurity for households

within the cluster much more still needs to be done to address underlying causes of food insecurity in the region.

Recommended non-food interventions

While ongoing interventions have been key in cushioning households from extreme food insecurity. Additional interventions are necessary to consolidate gains made and enhance resilience of households. See annex 1.

3.2.6 Post Election Crisis Areas

The assessed Post Election Violence affected areas include Nakuru, Trans Nzoia and Uasin Gishu districts with about 100,000 Internally Displaced Persons (IDPs) in transit camps close to their farms. Poor performance of the rains and high food commodity prices has combined to worsen the food security situation of the IDPs. Additional factors that have affected food security include failure to plant in the preceding year; negligible household food stocks; unavailability of good quality seed for the short duration crop and long distances between farms and transit camps of up to 4 kilometers.

The food security situation of households in Uasin Gishu and Nakuru districts improved slightly following the harvest of short rain potatoes and beans supplemented with relief distributions from World Food Programme (WFP) and Ministry of State for Special Programmes (MOSSP) under the Emergency Operation (EMOP). In Trans-Nzoia, the food security situation remained generally stable due to above normal short rains that supported production of short duration crops. Among those families that were displaced, resilience remained poor in all the districts.

Majority of the former IDPs put all their land under crop, though use of DAP fertilizer during planting was sub-optimal ranging from average of five percent in Uasin Gishu to 50 percent in Nakuru.

Whereas the area has functional market systems with most desired food commodities available, the high cost of commodities coupled with low purchasing power keeps these commodities out of reach to the vulnerable groups.

The loss of livestock during the violence and the lack of grazing space in transit camps has acted as a major constraint to dairy farming, doubling the price of dairy animals and local poultry since the violence occurred. The movement of animals due to displacement has increased incidences of contagious diseases such as FMD, Anthrax, Black Quarter in livestock and Newcastle in poultry.

Shelter is major constraint since the tents in the IDP and transit camps in Uasin Gishu and Nakuru are worn out forcing households to crowd in single tents. In general, the hope for benefiting from the resettlement fund from MoSSP is still discouraging some people in transit camps from relocating to their farms.

Peace and reconciliation has improved in all the three districts. In Uasin Gishu, there is complete return to peaceful co-existence. In Trans-Nzoia, there are still pockets of cattle rustling in upper parts of Cherangany and Kwanza, areas neighbouring West Pokot and Marakwet. In greater Nakuru, there are some cases of tension between communities, but incidences of attacks are rare and far apart if any.

A number of coping strategies have evolved, which among others include: reduction in the number and size of meals per day, restriction of consumption of adults to allow more for

children, sharing of available food and shelter among all members of households, consumption of seed stock, increased absenteeism of children from schools to assist in search for food, engaging in casual labour, remittance from relatives and friends, borrowing from non-Post Election Violence affected neighbours to supplement their needs (food and dairy animals), and utilizing part of the money given for resettlement.

4.0 Recommendations

The following recommendations outline the priority interventions by sector for the period September 2009 to February 2010.

4.1 Agriculture Sector

KFSSG's 2009 long rains assessment identify poor land use due to inappropriate farming methods, low agricultural diversification and low investments in non-rain fed agriculture, as major factors contributing to food insecurity. Furthermore, widespread environmental degradation is identified as an underlying cause of food insecurity in most agriculture based livelihoods. As a result, unacceptably high opportunity costs are incurred both at community and household level. Significant contribution of agriculture to ensuring food security is contingent on exploiting available opportunities and deliberate implementation of appropriate strategies including recommended immediate, medium and long term interventions. See annex 1.

4.2 Livestock Sector

Inadequate implementation of medium and long term recommendations made in previous assessments continues to weaken the resilience of households when shock episodes occur. KFSSG's 2009 long rains assessments underscores the link between current food insecurity and the adverse effects of the poor rains on livestock production. Consequently, immediate interventions that aim at cushioning households from high opportunity costs associated with loss of livestock while at the same time addressing acute food insecurity is prerequisite. Additionally, there is need to support recovery when the situation improves, so as to ensure sustainable livestock based livelihood strategies and strengthen capabilities. These outcomes can only be achieved through the implementation of recommended sectoral interventions aimed at sustainable livestock production as shown in annex 1.

4.3 Water Sector

Due to the drying up of up-to 90 percent of water sources many households find themselves very far from alternative sources and there is a need to truck water to them. There is need to increase the number of water bowsers and to repair those that are available but not in use in the worst affected districts. Fuel subsidy is necessary to run boreholes as communities' ability to pay for water has been badly eroded by the drought and most resources are used to buy food. The need to immediately de-silt pans and dams is necessary so as to tap as much water as possible during the expected short rains from October. Repair of water sources will also avail more water to the needy communities. These urgent intervention measures are necessary to avoid deaths and outbreak of diseases. See annex 1.

4.4 Health and Nutrition Sector

The current health and nutrition status of the vulnerable groups in the ASAL districts is precarious with pastoral livelihoods reporting critical rates of acute malnutrition in children (GAM >20%.) which are above WHO emergency threshold of 15 percent. In addition, levels of acute malnutrition are deteriorating and serious (GAM > 10%.) in districts that have traditionally not been significantly affected in southeastern marginal and agro pastoral areas (e.g. Kitui and Kajiado). Also, the trend in proportion of children at risk of malnutrition consistently a deteriorating situation in all ASAL districts with the current number twice compared to long term average. It is estimated that over 242, 000

children under five years are moderately malnourished and 39,000 are severely malnourished and consequently, have three and nine times more chances of dying (respectively) if appropriate interventions are not implemented. Moreover, malnourished children are an additional burden to the caregivers who cannot meet their basic needs owing to poor household food security. Disease outbreaks, especially in pastoral areas, attributed to poor hygiene as well as poor health seeking behavior have compounded the situation. In order to address the above issues a multifaceted approach need to be put in place to tackle both immediate and underlying causes of high rates of child malnutrition and associated mortality.

Medium to long term interventions

In addition to the short term interventions, continuous nutrition education of communities on good practices such as infant and young child nutrition, promotion of growth monitoring, good hygiene and sanitation practices etc will require special attention as they directly contribute to diseases and malnutrition and consequently remain a great threat to food security. Diseases related to poor environmental sanitation and hygiene includes intestinal worms, cholera and skin conditions.

Efforts towards scaling up of vitamin A supplementation and immunization coverage need to continue across the country and reach universal coverage. Linkage with agriculture sector will equally be important to promote best farming practices, improve food production and household dietary diversity. Finally, a firm commitment from the relevant Ministry is urgently required to provide basic supplies, especially anti-malarial drugs and therapeutic foods, and increase level of staffing to all rural health facilities to ensure quality and up to scale delivery of critical health and nutrition services. Strengthening disease and nutrition surveillance will also be required for close monitoring and timely interventions. See details in annex 1.

4.5 Education Sector

KFSSG's 2009 long rains assessments highlights the impact of current food security on education sector, noting that continued disruption of schooling contribute to long term erosion of human capital in worst affected areas and lead to a vicious cycle of poverty and hunger. In most pastoral livelihoods, parents have migrated with their children in search of pasture and water for livestock, leading to 10-20 percent primary school drop out.

The assessments identified instances where up to 20 percent of under age children enrolled in Early Child Development (ECD) mainly because of school meals program. Further, cases of drop outs, averaging over 30 percent were observed where food meant for school meals was exhausted. Consequently, implementation of both short and long term education sector interventions is necessary to ensure the development of human capital critical to escaping the vicious cycle of food insecurity and poverty. Some of these interventions are shown in annex I:

Medium to Long Term Interventions

The Education sector recommends interventions including provision of sanitary towels in primary schools; expanded school meals programme and homegrown, construction of classrooms and toilets, advocacy campaigns against child labour and early marriages, provision of water tanks for roof catchments/rain water harvesting, support grant towards the most vulnerable children and water trucking and rehabilitation of shallow wells at a cost of Kshs. 5 billion. See annex 1.

4.6 Food Sector

Food assistance will be required for the next six months to fill the gap in areas where terms of trade and loss of incomes and own production have made it impossible for vulnerable poor populations to access the minimum food required until end of February 2010. Total amount required is an estimated 398,000 MT of assorted food commodities valued at US\$ 353 million. The approximate tonnage and cost is based on an increased ration size of 75 and 100 percent of 2,100 kilocalories/person/day in the arid and semi arid districts respectively. Due to prevailing high malnutrition rates and very low dietary diversity and poor food consumption patterns, supplementary feeding needs have been included. See annex 1 indicating recommended beneficiary numbers by district.

5.0 Conclusions

The country has experienced another season of failed rains leading to continued food insecurity. The situation is further aggravated by compounding factors that have persisted including, high food prices, increasing conflicts, livestock diseases, deterioration of terms of trade leading to low purchasing power and high malnutrition. The situation is not expected to improve until February 2010 contingent on favourable short rains and implementation of the proposed multi-sectoral interventions.

6.0 Annexes

6.1 Annex 1 Proposed sectoral interventions

Agriculture sector

	Intervention	District	Cost (Kshs)	Available (Kshs)	Gap (Kshs)
1.	Availing certified seeds (relief) for drought tolerant crops	West Pokot, Mwingi, Machakos, Tharaka, Taita Taveta, Moyale, Meru North, Mbeere, Marsabit, Mandera, Malindi, Laikipia, Kitui, Kilifi, Kajiado, Isiolo, Ijara, Garissa, Baringo, Kwale	200M	-	200M
2.	Promote production of drought tolerant crops	Lamu, Machakos, Kitui, Kilifi, Isiolo, Garissa, Tana River, kwale, Mbeere, Makueni	100M	58M	42M
3.	Water harvesting & expansion of irrigation infrastructure for irrigated agriculture.	Wajir, Machakos, Mwingi, Makueni, Taita Taveta, Turkana, Meru North, Mandera, Kilifi, Kajiado, Isiolo, Tana River	150M	-	150M
4.	Construction of soil and water conservation structures	Machakos, Mwingi, Tharaka, Meru North, Mbeere, Kilifi	100M	-	100M
5.	Seed bulking of drought tolerant crops	Tharaka, Mbeere, Narok	50M	-	50M
6.	Promotion of high value crops under irrigation	Tharaka, Mbeere	30M	-	30M
7.	Provision of subsidized farm inputs	All districts	500M	-	500M
Sub Total			1.13B	58M	1.07B
MEDIUM AND LONG TERM INTERVENTIONS					
1.	Water harvesting and expansion of irrigation infrastructure	Wajir, Mwingi, Machakos, Makueni, Taita Taveta, Turkana, Meru North, Mandera, Kilifi, Kajiado, Isiolo, Tana River	450M	-	450M
2.	Promotion of Agro forestry activities	All districts	270M	-	270M
3.	Construction of cereals and Pulses depot	Tharaka	40M	-	40M
4.	Intensification of extension services	All districts	270M	-	270M
5.	Promotion of conservation agriculture	Meru North, Tharaka, Mbeere	40M	-	40M
6.	Promotion of value addition	All districts	270M	-	270M
7.	Seed bulking of drought tolerant crops	Narok, Tharaka, Mbeere	30M	-	30M
8.	Promotion of emerging crops	All districts	135M	-	135M
Sub Total			1.50B	-	1.50B
GRAND TOTAL			2.63B	58M	2.57B

Livestock Sector

Immediate Interventions					
	Interventions	District	Cost (Kshs)	Available (Kshs)	Gaps (Kshs)
1	Vaccinations, deworming and disease surveillance	Narok, Moyale, Marsabit, Turkana, Samburu, Garissa, Wajir, Ijara, Tharaka, Laikipia, Meru North, Taita Taveta, Malindi, Tana River, Mbeere, West Pokot, Mandera	1.2B	200M	1B
2	Feeds Supplements	Narok, Moyale, Marsabit, Turkana, Samburu, Garissa, Wajir, Ijara, Meru North, Kajiado, Kitui, Machakos, Mandera, West Pokot	2.7B	400M	2.3B
3	Livestock off-take	Narok, Moyale, Marsabit, Samburu, Garissa, Wajir, Meru North, Kajiado, Kitui, Machakos, Mandera, Laikipia, Ijara	3.7B	1.2B	2.46B
Sub Total			7.6B	1.8B	5.56B
Medium to Long term intervention					
1	Promotion of bee keeping	West Pokot, Mandera, Baringo, Turkana, Kitui, Samburu	40M	0	40M
2	Rangeland rehabilitation	Turkana, Samburu, Kajiado, Kitui, Garissa, Baringo, Makueni, Mwingi, Wajir, Moyale, West Pokot, Marsabit, Turkana, West Pokot, Laikipia, Mandera	500M	400M	100M
Sub Total			540M	400M	140M
GRAND TOTAL			8.1B	2.2B	5.7B

Water Sector

Immediate Interventions			
	Interventions	Districts	Cost (Kshs.)
1.	Purchase of water bowsers	Marsabit, Machakos, Mandera, Samburu, Kajiado, Narok, Isiolo	133M
2.	Repair of water bowser	Marsabit, Moyale, Garissa, Mandera, Wajir	9.5M
3.	Provision of gensets and other equipment	Marsabit, Baringo, Samburu, Kajiado, Garissa, Isiolo, Mandera, Wajir, Machakos, Makueni	50.5M
4.	Surveys, drilling and equipping of Boreholes	Marsabit, Moyale, Samburu, Wajir, Malindi, Tharaka	62.1M
5.	Provision of fuel subsidy to 34no. Boreholes	Marsabit, Moyale, Samburu, Kajiado, Garissa, Isiolo, Mandera, Wajir, Kitui, Makueni	60.4M
6.	Water trucking to schools and communities	Marsabit, Moyale, Samburu, Garissa, Ijara, Kajiado, Mandera, Tana River, Wajir, Kilifi, Kwale, Taita Taveta, Meru North, Mwingi, Makueni	78.3M
7.	Construction/de-silting of water pans, sand dams	Moyale, Kajiado, Narok, Mandera, Garissa, Ijara, Kilifi, Kwale, Mwingi, Kitui, Tharaka	102.5M
8.	Construction of latrines and hygiene promotion	Moyale, Narok, Lamu, Mwingi	8.7M
9.	Household distribution of water treatment tablets and periodic treatment of water sources	Moyale, Garissa, Ijara, Mandera, Lamu	16.6M
10.	Rehabilitation of water sources	Turkana, Narok, West Pokot, Kwale, Malindi, Mwingi	23.7M

11.	Training of Water Management Committees	Turkana, Ijara, Tana River, Makueni	2.7M
12.	Provision of storage tanks	Kajiado, Tana River, Kwale, Taita Taveta	18.8M
13.	Conversion of borehole pumping systems to wind vanes and solar panels	Kajiado	20M
14.	Promotion of rainwater harvesting	Narok, Mwingi, Tharaka	4.8M
15.	Pipeline extension	Narok	3.5M
16.	Construction/rehabilitation of irrigation schemes	Narok, Tharaka	52M
17.	Rehabilitate shallow wells	Tana River, Lamu, Meru North, Makueni	6.3M
	Sub Total		653M
Medium to Long Term Interventions			
1.	Provision of gensets and other equipment	Kajiado, Makueni	7.8M
2.	Surveys, drilling and equipping of Boreholes	Samburu, Turkana, Kajiado, Ijara, Mandera, Tana River	176.2M
3.	Construction/de-silting of water pans, sand dams	Samburu, Baringo, Narok, West Pokot, Ijara, Tana River, Kitui	72M
4.	Construction of latrines and hygiene promotion	Kilifi	5M
5.	Rehabilitation of water sources	Baringo, Narok, Ijara, Meru North, Machakos, Makueni	108.2M
6.	Training of Water Management Committees	Taita Taveta, Meru North	880,000
7.	Provision of storage tanks	Malindi, Meru North, Makueni	6.6M
8.	Promotion of rainwater harvesting	Mandera, Lamu, Kitui	8.2M
9.	Pipeline extension	Lamu, Meru North, Makueni	16.7M
10.	Construction/rehabilitation of irrigation schemes	Narok, Kilifi	70M
11.	Rehabilitate shallow wells	Mandera	3M
	Sub Total		475M
	GRAND TOTAL		1.119B

Health and Nutrition Sector

Immediate Interventions					
	Intervention	District	Cost (Kshs)	Available (Kshs)	Gap (Kshs)
1.	Scale-up/establish integrated management of moderate and severe acute malnutrition through technical support and provision of essential food and non food nutrition supplies	Mandera, Turkana, Marsabit, Tana River, Moyale, Garissa, Isiolo, Kwale, Kinango, West Pokot, East Pokot, Baringo, Malindi, Kilifi, Lamu, Makueni, Mwingi, Kitui, Kajiado, Machakos, Taita Taveta, Samburu, Ijara & Wajir.	350M	42M	308M
	Capacity strengthening through training on integrated management of acute malnutrition and provision of health personnel to under staffed facilities.	West Pokot, Baringo, Laikipia and Kajiado, Kitui, Mwingi, Makueni, Taita Taveta, Kwale, Malindi and Machakos	75M	-	75M
2.	Strengthen disease and nutrition surveillance and rapid response to disease outbreaks.	Turkana, Samburu, Garissa, Wajir, Mandera, Marsabit, Moyale, Isiolo, West Pokot, Baringo	17.5M	-	17.5M
	Support and protect infant and young child feeding practices through training, adequate counseling and education at health facility and community level	Mandera, Turkana, Marsabit, Tana River, Moyale, Garissa, Isiolo, Kwale, Kinango, West Pokot, East Pokot, Baringo, Malindi, Kilifi, Lamu, Makueni, Mwingi, Kitui, Kajiado, Machakos, Taita Taveta, Samburu, Ijara & Wajir.	20M	-	20M
3.	Provision of immunization services for under fives against measles, polio.	Turkana, Samburu, Marsabit	21M	-	21M
4.	Provision and stocking of essential drugs to dispensaries and hospitals	All districts	40M	-	40M
5.	Scale up Micronutrient supplementation of vitamin A, multiple micronutrients, iron and folic acid for children and mothers, Zinc and ORS	All districts	22.6M	-	22.6M
6.	Deworming of school going children,	All districts	30M	-	30M
7.	Procurement and distribution of Long Lasting Insecticide Treated Nets (LLITNS)	All districts	10.5M	-	10.5M
GRAND TOTAL			587M	42M	545M

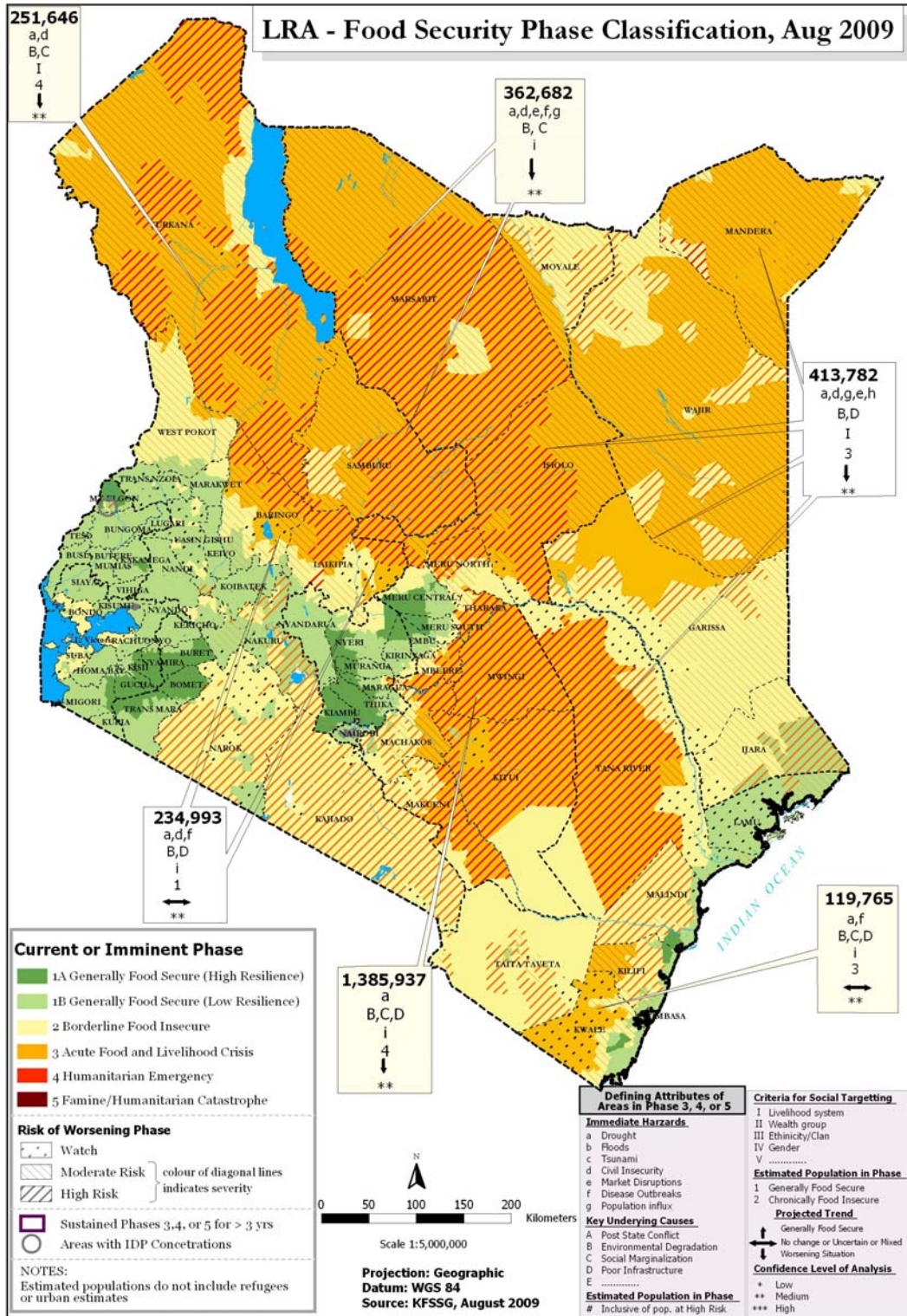
Education Sector

	Intervention	District	Cost (Kshs)
1	Provision of sanitary towels in primary schools.	Mandera, Moyale, Samburu, Kajiado, Makueni, Malindi, Mbeere, Kwale, Wajir, Garissa,	115.2M
2.	School meals programme (Home grown), excluding targeted ones under GOK/WFP regular programmes)	Kajiado, Kaloleni, Taita,Taveta, Mwingi Makueni, ,Machakos Malindi, Mbeere, Kitui Laikipia, Moyale, Lamu, Marsabit, West Pokot, Mutomo, Kangundo, Mbooni, Kilifi, Kinango, Kwale, Tharaka,	955M
3.	Infrastructure improvement (Construction of classrooms and Toilets/renovation of existing ones)-ksh.500,000 per classroom/ksh.180,000 per 5 cubicle toilets)	Garissa, Kajiado, Makueni, Malindi, Mbeere, Moyale, Samburu, Kitui, Laikipia, Isiolo, Mandera, Moyale, Samburu, Wajir, Garissa, Lamu, Marsabit, Turkana, West Pokot, Tana River, Tharaka, Trans Nzoia	3.2B
4.	Advocacy campaigns against child labour and early marriages	Ijara, Kajiado, Lamu, Makueni, Malindi, Mandera, Moyale, Tana River, West Pokot, Lamu, Taita Taveta, Laikipia,	102M
5.	Provision of water tanks for roof catchment/ Rain water harvesting	Lamu, Marsabit, Mbeere, Turkana, West Pokot, Tana River, Tharaka, Trans Nzoia, Machakos, Moyale, Tharaka, Kitui	406.7M
6.	Support grant towards the most vulnerable children	Marsabit, Moyale, Tharaka, Kitui, Lamu, , Mbeere, Turkana, West Pokot, Tana River, Tharaka, Machakos, Moyale, Tharaka, Kitui.	776M
7.	Water trucking /shallow wells rehabilitation	Uasin Gishu, Kilifi, Marsabit, Moyale, Turkana, Machakos, Ijara	489M
	Grand Total		5 B

Food Sector

District	Population	March – August 2009		September 2009 – February 2010	
		% in need	*No. of people requiring food assistance	% in need	*No. of people requiring food assistance
Baringo	318,713	28%	88,000	37%	118,000
Garissa	335,388	32%	106,000	45%	150,000
Ijara	87,711	30%	27,000	39%	34,000
Isiolo	129,055	33%	43,000	55%	71,000
Kajiado	568,554	15%	83,000	32%	184,000
Kilifi	678,702	10%	69,000	10%	65,000
Kitui	592,462	44%	261,000	50%	297,000
Koibatek	184,114	0%	0	25%	46,000
Kwale	591,361	18%	107,000	25%	146,000
Laikipia	429,338	16%	68,000	28%	118,000
Machakos	1,089,193	10%	106,000	25%	272,000
Makueni	926,893	34%	312,000	41%	378,000
Malindi	361,841	9%	32,000	8%	29,000
Mandera	330,284	37%	124,000	54%	178,000
Maragua	388,260	3%	12,000	4%	14,000
Marsabit	145,937	55%	80,000	82%	120,000
Mbeere	198,258	28%	56,000	38%	76,000
Meru North	737,326	0%	0	8%	60,000
Moyale	62,021	36%	23,000	41%	26,000
Mwingi	353,060	61%	215,000	74%	261,000
Narok	465,949	0%	0	12%	55,000
Samburu	173,299	46%	79,000	64%	112,000
Taita Taveta	268,782	28%	75,000	38%	101,000
Tana River	232,488	32%	74,000	45%	105,000
Tharaka	123,358	37%	45,000	43%	53,000
Turkana	454,100	63%	284,000	70%	316,000
Wajir	548,168	28%	156,000	55%	303,000
West Pokot	385,026	18%	69,000	28%	106,000
TOTAL	11,159,642	24%	2,600,000	34%	3,800,000

6.2 Annex 2 Integrated Phase Classification



6.3 Annex 3 Livestock migration patterns

