



## CONSOLIDATED INTER-AGENCY REPORT

Kenya Food Security Steering Group  
(KFSSG)

## **KENYA** **SHORT RAINS ASSESSMENT REPORT 2007**

**5th APRIL 2007**

A collaborative report of the Kenya Food Security Steering Group; Office of the President; Ministries of Agriculture, Livestock and Fisheries Development, Health, Water, Education; ALRMP, FEWS NET, FAO, UNDP, WFP; and UNICEF; with financial support from the Government of Kenya, FAO, SIDA, WFP, and UNDP.

# TABLE OF CONTENTS

TABLE OF CONTENTS.....	i
LIST OF ABBREVIATIONS.....	ii
1 EXECUTIVE SUMMARY.....	1
1.1 Key Findings.....	1
1.2 Implications for Response.....	4
1.3 Recommended Responses by Phase Classification.....	6
2 METHODOLOGY.....	10
2.1 Background.....	10
2.2 Scope.....	10
2.3 Analytical Framework.....	10
3 RAINFALL, CLIMATE OUTLOOK AND IMPACT ON FOOD SECURITY.....	11
3.1 The Performance of the 2006/07 Short Rains.....	11
3.2 Trends and Prospects.....	12
3.3 Impact of the Short Rains on Food Security.....	13
4 REGIONAL FOOD SECURITY STATUS.....	18
4.1 Northern Pastoral Cluster.....	18
4.2 Eastern pastoral cluster.....	18
4.3 Agro-pastoral cluster.....	19
4.4 Eastern Marginal Agricultural Cluster.....	20
4.5 Coastal marginal agricultural cluster.....	21
4.6 Lake Basin Marginal Agricultural Cluster.....	21
5. RECOMMENDED INTERVENTIONS.....	23
5.1 Strategic Response Framework for Northern Pastoral Cluster (Mandera, Marsabit, Moyale, Samburu, Turkana).....	23
5.2 Strategic Response Framework for Eastern Pastoral Cluster (Isiolo, Tana River, Wajir, Garissa, Ijara).....	25
5.3 Strategic Response Framework for Agro-pastoral Cluster (Baringo, Kajiado, Laikipia, Narok, West Pokot).....	28
5.4 Strategic Response Framework for Eastern Marginal Agriculture Cluster (Kitui, Mwingi, Makueni, Machakos, Mbeere Tharaka.....	32
5.5 Strategic Response Framework for Coastal Marginal Agriculture Cluster (Taita Taveta, Kwale, Kilifi and Malindi).....	37
5.6 Strategic Response Framework for Lake Basin Marginal Agriculture Cluster.....	38
6 STRATEGIC FOOD/CASH RESPONSE FRAMEWORK LINKED TO IPC.....	41
7.0 APPENDIX.....	44

## LIST OF ABBREVIATIONS

ALRMP	Arid Lands Resource Management Programme
ASAL	Arid and Semi Arid Lands
ASCU	Agriculture Sector Coordination Unit
CBTD	Community Based Targeting
CBTF	Community Based Therapeutic Feeding Programmes
CERF	Central Emergency Response Fund
CFA	Cash for Assets
CFW	Cash for Work
CSB	Corn Soya Blend
ECDs	Early Childhood Development
ECF	East Coast Fever
EIA	Environmental Impact Assessment
EMOP	Emergency Operation
FAO	Food and Agriculture Organization
FEWS NET	Famine Early Warning System Network
FFW	Food For Work
FMD	Foot and Mouth Disease
GAM	Global Acute Malnutrition
GFD	General Food Distribution
GoK	Government of Kenya
Ha	Hectare
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
Hrs	Hours
ICPAC	Climate Prediction and Application Centre
KARI	Kenya Agricultural Research Institute
KES/Kshs	Kenya Shillings
KFSM	Kenya Food Security Meeting
KFSSG	Kenya Food Security Steering Group
KMS	Kilometres
LSD	Lumpy Skin Disease
LZ	Livelihood Zone
MoA	Ministry of Agriculture
MoEST	Ministry of Education, Science and Technology
MoH	Ministry of Health
MUAC	Mid-Upper Arm Circumference
NDVI	Normal Deviation Vegetative Index
NGO	Non Governmental Organization
NPEP	National Poverty Eradication Plan
OP	Office of the President
RVF	Rift Valley Fever
SFC	supplementary feeding centres
TFC	Therapeutic Feeding Centre
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USD	United States Dollars
USGS	United States Geological Survey
UTI	Urinary tract infection
WFP	World Food Programme
WHO	World Health Organization
WRSI	Water Requirement Satisfaction Index

# 1 EXECUTIVE SUMMARY

## 1.1 Key Findings

The performance of the October to December 2006 (short rains) season was exceptionally good, with above normal rainfall in most parts of the country. Areas dependant on the short rains and most pastoral areas received good rainfall, which has started the recovery process after several seasons of drought. Flooding in the eastern part of the country and in the Lake region resulted in an outbreak of Rift Valley Fever (RVF) and poor crop production respectively.

National production is predicted to be 15% higher than the long term average, with over 3 million bags expected to be harvested during the previous long rains and current short rains seasons. This is predicted to amount to a surplus of over 300,000 MT nationally.

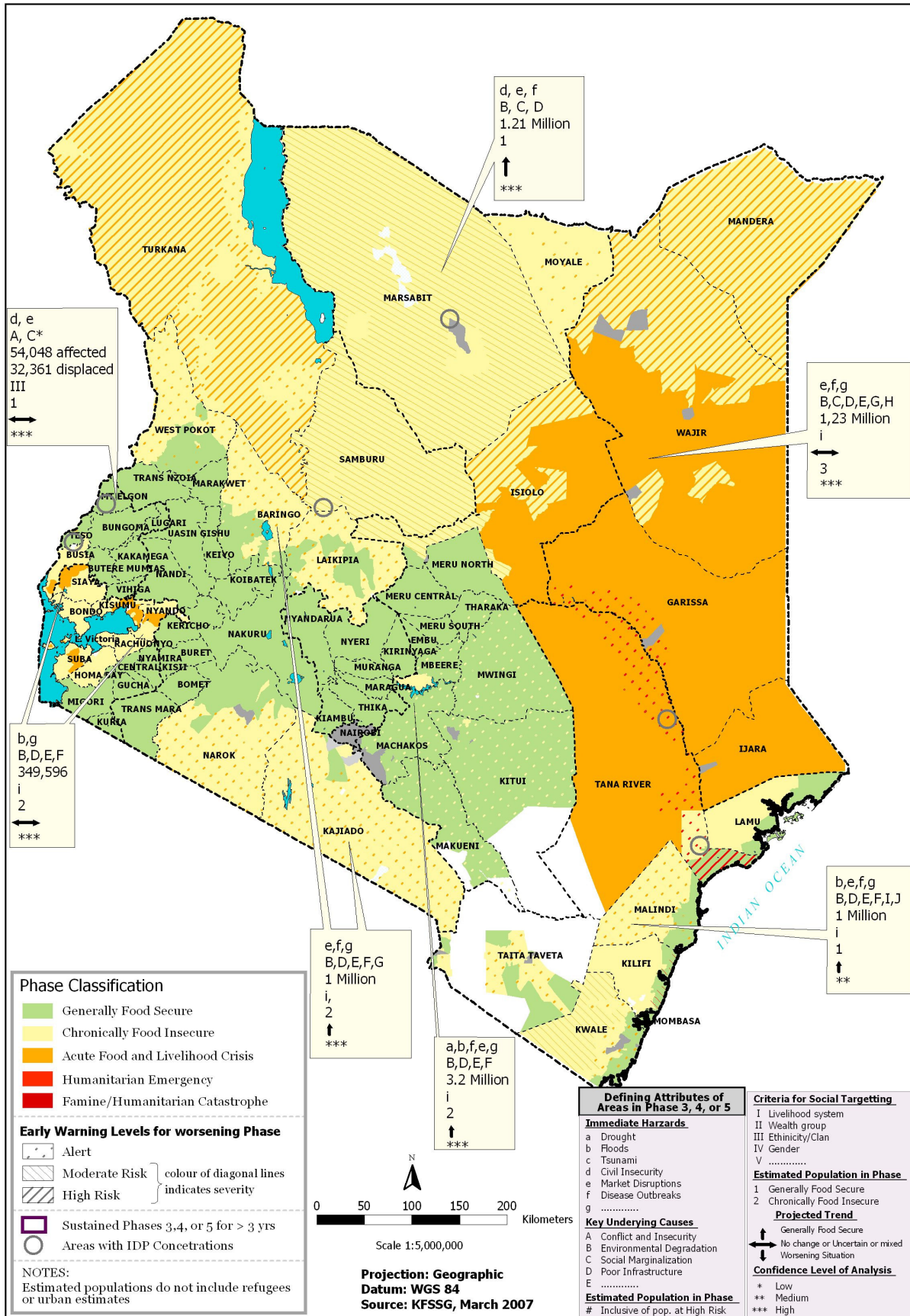
In the eastern pastoral and agro-pastoral zones (Garissa, Tana River, Ijara and parts of Isiolo and Wajir) with a total population of 1,228,752 people, (of which about 60% are considered to be vulnerable) are in acute food and livelihood crisis, as a result of the cumulative effects of drought, compounded with the outbreak of RVF, which saw the closures of livestock markets and consequent impact on the incomes of livestock producers. In addition, the mixed farming and agro-pastoral livelihood zones experienced extensive crop damage during the floods. Late season planting was done in some areas with mixed and unpredictable results.

The remainder of the northern pastoralist zone (Turkana, Marsabit, Samburu, Moyale, and Mandera), with a total population of 1,088,746 (of which 62% are vulnerable) has improved from acute food and livelihood crisis to chronically food insecure as a result of the good rainfall, regenerated range and good body condition of livestock that survived the drought. However, the impact of the previous seasons of drought on livelihoods cannot be underemphasised. While emergency relief food helped vulnerable populations to prevent further deterioration of the asset base, the underlying causes of food insecurity cannot be resolved through free food distribution. Pastoralist communities require several years to recover their herds, and require interventions that will assist their recovery. In addition, a significant proportion of pastoralists lost all or most of their livestock and has settled around trading centres. This phenomenon is not well understood, and requires more investigation to understand the extent and potential solutions to the problem.

The Lake basin experienced severe flooding, particularly in low-lying parts of Busia, Kisumu, Migori, Nyando, Rachuonyo, Siaya and Suba Districts, and affected areas (population: 349,596) are considered to be experiencing acute food and livelihood crisis. An estimated 40,000 people lost their short rains crop and livestock, many were displaced and farm infrastructure destroyed.




The Pastoralist and Agro-pastoralist zones of West Pokot, Baringo, Laikipia, Isiolo, Narok and Kajiado are also considered to be chronically food insecure. However, as recovery from drought had already started during the relatively good long rains in these areas, their situation is generally better than in the northern pastoral areas. The agro-pastoral areas expect normal to above normal crops, while water logging in some areas of Narok district delayed planting.

**Figure 1.1.1: Kenya Food Security Situation Analysis: March to June 2007**



Integrated Food Security and Humanitarian Phase Classification Reference Table (FAO/FSAU June 2006)

Phase Classification		Key Reference Outcomes <i>(current or imminent outcomes on lives and livelihoods; based on convergence of evidence)</i>	Strategic Response Framework <i>(mitigate immediate outcomes, support livelihoods, and address underlying/structural causes)</i>
1	Generally Food Secure	<p><b>Crude Mortality Rate</b> &lt; 0.5 / 10,000 / day</p> <p><b>Acute Malnutrition</b> &lt;3 % (w/h &lt;-2 z-scores)</p> <p><b>Stunting</b> &lt;20% (w/age &lt;-2 z-scores)</p> <p><b>Food Access/ Availability</b> usually adequate (&gt; 2,100 kcal ppp day), stable</p> <p><b>Dietary Diversity</b> consistent quality and quantity of diversity</p> <p><b>Water Access/Avail.</b> usually adequate (&gt; 15 litres ppp day), stable</p> <p><b>Hazards</b> moderate to low probability and vulnerability</p> <p><b>Civil Security</b> prevailing and structural peace</p> <p><b>Livelihood Assets</b> generally sustainable utilization (of 5 capitals)</p>	<p>Strategic assistance to pockets of food insecure groups</p> <p>Investment in food and economic production systems</p> <p>Enable development of livelihood systems based on principles of sustainability, justice, and equity</p> <p>Prevent emergence of structural hindrances to food security</p> <p>Advocacy</p>
2	Chronically Food Insecure	<p><b>Crude Mortality Rate</b> &lt;0.5/10,000/day; U5MR&lt;1/10,000/day</p> <p><b>Acute Malnutrition</b> &gt;3% but &lt;10 % (w/h &lt;-2 z-score), usual range, stable</p> <p><b>Stunting</b> &gt;20% (w/age &lt;-2 z-scores)</p> <p><b>Food Access/ Availability</b> borderline adequate (2,100 kcal ppp day); unstable</p> <p><b>Dietary Diversity</b> chronic dietary diversity deficit</p> <p><b>Water Access/Avail.</b> borderline adequate (15 litres ppp day); unstable</p> <p><b>Hazards</b> recurrent, with high livelihood vulnerability</p> <p><b>Civil Security</b> Unstable; disruptive tension</p> <p><b>Coping</b> 'insurance strategies'</p> <p><b>Livelihood Assets</b> stressed and unsustainable utilization (of 5 capitals)</p> <p><b>Structural</b> Pronounced underlying hindrances to food security</p>	<p>Design &amp; implement strategies to increase stability, resistance and resilience of livelihood systems thus reducing risk</p> <p>Provision of 'safety nets' to high risk groups</p> <p>Interventions for optimal and sustainable use of livelihood assets</p> <p>Create contingency plan</p> <p>Redress structural hindrances to food security</p> <p>Close monitoring of relevant outcome and process indicators</p> <p>Advocacy</p>
3	Acute Food and Livelihood Crisis	<p><b>Crude Mortality Rate</b> 0.5-1 /10,000/day, U5MR 1-2/10,000/dy</p> <p><b>Acute Malnutrition</b> 10-15 % (w/h &lt;-2 z-score), &gt; than usual, increasing</p> <p><b>Disease</b> epidemic; increasing</p> <p><b>Food Access/ Availability</b> lack of entitlement; 2,100 kcal ppp day via asset stripping</p> <p><b>Dietary Diversity</b> acute dietary diversity deficit</p> <p><b>Water Access/Avail.</b> 7.5-15 litres ppp day, accessed via asset stripping</p> <p><b>Destitution/Displacement</b> emerging; diffuse</p> <p><b>Civil Security</b> limited spread, low intensity conflict</p> <p><b>Coping</b> 'crisis strategies'; CSI &gt; than reference; increasing</p> <p><b>Livelihood Assets</b> accelerated and critical depletion or loss of access</p>	<p>Support livelihoods and protect vulnerable groups</p> <p>Strategic and complimentary interventions to immediately ↑ food access/availability AND support livelihoods</p> <p>Selected provision of complementary sectoral support (e.g., water, shelter, sanitation, health, etc.)</p> <p>Strategic interventions at community to national levels to create, stabilize, rehabilitate, or protect priority livelihood assets</p> <p>Create or implement contingency plan</p> <p>Close monitoring of relevant outcome and process indicators</p> <p>Use 'crisis as opportunity' to redress underlying structural causes</p> <p>Advocacy</p>
4	Humanitarian Emergency	<p><b>Crude Mortality Rate</b> 1-2 / 10,000 / day, &gt;2x reference rate, increasing; U5MR &gt; 2/10,000/day</p> <p><b>Acute Malnutrition</b> &gt;15 % (w/h &lt;-2 z-score), &gt; than usual, increasing</p> <p><b>Disease</b> pandemic</p> <p><b>Food Access/ Availability</b> severe entitlement gap; unable to meet 2,100 kcal ppp day</p> <p><b>Dietary Diversity</b> Regularly 2-3 or fewer main food groups consumed</p> <p><b>Water Access/Avail.</b> &lt; 7.5 litres ppp day (human usage only)</p> <p><b>Destitution/Displacement</b> concentrated; increasing</p> <p><b>Civil Security</b> widespread, high intensity conflict</p> <p><b>Coping</b> 'distress strategies'; CSI significantly &gt; than reference</p> <p><b>Livelihood Assets</b> near complete &amp; irreversible depletion or loss of access</p>	<p>Urgent protection of vulnerable groups</p> <p>Urgently ↑ food access through complimentary interventions</p> <p>Selected provision of complimentary sectoral support (e.g., water, shelter, sanitation, health, etc.)</p> <p>Protection against complete livelihood asset loss and/or advocacy for access</p> <p>Close monitoring of relevant outcome and process indicators</p> <p>Use 'crisis as opportunity' to redress underlying structural causes</p> <p>Advocacy</p>
5	Famine / Humanitarian Catastrophe	<p><b>Crude Mortality Rate</b> &gt; 2/10,000 /day (example: 6,000 /1,000,000 /30 days)</p> <p><b>Acute Malnutrition</b> &gt; 30 % (w/h &lt;-2 z-score)</p> <p><b>Disease</b> pandemic</p> <p><b>Food Access/ Availability</b> extreme entitlement gap; much below 2,100 kcal ppp day</p> <p><b>Water Access/Avail.</b> &lt; 4 litres ppp day (human usage only)</p> <p><b>Destitution/Displacement</b> large scale, concentrated</p> <p><b>Civil Security</b> widespread, high intensity conflict</p> <p><b>Livelihood Assets</b> effectively complete loss; collapse</p>	<p>Critically urgent protection of human lives and vulnerable groups</p> <p>Comprehensive assistance with basic needs (e.g. food, water, shelter, sanitation, health, etc.)</p> <p>Immediate policy/legal revisions where necessary</p> <p>Negotiations with varied political-economic interests</p> <p>Use 'crisis as opportunity' to redress underlying structural causes</p> <p>Advocacy</p>

Early Warning Levels	Probability / Likelihood (of worsening Phase)	Severity (of worsening phase)	Reference Hazards and Vulnerabilities	Implications for Action
 Watch	As yet unclear	Not applicable	<b>Hazard:</b> occurrence of, or predicted event stressing livelihoods; with low or uncertain vulnerability <b>Process Indicators:</b> small negative change from normal	Close monitoring and analysis
 Moderate Risk	Elevated probability / likelihood	Specified by predicted Phase Class, and as indicated by color of diagonal lines on map.	<b>Hazard:</b> occurrence of, or predicted event stressing livelihoods; with moderate vulnerability <b>Process Indicators:</b> large negative change from normal	Close monitoring and analysis Contingency planning Step-up current Phase interventions
 High Risk	High probability; 'more likely than not'		<b>Hazard:</b> occurrence of, or strongly predicted major event stressing livelihoods; with high vulnerability <b>Process Indicators:</b> large and compounding negative changes	Preventative interventions--with increased urgency for High Risk populations Advocacy

The Eastern Marginal and Mixed Agriculture areas (Kitui, Mwingi, Machakos, Mbeere and Tharaka) received excellent rains and are expecting above normal harvests. Small ruminants are reported to be kidding normally with consequent milk production. The lowland marginal areas experienced a particularly good season and are considered generally food secure at this time. RVF is causing some scares, affecting sales of livestock. However, this is expected to decrease over the coming months.

The Coastal Districts also received good rainfall. The hinterland is considered to be chronically food insecure with high levels of poverty, while the coastal strip is currently generally food secure.

Civil insecurity has displaced 32,361 people and indirectly affected a further 54,048 people in Mount Elgon District as a result of land disputes in the Chepyuk Settlement Scheme, that has to some extent affected the neighbouring areas of Bungoma and Busia. This area is considered to be at high risk of developing into a full blown emergency. Rising insecurity is also a concern in the border areas of Northeastern Province and Somalia, as the crisis over the border continues.

## 1.2 Implications for Response

With the overall improvement in food security across the country, it is important to reconsider current relief responses in order to move towards recovery and longer term development. It is critically important for Government and its partners to seize the opportunity of the improved food security situation to implement programmes that address the underlying causes of vulnerability, as a means to assist communities recover and increase their resilience before the next drought or flood. Only action now can break the vicious cycle of relief assistance being required in the absence of development investments. It is also important the food security coordination structures for both humanitarian (KFSM) and long term development (ASCU) come together for coordinating initiatives transitioning relief and development.

### 1.2.1 Recovery and Development Assistance

Recovery and development assistance needs to be designed to address the needs of different communities with varying livelihoods: the recommended responses are included in the next section under their appropriated phases and livelihoods. **In the next six months, the agriculture sector needs US\$ 8.3 million; livestock sector, US\$ 28.6 million; water and sanitation, US\$ 10 million; health and nutrition, US\$ 3.4 million.** Of immediate and national importance are the following recommendations:

- a. **Hunger Safety Nets:** cash and/or food based transfers to provide predictable resources for the poorest sections of society is a potential means – in combination with other investments – to lift chronically vulnerable people out of profound food insecurity and dependence on relief. It is recommended that cash-based transfers are piloted in three to four ASAL districts, and food-based transfers cover the chronically food insecure arid/pastoral districts for a three to four year period. **Estimated costs for cash transfers: US\$ 78 million, covering 300,000 people for four years. Also being considered is food transfers through a WFP Protracted Relief and Recovery Operation (PRRO) that requires resources to cover large areas within the country for several years.**

- b. **Rift Valley Fever:** In order to combat the threat of an international ban on Kenyan livestock exports and thereby protect livestock producers, it is recommended that a certification system be established by the Ministry of Livestock and Fisheries Development with support from FAO. **Initial cost of setting up the system: US\$ 2 million.**
- c. **Rehabilitation and development of infrastructure in the ASAL:** repair of infrastructure damaged by the recent floods (roads (particularly accessing markets), bridges, irrigation canals, water pipelines, damaged and silted water pans), and longer-term investment in developing infrastructure (particularly roads) is recommended to enable the economy of the ASAL areas to develop and transform. An assessment is required to estimate the extent of damage and cost repairs.
- d. **Chronically high malnutrition and poor access to health services:** while malnutrition rates have improved, anthropometric data suggests that the prevalence of malnutrition remains unacceptably high, especially in the pastoralist livelihood zones. Research to determine the specific causes of chronic malnutrition would enable actors to better target resources. It is recommended that the KFSSG put together a group of experts to analyse the data arising from the Multi Indicator Cluster Surveys as a means to elucidate underlying causes of high malnutrition prevalence. Promotion of nutritional surveillance and growth monitoring systems, and the general strengthening of primary health services in the ASAL will be important steps forward.
- e. **Destitute Pastoralists:** A study be commissioned to investigate the scale of destitution among pastoral communities, and potential solutions to assist pastoralists who have lost their livelihoods, either through restocking or adopting alternative livelihoods. **Estimated costs of the study: US\$ 90,000.**
- f. **Drought Management:** strengthen existing Early Warning and Food Security Analysis systems to inform the EC's Drought Management Initiative and particularly the National Contingency Fund. **Costs: within ALRMP budget and other supporting projects (FAO, WFP, UNDP, UNICEF).**
- g. **Emergency Preparedness:** Pastoral Field schools set up in ASAL region to address some of the underlying causes of the pastoral vulnerability, FAO to take the lead. **Initial cost of the first phase: US\$ 3 million**
- h. **Land, water and crop management:** promotion of improved crop husbandry, soil and water conservation, drought tolerant seeds and appropriate range management practices are important for optimising production and protecting fragile environments in the ASAL areas.
- i. **Enacting the *National Policy for the Sustainable Development of Arid And Semi Arid Lands of Kenya*:** It is recommended that this draft policy is enacted by the Government of Kenya, and coordination mechanisms be put in place for its implementation, with the support of the international donor community.

### 1.2.2 Food Assistance

Under the prevailing circumstances, there is a much reduced requirement for free food distribution, and food resources should be increasingly used as a safety net to support the most vulnerable section of communities, in collaboration with other safety net approaches such as cash transfers. However, as time is required to reprogramme food resources, it is recommended that limited and well targeted free food distributions continue for a transitional period. Equally it would be irresponsible to suddenly cut off support to the extended school feeding programme, with a likely reduction in enrolment. Currently, the food allocation subcommittee of the KFSSG proposes to provide free food assistance to 819,000 people targeted to 14 districts while 271,000 primary school children will be under the expanded school feeding program, and 120,000 people will be targeted under the selective feeding programme. A further 100,668 people will be targeted for cash/food for assets projects. Ten (10) Districts will be closed out of the emergency general food aid in recognition of the improvements in the general food security situation. Gross food requirements for the next six months is estimated at 84,723 MT, valued at approximately US\$



48 million, targeting just over 1.3 million people. Of this, 60,000 MT is already resourced either in-country or in the pipeline, leaving a net requirement of approximately 25,000 MT valued at US\$ 14 million.

### 1.3 Recommended Responses by Phase Classification

The Response Analysis findings are presented in detail in Section 5 of the report. The following represent a consolidation of these findings and can be considered the broad recommended interventions.

#### 1.3.1 Pastoral Cluster

**Food Security Status:** Acute Food and Livelihood Crisis/ Chronically Food Insecure:

**Districts:** Mandera, Marsabit, Moyale, Samburu, Turkana, Isiolo, Tana River, Wajir, Garissa and Ijara

**Total Estimated Population:** 2.44 million (60% at highly vulnerable)

Cause/Sector	Immediate	Longer Term
Eroded Assets/ Livestock/ drought	<ul style="list-style-type: none"> <li>○ Redistribution of livestock from wealthier herders to poorer</li> <li>○ Re-seeding denuded areas</li> <li>○ Strengthen disease surveillance and treatment</li> <li>○ Increase fodder/browse crop production</li> <li>○ Diversify incomes</li> <li>○ Sustainable charcoal production</li> <li>○ Capacity building for pastoral emergency preparedness</li> </ul>	<ul style="list-style-type: none"> <li>○ Establish strategic pasture/browse reserves</li> <li>○ Finalise/review ASAL and livestock policies</li> <li>○ Water harvesting schemes</li> <li>○ Develop livestock marketing</li> <li>○ Livestock census</li> </ul>
High Malnutrition and Morbidity	<ul style="list-style-type: none"> <li>○ Supplementary and therapeutic feeding for vulnerable groups</li> <li>○ Training on management of severe malnutrition</li> <li>○ Promotion of breast feeding practices</li> <li>○ Provision of treated mosquito nets and water treatment chemicals</li> </ul>	<ul style="list-style-type: none"> <li>○ Establish causes of high chronic malnutrition</li> <li>○ Strengthen primary health care system</li> <li>○ Establish nutritional surveillance and growth monitoring</li> <li>○ Education on hygiene and nutrition</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>○ Repair dams, wells pans, and pit latrines</li> </ul>	<ul style="list-style-type: none"> <li>○ Develop road and other infrastructure</li> </ul>
Access to seeds	<ul style="list-style-type: none"> <li>○ Provision of certified seeds of drought tolerant varieties</li> </ul>	
Low Literacy rates	<ul style="list-style-type: none"> <li>○ Promote primary education particularly for girls</li> </ul>	<ul style="list-style-type: none"> <li>○ Provision of more bursaries to enhance secondary school enrolment</li> </ul>
Civil Insecurity	<ul style="list-style-type: none"> <li>○ Initiate conflict resolution</li> </ul>	<ul style="list-style-type: none"> <li>○ Strengthen conflict management groups in districts</li> </ul>
Destitute pastoralists	<ul style="list-style-type: none"> <li>○ Study on extent of problem and potential solutions</li> </ul>	<ul style="list-style-type: none"> <li>○ Invest in findings from study</li> </ul>
Access to food	<ul style="list-style-type: none"> <li>○ Pilot and support Cash interventions and Food for Asset initiatives. GFD to be implemented in the interim</li> <li>○ Selective Feeding to be supported. Need for linkages between food interventions and selective feeding programmes</li> <li>○ Covered under regular school feeding</li> <li>○ Undertake rapid assessment (April/May) to determine the impact of the RVF outbreak on household food insecurity in some areas.</li> </ul>	<ul style="list-style-type: none"> <li>○ Establish cash/food based safety nets for most vulnerable</li> </ul>

### 1.3.2 Agro-Pastoral Cluster

**Food Security Status:** Chronically Food Insecure

**Districts:** Baringo, Kajiado, Laikipia, Narok and West Pokot

**Total Estimated Population:** 1 million

<b>Cause/Sector</b>	<b>Immediate</b>	<b>Longer Term</b>
Environmental degradation	<ul style="list-style-type: none"> <li>○ Soil and water conservation projects</li> <li>○ Reseeding of degraded areas</li> <li>○ Capacity building for agro-pastoralists to combat environmental degradation</li> </ul>	<ul style="list-style-type: none"> <li>○ Capacity building on environmental management</li> <li>○ Afforestation</li> <li>○ Range improvement/conservation</li> </ul>
High Malnutrition and Morbidity	<ul style="list-style-type: none"> <li>○ Supplementary and therapeutic feeding for vulnerable groups</li> <li>○ HIV/AIDS: provision ARVs</li> <li>○ Promotion of best feeding practices</li> <li>○ Provision of treated mosquito nets and water treatment chemicals</li> </ul>	<ul style="list-style-type: none"> <li>○ Establish causes of high chronic malnutrition</li> <li>○ Education campaigns on HIV/AIDS</li> <li>○ Strengthen primary health care system</li> <li>○ Establish nutritional surveillance and growth monitoring</li> <li>○ Education on hygiene and nutrition in community and schools</li> </ul>
Water scarcity	<ul style="list-style-type: none"> <li>○ Borehole rehabilitation, dam/pan desilting</li> <li>○ Rainfall harvesting facilities and tanks for schools</li> </ul>	<ul style="list-style-type: none"> <li>○ Strengthen water users associations</li> <li>○ Construction of boreholes (Kajiado)</li> <li>○ Excavation of pans</li> </ul>
Poor Agronomic practices	<ul style="list-style-type: none"> <li>○ Provision of certified seeds of drought tolerant varieties and farm inputs</li> <li>○ Provision of animal traction equipment</li> </ul>	<ul style="list-style-type: none"> <li>○ Promotion of drought tolerant and quick maturing crops</li> <li>○ Support Agro-biodiversity Farmer Field Schools</li> </ul>
Poor Livestock husbandry	<ul style="list-style-type: none"> <li>○ Redistribution of livestock to pastoralists who lost all animals</li> <li>○ Improve animal husbandry management</li> <li>○ Improve livestock support services</li> </ul>	<ul style="list-style-type: none"> <li>○ Improve stock breeds to KMC standards</li> <li>○ Diversify livestock enterprises</li> </ul>
Poor Infrastructure	<ul style="list-style-type: none"> <li>○ Repair of bridges, road section and irrigation canals</li> </ul>	<ul style="list-style-type: none"> <li>○ Strategic development of road infrastructure to support markets</li> </ul>
Access to food	<ul style="list-style-type: none"> <li>○ No general food distributions</li> <li>○ Selective feeding to be considered in areas with high malnutrition</li> <li>○ Cash interventions recommended due to food availability in the market; Food for Assets to be considered in the absence of readily available Cash intervention programmes</li> <li>○ No Expanded School Feeding due to improvement in food security indicators</li> </ul>	<ul style="list-style-type: none"> <li>○ Establish cash/food based safety nets for most vulnerable</li> </ul>

### 1.3.3 Eastern and Coast Marginal Agricultural Zone

**Food Security Status:** Generally Food Secure/Chronically Food Insecure

**Districts:** Kitui, Mwingi, Makueni, Machakos, Mbeere, Tharaka, hinterlands of Kwale, Kilifi, Malindi, and Lamu.

**Total Estimated Population:** 4.2 million

Cause/Sector	Immediate	Longer Term
Environmental degradation and water conservation	<ul style="list-style-type: none"> <li>○ Repair to soil and water conservation structures (cash/food for work)</li> <li>○ Desilt earth dams</li> <li>○ Promote water harvesting techniques</li> <li>○ Protect water sources</li> </ul>	<ul style="list-style-type: none"> <li>○ Capacity building soil and water conservation</li> <li>○ Reseeding degraded land</li> </ul>
High Malnutrition and Morbidity	<ul style="list-style-type: none"> <li>○ Supplementary and therapeutic feeding for vulnerable groups</li> <li>○ HIV/AIDS: provision ARVs</li> <li>○ Promotion of breast feeding practices</li> <li>○ Provision of treated mosquito nets and water treatment chemicals</li> </ul>	<ul style="list-style-type: none"> <li>○ Education campaigns on HIV/AIDS</li> <li>○ Measles and vitamin A campaigns</li> <li>○ Strengthen primary health care system</li> <li>○ Establish nutritional surveillance and growth monitoring through ECDs</li> <li>○ Education on hygiene and nutrition in community and schools</li> </ul>
Water scarcity	<ul style="list-style-type: none"> <li>○ Borehole rehabilitation, dam/pan desilting</li> <li>○ Rainfall harvesting facilities and tanks for schools</li> </ul>	<ul style="list-style-type: none"> <li>○ Strengthen water users associations</li> <li>○ Construction of boreholes (Kajiado)</li> <li>○ Excavation of pans</li> </ul>
Poor Agronomic practices and marketing	<ul style="list-style-type: none"> <li>○ Provision of certified seeds of drought tolerant varieties and farm inputs</li> <li>○ Promotion of grain storage structures</li> </ul>	<ul style="list-style-type: none"> <li>○ Training on improved crop husbandry/ promotion of drought tolerant crops</li> <li>○ Support existing marketing associations and promote new ones</li> <li>○ Improve marketing information system</li> <li>○ Establish/re-open NCPB depots</li> </ul>
Fisheries (Coast)	<ul style="list-style-type: none"> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>○ Construction of cold storage facilities</li> <li>○ Improve marketing infrastructure</li> <li>○ New technology: inshore/offshore</li> </ul>
Poor Infrastructure	<ul style="list-style-type: none"> <li>○ Repair of bridges, road section and irrigation canals, water pipelines</li> </ul>	<ul style="list-style-type: none"> <li>○ Strategic development of road infrastructure to support markets</li> </ul>
Access to food	<ul style="list-style-type: none"> <li>○ Provide targeted free food to vulnerable groups as transition to safety nets approaches</li> <li>○ No general food distributions; selective feeding in some areas.</li> <li>○ Cash interventions recommended due to food availability in the markets</li> <li>○ No Expanded School Feeding due to improved food availability</li> </ul>	<ul style="list-style-type: none"> <li>○ Establish cash/food based safety nets for most vulnerable</li> </ul>

### 1.3.4 Lake Basin Marginal Agricultural Cluster

**Food Security Status:** Acute Food and Livelihood Crisis/ Chronically Food Insecure

**Districts:** Busia, Kisumu, Migori, Nyando, Rachuonyo, Siaya and Suba

**Total estimated population at risk:** 349,595

Cause/Sector	Immediate	Longer Term
Flood Damaged Infrastructure	<ul style="list-style-type: none"> <li>○ Repair washed away sections of roads and bridges</li> <li>○ Rehabilitate damaged school structures and furniture/ teaching materials</li> <li>○ Repair dykes and river sluices</li> <li>○ Repair of irrigation canals and equipment</li> </ul>	<ul style="list-style-type: none"> <li>○ Upgrade roads to improve access to markets</li> <li>○ Construction of check dams upstream to arrest run-off</li> <li>○ Excavation and de-silting of rivers that drain into swamps instead of the Lake</li> </ul>
Environmental degradation and water conservation		<ul style="list-style-type: none"> <li>○ Establish soil and water conservation structures on farms and river catchments</li> <li>○ Afforestation in lowlands and upstream</li> </ul>
Health	<ul style="list-style-type: none"> <li>○ Supplementary and therapeutic feeding where malnutrition is recorded</li> <li>○ HIV/AIDS: provision ARVs; integrate infected and affected into community</li> <li>○ Continued support to school feeding programme especially in high HIV prevalence</li> <li>○ Provision of treated mosquito nets and water treatment chemicals</li> </ul>	<ul style="list-style-type: none"> <li>○ Education campaigns on HIV/AIDS through IGAS</li> <li>○ Strengthen primary health care system</li> <li>○ Establish nutritional surveillance and growth monitoring through ECDs</li> <li>○ Education on hygiene and nutrition in community and schools</li> </ul>
Access to seed and Poor Agronomic practices	<ul style="list-style-type: none"> <li>○ Provision of emergency seed for an estimated 4,000 Ha (maize, beans, sorghum and millet)</li> </ul>	<ul style="list-style-type: none"> <li>○ Conduct region-wide on-farm demonstrations to encourage improved agronomic practices</li> <li>○ Expand land that has irrigation potential</li> </ul>
Livestock Diseases	<ul style="list-style-type: none"> <li>○ Expand RVF and Lumpy Skin Disease vaccinations in flooded areas still prone to their spread.</li> </ul>	
Access to food	<ul style="list-style-type: none"> <li>○ Provide targeted free food to displaced and vulnerable groups</li> </ul>	

### 1.3.5 Mount Elgon District

**Food Security Status:** Acute Food and Livelihood Crisis (high risk)

**Districts:** Mount Elgon, parts of Busia and Bungoma

**Affected Population:** 32,361 displaced; 54,048 indirectly affected

Cause/Sector	Immediate	Longer Term
Protection	<ul style="list-style-type: none"> <li>○ Immediate measures to protect vulnerable people (particularly women, children and elderly)</li> </ul>	
Non-Food assistance	<ul style="list-style-type: none"> <li>○ Emergency provision of non-food items (kitchen sets, blankets, mosquito nets, soap, jerrycans, Unimix and water treatment) to displaced people.</li> </ul>	<ul style="list-style-type: none"> <li>○ Conflict resolution between conflicting groups: resolve the underlying issues</li> <li>○ Reintegrate displaced in safety</li> </ul>
Access to food	<ul style="list-style-type: none"> <li>○ Emergency food relief to displaced people</li> </ul>	

## **2 METHODOLOGY**

### **2.1 Background**

In the last hundred years, Kenya has experienced 28 major droughts. The latest drought, spanning four years, resulted in significant loss of livestock, which continues to stress livelihoods. The impact of the drought, recent floods and consequent interventions require periodic assessments. Since 2004, the Kenya Food Security Steering Group (KFSSG) has coordinated bi-annual assessments corresponding to the two rain seasons: short rains and long rains. The most recent being the Long Rains Assessment conducted in February of 2007.

### **2.2 Scope**

The Short Rains Assessment 2006/07 was conducted to determine the impact of the short rains season, in conjunction with the impact of previous rains, on the food security situation of drought and flood prone districts. Considering the broad, multi-sectoral definition of food security, teams were composed of government and non-government experts from both food and non-food sectors. The non-food sectors included water, health, education, agriculture and livestock. Government of Kenya (Office of the President; Arid Lands Project; Ministries of Agriculture, Livestock, Water, Health and Education), United Nations (WFP, FAO, UNICEF, UNDP, UNOCHA) and NGOs (FEWSNET, World Vision) participated in the field work. Since detailed nutrition surveys could not be conducted, teams were provided with results of the most recent nutrition surveys. Similarly, rain and moisture estimates from satellite imagery were provided. Population data, livelihood classifications and maps of the districts were compiled in a briefing kit for each district. Thirty two districts were assessed by the Rapid Appraisal teams from KFSSG in Nairobi and the District Steering Groups (DSGs). Ten of these districts were assessed at household level by field survey teams. The report recognizes that new districts have since been formed. However for this assessment and implementation of interventions, old districts have been used.

### **2.3 Analytical Framework**

This is the first assessment in Kenya that has used the Integrated Food Security and Humanitarian Phase Classification System (IPC) as the analytical framework for situation and response analysis. The IPC is designed to add rigour to food security analysis and be transparent and evidence-based. Because it employs a uniform set of indicators, and internationally recognised thresholds for many of them, the IPC provides a *common currency* for food security and humanitarian analysis that allows direct comparisons concerning food security status within and between countries.

The IPC has four components: the phase classification which is a scale running from Generally Food Secure and Chronically Food Insecure, through to Acute Livelihood Crisis, Humanitarian Emergency and finally Famine/Humanitarian Catastrophe (see Reference Table on page 3 for details). Each phase is assigned based on a convergence of evidence that is framed by the second component - the Key Reference Outcomes – together with other indirect evidence that is available. The Strategic Response Framework (third component) allows analysts to recommend the broad types of response that would meet the immediate and underlying needs of people in the different phases. Finally the early warning component provides information on the direction of change, and the relative risk.

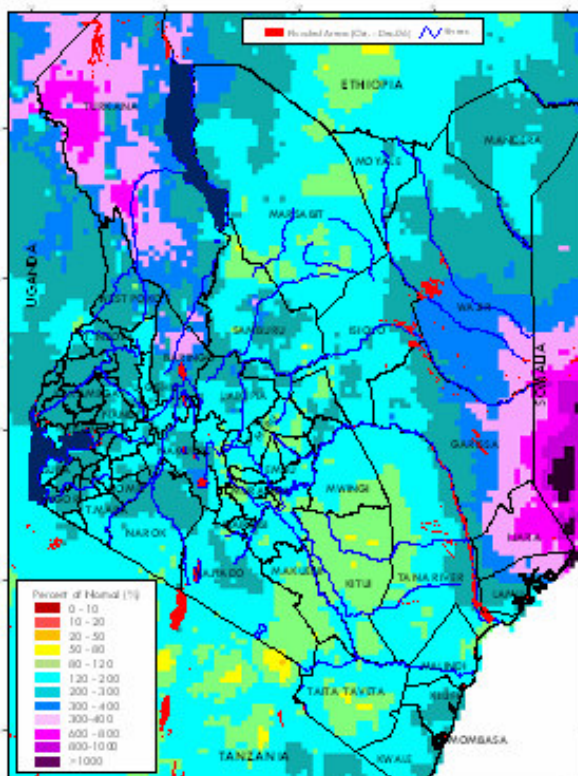
The data was analysed and written up in three stages: firstly the field teams wrote district reports while still in the field; secondly, representatives from the field teams wrote up cluster reports in a workshop in Nairobi; a smaller team composed of representatives from the field from relevant line ministries, together with analysts from WFP, FEWSNET and FAO conducted the IPC situational and response analysis. Responsibility for drafting the national report was taken by the Office of the President, with support from partners.

### 3 RAINFALL, CLIMATE OUTLOOK AND IMPACT ON FOOD SECURITY

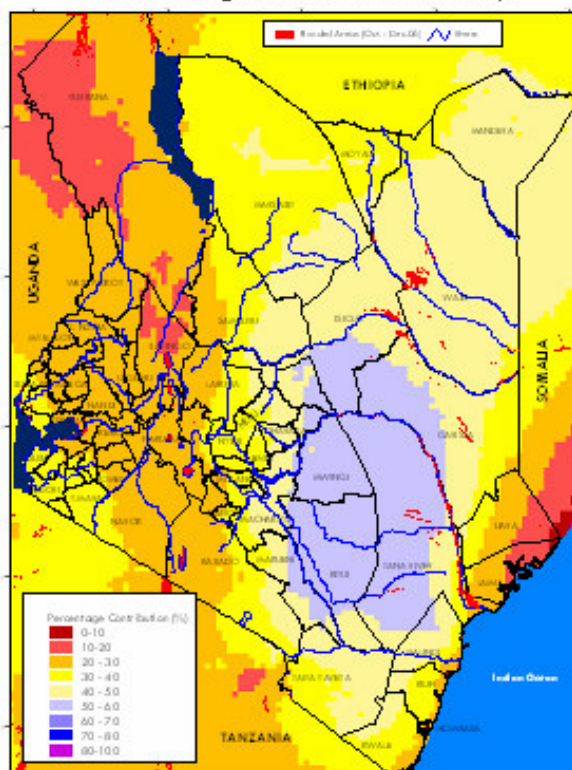
#### 3.1 The Performance of the 2006/07 Short Rains

The performance of the October to December 2006 season was good in most areas and especially those that depend on short rains. Rainfall intensity was above normal, with good spatial and temporal distribution despite flooding in some areas (see figure 1.1). The significance of the short rains in Kenya ranges from 30-40% of production in the lake basin region to 60-70 in the eastern half of the country as shown in figure 1.2. The rains started in late October and continued into January 2007. The months of November and December 2006 were exceptionally wet with torrential rains that caused flooding in the lake basin and eastern marginal agricultural regions, as well as in the eastern pastoral areas.

**Figure 3.1.1: Short Rains (October 2006 to 28<sup>th</sup> February 2007)**



**Figure 3.1.2: Short Rains Seasonal Significance (Normal Short rains as a Percentage of Annual Totals)**



Source: USGS/FEWSNET

The northern pastoral cluster comprising Turkana, Samburu, Marsabit, Moyale and Mandera, received above normal short rains as from October 2006, with most of it being recorded in October and November 2006. The amounts of rainfall recorded ranged between 160 to 300 percent of normal in most districts. Figure 1.1 shows the performance of the short rains as a percentage of the normal in the northern pastoral cluster. Turkana received between 300 to 600 percent of normal rainfall in most parts of the district with localized areas in Lokichoggio, Oropoi and Turkwel Divisions receiving amounts exceeding 600 percent. However, parts of Maikona, Loiyangalani and Laisamis Divisions of Marsabit, Uran in Moyale and Nyiro in Samburu received slightly lower amounts ranging between 80 to 120 percent of normal.

Most districts in the eastern pastoral cluster including Wajir, Ijara, Garissa, and Tana River, received much above normal rainfall during the short rains period between November and December 2006. This led to extensive flooding of the River Tana and Ewaso Nyiro basins and the lowlands of Garissa, Tana River, Ijara and parts of Wajir and Isiolo Districts.

The short rains started in October and continued into January 2007 in most areas in the coastal marginal agricultural cluster made up of Malindi, Kilifi, Taita Taveta and Kwale Districts. The region has a mean annual rainfall of between 400 to 1300 mm. This year's long and short rains were above normal that caused localised flooding in Kwale and Kilifi Districts. There were few areas that received below normal and late rainfall in Taita Taveta District.

In the agro-pastoral cluster composed of West Pokot, Baringo, Laikipia, Kajiado and Narok Districts, the short rains started earlier than normal in September instead of October and intensified in October/November in all parts of the livelihood zone. The rains were good both in quantity and spatial distribution. The total rainfall received during the season exceeded the long term amounts by 200 to 300 percent in most parts of the cluster. Significant areas of Nginyang and Kollowa Divisions in Baringo District received between 300 and 600 percent of the long term average.

The eastern marginal agricultural cluster that includes, Mwingi, Kitui, Makueni, Machakos, Mbeere, and Tharaka Districts experienced the El Nino phenomenon during the 2006/2007 short rains season after five successive drought seasons since year 2004. The rains began on time throughout the region and extended to the month of January usually a dry month. The amount of rainfall received was above normal compared to the long term average and was generally well distributed. The cumulative rainfall amounts in Machakos and Mbeere Districts were between 120-200 percent of the long term average except for Kitui and Makueni where most of the areas received 80 to 160 percent of the long term average. In Tharaka most areas received between 200 to 300 percent of the long term average. The heaviest downpour was experienced from late November to early December lasting for about 2-3 weeks. However, the rainfall season was regarded as the best in five years.

The 2006 short-rains season was characterized by severe flooding in the lowland areas of the Lake region comprised of Busia, Kisumu, Migori, Nyando, Rachuonyo, Siaya and Suba Districts. The floods resulted from exceptionally heavy rainfall in adjacent highland districts of the Rift Valley, including Trans Nzoia, Uasin Gishu, Kericho and Bomet, in addition to heavier-than-normal local rains within the Lake region.

### **3.2 Trends and Prospects**

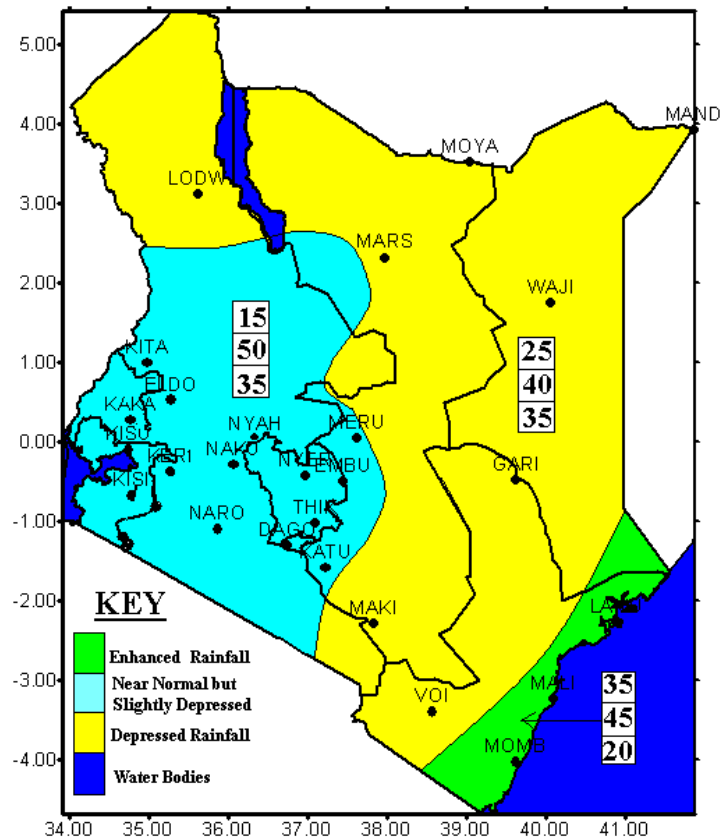
There has been a further improvement in food security status after the October-December rains from the marginal gains made during the March to July 2006 long rains for pastoralists, agro-pastoral and marginal farmers. The performance of the long rains will be critical in strengthening the long term recovery of pastoral, agro-pastoral and marginal farming livelihoods in the arid and semi-arid areas.

From 5 to 7 March 2007, the nineteenth Climate Outlook Forum was convened in Nairobi, Kenya by ICPAC to formulate consensus guidance for the March to May rainfall season in the Greater Horn of Africa. Probability distributions for rainfall were established to indicate the likelihood of above-, near-, or below-normal rainfall for each zone. Above-normal rainfall is defined as within the wettest third of long term recorded rainfall amounts in each zone; near-normal is defined as the third of the recorded rainfall amounts, centred around the climatological median; below-normal rainfall as within the driest third of the recorded rainfall amounts. Climatology refers to a situation where any of the three categories have equal chances of occurring. The Kenya March to May rainfall forecast is shown in figure 4.1. The outlook is relevant only for seasonal time scales and relatively large areas. Local and month-to month variations may occur. Currently much of the Indian and southern Atlantic Ocean are warm. Any occurrence of tropical cyclones in March/April may interfere with the wind and moisture patterns and increase drought risks in the Equatorial parts of the GHA. Update forecasts for GHA sub-region are provided by the National Meteorological and Hydrological Services and ICPAC.

**Figure 3.2.1: March to May Rainfall forecast in Kenya**

The long rains are usually not reliable in the eastern half of the country, and the probability of depressed rainfall is not surprising. This part of the country relies on the short rains for food production. Livestock may pass through lean times if the rains are depressed, and water sources may be affected. The resilience of most households during the March to May rainfall period will depend on the level of households' food stock from the 2006/7 bumper harvest. However, livelihoods in the northern and eastern pastoral areas under alert or moderate risk of a worsening phase because they are equally dependent on both the short and the long rains.

The high potential mixed farming highlands of Rift Valley, Western, Nyanza, Eastern and Central Provinces expect near normal to slightly depressed rainfall. These generally food insecure areas will need to be monitored closely.



Source: ICPAC and USGS

### 3.3 Impact of the Short Rains on Food Security

Generally the short rains were normal to above normal. Some parts in the eastern pastoral districts of Wajir, Ijara, Garissa and coastal marginal agricultural districts of Lamu, Tana River, Kilifi and Malindi experienced floods which were caused by abnormal high rains within and in other surrounding districts. The floods damaged roads, accessibility to livestock auction yards, schools, water and health facilities; and key agricultural markets. People lost their lives after being swept away and acres of crops in valleys and low lying areas were washed away. About 250,000-500,000 people were either directly or indirectly affected. Classrooms, school equipment and pit latrines were either destroyed by the floods or internally displaced people. However, in most areas, the short rains were well-distributed and adequate. Consequently the general food situation in the country has improved remarkably compared to previous seasons.

#### Livestock

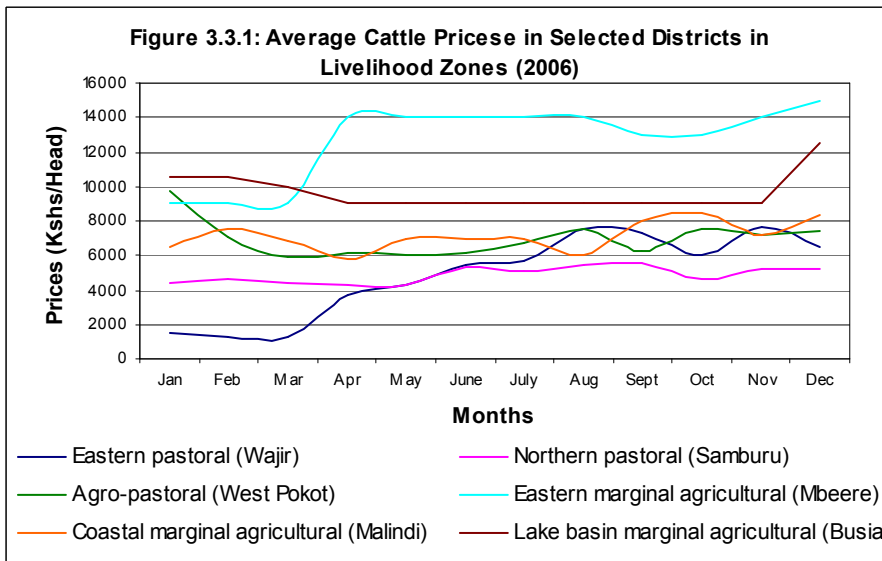
In the marginal agricultural, agro-pastoral and pastoral areas, pasture and browse regeneration is good and available in most areas, trekking distances to water sources has reduced considerably and there is no unusual movement of people or livestock. Consequently, the body condition of all livestock species is generally good. The pasture and browse is expected to last until the beginning of the long rains season. However, unpalatable plants continue to encroach on rangelands (e.g. *Prosopis Juliflora*). The wet conditions following the droughts have caused a wide spread of animal diseases, RVF being the most noticeable, but also Helminthosis, PPR in Turkana, and a range of other disease have affected the livestock production systems negatively.

There is improved milk availability due to kidding and lambing in shoats but the quantities remain below normal. The number of animals per household is still below normal but most households are gradually



recovering from losses suffered during the past droughts. Cattle are in calf and are expected to start calving in April-May 2007. Camels are expected to start calving towards the end of the year.

The outbreak of RVF has delayed the build-up of stocks and recovery. The restriction on bovine and caprine marketing has negatively affected household income particularly in eastern marginal agricultural, southern agro-pastoral and eastern pastoral areas who obtain about 50 percent and above of their annual cash income from livestock and livestock products including meat, skins, milk, skins and other by products. The RVF also negatively affected livelihoods whose income is mainly derived from domestic and international livestock trade. Although RVF may limit trade of live stock from affected areas, Kenya Meat Commission remains a major outlet for processed livestock products to overseas markets.



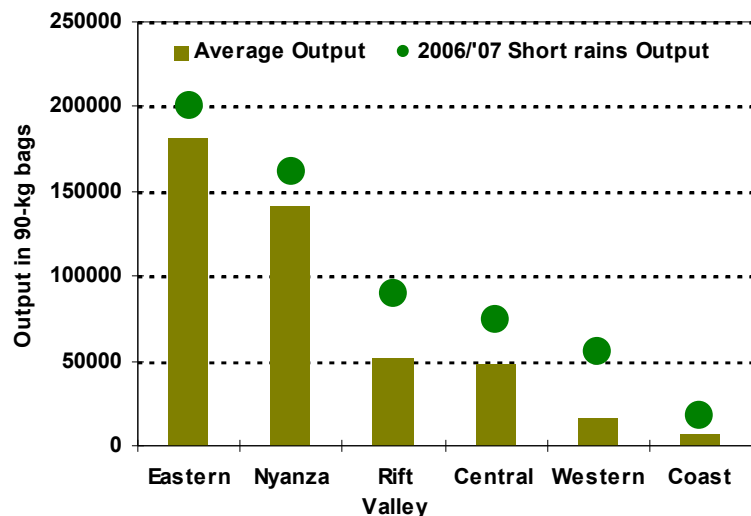
Livestock prices had been on the increase in the second half of 2006 after early and erratic but relatively good long rains of 2006 contributed towards improved livestock body conditions, see figure 3.3.1. This upward trend continued up to mid January 2007 but fell sharply in all markets after the outbreak of the Rift Valley Fever in the country caused panic among red meat

consumers. Before mid January 2007, the terms of trade had favoured livestock traders with cereal prices on the decline while livestock prices were on the increase. It is anticipated that the spread of the RVF will be contained and markets reopened. Consequently, livestock prices are anticipated to track higher in the first half of 2007 because the imminent long rains are expected to sustain forage regeneration and access to water, thereby improving on or maintaining the good animal body conditions. In addition, market supply is still constrained by reduced supply in the market as households continue to restock. If RVF still persists, it will constrain supply and push livestock prices up.

### Crops

The prolonged rainfall period favoured both the early and late planted crops of maize and beans, green grams, sorghum, pearl millet, pigeon peas, cow peas, some of which have been harvested. Although there were cases of water logging and leaching mostly in sandy soils; high weed and pest infestation; and rotting of beans during the harvesting period in some marginal agricultural areas, the expected crop yields is good. The estimated short rain maize output is 450,000 MT. Figure 3.3.2 shows the performance of the maize in the short season. However, most households do not have adequate storage facilities for the expected bumper harvest. Also,

**Figure 3.3.2: Comparative National 2006/7 Short Rains Maize Output**



Source: MoA/FEWSNET

because of the ban in livestock sales, there is an accelerated sale of farm produce by households in the eastern marginal agricultural areas in need of cash. Consequently household produced food stocks may be depleted early.

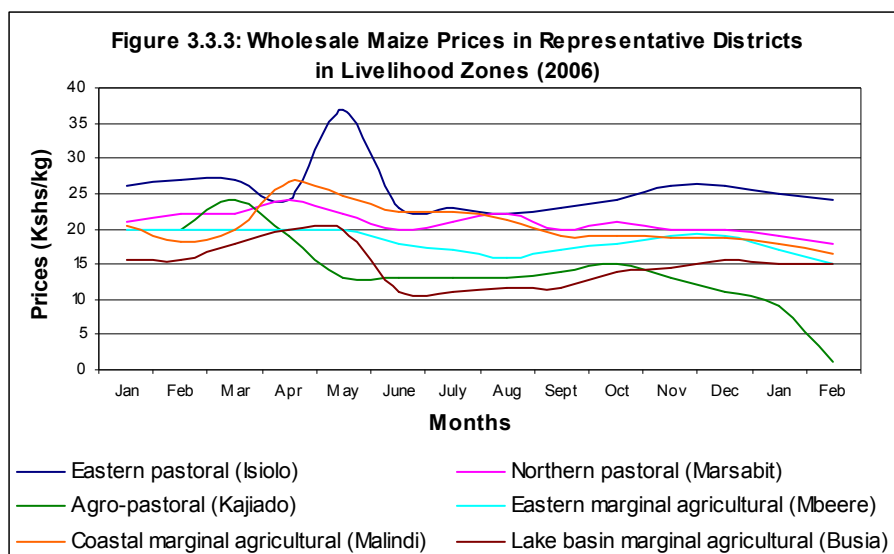
The Ministry of Agriculture has concluded that just over 3 million MT of maize will be harvested during the July 2006 – June 2007 long and short rains seasons. The output is about 15 percent higher than the long term average and is attributed to good long and short rains in key producing areas of the country.

Table 3.3.1: Maize Balance Sheet: August 2006-June 2007: Source of Data: MoA, KARI, NCPB, Millers		
Period	Source	Quantity (MT)
Aug. 2006	Opening stocks (millers, traders, on-farm stocks,	1,792,000
Aug. 2006-Jun. 2007	Imports (Uganda/Tanzania)	243,000
Aug. 2006-Jan. 2007	Long rains output - remaining	890,000
Feb. – Mar. 2007	Short rains output	450,000
<b>Aug. 2006-Jun. 2007</b>	<b>Total Availability</b>	<b>3,375,000</b>
Aug. 2006-Mar. 2007	Post harvest losses	150,000
Aug. 2006-Jun. 2007	Seed, animal feed, industrial	120,000
Oct. - Dec. 2006	Export (Tanzania)	23,000
Aug. 2006-Jun. 2007	Total Consumption	2,750,000
<b>Aug. 2006-Jun. 2007</b>	<b>Total Demand</b>	<b>3,043,000</b>
<b>Aug. 2006-Jun. 2007</b>	<b>Surplus</b>	<b>332,000</b>

Current maize stocks are estimated to be 1.56 million MT, equivalent to a seven month's national demand for maize. Farmers are holding 890,000 MT or 58 percent of that quantity, traders 340,000 MT, the National Cereals and Produce Board 290,000 and Millers 120,000 MT. Additional output from the short-rains season harvest in March has boosted local supply even further. Subsequently a 332,000 MT surplus is anticipated. Table 3.3.1 is a balance sheet for the July 2006 – June 2007 period. In Tanzania, the crop output north of the country was good and the

export ban of maize and other food crops has been lifted. However, maize exports from Tanzania into south-eastern Kenya, the traditional destination market for Tanzanian maize, expected to face stiff competition due to the good short rains output in eastern Kenya. The long rains season was below normal in the Lake basin region of Tanzania and reverse flow of maize from Kenya to that region is probable. Maize imports from Uganda into south-western Kenya and the hinterland may decline in the first quarter of 2007 due to good short and long rains harvest in western Kenya. However this cross-border trade is expected to pick up from May as domestic supply in Kenya tightens.

Prices of farm produce in the eastern and coastal marginal areas had remained above normal in the past seasons due to consecutive droughts. With the expected good harvest this season, prices have started to



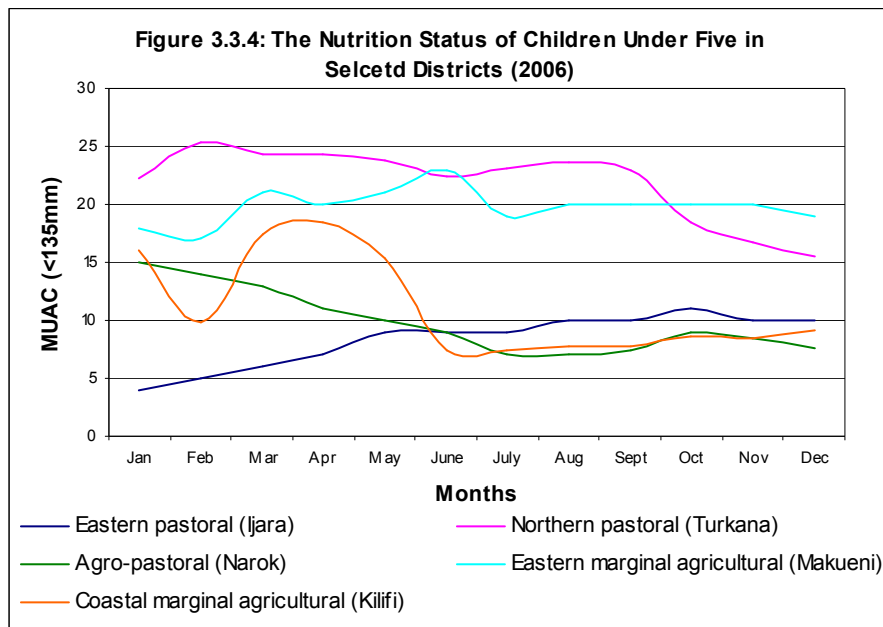
decline a trend that is expected to continue in the first quarter of 2007. Farmers in the drought-prone marginal agricultural areas have been sell their newly harvested crop immediately after harvest at very low prices, and when the market is already over-supplied. The rapid sale of crop output is attributed to a combination of a need to finance other obligations; absence of adequate on-farm storage

infrastructure; and a need to mitigate high post harvest losses, especially from damage by the greater grain borer and aflatoxin infection. Unfortunately for many of these households, the cyclical nature of

food insecurity is evident a few months after harvest, when households purchase back cereals at several times the price at which they sold their harvests. Figure 3.3.3 shows maize prices in selected districts in the six clusters assessed. While lower prices will improve access to food by market-dependent households, this must be measured against early depletion of food stocks and reduced household income for other households.

### Health and Nutrition

The health and nutritional status has improved (as shown in figure 3.3.4) with malnutrition rates (MUAC for children five) in most livelihood zones on a downward trend since September 2006 due to milk availability and supplementary feeding programs in most marginal pastoral and agro-pastoral areas. However, malnutrition rates are still high in some parts and therefore there is need for investigation to establish and address the underlying causes.



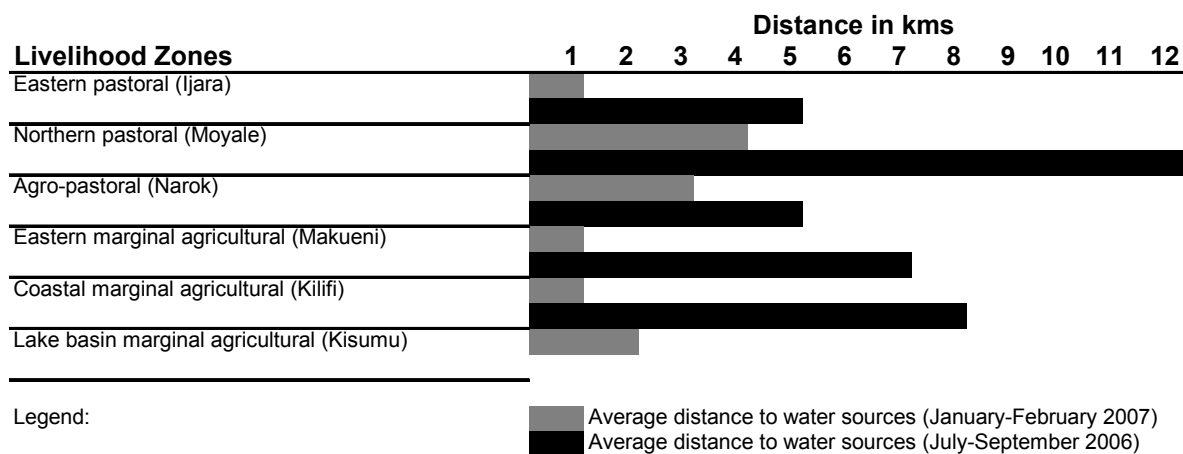
availability and supplementary feeding programs in most marginal pastoral and agro-pastoral areas. However, malnutrition rates are still high in some parts and therefore there is need for investigation to establish and address the underlying causes.

Except for RVF, there were no major disease outbreaks in most areas but malaria, diarrhoea, pneumonia and acute respiratory infections, were on the increase.

### Water and Sanitation

Pans, dams, natural ponds and underground tanks collected sufficient water despite high siltation during the season. Boreholes and wells were also adequately replenished. Hence availability and accessibility of water for both domestic and livestock use has improved significantly as shown in figure 3.3.5. There is a reduction in the average walking distance to water points in all livelihood zones. There are no reported cases of conflicts over water. However, most primary schools still lack access to clean water and water sources are poorly distributed in some livelihood zones.

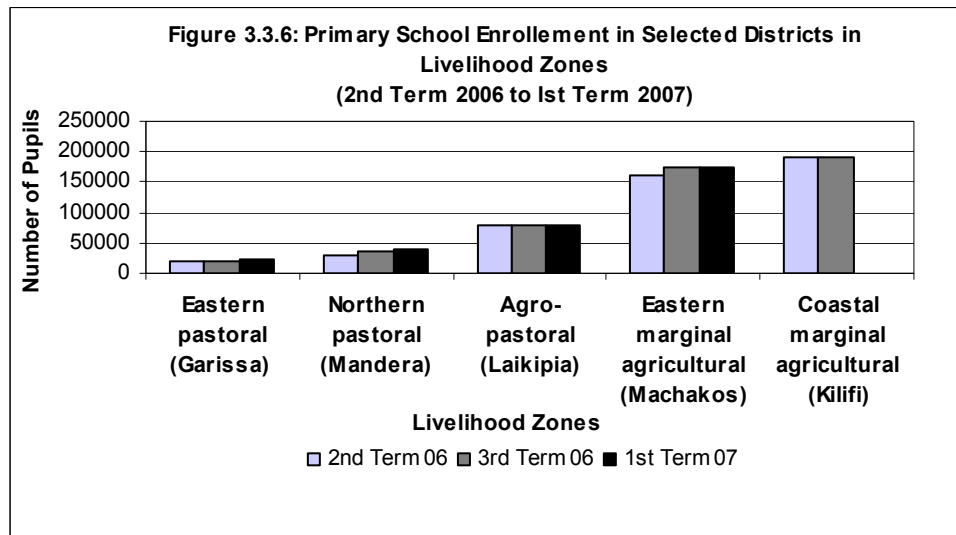
**Figure 3.3.5: Average distance to water sources in selected districts in livelihood zones**



Source: RAT and DSGs, February 2007

### Education

Figure 3.3.6 shows the level of school enrolment in selected representative districts. While free primary education has led to an increase in the overall enrolment, regular and expanded school feeding programmes has augmented it by enhancing retention of pupils, minimizing absenteeism, improving



academic performance, allowing parents to have more time for other economic activities and enhancing good health and nutrition of pupils. However, most households are still unable to pay secondary school fees because they are still recovering assets lost in the past drought. If RVF persists loss of income may result in extensive non payment of secondary school fees in eastern marginal agricultural and pastoral areas.

### Conflict and Insecurity

The general security situation including conflict over resources in the pastoral and agro-pastoral areas has improved and currently the situation is generally calm except in Mount Elgon area. No serious attacks have been reported in the recent past in these areas and this is attributed to peace initiatives currently on going between the affected communities. The security situation remains precarious in northern Kenya bordering Ethiopia and eastern Kenya along the Somalia border. The influx of displaced persons as a result of localized conflict in southern Ethiopia and in Somalia may lead to increased insecurity due to competition for pasture and water resources; and increased raids for livestock due to reduced cost and/or increased smuggling of small arms.

## **4 REGIONAL FOOD SECURITY STATUS**

There has been a marked improvement in the food security status of most pastoral, agro-pastoral and marginal agricultural livelihoods after the October-December 2006 short rains. Prior to the 2006 long rains, these livelihoods had been devastated by a succession of poor seasons. The 2006 long rains were better than in the previous seasons and initiated the recovery process of pastoral, agro-pastoral and to some extent, marginal agricultural livelihoods. A good 2006 short rains season has further boosted this livelihood recovery process which requires successive good seasons. Figure 3.1 shows the food security status and projection by March 22, 2007 for the period between March and June 2007.

### **4.1 Northern Pastoral Cluster**

The northern pastoral cluster consists of Mandera, Marsabit, Moyale, Samburu and Turkana Districts. The region has an estimated population of 1,205,427 with Turkana being the largest in size and population. The main source of livelihood is pastoralism and communities keep mixed herds of goat, sheep, cattle and camels. Pockets of agro-pastoral zone are also found in the districts and subsistence farming is mainly practiced around the high potential areas. The main crops grown in the agro-pastoral zone are maize, beans, sorghum, cowpeas and green grams. Formal employment/business/petty trade livelihoods are located in major town centers within the districts. Fishing is a major source of income for people living along the shores of Lake Turkana.

The northern pastoral cluster is classified as chronically food insecure. However, the livelihood zones within the districts are at different stages of early warning ranging from alert to high risk. Rift Valley Fever (RVF) has negatively effected markets and prices of livestock and allied products. Food access and availability has improved but remains unstable due to low purchasing power. Water availability has also significantly improved. Households are mostly practicing usual or insurance coping mechanisms. Livelihood assets are stressed and communities have just begun rebuilding their herds as consequence of the recent drought period.

In the pastoral livelihood, the probability of the current chronically food insecure status worsening is high in Turkana and moderate in Samburu District while the direction of the status is unclear in Marsabit and Moyale which remain under alert. Malnutrition rates, though stabilizing, still remain high in the pastoral areas. Milk availability has marginally improved due to kidding and lambing in small stock. However calving is yet to take place and milk availability is below normal. An upsurge of diseases including cholera, diarrhoea, malaria and localized cases of measles has been reported further compromising the nutrition status of the under fives. Insecurity is a major concern especially in Turkana and Samburu Districts and is significantly hampering the recovery process. There is acute dietary diversity deficit in Turkana and Samburu Districts.

The food security status in the agro-pastoral livelihoods of Marsabit, Moyale and Mandera Districts, does not face immediate risk of worsening. However, the same livelihood is under alert in Turkana and at moderate risk of worsening in Samburu District. This is because most food security indicators and key reference outcomes place the two districts under chronic food insecurity but several indicators remain worrisome. Malnutrition is still high and dietary diversity deficit is acute in Turkana and Samburu. In addition, there is a high level of insecurity and tension. In the fisheries livelihood of Turkana, malnutrition rates are high and diseases prevalence is on the increase.

### **4.2 Eastern pastoral cluster**

The eastern pastoral cluster is made up of Isiolo, Tana River, Wajir, Garissa and Ijara Districts. The main livelihood in this cluster is pastoralism, agro-pastoral, mixed and marginal mixed farming along rivers Ewaso Nyiro, Daua and Tana. Livestock production is the main source of livelihood in the cluster. Most households keep cattle, camel, sheep, and goats. Pastoral East received above normal rainfall, which

improved pasture and access to water. As a result of this, there was an improvement in livestock body condition. However, the cumulative effect of the previous drought compounded by RVF outbreak in the cluster led to deaths and abortions among livestock thus delaying recovery of livestock assets. Crops were also washed away by floods.

Food security status in the agro-pastoral livelihood zone ranges from chronically food insecure, to acute food and livelihood crisis. Garissa District is at alert warning level because of anthrax, RVF and pneumonias in livestock caused by floods and resultant chilly weather. In humans, waterborne infections, respiratory diseases and malaria upsurges have arisen for the same reason. Consequently, crude mortality rate is high. Floods caused crop losses, while the legacy of livestock losses still persist hence many households are displaced and destitute.

Ijara and Isiolo Districts are at moderate risk of moving from chronically food insecure to acute food and livelihood crisis because of high malnutrition rate and low dietary diversity. This has been caused by low consumption of animal products due to loss of livestock in the previous drought, closure of livestock markets and ban on animal slaughter. Infant mortality rate is high, and malaria is on upsurge trend. On the other hand, Wajir is at high risk of moving to acute food and livelihood crisis. This is due to abortions in livestock, loss of livestock, reduced purchasing power and displacement of people especially in Griftu, Habaswein and Sebule. Prevalence of malaria and diarrhoeal diseases is high. Recovery will take longer because of abortions due to RVF. In addition, the situation may get worse should the long rains delay.

The whole of the pastoral livelihood zone is under acute food and livelihood crisis. Like in the agro-pastoral livelihood zones, pastoralists suffered similar hazards. They suffered more livestock losses due to drought in the past. This coupled with closure of markets and ban on slaughter has undermined their purchasing power and resulted in an increase in malnutrition. Delay in the expected long rains will adversely affect pastoralists due to diminishing water and pasture.

Marginal and mixed farming areas are in acute food and livelihood crisis. Effects of the floods resulted in destitution and displacements especially in Bura, Kipini and Garsen Divisions. Dykes on River Tana were broken in at least four places and are yet to be repaired and displaced. People have not moved back to their farms. If long rains come before repair of the dykes, there will be further flooding. The area has high mortality attributable to high incidences and prevalence of malaria and water borne diseases. Previous drought affected both livestock and crops. Later floods swept away crops in the farms.

Firewood gathering/Charcoal burning livelihoods depend on the purchasing power of other livelihoods. Therefore, they were adversely affected by reduced purchasing power of the people in the other livelihood zones. This population lives within the highly populated suburbs of Isiolo town, where access to sanitation facilities and other amenities is poor. Disease morbidity is high.

### **4.3 Agro-pastoral cluster**

The agro-pastoral livelihood cluster is composed of Baringo, Kajiado, Laikipia, Narok and West Pokot Districts. The five districts cover an area of 142,438 square kilometers with a population of 2.1 million people. Pastoralism is the pre-dominant livelihood in the cluster followed by agro-pastoralism, mixed farming and formal/informal employment. Pastoralists keep cattle, goats and sheep and to a smaller extent, camels. Crop farming is practiced for both subsistence and commercial purposes in all districts in the cluster. In Narok, large scale wheat, barley and maize production is practiced in the mixed farming zones. In Baringo and West Pokot, households engage in commercial production of maize including seed, and some horticulture in the Perkerra and Sigor irrigation schemes. Formal employment/business/trade livelihoods are mostly located in major towns in the cluster.

The overall food security status in all the livelihood zones in this cluster has improved from acute food and livelihood crisis to chronically food insecure. The mixed farming livelihood zones in Narok, Kajiado, Laikipia and West Pokot Districts still generally food secure. Generally, the region received above normal rainfall during the 2006 short rains. Pasture and browse regeneration was good in the whole area apart

from patches that have been subjected to overgrazing and soil degradation. The livestock body condition for all species in all the cluster districts is good. Distances to water sources for livestock and domestic purposes have significantly reduced since water sources are well recharged. Families are consuming two meals per day although, dietary diversity remains chronically deficient. Malnutrition rates are on the decline but RVF continues to undermine the trend as families avoid consuming meat and milk. At least nine human deaths and several livestock infections have been recorded in Baringo and Kajiado Districts. Livestock quarantine and ban on sales have reduced the purchasing power of pastoral livelihoods.

The agro-pastoral areas of Kajiado, Laikipia and Narok Districts expect normal to above normal harvests for both maize and beans. Maize and beans prices in all districts apart from West Pokot are either normal or slightly higher than normal. Irrigation schemes in Kajiado and Narok experienced significant losses and reduction in crop yields due to heavy rains, water logging and blight. Water logging and localized flooding on farms in the mixed farming zones in Narok district also delayed land preparation for the long rains season and hampered movement of wheat and barley harvesting equipment. There were pre maturity losses in beans due to heavy rains that caused flower abortion and infestation of pods by caterpillars especially in Kajiado District.

An increase in wildlife population, especially wildebeests and zebras in Narok District, during this season has led to competition for pasture, overgrazing and increased exposure of livestock to contagious diseases such as malignant catarrh fever. The increase in vegetation cover has increased the breeding ground for tsetse flies and other disease vectors. Narok and Kajiado Districts have areas that are currently difficult to access due to washing away of bridges and sections of roads; and formation of wide gullies across roads. No severe coping mechanisms are being employed in any of the districts in the cluster. There is prevailing and structural peace.

#### **4.4 Eastern Marginal Agricultural Cluster**

The marginal agriculture region includes Kitui, Mwingi, Makueni, Machakos, Mbeere and Tharaka Districts. There are three main livelihood zones in this cluster: mixed farming (MF), marginal mixed farming (MMF), formal employment/business, mainly found in urban centers of Kitui, Machakos, Makueni and Mwingi. Tharaka District has a small rain fed livelihoods while Machakos has a ranching livelihoods zone MF livelihoods are situated the highland areas and have higher agricultural potential compared to the less productive MMF livelihoods mostly found in the lowland areas. The MF areas depend on crops and livestock production for their income while MMF areas depend on livestock for most of their income. The region has a bimodal rainfall pattern. The short rains (October to December) are reliable than the long rains (March to June). Consequently, most agricultural production takes place in the short season.

The cluster is generally food secure after experiencing an exceptionally good season which impacted positively on livelihoods. Above normal yields were realized in crops improving food availability after successive poor seasons since 2004. In areas where there is high soil fertility and farmers have adopted appropriate drought tolerant crops especially in the marginal mixed farming areas, the overall crop performance was very good with higher yields than in areas with poor soil fertility. Livestock productivity has improved resulting in marginal increases in herd sizes especially for shoats. With adequate forage and reduced distances to water sources, livestock production is expected to make further improvements. Market food prices have reduced significantly improving food accessibility and dietary diversity. Currently, households are consuming adequate food rations and malnutrition rates have declined among vulnerable groups over the past 3-4 months. Overall, the food security status is normal and is expected to remain so up to July 2007.

However, the above normal rains led to destruction of farm structures, collapse of latrines, roads and bridges affecting accessibility to markets and general communication networks in most areas. There is also mass sale and outflow of legumes from the region to external markets at low prices threatening future food security status in the region. A bumper harvest of maize is expected in the region but inadequate and/or poor storage facilities may lead to cases aflatoxicosis and post harvest grain losses. In addition, an

outbreak of RVF was reported in Mwingi, Kitui and Makueni but not in Tharaka, Mbeere and Machakos Districts. The outbreak resulted in spontaneous abortions that delayed the anticipated recovery of livestock from losses suffered during the past droughts. In Mwingi and Kitui the situation was compounded by the outbreak of Lumpy skin Disease (LSD) that reduced the expected income from livestock sales. Therefore, agro-pastoral areas in this cluster are chronically food insecure and are under alert.

While both the mixed and marginal mixed farming livelihoods have returned to their normal food secure status, there remain pockets of chronic food insecurity and acute food and livelihood crisis, in Mwea Mbeere and Mutonguni Divisions respectively. Water logging in the black cotton soil areas in Mwea Mbeere Division resulted in stunting and poor crop performance, market inaccessibility and damaged communication network. The Mutonguni area of Kitui District is chronically food insecure and has not shown significant improvements in key indicators this season. Torrential rains coupled with poor vegetation cover in some areas caused strong surface run-offs that led to heavy leaching and soil erosion, flooding, widening of river banks and washing away of crops in low lying areas. There is an elevated probability of the area falling into acute food and livelihood crisis from chronic food insecurity.

#### **4.5 Coastal marginal agricultural cluster**

The coastal marginal agricultural cluster consists of Taita Taveta, Kwale, Kilifi and Malindi Districts. There are various livelihoods within the cluster but the main ones include mixed farming, cash crop/dairy, formal employment, tourism, forest and national parks.

The region is chronically food insecure and under alert except along the coastal belt which depend on the long rains and are generally food secure. The 2006 short rains season were the best in the last five years. This impacted positively in all the livelihoods as crop production and yields are above normal. Food commodities are available at household level and accessible in the local markets at affordable prices. Livestock body condition has significantly improved due to availability of pasture and forage. Distances to water sources for both livestock and domestic use has greatly reduced because of recharged water pans, dams and rivers. Families are consuming at least two meals with improved dietary diversification. The trend of malnutrition is on the decline. However, there was an outbreak of RVF in the region which temporarily reduced the purchasing power of households relying on the livestock and their products. Also, some households have avoided consumption of meat and milk. There was late harvest of maize in parts of Voi Division due to lack of storage facilities increasing the probability of post harvest losses.

In Taveta and Tausa Divisions and parts of Wundanyi in Taita Taveta; and Kinango, Samburu Divisions and parts of Lunga Lunga in Kwale District, overall crop production was low due to flooding, damage to crops, water logging and late planting. There was also significant damage to road network making communication and accessibility to market difficult. These divisions remain chronically food insecure with a high probability of shifting to acute food and livelihood crisis.

#### **4.6 Lake Basin Marginal Agricultural Cluster**

The seven assessment districts situated around the shores of Lake Victoria account for a total population of about 3.1 million persons or 10 percent of the country's population. There are four main livelihood zones in the Lake region, namely the marginal agricultural – mixed farming, highland mixed farming zone; fishing, and formal/informal trade centers. Less than 20 percent of the population resides in the highlands. The vast majority are situated in the lowland areas that are prone to both drought and floods.

The long-rains season is the principal season and contributes up to 70 per cent of total annual crop output. Short rains crop production is undertaken primarily in the relatively upper lying areas of the region. The Lake region is a deficit area where local production accounts for less than half of the region's demand; in part attributed the limited application of recommended agronomic practices. Improved breeds of cattle are reared in the few upper lying areas of the region, while local indigenous zebu cattle dominate the



livestock reared in most of the rest of the region. Fish production is an important source of food and income for most families residing in the perennially drought-prone areas along the lake's periphery.

The lake basin marginal agricultural cluster is chronically food insecure except in the households in the flood-affected lowlands adjacent to Lake Victoria who face acute food and livelihood crisis. These households remain highly vulnerable to food insecurity and face a deepening crisis. An estimated 40,000 persons lost their short rains crops and small stock; a significant proportion was displaced; their farm structures and production implements were destroyed or washed away by the floods. While the short rains season contributes about 30 percent to total annual output, prospects for the more important long rains season are not optimistic in the flooded areas. Soils have not yet dried properly and remain unworkable, resulting in little land preparation. If the long rains are timely, little or no crop will be planted, yet household food stocks are already depleted. Normal or above normal rains could also lead to a resurgence of malaria, diarrhoea and other water borne diseases, pushing up the rates of child malnutrition that rose in most districts between October and December. Floods and the water hyacinth weed have also compromised fish production by pushing the breeding grounds further into inaccessible deep seas worsened by piracy in Lake Victoria. In addition, infrastructure damage is extensive, including roads, schools, water and irrigation facilities which were affected adversely. Food and non-food interventions targeted exclusively to flood-affected households are required. More worrying and underlying cause of current food insecurity is the HIV/AIDS pandemic, increasingly a serious humanitarian catastrophe whose impacts require urgent and systematic redress.

## 5. RECOMMENDED INTERVENTIONS

With the overall improvement in food security across the country, it is important to reconsider current relief responses in order to move towards recovery and longer term development. It is critically important for Government and its partners to seize the opportunity of the improved food security situation to implement programmes that address the underlying causes of vulnerability, as a means to assist communities recover and increase their resilience before the next drought or flood. Only action now can break the viscous cycle of relief assistance being required in the absence of development investments. It is also important the food security coordination structures for both humanitarian (KFSM) and long term development (ASCU) come together for coordinating initiatives transitioning relief and development.

### 5.1 Strategic Response Framework for Northern Pastoral Cluster (Mandera, Marsabit, Moyale, Samburu, Turkana)

Phase	Livelihood Zone	Causes			
		Underlying		Immediate	
		Cause/problem	Response	Cause/problem	Response
Chronically Insecure	Pastoral /Agro Pastoral	Poor hygiene and sanitation practices	➤ Regular health education on areas of hygiene and Nutrition	Incomplete recovery from decimation of livestock	➤ Restocking of livestock at a cost of Kshs 458 million
		Poor maternal and infant feeding practices	<ul style="list-style-type: none"> <li>➤ Nutrition education on food diversification to address micronutrient deficiency</li> <li>➤ Promotion of growth monitoring through ECDs</li> <li>➤ Promotion of exclusive breast feeding and proper complementary feeding practices</li> </ul>	Access to grazing lands	➤ Enhancement of peace initiatives
				Consistently high levels of malnutrition among under fives	<ul style="list-style-type: none"> <li>➤ Provision of supplementary feds for vulnerable groups (pregnant, lactating and under fives) in all the health facility.</li> <li>➤ Selective Feeding to be supported. Need for linkages between food interventions and selective feeding programmes.</li> <li>➤ General food distributions to be implemented in the interim before other interventions are considered.</li> <li>➤ Covered under regular school feeding</li> <li>➤ Provision of therapeutic feds for premature and underweight babies</li> <li>➤ Training health workers on management on severe malnutrition</li> <li>➤ Promotion of exclusive breast feeding and proper</li> </ul>

					complementary feeding practices Promotion of exclusive breast feeding and proper complementary feeding practices
	Poor health seeking behaviour	<ul style="list-style-type: none"> <li>➤ Regular health education on areas of hygiene and Nutrition</li> <li>➤ Strengthening of primary health care</li> </ul>	Access to markets		<ul style="list-style-type: none"> <li>➤ Improved marketing systems and infrastructure</li> <li>➤ Containment of RVF</li> </ul>
	Limited access to health facilities	<ul style="list-style-type: none"> <li>➤ Employment/deployment of health workers especially nutritionists</li> </ul>	Upsurge in human and livestock diseases		<ul style="list-style-type: none"> <li>➤ Provision of insecticide treated mosquito nets</li> <li>➤ Continuation of outreach services and screening and referral of malnourished cases</li> <li>➤ Procurement of 5MT of chlorine and Aluminium Sulphate for water treatment at a cost of Ksh.1Million – (Moyale)</li> <li>➤ Provision of funds to SND to complete construction of 20 pit latrines in Bori location for the displaced households - Moyale</li> <li>➤ Active disease surveillance</li> <li>➤ Vaccinations and treatments of livestock</li> </ul>
	Lack of Nutrition information	<ul style="list-style-type: none"> <li>➤ Establish nutrition surveillances system in each district</li> <li>➤ Strengthen nutrition data collection method, analyses and reporting</li> <li>➤ Carry out a nutrition survey on malnutrition levels.</li> </ul>			
			Inadequate health workers		<ul style="list-style-type: none"> <li>➤ Deployment of 3-Nutritionist to improve nutrition services - Moyale</li> </ul>
	Low immunization levels		Damaged water structures due to heavy rainfall and siltation of water sources		<ul style="list-style-type: none"> <li>➤ Rehabilitation of 3 damaged dams; and 20 shallow wells at a cost of Kshs. 6 Million – Moyale</li> <li>➤ Repair and rehabilitation of pans and dams – Marsabit</li> <li>➤ Desilting and protection of shallow wells</li> <li>➤ Construction of gabions and creation of a concrete wall around Borri Bore hole at a cost Kshs. 6Million and Piping of the water to a distance of about 500 meters – Moyale</li> <li>➤ Repair, servicing and sinking of new boreholes including installation of spare parts</li> <li>➤ Repair of district water bowser</li> </ul>
	Extensive land degradation	<ul style="list-style-type: none"> <li>➤ Re-establishment of good quality pasture and fodder crops</li> <li>➤ Conservation and management of block grazing</li> </ul>	First signs of recovery but HHs still face food gaps		<ul style="list-style-type: none"> <li>➤ Combination of general food distribution and food for assets at reduced levels to support recovery process</li> </ul>

		Poor trade infrastructure	➤ Support livestock marketing groups through organization and subsidy		
		Endemic conflicts	➤		
		Dependency on sole asset	➤ Enhancement of irrigation where feasible		
		Low literacy levels	➤ Provision of more bursaries to enhance secondary school enrolment		
Chronically Insecure	Agro Pastoral			Access to seeds	➤ Provision of certified and drought resistant seeds
				Access to farming land	➤ Enhancement of peace initiatives

## 5.2 Strategic Response Framework for Eastern Pastoral Cluster (Isiolo, Tana River, Wajir, Garissa, Ijara)

Phase	Livelihood Zone	Causes			
		Underlying		Immediate	
		Cause/problem	Response	Cause/problem	Response
Acute food and livelihood crisis	Agro-pastoral	Drought frequency	<ul style="list-style-type: none"> <li>➤ Develop water harvesting schemes</li> <li>➤ Strengthen irrigation schemes along rivers Tana and Ewaso Nyiro</li> <li>➤ Promote drought resistant crops and pastures in agro-pastoral areas of Ijara, Garissa, Wajir, Isiolo, Tana River, through initial supply of seeds (millet, sorghum, cassava cenchrus, erogrostis, chloris) at a cost Kshs. 25 million for grass seeds</li> <li>➤ Establish strategic feed and food reserves at accost of kshs.75million</li> <li>➤ Sink boreholes (Isiolo-14, 11 in Tana River)</li> </ul>	Incomplete recovery from decimation of livestock	<ul style="list-style-type: none"> <li>➤ Livestock redistribution for vulnerable groups, 800 HH in Wajir, 3,000HH in Garissa, 1,300 in Ijara, 1,000HH in Isiolo at cost of Kshs.458 million</li> <li>➤ Carry out livestock census in the 5 districts at a cost of Kshs.20million</li> </ul>
		Institutional weaknesses	<ul style="list-style-type: none"> <li>➤ Finalise/review ASAL and livestock policies</li> <li>➤ Rationalize budget allocations both intra and inter-sectoral to the</li> </ul>	Damage to infrastructure	<ul style="list-style-type: none"> <li>➤ Assess damage and cost of repairs to infrastructure due to floods</li> <li>➤ Repair destroyed sections of the dyke along river</li> </ul>

			<p>5 districts</p> <ul style="list-style-type: none"> <li>➤ Increase resources deployment to the 5 districts</li> <li>➤ Strengthen District Health Management Information System in all districts</li> </ul>		<p>Tana in Tana River District</p> <ul style="list-style-type: none"> <li>➤ Reconstruct pump house for water intake in Masalani</li> <li>➤ Repair 2 windmills for 2 schools in Garissa</li> <li>➤ Rehabilitate Bura irrigation scheme in Tana River district: intake and canal repairs and de-silting</li> <li>➤ De-silt water pans in all affected districts (20 in Ijara)</li> <li>➤ Repair 6 classrooms in Garissa –Damajale School.</li> <li>➤ Replace 131 assorted pumping equipment in Garissa at cost of 99.4m (for Garissa 718m)</li> </ul>
		Inadequate water and sanitation facilities	<ul style="list-style-type: none"> <li>➤ reconstruction of 157 pit latrines (20 in Wajir, 40 in Ijara, 19 in Garissa, 54 in Isiolo, 24 in T/River)</li> <li>➤ Strengthen public education on sanitation and hygiene</li> </ul>	<p>Poor access/utilization of health services</p>	<ul style="list-style-type: none"> <li>➤ Strengthen disease surveillance system in the 5 districts through IDSR training @ Kshs. 10 m</li> <li>➤ Enhance vector control activities</li> <li>➤ Strengthen RVF surveillance Kshs. 5 million</li> <li>➤ Register and staff 4 dispensaries constructed through CDF in Ijara district</li> <li>➤ Establish nomadic outreach services</li> <li>➤ Supply chlorination of water at household level in all districts</li> </ul>
		Dietary diversity deficit	<ul style="list-style-type: none"> <li>➤ Investigate courses of chronic malnutrition</li> <li>➤ Implement targeted supplementary feeding programme in</li> </ul>		
		Poor agronomic practices	<ul style="list-style-type: none"> <li>➤ Public education on crop and livestock husbandry</li> </ul>		
			<ul style="list-style-type: none"> <li>➤</li> </ul>		
		HIV/AIDS	<ul style="list-style-type: none"> <li>➤ Implementation of Work place HIV/AIDS policy by all districts</li> <li>➤ integration of infected and affected into the society through home based programmes</li> <li>➤ formation of groups and initiate IGAS</li> </ul>		
		Resource based conflicts	<ul style="list-style-type: none"> <li>➤ Initiate conflict resolution measures with involvement of local leaders – strengthen conflict resolution committees in volatile</li> </ul>		

			areas at all levels		
				First signs of recovery but HHs still face food gaps	➤ Combination of general food distribution and food for assets at reduced levels to support recovery process
Pastoral	Drought frequency	➤ Re-seeding of denuded lands (1,600 Kg in Wajir, 2,500 Kg in Garissa) at a cost of Kshs. 5 million ➤	Incomplete recovery from decimation of livestock		➤ Livestock redistribution for vulnerable groups, 800 HH in Wajir, 3,000HH in Garissa, 1,300 in Ijara, 1,000HH in Isiolo at a cost of Kshs. 458 million ➤ Carry out livestock census in the 5 districts Kshs. 25 million
	Institutional arrangements	➤ Finalise/review ASAL and livestock policies ➤ Rationalize budget allocations both intra and inter-sectoral to the 5 districts ➤ Increase resources deployment to the 5 districts ➤ Strengthen District Health Management Information System in all districts	Disease outbreaks		➤ Enhance vector control activities for control of both human and livestock diseases 15 million ➤ Strengthen RVF surveillance in all districts at a cost of kshs.10 million
	Environmental Degradation	➤ Re-seeding of denuded at a cost of Kshs. 40 million ➤ Soil conservation programme	Market disruption		➤ open closed markets in areas where RVF has been controlled like Ijara and Garissa
	Limited sources of income	➤ Diversify sources of income to include agro-farming and IGAs	Floods		➤ Construction of Habaswein bridge in Wajir ➤ Rehabilitation of 68 Km road linking Ijara and Tana River districts ➤ Rehabilitate road linking Hulugho to Ijara
			➤	First signs of recovery but HHs still face food gaps	➤ Combination of general food distribution and food for assets at reduced levels to support recovery process
Marginal/mixed farming	Drought frequency	➤ Supply seeds for dry resistant crops in Tana River (Garsen, Bura and Kipini divisions),	Floods		➤ Repair 4 broken sites on the dyke in Garsen division ➤ Introduce quick harvest maize variety
	Environmental Degradation	➤ Initiate alternative IGAs ➤ Soil conservation programme ➤ Re-seeding of the land at a cost of Kshs. 40 million	Inadequate seeds		➤ supply adequate seeds Garsen, Bura and Kipini divisions of Tana River district;
	Institutional arrangements	➤ Finalise/review ASAL and farming policies in arid areas	Disease outbreaks		➤ Strengthen PHASE strategy in learning institutions ➤ Vector control and surveillance activities

			➤ Access to credit facilities to strengthen farming activities		➤ Distribute chlorine for household treatment of drinking water
		A.HIV/AIDS		High levels of malnutrition in some areas.	➤ General food distribution ➤ Provision of supplementary feeds for vulnerable groups (pregnant, lactating and under fives) in all the health facility.
Chronically food insecure	Charcoal burning/firewood collection	Environmental Degradation	➤ Initiate alternative IGAs in order to save trees ➤ Soil conservation programme ➤ Re-seeding of the land at a cost of Kshs. 40 million	Disease outbreaks	➤ Carry out weekly outreach services within Ngare Mala Location ➤ Distribute chlorine for household treatment of drinking water in Ngare Mala Location ➤ Strengthen public education of prevention of diseases. This should include education on proper disposal of human waste
		Dependency on charcoal	➤ Diversify sources of income to include marginal farming in Ngare Mala location of Isiolo division		
		Institutional arrangements	➤ Establish credit facility for households in Ngare Mala Location in Isiolo District	Poor sanitation (flying toilets)	➤ strengthen sanitation and hygiene education

### 5.3 Strategic Response Framework for Agro-pastoral Cluster (Baringo, Kajiado, Laikipia, Narok, West Pokot)

Phase	Livelihood Zone	Causes			
		Underlying		Immediate	
		Cause/problem	Response	Cause/problem	Response
Generally Food Secure	Mixed farming/ agro pastoral	Malaria / URTI	Preventative measures	Malaria/URTI	Treatment Provision of drugs
		HIV/ AIDS	Campaign Education Nutrition Health	HIV/ AIDS	Treatment Provision of ARV
		Water scarcity	Strengthening Water Resources Users associations. ➤ Provision of plastic tanks in ➤ Excavation of Pans ➤ Construction of 6 dams for rainwater harvesting and small	Water that is available is of water quality	➤ Provision of Chlorine for 64 pans/ dams in Baringo. ➤ Assessment to identify pans/dams that require desilting. ➤ Provision of rain harvesting facilities and plastic tanks to schools

			scale irrigation												
		Environmental degradation	Community capacity building on environmental, soil and water conservation measures (A forestation and construction conservation structures)												
		Poor Agronomic Practices	<p>Promotion of production and consumption of drought resistant and quick maturing crops (sweet potatoes, cassava and sorghum)</p> <ul style="list-style-type: none"> <li>➤ Support Agro-biodiversity farmer field schools. (FFS).</li> <li>➤ Capacity building</li> <li>➤ Nutrition education</li> </ul>	Land under cultivation below potential	<p>Provision of certified seed.</p> <ul style="list-style-type: none"> <li>➤ Baringo (to cover 13,000ha-maize; 9000ha beans)</li> <li>➤ Laikipia 100MT (maize (DH04, H515, H516, H614 and H629); Sorghum (Cadam); Beans (Mwitmania) cow peas, green grams and Finger millet)</li> <li>➤ Kajiado</li> <li>➤ Maize 107 MT DHO 1,,DHO1, DHO 4, HB 513, HB513, Pannar, Pannar, DHO2, DH01,</li> <li>➤ Beans 85 MT Rose coco(GLP2), Rose coco(GLP2), Kat B1, Rose coco(GLP2, Kat B1</li> <li>➤ Narok various certified seed (Dry land maize, Cassava, Sweet potato, Katumani, Dolicos lablab, Sorghum, Millet) @ Kshs 87,000.00</li> </ul> <p>Provision of farming inputs (fertilizers, herbicides and pesticide)</p> <p>Provision of framing tools and implements Kajiado</p> <table border="1"> <thead> <tr> <th>Implement</th> <th>Quantity(No.)</th> </tr> </thead> <tbody> <tr> <td>Ox-plough</td> <td>300</td> </tr> <tr> <td>Yokes</td> <td>600</td> </tr> <tr> <td>Straps</td> <td>1200</td> </tr> <tr> <td>Harnesses</td> <td>100</td> </tr> </tbody> </table>	Implement	Quantity(No.)	Ox-plough	300	Yokes	600	Straps	1200	Harnesses	100
Implement	Quantity(No.)														
Ox-plough	300														
Yokes	600														
Straps	1200														
Harnesses	100														
		Poor Infrastructure (Communication difficulties)		Damage to communication infrastructure by heavy rains and floods	Rehabilitation of bridges and road sections,										
				Damage to irrigation infrastructure by heavy rains and floods	<p>Ptokou and Sangat Irrigation Canals in West Pokot at Kshs 4 million.</p> <p>Repair of Elangata Enterit weir and Irrigation Scheme in Narok district at Kshs 1.5 million.</p>										



		Poor Infrastructure			
Generally Food Secure	Pastoral/ agro pastoral	Malaria / URTI	<ul style="list-style-type: none"> <li>➤ Preventative measures</li> <li>➤ TB cases: screening of new cases and enhanced monitoring of defaulters.</li> </ul>	Malaria/URTI	<ul style="list-style-type: none"> <li>➤ Treatment</li> <li>➤ Provision of drugs</li> <li>➤ Malaria intervention: In-door residual spraying at beginning of March before onset of long rains. In low lands, communities to be sensitized to use insecticide treated mosquito nets.</li> </ul>
		HIV/ AIDS	Campaign Education Nutrition Health	HIV/ AIDS	Treatment Provision of ARV
		Water scarcity	<p>Strengthening Water Resources Users associations.</p> <ul style="list-style-type: none"> <li>➤ Construction of dry season permanent (strategic) watering points: Drilling of boreholes in Kajiado @ Kshs 120million.</li> <li>➤ Provision of plastic tanks in Kajiado@ Kshs 64 Million.</li> <li>➤ Excavation of pans @ Kshs 35.7 million.</li> </ul>	Water that is available is of water quality	<ul style="list-style-type: none"> <li>➤ Provision of Chlorine for 64 pans/ dams in Baringo,</li> <li>➤ Rehabilitation of boreholes @ Kshs 50 million</li> <li>➤ Provision of fuel subsidy in Kajiado @ Kshs 2Million.</li> <li>➤ Assessment to identify pans/dams that require desilting.</li> <li>➤ Provision of rain harvesting facilities and plastic tanks to schools</li> </ul>
		Environmental degradation / Water catchments	<p>Community capacity building on environmental, soil and water conservation measures (</p> <p>A forestation and construction conservation structures)</p>		
		<p>Environmental degradation</p> <p>Minimal pasture regeneration</p> <p>(due to overgrazing and/or prolonged drought periods)</p>	<p>Expand the already on-going pasture improvement and range rehabilitation through establishment of grass and re-seeding of rangelands</p> <p>Community out reach to encourage farmers to fence out pasture land using locally available material such as thorny bushes to enable regeneration. The local leaders should be encouraged to enforce the community by-laws on trespass on pasture enclosures.</p> <p>Establish policy to reduce human</p>		<p>Training on Pasture establishment and conservation and re-seeding of rangelands. At a cost of Kshs. 4 million</p> <p>Provision of hay baling equipment in Narok district at Kshs 2.8 million.</p>

			wildlife conflict.		
		High malnutrition rates	<ul style="list-style-type: none"> <li>➤ Universal supplementary be considered for children under 3 years, pregnant and lactating.</li> <li>➤ Diarrhoea intervention: Public sensitization for people to boil water.</li> <li>➤ Baseline Nutritional survey be carried out to establish the nutrition status of the livelihood zone.</li> <li>➤ Health education to sensitize communities and schools on diversification of meals - emphasis should be on quality of meals – to meet RDA - rather than quantity. The community should be encouraged to use locally available food, to meet their nutritional daily requirements.</li> </ul>	High malnutrition rates	<ul style="list-style-type: none"> <li>➤ No general food distributions</li> <li>➤ Selective feeding to be considered in areas with high malnutrition</li> <li>➤ Retain Expanded School Feeding Program.</li> </ul>
		Poor health seeking behaviour			
		Poor livestock husbandry and rangeland management practices	Improve stock breeds to improve live weight and quality acceptable to KMC standards at Kshs 0.4 million in Narok district.	Legacy of loss of HH livestock holding	Restocking for households that lost all their livestock in Narok at Kshs 1 million.
				<p>Low value of livestock assets due to diseases</p> <p>CBPP, FMD, BQ/Anthrax Shoatpox, RVF</p> <p>Blue tongue, LSD</p>	<p>Establish structures for cattle dip management at community level.</p> <p>Rehabilitation of existing cattle dips a cost of 10 million.</p> <p>Vaccination and treatment against livestock diseases as well as surveillance, vector control, and pastoralist capacity building</p> <p>Baringo Kshs 7 million</p> <p>Kajiado Kshs 6.7 million</p> <p>Laikipia Kshs.5 million</p> <p>Narok Kshs 2 million</p>

					West Pokot      Kshs. 4 million
		Dependence on limited income sources.	Diversification of livestock enterprises- promotion of beekeeping, camel rearing, pasture conservation at a cost of 25 million  Explore fish farming (identify permanent surface water sources)  Promotion of bee keeping in the lower parts of the cluster districts at a cost of Kshs. 3 million	Poor livestock husbandry	

#### 5.4 Strategic Response Framework for Eastern Marginal Agriculture Cluster (Kitui, Mwingi, Makueni, Machakos, Mbeere Tharaka

	Livelihood Zone	Causes			
		Underlying	Response	Immediate	Response
Generally Food Secure	Mixed farming	Extensive land degradation	<ul style="list-style-type: none"> <li>➤ Rehabilitation of soil conservation structures in Kitui district through FFW.</li> <li>➤ Capacity building on soil conservation strategies.</li> <li>➤ Reseeding of bare land</li> </ul>	Washing away of dams	<ul style="list-style-type: none"> <li>➤ Undertake repairs of embankments of earth dams that were destroyed during the heavy rains.</li> <li>➤ Desilt earth dam intakes as soon as the water levels subside.</li> <li>➤ Promote water harvesting techniques especially in MMF zones where Borehole water is saline.</li> <li>➤ Protect water sources to avoid contamination from livestock and run-offs.</li> </ul>
		Poor roads	<ul style="list-style-type: none"> <li>➤ Grading of roads and repair of bridges</li> </ul>	Contamination of water sources	<ul style="list-style-type: none"> <li>➤ Chlorination of contaminated water</li> </ul>
		Poor farming methods	<ul style="list-style-type: none"> <li>➤ Training on proper crop husbandry</li> <li>➤ Strengthen extension program in the region</li> <li>➤ Increase extension staff in the region</li> </ul>	Quarantine	<ul style="list-style-type: none"> <li>➤ Strengthen disease surveillance system and early warning system</li> </ul>
		Poor organization of marketing system	<ul style="list-style-type: none"> <li>➤ Support formation/existing local marketing societies</li> <li>➤ Improve rural accessibility to</li> </ul>	Flower abortion in fruits	

			markets ➤ Opening of NCPB depots ➤ Improve market information system		
				RVF scare and LSD	➤ Education on RVF at a cost of kshs.5 million ➤ Vaccination of herds in affected areas – Kshs. 50 million
				Low milk sales	➤ Education on RVF at a cost of kshs.5 million
		Lack of grain storage facilities	➤ Establish/Re-open NCPB depots ➤ Promotion of grain storage structures ➤ Training on post-harvest management of grains and aflatoxin detection ➤ Provision or stocking of appropriate grain storage pesticides	Malaria, URTI	➤ Maintain malaria prevention campaigns
		Over emphases on maize production	➤ Promotion of drought tolerant crop varieties and utilization ➤ Provision of appropriate seeds for the region	Low yields	➤ Improve crop husbandry methods and expand cropping area. ➤ Promote adoption of drought tolerant crops ➤ Provision of appropriate seed varieties for the region
		Lack/Inadequate water treatment works in Mbeere and Tharaka	➤ Establishment and Expansion of the treatment works.	High disposal of farm produce	➤ Support existing marketing societies and establish new ones ➤ Improve market information system
		Low rate of exclusive breast feeding		Water logging	➤ Provision of appropriate relief seeds
				Poor accessibility and provision of primary health care services	➤ Employ/deploy more health workers especially Nutritionists; at least one per division  ➤ Massive campaign on Vitamin A supplementation and Measles vaccination ➤ Promotion of growth monitoring through ECDs ➤ Strengthen data collection method, analyses and reporting system

					<ul style="list-style-type: none"> <li>➤ Establish nutrition surveillance systems</li> <li>➤ Establishment of therapeutic feeding centers in all hospitals</li> <li>➤ Capacity building of health workers on management of severe malnutrition</li> <li>➤ Conduct a nutrition survey</li> <li>➤ Strengthen CHANIS in all health facilities</li> </ul>
				Lack of reliable nutrition data/relatively low malnutrition rates	<ul style="list-style-type: none"> <li>➤ No general food distributions and no Selective feeding</li> <li>➤ Food For Work, Food For Assets, Cash interventions recommended due to food availability in the market</li> </ul>
Chronically food insecure	MMF	Droughts more frequent and longer	<ul style="list-style-type: none"> <li>➤ Continuation of RSFP</li> <li>➤ Adoption of drought tolerant crops</li> </ul>	Malaria, URTI	<ul style="list-style-type: none"> <li>➤ Maintain malaria prevention campaigns</li> </ul>
		High dependence on food aid	<ul style="list-style-type: none"> <li>➤ Promotion of income generating projects</li> <li>➤ Intensify farming activities</li> <li>➤ Provision of relief seed to affected population</li> <li>➤ Restocking of affected households</li> </ul>	Low milk sales	<ul style="list-style-type: none"> <li>➤ Education on RVF at a cost of kshs.5 million</li> <li>➤</li> </ul>
		High dependence on rain fed farming	<ul style="list-style-type: none"> <li>➤ Promotion of irrigation farming and expansion of irrigation scheme</li> </ul>	Washing away of dams	<ul style="list-style-type: none"> <li>➤ Undertake repairs of embankments of earth dams that were destroyed during the heavy rains.</li> <li>➤ Desilt earth dam intakes as soon as the water levels subside.</li> <li>➤ Promote water harvesting techniques especially in MMF zones where Borehole water is saline.</li> <li>➤ Protect water sources to avoid contamination from livestock and run-offs.</li> <li>➤ Construction of new dams</li> </ul>
		Poor road network	<ul style="list-style-type: none"> <li>➤ Grading of roads and repair of bridges</li> </ul>	Contamination of water sources	<ul style="list-style-type: none"> <li>➤ Chlorination of contaminated water</li> </ul>
				Poor accessibility and provision of primary health care services	<ul style="list-style-type: none"> <li>➤ Employ/deploy more health workers especially a Nutritionists in every division</li> <li>➤ Massive campaign on Vitamin A</li> </ul>

					<p>supplementation and Measles vaccination</p> <ul style="list-style-type: none"> <li>➤ Promotion of growth monitoring through ECDs</li> <li>➤ Strengthen data collection method, analyses and reporting system</li> <li>➤ Establish nutrition surveillance systems</li> </ul> <ul style="list-style-type: none"> <li>➤ Provision of therapeutic fees for premature and low birth weight babies in all hospitals</li> <li>➤ Capacity building health workers on management of severe malnutrition</li> </ul>
		Over emphases on maize production	<ul style="list-style-type: none"> <li>➤ Promotion of drought tolerant crop varieties and utilization</li> <li>➤ Provision of appropriate seeds for the region</li> </ul>	Flower abortion in fruits	
				RVF scare and LSD	<ul style="list-style-type: none"> <li>➤ Education on RVF</li> <li>➤ Vaccination of herds in affected areas</li> </ul>
				Quarantine	<ul style="list-style-type: none"> <li>➤ Strengthen disease surveillance system and early warning system</li> </ul>
				Low milk sales	<ul style="list-style-type: none"> <li>➤ Education on RVF Kshs. 10 million</li> </ul>
		Poor organization of market system	<ul style="list-style-type: none"> <li>➤ Support formation/existing local marketing societies</li> <li>➤ Improve rural accessibility to markets</li> <li>➤ Opening of NCPB depots</li> <li>➤ Improve market information system</li> </ul>	Malaria, URTI	<ul style="list-style-type: none"> <li>➤ Maintain malaria prevention campaigns</li> </ul>
		Inadequate water treatment works	<ul style="list-style-type: none"> <li>➤ Expansion of the treatment works in Mbeere District</li> </ul>	Low yields	<ul style="list-style-type: none"> <li>➤ Improve crop husbandry methods and expand cropping area</li> <li>➤ Promote adoption of drought tolerant crops</li> <li>➤ Provision of appropriate seed varieties for the region</li> </ul>
		Lack of grain storage facilities	<ul style="list-style-type: none"> <li>➤ Establish/Re-open NCPB depots</li> <li>➤ Promotion of grain storage</li> </ul>	High disposal of farm produce	<ul style="list-style-type: none"> <li>➤ Support existing marketing societies and establish new ones</li> </ul>

			structures ➤ Training on post-harvest management of grains and aflatoxin detection ➤ Provision or stocking of appropriate grain storage pesticides		➤ Improve market information system
				Water logging	➤ Provision of appropriate relief seeds for affected area
				High school drop out rates in Mbeere	➤ The district should address the poor performance and dropout rates in schools especially in Gachoka Division due to Miraa (Khat) farming
				Water department in Mbeere district	➤ Rehabilitation of 46 strategic wells and boreholes at a cost of Kshs 1.38 M
					➤ De-silting and excavation of 8 dams and Pans – Kshs 4 M
					➤ Extension and repair of 30 km strategic water pipeline - Kshs 6 M
					➤ Roof catchment for 20 primary schools (10m <sup>3</sup> tanks)- Kshs 1.2 M
					➤ Protection of 6 Springs in water catchment development – Kshs 3 M
					➤ Development of 6 rock catchments - Kshs 9 M
					➤ Rehabilitation of 2 filtration media for water supplies - Kshs 4 M
					➤ Construction of 8 sand dams- Kshs 4 M

## 5.5 Strategic Response Framework for Coastal Marginal Agriculture Cluster (Taita Taveta, Kwale, Kilifi and Malindi)

Phase	Livelihood Zone	Causes			
		Underlying		Immediate	
		Cause/problem	Response	Cause/problem	Response
Chronically food insecure	Mixed Farming	Human-Wildlife conflict	<ul style="list-style-type: none"> <li>➤ Electric Fencing(300 Km at Ksh.100,000/Km</li> </ul>	Floods/Damage to infrastructure.	<ul style="list-style-type: none"> <li>➤ Rehabilitation of; Roads &amp; Bridges-Kshs. 721Million(Kwale &amp; T/Taveta)</li> <li>➤ Schools-Kshs. 5.4Million</li> <li>➤ Water pipelines-Kshs. 8 M</li> <li>➤ Water structures(pans &amp; dams)- Kshs. 12.5 Million</li> </ul>
		Poor soils and agronomic practices	<ul style="list-style-type: none"> <li>➤ Train farmers on; composting, Soil conservation measures</li> <li>➤ Train farmers on new farming technologies</li> </ul>	Rift Valley Fever	<ul style="list-style-type: none"> <li>➤ Livestock Vaccination (Kshs. 1.4 Million in Kilifi)</li> <li>➤ Controlled livestock movement</li> <li>➤ Purchase and distribution of mosquito nets( Kshs. 12.5M)</li> </ul>
		Water scarcity	<ul style="list-style-type: none"> <li>➤ Drilling of bore-holes</li> <li>➤ Rehabilitation of pans and dams</li> </ul>	Poor agronomic practices-limited use of improved seeds	<ul style="list-style-type: none"> <li>➤ Provision of certified seeds, fertilizers and pesticides (Ksh.150 Million)</li> </ul>
		Poor health and nutrition	<ul style="list-style-type: none"> <li>➤ Nutrition education</li> </ul>	Child malnutrition	<ul style="list-style-type: none"> <li>➤ Provision of supplementary feds for vulnerable groups (pregnant, lactating and under fives) in all the health facility.</li> <li>➤ No general food distributions and no Selective feeding</li> <li>➤ Selective Feeding to be supported. Need for linkages between food interventions and selective feeding programmes.</li> <li>➤ Food For Work, Food For Assets, Cash interventions recommended due to food availability in the market</li> </ul>
		HIV/AIDS	<ul style="list-style-type: none"> <li>➤ Education on behaviour change</li> </ul>		Provision of ARVs



	Fisheries	Poor storage	➤ Construction of cold storage facilities		
		Low harvests	<ul style="list-style-type: none"> <li>➤ Improve market infrastructure</li> <li>➤ Application of new technology to exploit inshore and offshore fisheries</li> </ul>	Floods/Damage to infrastructure	➤ Rehabilitation of water structures(pans & dams)- Kshs. 6 Million
	Livestock/ Ranching	Bush fires	➤ Construction of Fire-breaks at a cost of Kshs. 25 million	Poor water quality	➤ Provision of aqua tabs
		Diseases	<ul style="list-style-type: none"> <li>➤ Disease surveillance kshs.10 million</li> <li>➤ Improved animal disease control</li> </ul>		
		Lack of value addition	➤ Rehabilitation of livestock processing plants e.g. milk cooler and bee keeping equipment in Mariakani at a cost of Kshs. 40 million		
		Water scarcity	Construction and de-silting of pans and dams(Kshs. 9.15 Million in T/Taveta)		
		Tsetse and tick borne diseases	➤ Rehabilitation of cattle dips - Kshs. 10 million		

## 5.6 Strategic Response Framework for Lake Basin Marginal Agriculture Cluster

Phase	Livelihood Zone	Causes			
		Underlying		Immediate	
		Cause/problem	Response	Cause/problem	Response
<b>Chronically food insecure with spots of Acute food and livelihood crisis in flooded areas</b>	<b>Marginal Agriculture</b>	Environmental degradation	<ul style="list-style-type: none"> <li>➤ Establish soil and water conservation structures on farms and on river catchments.</li> <li>➤ Develop tree nurseries and encourage planting of trees both in the lowlands and upstream.</li> </ul>	Damaged infrastructure	Roads: <ul style="list-style-type: none"> <li>➤ Upgrade roads that lead to the flooded areas so as to improve access to flood-affected populations, markets and other facilities.</li> <li>➤ Repair several roads and bridges in the flood-affected areas that were either damaged or washed away by flood waters.</li> </ul> Education:

					<ul style="list-style-type: none"> <li>➤ Hasten rehabilitation of classrooms, toilets, and other school facilities - as the long-rains season is about to start.</li> <li>➤ Support provision of replacement desks and teaching materials.</li> </ul> <p>Water and Irrigation:</p> <ul style="list-style-type: none"> <li>➤ Repair of several dykes, weirs and sluices on rivers such as Nzoia and Yala and all other divisions.</li> <li>➤ Rehabilitation of strategic dams and boreholes.</li> <li>➤</li> </ul>
		Flooding	<ul style="list-style-type: none"> <li>➤ Construction of check dams upstream to arrest run-off from the highlands.</li> <li>➤ Train the course of the rivers so as to reduce the intensity of their flow.</li> <li>➤ Excavation and de-silting of rivers that drain into swamps instead of the Lake.</li> <li>➤ Allocation of a bulldozer to facilitate excavation of pans, dams and roads.</li> <li>➤</li> </ul>	Damage to infrastructure	<ul style="list-style-type: none"> <li>➤ Assess damage and cost of repairs to infrastructure due to floods</li> <li>➤ Repair destroyed sections of the dyke along river Tana in Tana River District</li> <li>➤ Reconstruct pump house for water intake in Masalani</li> <li>➤ Repair 2 windmills for 2 schools in Garissa</li> <li>➤ Rehabilitate Bura irrigation scheme in Tana River district: intake and canal repairs and de-silting</li> <li>➤ De-silt water pans in all affected districts (20 in Ijara)</li> <li>➤ Repair 6 classrooms in Garissa –Damajale School.</li> <li>➤ Replace 131 assorted pumping equipment in Garissa at cost of 99.4m (for Garissa 718m)</li> </ul>
		Poor access/utilization of health services	<ul style="list-style-type: none"> <li>➤ Establish a mechanism to carry out periodic detailed nutritional surveys.</li> <li>➤ Promote community outreach clinics so as to target the substantial proportion of households that have limited access to health care facilities.</li> <li>➤ Expand water purification and testing to cover all flood-affected areas.</li> </ul>	High child malnutrition	<ul style="list-style-type: none"> <li>➤ Institute supplementary feeding programs in flood-affected households where child malnutrition is already visible.</li> </ul>

			➤		
		Poor agronomic practices	<ul style="list-style-type: none"> <li>➤ Conduct region-wide on farm demonstrations to encourage adoption of recommended agronomic practices.</li> <li>➤ Expand land that has potential for irrigation to make use of flood waters.</li> <li>➤</li> </ul>		
		Livestock diseases	<ul style="list-style-type: none"> <li>➤ Expand the Rift Valley Fever and Lumpy Skin Disease vaccination campaigns in all flooded areas that remain conducive to the outbreak of the diseases. – 10 million</li> <li>➤</li> </ul>		
		HIV/AIDS	<ul style="list-style-type: none"> <li>➤ Implementation of Work place HIV/AIDS policy by all districts</li> <li>➤ integration of infected and affected into the society through home based programmes</li> <li>➤ formation of groups and initiate IGAS</li> </ul>	HIV/AIDS	<ul style="list-style-type: none"> <li>➤ Support to school feeding programs especially in districts with the highest HIV/AIDS prevalence, including Siaya, Suba and Rachuonyo.</li> <li>➤</li> </ul>
<b>Fishing</b>		Water Hyacinth and lake contaminants	<ul style="list-style-type: none"> <li>➤ Removal of the water hyacinth weed so as to improve access to the lake by small scale fishermen.</li> </ul> <p>Clearing the silted canals so that planktons do not move into the unreachable deep seas.</p>	Lack of seeds	Provision of emergency seed for an estimated 4,000 hectares, assuming that some of the fields will have dried out in time for planting. Most important seeds include pasture seeds maize, beans, sorghum and millet. At cost of Kshs. 30 million
		Security	<ul style="list-style-type: none"> <li>➤ Provide motorized boats to security personnel so as to police more effectively against sea pirates.</li> <li>➤</li> </ul>	Livestock Disease outbreaks	Rehabilitation of almost 90 percent of the cattle spray pens to enhance the control of livestock diseases-Kshs. 25 million.
			➤	Food Aid	<ul style="list-style-type: none"> <li>➤ Institute Food for Work programs for the flood-affected population. Activities would include opening up of canals; reconstruction of toilets; and rehabilitation of boreholes.</li> <li>➤</li> </ul>

## 6 STRATEGIC FOOD/CASH RESPONSE FRAMEWORK LINKED TO IPC

Following the short-rains assessment of January 2006, and the declaration of a crisis in the Arid and Semi-Arid Areas of Kenya due to continued widespread drought, the emergency food aid response, through general food distribution, required a massive increase. Beneficiary numbers escalated from 1.1 million to 3.1 million covering 25 of the ASAL districts from February through August 2006. The subsequent average to above average rainfall from April to June resulted in a downsizing of the emergency response by 600,000 people to 2.4 million beneficiaries receiving general food distribution from September 2006 through February 2007; improvement was primarily seen in the coastal stretch. During this period, expanded school feeding continued to 550,000 school children as did support to the selective feeding programmes. Currently, the food allocation subcommittee of the KFSSG proposes to provide free food assistance to 819,000 people targeted to 14 districts while 271,000 primary school children will be under the expanded school feeding program, and 120,000 people will be targeted under the selective feeding programme. A further 100,668 people will be targeted for cash/food for assets projects. Ten (10) Districts will be closed out of the emergency general food aid in recognition of the improvements in the general food security situation. Gross food requirements for the next six months is estimated at 84,723 MT, valued at approximately US\$ 48 million, targeting just over 1.3 million people. Of this, 60,000 MT is already resourced either in-country or in the pipeline, leaving a net requirement of approximately 25,000 MT valued at US\$ 14 million.

### Food Security Phase Classification and Implications for Food Interventions

1. Generally food secure: This classification phase comprises districts within the marginal mixed farming livelihood zone and pockets in the agro pastoral zone and includes some areas under the current EMOP: Kitui, Machakos, Makueni, Mwingi, Mbeere and Tharaka; and the coastal belt of Kilifi, Kwale, Malindi and parts of Taita Taveta; as well as the mixed farming areas of Baringo, Laikipia, Kajiado, Narok and West Pokot. These areas received good levels of rainfall and an above average harvest resulting in increased food availability at household level, food diversity on the market and low and stable cereal prices. No food interventions are recommended in view of the food security improvements.

2. Chronically food insecure phase - alert level. Districts under this classification include districts within the pastoral livelihood and marginal mixed farming livelihood zone, including Moyale, parts of Baringo, Kajiado, Laikipia, Narok, west Pokot, and south eastern parts of coast,; i.e. the hinterlands of Malindi and parts of Taita Taveta. The main food security indicators including food consumption and food diversity are chronically at the minimum threshold. As the market food availability and access conditions have improved, general food distributions and selective feeding are not considered a viable option. Expanded school feeding and cash interventions are recommended due to food availability in the market; Food for Assets will be considered in the absence of readily available cash intervention programmes in the pastoral areas.

3. Chronically food insecure phase - moderate risk. These are the pastoral livelihood zones of Marsabit, Samburu and Kwale hinterland. These areas have received favourable rainfall and were mostly spared from the RVF outbreak. However, pastoralist household income level was temporarily affected as a result of preventive measures through a temporary ban on livestock slaughtering and marketing. Significant household food deficits still exist in certain geographical areas of the districts under this phase classification, as the recovery process has not yet been fully completed. Food for assets can be considered due to food access and availability constraints. GFD is recommended for the interim while appropriate programmes are established. Selective feeding is recommended in areas of high malnutrition rates.

4. Chronically food insecure phase- high risk. This classification reflects the situation found in portions of the pastoral livelihood zones including the districts of Mandera, Turkana, parts of Isiolo and Wajir. This phase is characterized by widespread long-term unsustainable use of natural resources (e.g., land, water), persistent and cyclical recurrence of production shortfall, health epidemics, and chronic malnutrition. The data suggest that these communities border on an acute livelihood crisis depending on market disruptions, rising malnutrition amongst the under five, upsurge of human and livestock diseases associated to loss of social infrastructures, such as water structures due to heavy rainfall. Although these areas were not affected directly by the RVF, and hence no livestock death was reported or human lives lost, markets were disrupted, which affected the incomes of local households. It

is recommended that general food distributions be implemented until food availability and access constraints are mitigated and cash interventions and / or food for assets interventions are operational. In view of high malnutrition rates, it is recommended that selective feeding should be expanded and strengthened, in combination with other food interventions.

**5. Acute food and livelihood crisis:** This phase comprises most of the eastern portion of the pastoral livelihood zone, including the districts of Garissa, Ijara, Isiolo, Tana River and Wajir. This is a chronically food insecure area affected by multiple shocks that have pushed the food security line below the minimum acceptable threshold for the livelihood zone. The drought and floods followed by RVF resulted in infrastructure damage, livestock death, market disruption and loss of income for pastoralists. Although the RVF is reported by the Government to be largely under control, the impact is still felt in terms of market disruption (national and international) and poor prices. It is recommended that an assessment be done in the course of April to determine continued impact of RVF. It is recommended that general food distribution be considered while supporting and phasing in cash for work and food for assets interventions. In view of high malnutrition rates, it is recommended that selective feeding should be expanded and strengthened, in combination/ linkage with other food interventions.

#### **Targeting Food For Assets (FFA) Beneficiaries:**

The Food For Assets (FFA) activities are expected to play a role in assisting chronically food insecure households and communities to reduce their vulnerability to food insecurity by building relevant community assets. The basic principle for the success of the FFA interventions is community ownership and commitment as well as technical support by relevant stakeholders. In addition, it is critical that the food aid be complemented by relevant non-food aid input. Asset creation projects are expected to be implemented in cases where less than 50% of targeted geographical area requires food aid, providing a maximum of 50% of the standard ration.

#### **Addressing malnutrition:**

Populations in the chronically food insecure and acute food insecure phases continue to experience levels of acute malnutrition that are among the highest in the world. In many of these regions malnutrition levels are showing rising trends, which in other countries would trigger major humanitarian operations. Under the overall leadership of the Ministry of Health, UNICEF and WFP are proposing to assist in the support of the management of moderate acute malnutrition in ASAL areas and to increase access to macro and micro-nutrient rich foods. The proposed areas of focus are nutrition related interventions within the health services to detect and manage cases; the provision of a supplementary ration; the promotion of healthier practices; supplementation and increased access to fortified foods and the implementation of Child Health Weeks. The Programme will target children less than five years old, with a weight-for-height below 80% or those with a medical condition indicating vulnerability to acute malnutrition, and lactating women with a child < 6 months and with a MUAC below 21 cm and pregnant women from their 2<sup>nd</sup> trimester and with a MUAC below 23 cm.

#### **Strengthening food security and market monitoring:**

Food and/or cash can be appropriate interventions depending on market situations. In areas such as Ukambani, where markets are easily accessible and food is available, cash transfer maybe a more suitable response than food. It is crucial that the early warning community monitors and provides regular market analysis, which provide information on food availability and price trends that will serve as an essential input in planning and targeting cash and food for assets interventions. However, there is relative paucity of cash transfer experience in Kenya and an established mechanism for cash transfers, as there is for food aid programmes. It is proposed that the KFSSG promote discussions on food and cash transfers and assess how they can co-exist.

#### **Strategic Food/Cash Response Framework in line with IPC:**

The response classification is detailed in the table below. Broad considerations guiding the response are food availability and accessibility, the loss of productive assets, livestock in particular, floods, rift valley fever and the resultant chronic vulnerability, particularly in the pastoralists areas of Kenya. While emergency food aid in Kenya in 2006 was used as a short-term mechanism to save lives and discourage the sale of productive assets, the emergency response was not intended to address the underlying causes of food insecurity. Although the past two seasons of rains have been healthy, it is premature to switch off the food aid tap to people who have yet to further

recover from a very fragile resource basis. However, the continuation of food aid general distributions, under an emergency response mechanism, is not the remedy for what can now be considered as a chronic caseload of vulnerable individuals. Food aid will continue to be feasible and desirable as an input to recovery processes, rather than as an end in itself. This approach of transitioning into recovery supporting food interventions will pose challenges on capacity, timing, and coordination between non-food and food interventions aimed at improving food security conditions.

The response framework below attempts to link the food security classification analysis (IPC) to the response depending upon the severity of the situation. The underlying theme is one of stages in a move that intends to shift towards recovery and the use of food and cash where appropriate. It is also an attempt to move into activities that will be of benefit to the community and which will look at a longer-term response to a situation that has been characterized by short-term emergency responses. The number of food aid beneficiaries by Districts and Divisions are in appendix 7.

**Table 6.1: Summary Strategic Food/Cash Response Framework Linked to IPC**

Phase	Livelihood Zone	Geographical Area	Response
Generally Food Secure	Mixed Farming, High Potential,	Highlands of Western, Central and parts of Rift Valley and Nyanza Provinces	<ul style="list-style-type: none"> <li>No food interventions</li> </ul>
	Mixed Farming Marginal	Ukambani and the Coastal strip; Machakos, Mwingi, Makueni, Kitui, Tharaka and Mbeere and coastal belt in Kilifi, Kwale Malindi and parts of Taita Taveta	<ul style="list-style-type: none"> <li>No food interventions</li> </ul>
Chronically Food Insecure (Alert)	Pastoral	Parts of West Pokot, Baringo and Laikipia. Southern parts of Kajiado and Narok Districts	<ul style="list-style-type: none"> <li>No General Food Distribution</li> <li>Selective feeding to be considered in areas with high malnutrition</li> <li>Expanded School Feeding to continue in pastoral areas</li> </ul>
	Marginal Mixed Farming	South eastern parts of Coast; Hinterland of Kilifi, Malindi, Kwale and parts of Taita Taveta	<ul style="list-style-type: none"> <li>No General Food Distribution</li> <li>Cash interventions, if feasible, in Kwale and Taita Taveta; otherwise FFA</li> <li>Expanded School Feeding to continue</li> </ul>
Chronically Food Insecure (Moderate)	Pastoral	Moyale, Samburu and Marsabit	<ul style="list-style-type: none"> <li>Cash interventions and/or FFA proposed due to food access and availability constraints. GFD to be implemented in the interim</li> <li>Selective feeding to be supported in areas with high malnutrition</li> <li>Covered under regular school feeding</li> </ul>
Chronically Food Insecure (High risk)	Pastoral	Turkana, Mandera and parts of Wajir and Isiolo districts	<ul style="list-style-type: none"> <li>GFD until Cash intervention programmes and/or FFA are operational and food accessibility and availability constraints are mitigated</li> <li>Covered under regular school feeding</li> <li>Selective Feeding to be supported in areas with high malnutrition. Need for linkages between food interventions and selective feeding programmes</li> </ul>
Acute Food and livelihood Crisis	Pastoral	Ijara, parts of Garissa, Tana River, Wajir and Isiolo districts	<ul style="list-style-type: none"> <li>General Food Distribution</li> <li>Pilot and support Cash interventions and Food for Asset initiatives</li> <li>Covered under regular school feeding</li> <li>Selective Feeding to be supported in areas with high malnutrition. Need for linkages between food interventions and selective feeding programmes</li> <li>Undertake rapid assessment (April/May) to determine the impact of the RVF outbreak on household food insecurity</li> </ul>

## 7.0 APPENDIX

**Table 7.1: Number of People in Need of Food Aid: EMOP Phase VI**

District	Division	% in Need MIN	% in Need MAX	Proposed Beneficiary Numbers
<b>Turkana</b>	Lokichoggio	25%	25%	7,940
	Kaaling	35%	45%	12,904
	Lapur	35%	45%	6,856
	Lokitaung	35%	45%	12,117
	Kibish	25%	25%	1,805
	Lokichar	25%	25%	6,495
	Oropoi	25%	25%	5,371
	Lokori	25%	25%	5,339
	Lomelo	25%	25%	1,814
	Katilu	25%	25%	3,740
	Kainuk	25%	25%	3,517
	Central	25%	25%	7,326
	Kerio	35%	45%	8,266
	Kalokol	35%	45%	15,416
	Turkwel	25%	35%	20,813
	Loima	35%	45%	18,229
	Kakuma	25%	25%	6,618
<b>Turkana Total</b>				<b>144,565</b>
<b>Marsabit</b>	Central	0%	0%	0
	Gadamoji	0%	0%	0
	Laisamis	35%	50%	14,312
	Maikona	35%	50%	11,634
	Loiyangalani	35%	50%	10,112
	North Horr	35%	50%	14,031
<b>Marsabit Total</b>				<b>50,090</b>
<b>Samburu</b>	Nyiro	40%	50%	7,416
	Baragoi	40%	50%	9,482
	Kirisia	25%	25%	10,236
	Lorroki	40%	45%	9,044
	Wamba	40%	50%	11,519
	Waso	40%	50%	4,918
<b>Samburu Total</b>				<b>52,614</b>
<b>Moyale</b>	Central	30%	30%	6,011
	Golbo	35%	50%	5,688
	Obbu	35%	50%	3,356
	Uran	35%	50%	1,464
<b>Moyale Total</b>				<b>16,519</b>
<b>Isiolo</b>	Oldonyiro	50%	50%	5,763
	Central	30%	30%	6,329
	Kinna	30%	30%	2,551
	Garba Tulla	40%	40%	3,343
	Merti	70%	70%	13,161
	Sericho	70%	70%	7,509
<b>Isiolo Total</b>				<b>38,656</b>
<b>Mandera</b>	Khalalio	45%	50%	4,471
	Hareri	55%	60%	3,759
	Libehia	65%	70%	2,431
	Fino	55%	60%	5,438

	Lafey	65%	70%	6,390
	Rhamu	45%	50%	6,085
	Rhamu Dimtu	55%	60%	5,067
	Ashabito	41%	41%	16,884
	Banisa	45%	50%	21,407
	Malkamari	65%	70%	10,154
	Takaba	45%	50%	5,438
	Dandu	65%	70%	13,434
	El Wak	50%	50%	7,272
	Shimbir Fatuma	55%	60%	3,561
	Wargadud	55%	60%	5,756
	Warankara	70%	70%	2,661
	Kotulo	55%	60%	8,906
	Central	30%	40%	11,761
<b>Mandera Total</b>				<b>140,875</b>
<b>Wajir</b>	Central	45%	60%	11,379
	Habaswein	70%	75%	22,921
	Buna	45%	60%	15,643
	Tarbaj	60%	75%	16,279
	Wajir-Bor	45%	60%	9,145
	Kotulo	60%	75%	23,138
	Diff	45%	60%	10,221
	Gurar	45%	60%	9,703
	Griftu	60%	75%	30,280
	Bute	45%	60%	7,877
	Eldas	45%	60%	4,917
	Hadado	70%	75%	16,512
	Sebule	70%	75%	21,446
<b>Wajir Total</b>				<b>199,462</b>
<b>Garissa</b>	Central	28%	28%	6,720
	Sankuri	35%	50%	6,982
	Balambala	35%	50%	7,791
	Danyere	25%	35%	3,610
	Benane	25%	35%	5,583
	Modogashe	35%	50%	8,736
	Shant-Abak	50%	60%	9,534
	Dadaab	35%	50%	14,836
	Liboi	25%	35%	7,152
	Jarajilla	50%	60%	7,571
	Bura	35%	50%	7,754
<b>Garissa Total</b>				<b>86,270</b>
<b>Ijara</b>	Hulugho	40%	40%	9,933
	Sangailu	40%	40%	5,349
	Ijara	30%	30%	6,164
	Masalani	30%	30%	4,178
<b>Ijara Total</b>				<b>25,624</b>
<b>Tana River</b>	Bangale	45%	45%	7,968
	Madogo	40%	40%	10,363
	Bura	40%	40%	13,756
	Galore	30%	30%	12,499
	Wenje	30%	30%	4,537
	Garsen	25%	25%	15,376
	Kipini	0%	0%	0
<b>Tana River Total</b>				<b>64,500</b>
<b>West Pokot</b>	Alale	0%	0%	



	Kasei	0%	0%
	Kacheliba	0%	0%
	Kongelai	0%	0%
	Chepareria	0%	0%
	Kapenguria	0%	0%
	Lelan	0%	0%
	Sigor	0%	0%
	Chesegon	0%	0%
<b>West Pokot Total</b>			
<b>Baringo</b>	Salawa	0%	0%
	Kabarnet	0%	0%
	Sacho	0%	0%
	Tenges	0%	0%
	Marigat	0%	0%
	Mukutani	0%	0%
	Mochongoi	0%	0%
	Bartabwa	0%	0%
	Kabartonjo	0%	0%
	Kipsaraman	0%	0%
	Barwesa	0%	0%
	Nginyang	0%	0%
	Tangulbei	0%	0%
	Kollowa	0%	0%
<b>Baringo Total</b>			
<b>Kajiado</b>	Ngong	0%	0%
	Magadi	0%	0%
	Mashuru	0%	0%
	Central	0%	0%
	Namanga	0%	0%
	Isinya	0%	0%
	Loitokitok	0%	0%
<b>Kajiado Total</b>			
<b>Laikipia</b>	Central	0%	0%
	Lamuria	0%	0%
	Ngarua	0%	0%
	Olmoran	0%	0%
	Nyahururu	0%	0%
	Rumuruti	0%	0%
	Mukogondo	0%	0%
<b>Laikipia Total</b>			
<b>Narok</b>	Central	0%	0%
	Mau	0%	0%
	Osupuko	0%	0%
	Mara	0%	0%
	Olokurto	0%	0%
	Mulot	0%	0%
	Ololulunga	0%	0%
	Loita	0%	0%
<b>Narok Total</b>			
<b>Machakos</b>	Central	0%	0%
	Kalama	0%	0%
	Kangundo	0%	0%
	Kathiani	0%	0%
	Masinga	0%	0%
	Matungulu	0%	0%

	Mavoko	0%	0%	
	Mwala	0%	0%	
	Ndithini	0%	0%	
	Yathui	0%	0%	
	Yatta	0%	0%	
<b>Machakos Total</b>				
<b>Makueni</b>	Tulimani	0%	0%	
	Mbooni	0%	0%	
	Kisau	0%	0%	
	Kalawa	0%	0%	
	Kilome	0%	0%	
	Kilungu	0%	0%	
	Kaiti	0%	0%	
	Kasikeu	0%	0%	
	Mbitini	0%	0%	
	Wote	0%	0%	
	Matiliku	0%	0%	
	Kathonzweni	0%	0%	
	Nguu	0%	0%	
	Makindu	0%	0%	
	Kibwezi	0%	0%	
	Mtito-Andei	0%	0%	
	Tsavo West	0%	0%	
	Chyulu Game Reserve	0%	0%	
<b>Makueni Total</b>				
<b>Kitui</b>	Central	0%	0%	0
	Chuluni	10%	20%	8,553
	Mutitu	0%	0%	0
	Mutomo	0%	0%	0
	Yatta	0%	0%	0
	Mutonguni	10%	20%	6,963
	Matinyani	10%	20%	4,846
	Mwitika	0%	0%	0
	Mutha	0%	0%	0
	Ikutha	0%	0%	0
<b>Kitui Total</b>				<b>20,362</b>
<b>Mwingi</b>	Central	0%	0%	0
	Migwani	0%	0%	0
	Muumoni	15%	25%	6,488
	Nuu	0%	0%	0
	Kyuso	15%	25%	5,912
	Tseikuru	0%	0%	0
	Nguni	15%	25%	3,522
	Mui	0%	0%	0
	Ngomeni	25%	30%	3,080
<b>Mwingi Total</b>				<b>19,002</b>
<b>Mbeere</b>	Siakago	0%	0%	
	Evurore	0%	0%	
	Gachoka	0%	0%	
	Mwea	0%	0%	
<b>Mbeere Total</b>				
<b>Tharaka</b>	South Tharaka	0%	0%	
	Central Tharaka	0%	0%	
	North Tharaka	0%	0%	

<b>Tharaka Total</b>				
<b>Kilifi</b>	Bahari	0%	0%	
	Chonyi	0%	0%	
	Kikambala	0%	0%	
	Ganze	0%	0%	
	Bamba	0%	0%	
	Vitengeni	0%	0%	
	Kaloleni	0%	0%	
	Arabuko Sokoke	0%	0%	
<b>Kilifi Total</b>				
<b>Kwale</b>	Samburu	25%	35%	26,751
	Kinango	15%	20%	12,703
	Matuga	0%	0%	0
	Msambweni	0%	0%	0
	Lunga Lunga	0%	0%	0
	Kubo	0%	0%	0
	Shimba Hills	0%	0%	0
	<b>Kwale Total</b>			
<b>Malindi</b>	Marafa	0%	0%	
	Magarini	0%	0%	
	Malindi	0%	0%	
<b>Malindi Total</b>				
<b>Taita Taveta</b>	Taveta	25%	35%	15,807
	Mwatate	0%	0%	0
	Wundanyi	0%	0%	0
	Tausa	25%	35%	6,043
	Voi	0%	0%	0
	Mwambirwa	0%	0%	0
	Tsavo N. Park	0%	0%	0
<b>Taita Taveta Total</b>				<b>21,850</b>
<b>Total GFD/CFW/FFA</b>				<b>919,843</b>
GFD (Or Transition to CFW/FFA)				819,175
Possible CFW/FFA				100,668
Selective Food Program (SFP)				120,000
Expanded School Feeding Program (ESFP)				271,772
<b>Grand Total</b>				<b>1,311,615</b>

Footnote: ESFP Districts includes all current ESFP Districts except Ukambani Districts. Ukambani Districts are in the IPC classification Generally Food Secure (Alert Level)