KENYA EMERGENCY FOOD NEEDS ASSESSMENT

1.0 EXECUTIVE SUMMARY

A detailed Food needs assessments for the country was conducted at the request of Kenya Food Security Meeting (KFSM) following reports of failure of the long rains and subsequent threat to food security in the district. Affected districts have made requests for food aid in anticipation of a major food deficit, which followed the failure of the 2003 short rains and the erratic long rains.

KFSM tasked the Kenya Food Security Steering Group (KFSSG), a multi-agency team, comprising representatives from GOK, UN, and NGOs to undertake the assessment. The team was to identify recent hazards that had affected food security in the country, assess the impact of the hazards, and recommend possible interventions.

The team reviewed and collated data from regular and ad hoc reports to understand the food insecurity situation in the country. The team reviewed the following reports; ALRMP monthly district reports, Ministry of Agriculture Monthly reports, FEWSNET, GoK and WFP monthly updates, meteorological reports, assessment reports commissioned by various District Steering Groups (DSGs), and KFSM commissioned short rains assessments (carried out in February/March 2004). Information from these reports was supplemented by another KFSM commissioned Long rains assessments conducted in June 2004. Extrapolations, using Population data, Livelihood zone data and Maps, were done for areas where information was weak or missing.

The Assessments revealed that a large proportion of the country is facing severe hunger due to the following factors:

a) The poor performance of the short rains of 2003/2004, and the Long rains of 2004. In most parts of the country these rains were much below normal in quantity and was also poorly distributed. Farmers experienced near total to total crop failures, and poor pasture and browse in most parts of Coast, Eastern, North Eastern, and Rift Valley Provinces.

b) Loss of food stocks due to aflatoxin contamination of grains. Approximately 120 deaths have been reported in the marginal agricultural areas of Eastern Province. The GoK will have to destroy and replace contaminated grain at all levels to avoid further mortalities.

c) Damage of crops by wild life. Wild animals were coming out of the game parks (due to shortage of water and pasture), and damaging crops.

d) Increase of grain prices and decline of prices for livestock. Grain prices had almost doubled in most parts of the country while livestock prices have declined significantly. The terms of trade are against grain consumers.

Some hungry poor have begun evoking coping mechanisms that could harm their future food security. Some of the negative coping mechanisms identified were: massive burning of charcoal which lead to environmental degradation, massive sale of breeding stocks (cattle and shoats) to purchase food, children skipping classes to assist parents in searching for food, and skipping meals.

The assessments also revealed that some positive coping mechanisms were under use. These were; increased fishing in Coast and Turkana areas, and increased remittances from relatives.

The team recommended the following:
1) Immediate food aid assistance for 1,778,678 hungry poor who have started evoking negative coping mechanisms. These people are in the rural areas of Coast, Eastern, North Eastern, and Rift valley provinces. They should be assisted up to December 2004. This recommendation assumes that the one million school children receiving school lunches through School Feeding Programme will continue at full resource levels. An additional 500,000 school children will require to be provided with school lunch under the Expanded School Feeding Programme during the same period. It also assumes that the October-December short rains will be normal and families will begin consuming green crops in January 2005.

2) If the short rains perform poorly an additional one million people will also require food aid assistance and the additional beneficiaries will be from districts that are not currently targeted and increased numbers from those targeted under 1) above. This brings to a total of around 2.8 million in normal emergency food aid and 1.5 Million under school feeding programme.

3) The performance of the short rains should be closely monitored.

4) The following needs were also identified and more information and analysis is required.
   • Supplementary feeding of under fives, lactating and pregnant mothers
   • Seeds to plant during the short rains. Farmers lost a lot of their seeds during the crop failures.
   • Water tankering in some parts of the country
   • Water purification tablets. Water quality will deteriorate as the water pans continue to dry out.
   • Rehabilitation and construction of boreholes and dams.
   • Control of crop destruction by wildlife.

Below are summaries of the following reports:
   i) A summary of Food security Situation in Eastern Province (Marginal Agriculture)
   ii) A summary of Food Security Situation in Coast Province
   iii) Detailed Desk study of the Pastoral Livelihood Zones
2.0 Eastern Province (Marginal Agriculture) Food Security Summary

2.1 Introduction
The Rapid Long Rains Assessments was a coordinated inter-agency effort under the Kenya Food Security Steering Group and was a follow up to the February 2004 Short Rains Assessments. The fieldwork was undertaken during the period 20th to 25th June 2004. The overall objective of the assessment was to establish the impact of the poor long rains season in the marginal agricultural areas of Eastern Province, quantify the scale of the problem and to propose the appropriate interventions in a bid to averting a food security crisis.

2.2 Background
The marginal crop producing districts of Eastern Province consists of Kitui, Machakos, Makueni, Mwingi, Tharaka and Mbeere districts. The province also covers pastoral and agro-pastoral areas of Marsabit, Moyale and Isiolo districts as well as mixed farming and cash cropping areas of Meru Central, South and North.

The marginal and agro-pastoral areas are inhabited by some of the poorest communities in the country. According to the Economic Survey, 2004 (Central Bureau of Statistics, Ministry of Planning and National Development), in Eastern Province, 31 out of 36 (86.1 per cent) of the constituencies/divisions have more than 50 per cent of the populations living below the poverty line.

The marginal agriculture districts i.e. Kitui, Machakos, Makueni, Mwingi, Tharaka and Mbeere are semi-arid and a drought prone. The lowland areas of these districts have experienced successive poor seasons and the impact of the 1999 – 2000 drought had far reaching economic implications to most rural households in the District. Good short rains of 2002 marked the end of the last severe drought, which resulted in a near normal 2002/2003 harvest. The districts have had subsequent poor seasons, which have led to deteriorating food security prospects at the household level. The vulnerability status of Eastern Province’s households is principally attributed to high post-harvest losses, between 2002-2004.

2.3 Risk/Hazards and Effects on Food Security
The long rains were characterized by a late onset, poor distribution and early cessation in the marginal agriculture areas. The March – May rains began in early April and continued for one and a half weeks. These districts thereafter continued to experience long dry spell characterized by hot and dry weather conditions. During the month of May, Very little rainfall occurred and in most areas the season effectively ended in early May, instead of during the first week of June. In general these districts received far much below expected seasonal averages.

The long rains season in the marginal agriculture areas is a minor season, however, a fair season would normally act as a bridge to the more important short-rains season. The poor
The 2004 long-rains season is compounded by substantial post-harvest losses. The above graph illustrates rainfall estimates for Kitui district during the poor long rains season compared to average.

In Mwingi district, conflict over resources (Water and pasture) is brewing at the Eastern part of the district where hundreds of pastoralists from a neighbouring district are concentrated with their herds in search of water and pastures. As the dry spell continues tension is expected to heighten. A similar situation exists in areas of Kitui that border Tana River district. Human/Wildlife conflict also exists in the Chyulu game reserve and Tsavo National park in Makueni district and areas in Kitui bordering the Tsavo. Animals from these parks usually destroy crops and compete over declining forage, browse and water sources.

The food insecurity situation in Makueni and Kitui districts has been compounded by a very high incidence of aflatoxin contamination of maize stocks. Aflatoxin is highly toxic and most deaths have been reported in the two districts with lower infection rates reported in Mbeere and Embu. A large proportion of the maize stocks will have to be destroyed and replaced.

### 2.4 Impact of the Season on Food Security

**Crop Production**

The poorly distributed and erratic rainfall during the long rains season resulted in poor germination and impaired crop growth due to moisture stress. The dry spell witnessed from mid April had occurred at the most important stage of crop development. Most of the major crops wilted completely and dried. Even the most drought tolerant crops such as sorghum, millet, Cowpeas and Pigeon peas have wilted and dried. The long rains favours growing of drought tolerant crops such as sorghum, millet, cowpeas and pigeon peas. Over the recent past, feeding habits of the local communities in the marginal agriculture districts have changed and currently more emphasis is given to growing of maize and beans at the expense of drought tolerant crops such as Sorghum and Millet. Approximately 80% to near total crop failure is expected in the worst hit divisions of these districts. Most households have depleted their short rains crop and are relying heavily on market exchanges and other coping strategies to meet their household food requirements. The situation is likely to remain the same until next harvest (Feb-March 2005) however this is dependent on the performance of the October – December short rains. Rapid sale of the short-rains crop (at low prices), in order to avoid destruction by the Larger Grain Borer, further compromised the food security of a significant proportion of the households who normally buy back the grain, three months later, often at triple the price.

During the short and long rains assessments that covered parts of Eastern Province, the following agro-pastoral divisions in these districts were identified as the worst affected:

- **Kitui:** Mutomo, Mutitu, Mwitika, Mutha, Ikutha and Lower Yatta
- **Mwingi:** Tseikuru, Kyuso, Ngomeni, Nguni and Nuu
- **Mbeere:** Mwea and Evurore divisions, parts of Gachoka and Siakago
- **Makueni:** Kalawa, Kathonzweni, Nguu, Makindu, Kibwezi and Mtito-Andei

**Aflatoxin Contamination**

While mortalities and cases of aflatoxicosis have declined, significant quantities of contaminated maize are still held by traders and households. Most of the mortalities were reported in Makueni and Kitui Districts, the epicenter of the contamination, with lower infection rates in Mbeere, Thika and Embu Districts. The United States Centre for Disease Control (CDC) has reported that 121 deaths have occurred and concerted efforts are being
made to destroy and replace contaminated grain at all levels, to avoid further mortalities. The CDC in collaboration with the Ministry of Health has carried out rigorous testing of collected samples and found significant levels of aflatoxin contamination at the households, in markets and at some NCPB depots, in the worst affected areas. Subsequently, the CDC, the MoH, the provincial administration and the MoA are conducting extensive awareness campaigns to enhance detection among households and traders. The GoK has set aside 1,800 MT of maize per month for the next three months, to replace contaminated grain. However, ensuring the collection of all contaminated grain in a liberalized market is difficult and the threat of re-contamination is real.

Livestock Production
Livestock body condition in most districts was reported as fair to good. However, the poor performance of the long rains resulted in deterioration of pasture, browse and water availability and accessibility. Drying of temporary water sources, early migration of livestock to distant grazing areas and crowding of livestock and humans around major watering sources have been witnessed across the agro-pastoral livelihood zones of the marginal agriculture districts. Average distance traveled to watering sources and time spent accessing these key resource have increased from an average of 1-3 hours under normal conditions to 4-8 hours a day. Due to the above factors, livestock conditions are expected to deteriorate in coming months.

Market Prices
Prices of major cereals and pulses have continued to increase in comparison to previous months. This is due to increased demand as supply continues to diminish, since majority of the households have depleted their stocks. The price of a 90-kg bag of maize that normally retails at Ksh. 20 was Ksh. 1,440 in June. Food prices are expected to continue rising as households continue to deplete their food stocks and become more dependent on market exchanges to meet their food requirements. Livestock prices showed a downward trend as more animals were presented for sale to access income to purchase food and other basic requirements. For instance, in Kitui district livestock prices are currently 40% below normal (from an average of Ksh. 9,000/= to Ksh. 5,000/= for a mature bull). Prices are expected to decline even further due to the worsening food security situation.

2.5 Coping Mechanisms
The main food sources in the marginal agricultural districts are from food crops grown in the farms, livestock products and purchase of food from the market. The main crops grown are maize, beans, cowpeas, pigeon peas, green grams, millet and sorghum. Green grams are grown as a cash crop and are rarely consumed as most of it is sold for income. Main income sources include casual labour, waged labour, sale of crops and livestock, charcoal burning, remittances, petty trade and business. A larger proportion of the population is classified as poor and mostly depends on casual labour, charcoal burning and crop sales to cater for their other non food basic needs and school fees. Coping strategies includes sale of charcoal, firewood, sale of sand, ballast crushing and labour migration. Most households have begun applying the commonly used coping mechanisms of searching for casual labour, charcoal burning, limited sales of livestock and engaging in petty trade to purchase food from the market. Incidences of charcoal burning and firewood selling have increased but are fetching low prices, as households complement their disposable income to meet various domestic needs including food purchases. Casual labour rates are fluctuating and the number of household members seeking unskilled labour is increasing but the number of those who are engaged is declining. This is attributed to the drastic fall in agricultural activities due to
unfavorable weather conditions. Migration in search of labour is becoming more pronounced as household members move to neighbouring districts to search for employment. The food security situation is envisaged to be more precarious in the month of July/August and this is when most households are expected to begin applying more severe coping mechanisms such as missing meals, desperate sale of livestock, feeding on wild fruits, Separation of families and dropping children out of school.

2.6 Food Aid Needs and Interventions

Government officials at district level and community members interviewed during the assessments expressed a preference for FFW over free food distribution wherever this is feasible and adults are strong enough to work.

The following table summarizes beneficiary numbers and food aid needs for the district by division for six months. The population of people needing assistance may increase as the food security situation continues to deteriorate. The following table summarizes beneficiary numbers.

Table 1

<table>
<thead>
<tr>
<th>District</th>
<th>Division</th>
<th>2004 population</th>
<th>Affected Pop.</th>
<th>% of total</th>
<th>% Of pop. Requiring food aid</th>
<th>Population requiring food aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitui</td>
<td>Central</td>
<td>138,169</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td></td>
<td>Chuluni</td>
<td>80,774</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td></td>
<td>Mutitu</td>
<td>26,644</td>
<td>53.3</td>
<td>50</td>
<td>13,322</td>
<td>13,322</td>
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<td></td>
<td>Mutomo</td>
<td>51,123</td>
<td>73.3</td>
<td>75</td>
<td>38,342</td>
<td>38,342</td>
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<tr>
<td></td>
<td>Yatta</td>
<td>46,501</td>
<td>53.3</td>
<td>50</td>
<td>23,251</td>
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<td></td>
<td>Mutonguni</td>
<td>65,764</td>
<td>16.7</td>
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<td>0</td>
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<td></td>
<td>Matinyani</td>
<td>45,764</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td></td>
<td>Mwitika</td>
<td>28,697</td>
<td>56.7</td>
<td>50</td>
<td>14,349</td>
<td>14,349</td>
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<tr>
<td></td>
<td>Mutha</td>
<td>43,704</td>
<td>73.3</td>
<td>75</td>
<td>32,778</td>
<td>32,778</td>
</tr>
<tr>
<td></td>
<td>Ikutha</td>
<td>48,537</td>
<td>90</td>
<td>75</td>
<td>36,403</td>
<td>36,403</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>575,677</strong></td>
<td><strong>27.52</strong></td>
<td><strong>158,444</strong></td>
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</tr>
<tr>
<td>Mwingi</td>
<td>Central</td>
<td>90,896</td>
<td>30</td>
<td>0</td>
<td>27,269</td>
<td>27,269</td>
</tr>
<tr>
<td></td>
<td>Migwani</td>
<td>61,809</td>
<td>30</td>
<td>18,543</td>
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<tr>
<td></td>
<td>Kyuso</td>
<td>37,224</td>
<td>37</td>
<td>13,773</td>
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<tr>
<td></td>
<td>Tseikuru</td>
<td>25,706</td>
<td>40</td>
<td>10,282</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Mumoni</td>
<td>40,849</td>
<td>35</td>
<td>14,297</td>
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<tr>
<td></td>
<td>Nguni</td>
<td>22,174</td>
<td>35</td>
<td>7,761</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Ngomeni</td>
<td>11,635</td>
<td>36</td>
<td>4,189</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nuu</td>
<td>22,970</td>
<td>36</td>
<td>8,269</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mui</td>
<td>16,741</td>
<td>35</td>
<td>6,027</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>330,000</strong></td>
<td><strong>35</strong></td>
<td><strong>110,410</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mbeere</td>
<td>Gachoka</td>
<td>66,543</td>
<td>26</td>
<td>17,541</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mwea</td>
<td>45,802</td>
<td>45</td>
<td>20,610</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Siakago</td>
<td>38,652</td>
<td>27</td>
<td>10,550</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evurore</td>
<td>41,479</td>
<td>45</td>
<td>18,666</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>192,476</strong></td>
<td><strong>35</strong></td>
<td><strong>67,367</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Makueni*</td>
<td>Total</td>
<td>868,683</td>
<td>10</td>
<td>86,864</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machakos*</td>
<td>Total</td>
<td>1,020,790</td>
<td>10</td>
<td>102,079</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tharaka*</td>
<td>Total</td>
<td>113,707</td>
<td>15</td>
<td>17,056</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Continuation and phase in of previously phased out schools under the School Feeding Programme: SFP would maintain enrolment rates and ensure that at least children received meals in school and reduce the burden on parents who will save on the cost of providing lunch.

2.7 NON–FOOD INTERVENTIONS

Provision of seeds: Most farmers depend on part of their harvests for seeds to plant during the next season. Drought resistant and high quality seeds are normally expensive and are not affordable to most households. Provision of seeds will maintain quality and enough seed stocks for households with no access to seeds.

Construction and desilting of water dams, and rehabilitation and construction of boreholes near communities to reduce distances trekked to water sources. Currently there are few water sources situated near settlements and when these dry up, households trek longer distances to alternative water points.
3.0 COAST PROVINCE FOOD SECURITY SUMMARY

3.1 INTRODUCTION
The food needs assessment was conducted at the request of KFSM. Coast province has made requests for food aid due to hunger being experienced by some families following the failure of the 2003/4 short rains and the erratic long rains of 2004. This report is based on historical data on poverty, the findings from the 2003/4 short rains assessment, and 2004 Long rains assessment. The report will focus on the main hazards experienced in the Province and their impact on food security, how the communities are coping, and the recommend interventions.

3.2 BACKGROUND INFORMATION
Coast Province is made up of seven districts; Kwale, Kilifi, Malindi, Tana River, Taita Taveta, Lamu and Mombasa. All districts except Taita Taveta has a coastal strip (Tana River has the smallest coastal line).

Coast province only started to receive significant emergency relief food in 2003. Previously it has managed to cope with food stress with minimal food aid through the WFP/MOEST implemented School Feeding Programme. Coast province (except Tana River District) was not even targeted for Emergency operation during the 1999-2002 drought that affected most parts of Kenya.

Coast province comprises two main areas; the Coastal strip and the Coast hinterland. Coastal strip enjoys more reliable rainfall, proximity to the ocean and the location of most industries, better infrastructure. Families living in this strip have more opportunities than those in the hinterland. The Livelihood Zones (LZs) in this area are mainly: Urban Fishing, Fishing and harvesting, Urban, mixed farming, cash cropping.

The hinterland comprises mainly of marginal and agro-pastoral areas of Coast province. This area receives less rainfall, which is also less reliable compared to the coastal strip. The further removed from the coast line the less the opportunities for families improve on their welfare. The main LZs in this area are: agro-pastoral, lowland farming, ranching.

Coast province is inhabited by some of the poorest communities in the country. According to the Economic Survey, 2004 (Central Bureau of Statistics, Ministry of Planning and National Development), in Coast Province 13 out of 17 (76.5 Per cent) of the constitutions/divisions have more than 50% of the populations living below poverty line. Ganze in Kilifi district is the poorest constituency in the country with up to 81.8 per cent of the populations living below the poverty line. Families living in the hinterland are easily pushed to food insecurity very vulnerable. Drought is superimposed on high levels of poverty.

3.3 RISKS & HAZARDS EXPERIENCED AND THEIR EFFECTS ON FOOD SECURITY
Drought especially in the last two years has been the main hazard that has affected the food security in Coast province. Other drought related hazards has been the decline in prices for livestock and charcoal, reduced demand for casual labor, and isolated wildlife menace in Kilifi and Taita Taveta districts. Below is a detailed analysis of the hazards and coping mechanisms.
**Poor rainfall:**
The production system in Coast Province is characterized by bi-modal rainfall patterns. The March- May long rains is the key production season. The short rains runs from October-December.

During the short and long rains assessments conducted this year, farmers and district officials have reported that the rains have remained erratic and unpredictable since 1998. Farmers have therefore not had a good crop since. An examination of rainfall figures for the period 2000-2004 (see Figures 1-4, below) seems to concur with the farmer’s assertion with both quantity and number of rainy days decreasing consistently except in 2003. However, even in 2003, the number of rainy days continued to decrease.

The long rains assessment in Kilifi, Kwale and Taita Taveta reported that the long rains were also far much below normal, started on time, showered for 2-4 days, followed by a dry spell of ranging from 1-2 months. Most crops in the hinterland had withered during the dry spell. The hinterlands experienced almost a total crop failure for the cereals that they planted. Maize is the predominant crop other than the more resilient and faster maturing sorghum, and millet

Below find some figures that illustrates that quantity and distribution of rains has been deteriorating since1998 (example from Kwale district).

**Figure 1: Annual rainfall trend by Division**

![Annual rainfall trends by division](image-url)
Figure 2: Long rains trends by Division

Figure 3: Number of rainy days by division (all year)

Figure 4: Number of rainy days in long rains season
The terms of trade are not in favor of the consumers who are generally grain buyers.  

**Grain Prices**: Grain prices have almost doubled following the poor short rains harvests. For example in Kinango division, Kwale district a 17 kg tin was going for KShs 350 compared to KShs 200 in a similar period.

**Livestock Prices**: An increase in livestock sales were reported in all the areas visited during the short and the long rains assessments. Prices of livestock had reduced considerably due to these increased sales. For example in Kwale the average price of a goat had fallen to KShs 400-1000 in June, compared to averages in normal times of KShs 1,000-1,500. Adult cows averaged KShs 4,000-10,000 compared to a normal price of KShs 7,000-10,000.

The combination of low livestock prices, increase of grain prices resulted in high levels of food insecurity.

### 3.4 COPING MECHANISMS

In normal times families in the Coast province acquire around 30 per cent only of their total food from crops (see figure 1). The rest of the food comes from purchases livestock sales, casual labor, sale of charcoal and firewood, hunting and wild foods, petty trade and remittances. Coping ability of HHs in the marginal agricultural areas has faced a continuous decline from 1998 (after El nino rains) following successive poor rain seasons. The depletion of household assets especially livestock during those poor seasons affected adversely the households’ ability to cope with future production short falls.

Below is a description on the current situation of each of these food sources.

a) **Livestock**: Sales of livestock by most families has been on the increase in the recent past. This has been necessitated by poor crop harvests and decline in other opportunities as will be discussed below. The livestock prices have been on the decline as discussed above. This reduces the purchasing power of the families.

b) **Sale of Charcoal**: Most of the families in the hinterland rely on sale of charcoal to buy food. The quantity of charcoal being sold is on the increase despite the ban by the administration on burning and sale of charcoal. The abnormal sale of charcoal was evident on the Mombasa-Nairobi road where thousands of bags were pilled at the roadside for sale. The prices for charcoal, has declined from a normal of KShs 120-140 to around KShs 80. This decline, like in the case of livestock sales, reduces the purchasing power from charcoal sales. Families without a strong member (those headed by females and elderly, and the orphans) are not able to exploit this option. Charcoal burning will lead to environmental degradation and reduced productivity in this already fragile ecology.

c) **Casual labor**: Families from the hinterland normally come to the coastal strip LZs for casual employment in the more productive farms. The rainfall has been poor and the demand for farm labor has been low in these farms. This has reduced the contribution from this source of food.

d) **Remittances**: Most families have received kinship support from members employed in the big towns. Decline in tourism in Coast province have affected food security in the sense that substantial amount of remittances comes from relatives working in the hotels and beaches.
e) **Wild Foods**: A few families were found to be consuming some wild roots as part of their diet. This is normally consumed in a small quantities and scale of consumption increases as food stress increases. Some families complained that they that started using it at a scale that is leading to Diarrhoea. Families near the forests are hunting small game (mainly Dik Diks) but in a small way since hunting are banned by the government.

f) **Relief Food**

GOK has been distributing relief food since 2003 due to successive crop failures caused by poor rains. Below is a summary of the food allocated to the districts in the first half of 2004.

| Foods allocated to the Coast province January-June 2004 |

<table>
<thead>
<tr>
<th>District</th>
<th>Cereals</th>
<th>Pulses</th>
<th>Oil (carton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilifi</td>
<td>19,653</td>
<td>3,953</td>
<td>5,239</td>
</tr>
<tr>
<td>Malindi</td>
<td>16,298</td>
<td>2,921</td>
<td>2,581</td>
</tr>
<tr>
<td>Lamu</td>
<td>7,452</td>
<td>2,921</td>
<td>496</td>
</tr>
<tr>
<td>Kwale</td>
<td>23,736</td>
<td>3,571</td>
<td>4,548</td>
</tr>
<tr>
<td>Taita Taveta</td>
<td>13,321</td>
<td>2,107</td>
<td>2,261</td>
</tr>
<tr>
<td>Tana River</td>
<td>11,102</td>
<td>1,721</td>
<td>1,658</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>91,562</td>
<td>17,194</td>
<td>16,783</td>
</tr>
</tbody>
</table>

Families have been receiving this food in form of FFW and as a school feeding (in Kwale). Targeting at community level has been ineffective. It did not go to the most needy in the community.

3.5 **FOOD NEEDS**

Families living at the coast hinterlands (Ranching, and agro-pastoral LZs) of Coast province are facing serious hunger situation. The most food insecure families are those with few livestock (0-10 shoats), out without a strong family member (headed by female, sick, elderly), limited economic activities, hand limited kinship support.

| People Requiring Food aid |

<table>
<thead>
<tr>
<th>District</th>
<th>Division</th>
<th>Highly Food Insecure</th>
<th>Adopting High-Severe Coping Mechanisms</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilifi</td>
<td>Bamba</td>
<td>5,400</td>
<td>18,400</td>
<td>23,800</td>
</tr>
<tr>
<td></td>
<td>Vitengeni</td>
<td>2,400</td>
<td>9,164</td>
<td>11,564</td>
</tr>
<tr>
<td></td>
<td>Kaloleni</td>
<td>4,000</td>
<td>9,100</td>
<td>13,100</td>
</tr>
<tr>
<td></td>
<td>Ganze</td>
<td>5,564</td>
<td>5,564</td>
<td>5,564</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>11,800</td>
<td>42,228</td>
<td>54,028</td>
</tr>
<tr>
<td>Kwale</td>
<td>Samburu</td>
<td>11,200</td>
<td>33,600</td>
<td>44,800</td>
</tr>
<tr>
<td></td>
<td>Kinango</td>
<td>18,750</td>
<td>18,750</td>
<td>18,750</td>
</tr>
<tr>
<td></td>
<td>Lunga Lunga</td>
<td>14,400</td>
<td>14,400</td>
<td>14,400</td>
</tr>
</tbody>
</table>
3.6 NON–FOOD INTERVENTIONS

i) Seeds: Many farmers lost their seeds during the repeated plantings caused by the erratic rainfall. Food production would get a boost from a distribution of seeds for maize, beans, sorghum, millet cowpeas, and green grams to plant during the short rains.

ii) Water tankering for 40,000 people in Samburu and Bamba divisions of Kwale and Kilifi districts respectively. The possibility of recharging of the water pans from showers received in June should monitored.

iii) Water treatment tablets: There is a potential that levels of water contamination will go up as the wells dry up in Samburu and Bamba divisions. Distribution of water purification tablets is recommended for 40,000 people.
4.0 PASTORAL AND AGRO PASTORAL FOOD SECURITY SUMMARY

4.1 Introduction
For the districts, which the KFSM had enough information no teams were sent to these districts to do assessment, but a team was constituted by KFSSG to go through the available records and come up with an assessment. These were mainly the districts where ALRMP operates. These districts included Mandera, Wajir, Garissa, Ijara, in North Eastern Province, Marsabit, Moyale Isiolo, Mbeere, Tharaka, Mwingi, Kitui, and Makuenei districts in Eastern Province, Turkana, West Pokot, Baringo, Samburu, Kajiado, Narok and Transmara in the Rift Valley province and Tana River in Coast province.

The team consulted all the available reports for the districts; these included mainly the district monthly drought early warning bulletins produced monthly by ALRMP, Long rains assessments done by the individual districts, FEWS-NET reports and satellite imageries provided regularly by FEWS-NET and other partners.

The districts were divided into two groups depending on the dominant livelihood of the district; these were the Pastoral and Agro-pastoral districts.

4.2 PASTORAL
Pastoral areas are mainly located in the entire of the North Eastern Province, Tana River district of the Coast province, Marsabit, Moyale and Isiolo district of Eastern Province and Baringo, Samburu and Turkana districts of Rift Valley province.

The total projected human population in these areas is about 2,494,553. (See population by district in table 4.

4.2.1 Livelihoods
The main livelihood for the pastoralists is livestock production. The small stock (sheep and goats), are the main livestock species reared in addition to cattle and camels. The livestock population is spread all over the area. Concentration of livestock species in an area depends on the vegetation type among other factors. Most of the camels are found in Wajir district.

The major income sources for the pastoralists come from the sale of livestock and livestock products such as meat, milk hides and skins. The major source of food includes livestock products such as meat and milk and also cereals and pulses. Livestock products are derived from own production while cereals and pulses are mainly purchased.

4.2.2 Major Hazards
Major hazards that affect the pastoralists include droughts, floods and insecurity among others. The droughts affects the livestock production by limiting the availability of forage and water, while floods limits access to forage, insecurity causes displacements, loss of life and property, limit access to markets and movement to areas with adequate pasture.

The pastoral areas experience frequent droughts and floods. Under extreme cases some people totally lose their livelihoods, and productive assets and become destitute. These areas usually benefit from relief food provided by the government and other development partners. The relief food is provided to prevent people from selling their productive assets, reduce malnutrition and death from starvation, and prevent people from migrating to other areas.
4.2.3 Coping mechanisms.
During stress the pastoralists employ several coping strategies depending on the locality, natural resources available, social infrastructure and other developmental amenities. Generally the pastoralist coping strategies include migration in search of pasture both within and outside the country depending on the severity of the drought, relying on the social network for gifts and assistance, getting remittances from relatives outside the pastoral zones, resorting to other income earning activities such as sale of firewood and/or charcoal production, and for those who have totally lost their livelihoods they move to other areas especially urban centre in search of other income earning activities such as employment.

Table 4: Population of the Pastoral and Agro-pastoral districts

<table>
<thead>
<tr>
<th>District</th>
<th>Population</th>
<th>Requiring</th>
<th>Population</th>
<th>Requiring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkana</td>
<td>507,624</td>
<td>49%</td>
<td>249,347</td>
<td></td>
</tr>
<tr>
<td>Marsabit</td>
<td>136,772</td>
<td>45%</td>
<td>62,192</td>
<td></td>
</tr>
<tr>
<td>Samburu</td>
<td>161,620</td>
<td>16%</td>
<td>25,861</td>
<td></td>
</tr>
<tr>
<td>Moyale</td>
<td>60,212</td>
<td>15%</td>
<td>9,315</td>
<td></td>
</tr>
<tr>
<td>Isiolo</td>
<td>113,560</td>
<td>12%</td>
<td>13,400</td>
<td></td>
</tr>
<tr>
<td>Mandera</td>
<td>281,894</td>
<td>34%</td>
<td>95,280</td>
<td></td>
</tr>
<tr>
<td>Wajir</td>
<td>359,456</td>
<td>27%</td>
<td>96,800</td>
<td></td>
</tr>
<tr>
<td>Garissa</td>
<td>371,399</td>
<td>23%</td>
<td>83,300</td>
<td></td>
</tr>
<tr>
<td>Ijara</td>
<td>70,529</td>
<td>13%</td>
<td>8,950</td>
<td></td>
</tr>
<tr>
<td>Tana River</td>
<td>203,677</td>
<td>31%</td>
<td>62,950</td>
<td></td>
</tr>
<tr>
<td>West Pokot</td>
<td>346,874</td>
<td>9%</td>
<td>32,200</td>
<td></td>
</tr>
<tr>
<td>Baringo</td>
<td>298,339</td>
<td>12%</td>
<td>34,846</td>
<td></td>
</tr>
<tr>
<td>Kajiado</td>
<td>457,177</td>
<td>7%</td>
<td>30,400</td>
<td></td>
</tr>
<tr>
<td>Narok</td>
<td>411,798</td>
<td>9%</td>
<td>38,700</td>
<td></td>
</tr>
<tr>
<td>Makueni</td>
<td>868,683</td>
<td>21%</td>
<td>184,600</td>
<td></td>
</tr>
</tbody>
</table>

Rainfall patterns in the Pastoral areas.
The long rain season which occurs from late March to April is the main productive season for the pastoralists. The short rains season which occurs from October to December though not the main season helps in boosting forage and water availability to bridge the dry spell gap between the long rain season.

Performance of the long rain season - 2004.
Generally the long rain season of 2004 was poor in most of the pastoral areas. Most of the areas received below normal rainfall amounts, except localized areas of Marsabit, Wajir, West Pokot, Turkana, Samburu and Baringo districts.
The temporal distribution of the rains in most of the pastoral districts was also poor in that the rains fell within a very short period of mid April to early May, for example the areas around Mount Marsabit received seasonal rainfall amount of 197mm of rainfall in only two days. In addition the spatial distribution of the rains was limited to very few areas in most of the districts. For example only parts of Turkana, Samburu, Baringo and the mountainous areas of Marsabit received adequate rains. Due to poor spatial and temporal distribution of the rains even in the few areas where adequate rainfall was received there was minimal positive impact on the forage and water situation.

**Performance of previous rain seasons**

Although most of the pastoral areas received reasonable rainfall during the short rains of 2003 and the long rains of 2003, the same however was not well distributed in time and space and as such forage did not fully regenerate while pans and dams did impound adequate water. The current food security situation in these areas is therefore mainly as a result of poor performance of the just concluded long rains and to some extend due to cumulative effect of inadequate recovery of forage and water resources in the previous rain seasons.

**Impacts of drought**

**Forage Water and Browse**

Under normal situation in July, just after the end of the long rains season, there should be adequate water, and forage with most of the animals in the wet season grazing areas, livestock movement to dry season grazing areas usually starts in the months of August. However, currently most of the livestock have moved to the dry season grazing areas, this early movement indicates inadequate forage and water in the wet season grazing areas. In Turkana and West Pokot livestock are still in wet season grazing areas due to insecurity in the dry season grazing areas.

Normally at this time of the year the main sources of water in the pastoral areas would be from pans and dams, but currently the main source of water in most of these areas are the boreholes, indicating that the dams and pans did not impound adequate amounts of water during the long rains season. For example in Wajir and Mandera districts the communities are already relying on water tankering for their domestic use while the live stock have to trek for long distances in search of water and forage.
**Prices of livestock**
The general trend indicates that the prices of livestock are below average in most of the pastoral districts. This is because more animals are presented for sale for fear of the animals losing condition and fetching low prices in future and also due to need of money to purchase relatively expensive cereals. However the prices of livestock are above average in Turkana, Marsabit and Moyale, this is mainly due to on going food for work and general food distribution interventions in these districts, reducing the need for money to purchase cereals.

**Prices of cereals.**
Prices of cereals are generally on the upward trend in most of the pastoral district, and are above the average except in a few districts where effective food interventions are going on. With the long rains crop poor performance in areas such as eastern, central, south rift and Nyanza provinces where maize harvesting takes place in July and August, prices of cereals are likely to continue in upward trend. The high prices are undermining the already precarious food security in the pastoral areas and negatively affecting terms of trade for the pastoralists. Were it not for some food aid interventions in these areas the prices of cereals would have been higher than the current levels.

**Malnutrition rates**
Household milk availability has dropped due to low milk production and early movement of livestock to dry season grazing areas. This has partly contributed to the high global acute malnutrition rates in most of the pastoral districts, indicating general food insecurity in these areas.

**Coping Mechanisms**
Early migration into the dry season grazing zones will resort to early exhaustion of resources which may cause further movement far from the settlements, this will reduce availability of milk and other livestock products to the households, This movement will result in convergent of very many animals in the same areas, which may cause conflict and spread of livestock diseases.

More people are resorting to charcoal burning and sale of firewood resulting into more damage to the already fragile environment.

Social networks are not working as the drought has affected the majority of the pastoralists.

Migration to the urban or peri-urban centres has increased but this may not help resolve the problem as most of the centres are not well developed and there are few employment opportunities available.

**INTERVENTIONS**

a) **Food aid**
There are already food interventions going on in Turkana and Marsabit districts, the same have been planned for Isiolo and Mandera. There is need to scale this programmes to cover more districts. There is also need for consideration of general food distribution to cover the sick; the very old, disabled, pregnant and lactating mothers in the drought affected areas. The population affected by drought that require interventions and the quantities of food required per district are indicated in table 4

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b) Water
Water tankering should be continued and scaled up to cover more districts which are in need, at the same time rehabilitate water conservation facilities e.g. Boreholes, pans and dams. Enhance the existing water facilities for optimum water production.

c) Health and Nutrition for intensified supplementary feeding in the affected areas.

4.3 AGROPASTORAL

4.3.1 INTRODUCTION

The agro pastoral areas cover parts of coast, eastern and Rift valley provinces. Districts considered in this study under this category includes West Pokot, Kajiado, Narok, in Rift Valley Province, Tana River in coast Province. The Agro-pastoralists are more settled pastoralists with permanent crop fields close to their homestead.

Livelihoods
The main livelihoods of the agro-pastoralists include both livestock and crop production. The main livestock reared include cattle, sheep and goats. While the major crops grown include maize, beans, sorghum, millet and wheat. Most of the income for agro-pastoral is derived from the sale of livestock and livestock products and food crops. Likewise main source of food is from crop and livestock while most of the livestock and livestock products consumed are from own production, most of the crops consumed are purchased from the market.

Major Hazards
Major hazards that affect the agro-pastoralists include mainly droughts and to some extent floods. The droughts adversely affects the livestock and crop production, hence cause food insecurity.

Coping mechanisms.
During stress the agro-pastoralists resort to some coping mechanisms, which include sale of livestock, engagement in casual employment in urban and peri-urban centres, charcoal burning, sale of firewood and migration of livestock to areas with forage and water.

Rainfall patterns
These areas receive bimodal rainfall with long rains occurring between February and June and long rains occur from October to December. However the long rain season is more important in most of the agro-pastoral areas as most of the production is realized in this season.

Performance of the long rain season 2004.
Most of the agro-pastoral areas received adequate amounts of...
rainfall except for Kajiado and parts of Laikipia, and Narok districts where the rains were below normal. The rains were fairly distributed in time; however spatial distribution was poor in that the long rains did not adequately cover parts of Kajiado, Nyeri, Narok and Mbeere districts. These same areas that had a poor spatial rainfall distribution experienced early cessation of the season.

**Performance of short rains 2003 season**

Generally, these areas had received inadequate short rains, which were not all well distributed in space. The current food insecurity in parts of these areas is as a result of inadequate long rains of 2004 and to a lesser extent sub optimal short rains of 2003.

![Rainfall Estimates for West Pokot](image)

**4.3.2 IMPACTS OF THE DROUGHT**

**Crop production**

Long rains contribute significantly to food crop production in the agro-pastoral areas. With the exception of Transmara district, Sixty percent of the crops in the agro-pastoral areas have failed, this is because of the early cessation and poor spatial distribution of the rains in the area.

**Forage water and browse**

The situation of forage, and water is worsening in most of the agro-pastoral areas. The forage is drying up and the water levels in pans and dams are receding; as such the distances to water and forage are increasing.

**Prices of livestock**

Due to deteriorating forage and water situation, and also need for cash by households for purchase of cereals, sales of livestock by households is increasing leading to declining livestock prices.

**Prices of cereals**

Prices of cereals are generally on the upward trend in most of the agro-pastoral districts. This is because of the diminishing supplies from the main cereals producing areas, and the fact that majority of the households in these areas are relying on the market for the supply of the commodity thus increasing the demand.

**Malnutrition rates**

Malnutrition rates remained higher than the previous month in the agro-pastoral areas of Nyeri and Mbeere districts.
4.3.3 COPING MECHANISMS
Due to drought stress that is creeping in slowly, in parts of the agro-pastoral areas, affected households have started to resort to some coping mechanisms such as charcoal burning and sale of firewood which is taking place in parts of Mbeere district. If the situation is not arrested soon, most households will resort to employing coping mechanisms such as charcoal burning, cutting of trees for sale of firewood and increased sand harvesting, which may be destructive to the environment.

4.3.4 INTERVENTIONS

**FOOD**
Some limited food interventions under Food For Work programme will be necessary for the few households that are already affected. (See table 4 section 4.2.3 for figures on populations affected)

**Health and Nutrition**
There will be need for targeted supplementary feeding in the few areas with prevalent malnutrition, especially in areas where general food distribution will be undertaken.

**NON FOOD**

**Seeds:**
Many farmers lost their seeds during the repeated plantings caused by the erratic rainfall. Food production would get a boost from a distribution of seeds for maize, beans, sorghum,, millet cowpeas, and green grams to plant during the short rains.

**Tools:**
There will be need to provide hand tools to be used especially in Food For Work programmes
5.0 RECOMMENDATIONS

Below find a summary of the recommendations that the team made.

5.1 Immediate food aid assistance for 1,778,678 hungry poor who have started evoking negative coping mechanisms. These people are in the rural areas of Coast, Eastern, North Eastern, and Rift valley provinces. They should be assisted up to December 2004. This recommendation assumes that the one million school children receiving school lunches through School Feeding Programme will continue at full resource levels. Based on final discussions with Ministry of Education an additional 500,000 school children will require to be provided with school lunch under the Expanded School Feeding Programme during the same period. It also assumes that the October-December short rains will be normal and families will begin consuming green crops in January 2005.

5.2 If the short rains perform poorly an additional one million people will also require food aid assistance and the additional beneficiaries will be from districts that are not currently targeted and increased numbers from those targeted under 1) above. This brings to a total of around 2.8 million in normal emergency food aid and 1.5 Million under school feeding programme.

5.3 The timeliness, distribution and quantity of the short rains season should be closely monitored.

5.4 The following needs were also identified and more information and analysis is required.
   • Supplementally feeding of under fives, lactating and pregnant mothers
   • Seeds to plant during the short rains. Farmers lost a lot of their seeds during the crop failures. The seeds of the following crops were mentioned: Maize, sorghum, millet, and green grams
   • Water tankering in some parts of the ASAL parts of the country country
   • Water purification tablets. Water quality will deteriorate as the water pans continue to dry out.
   • Rehabilitation and construction of boreholes and dams.
   • Control of crop destruction by wildlife.