THE UNITED REPUBLIC OF TANZANIA

Comprehensive Food Security and Nutrition Assessment Report

Coordinated by the Disaster Management Department - Prime Minister's Office and
The National Food Security Division - Ministry of Agriculture Food Security and Co-operatives, Dar es Salaam

Prepared by the Tanzania Food Security and Nutrition Analysis System - MUCHALI
Tanzania

October 2012

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List of Acronyms

COS	Carry Over Stocks
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization
FSNA	Food Security and Nutrition Analysis
FSNAU	Food Security and Nutrition Analysis Unit
GAM	Global Acute Malnutrition
HDD	Household Dietary Diversity
IPC	Integrated Food Security Phase Classification
LFSN	Livelihood Based Food Security and Nutrition
MAFC	Ministry of Agriculture Food Security and Cooperatives
MLFD	Ministry of Livestock and Fisheries Development
MUAC	Mid Upper Arm Circumference
NFRA	National Food Reserve Agency
PMO	Prime Minister's Office
SAM	Severe Acute Malnutrition
SSR	Self Sufficiency Ratio
SST	Sea Surface Temperature
SUA	Sokoine University of Agriculture
TFNC	Tanzania Food and Nutrition Centre
TMA	Tanzania Meteorological Agency
UNICEF	United Nations Children Education Fund
WFP	World Food Programme

Executive Summary

This report provides a detailed analysis of the assessment on the food and nutrition situation of Tanzania Mainland during the 2011/12 marketing year. The assessment was coordinated and conducted by the MUCHALI1 Team in September 2012 in 41 Councils in 14 regions in the country. The assessed regions and their districts/municipal councils (in brackets) are: **Arusha** (Karatu, Longido, Monduli and Ngorongoro); **Dodoma** (Bahi and Chamwino);**Geita** (Geita and Nyangwale); **Iringa** (Iringa (DC); **Kilimanjaro** (Hai, Mwanga, Moshi (DC) and Same); **Lindi** (Lindi DC); **Mara** (Musoma (DC) and Rorya); **Manyara** (Babati, Mbulu and Simanjiro); **Morogoro** (Morogoro (DC) and Mvomero); **Mwanza** (Magu, Misungwi and Kwimba); **Shinyanga** (Bariadi, Kahama, Kishapu, Maswa, Meatu, Shinyanga (DC), Shinyanga (MC)); **Singida** (Iramba and Manyoni); (**Tabora** (Igunga, Nzega, Sikonge and Uyui); and **Tanga** (Korogwe, Lushoto, Mkinga and Pangani). These Councils were identified by different food security and nutrition stakeholders such as the Food Crops Production Forecast by the Ministry of Agriculture, Food Security and Cooperatives (MAFC), trends of pasture and water availability for livestock by the Ministry of Livestock and Fisheries Development (MLDF), supplies and prices of food commodities in markets by the Ministry of Industry, trade and Marketing to potentially food insecurity areas during the 2012-2013 marketing year (consumption year).

The objectives of the assessment were to 1) determine the impact of the food production (crop and livestock) shortfall from the 2011/12 production year on the livelihoods of, and food and nutrition status among the population in the affected areas; 2) identify populations vulnerable to food insecurity and malnutrition during the 2012/2013 consumption year; and 3) determine and recommend appropriate short, medium and long-term interventions for the affected population.

The methodology employed involved a holistic livelihood-based food security and nutrition (LFSN) approach incorporating the four pillars of food security

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[1] MUCHALI=Mfumo wa Uchambuzi wa Uhakika wa Chakula na Lishe, Tanzania (Tanzania Food and Nutrition Security Analysis Framework)

(availability, accessibility, utilization and stability); food consumption, livelihood change, nutritional status, mortality rates and diseases. The Integrated Food Security Phase Classification Version 2.0 (IPC) tool was used to guide the analysis and report writing. The main livelihood systems studied in the affected areas are agricultural, agro-pastoral, pastoral and fisheries. Specific indicators such as crop, livestock and fish production, supplies and prices, nutrition, access to water, livelihood assets and coping strategies, and climate factors particularly rainfall were assessed. In addition, the measurement of the Mid-Upper Arm Circumference (MUAC) was used as a proxy for the prevalence of Severe Acute Malnutrition (SAM) and Global Acute Malnutrition (GAM). The MUAC and oedema measurements were obtained from 15,695 children aged between 6 – 59 months in 40 Councils.

The findings revealed that food production was largely affected by below normal rainfall with sporadic rains accompanied by long dry spells particularly during the critical stages of crop development. On average, the performance of the 2011/2012 March to May (MAM) rainfall in the assessed councils was 50% and 40% below normal in the bimodal and unimodal rainfall regimes, respectively. Despite supplies of new harvests in markets, access to food was undermined by high food prices. On the other hand, Newcastle was found to be the most important disease undermining poultry production. Increasing tensions/ conflicts particularly among livestock keepers and crop farmers were reported to destabilize livelihood systems in some of the surveyed councils. In addition, the July-September 2012 food prices increased significantly up to 80% (for maize) compared to the same period in 2011, livestock prices decline by up to 60% during July-September 2012; thus affecting the terms of trade between selling livestock and purchasing food.

Furthermore, results of nutritional status of children under-five using the Global Acute Malnutrition (MUAC <12.5 cm) as a proxy for prevalence of Severe Acute Malnutrition (SAM), revealed unacceptable SAM levels in three Council of Monduli, Ngorongoro and Shinyanga DC. Access to sufficient clean

and safe water is problematic in the assessed Councils with many getting amounts, which are much below the Minimum Sphere Standard (and WHO) threshold of 15 litres per person per day (PPPD). Most households indicated accessing water from unprotected sources, boreholes and dams, with availability worsening during dry seasons. Sanitation, particularly the use of latrines is a challenge in some communities, particularly, among the pastoralist areas of the Maasai, where over 90% of assessed the households do not use latrines.

Conclusion

Overall, the analysis has established that a total of **29,683 people** in 8 assessed Councils fall under Integrated Food Security Phase Classification (IPC) phase 3 and will be experiencing food and nutrition security crisis conditions with very low resilience. A total of **396,920 people** in 27 councils fall in IPC phase 2 and will have their food and nutrition conditions stressed. Further analysis indicates that some households (a total of **761, 799 people**) in all 41 assessed councils to be facing minimal or not stressful food and nutrition security conditions. Additionally, previous reports had indicated that the remaining councils, which were not, included in this assessment to be generally food secure.

Access to food for people in phase 3 and 2 (a total of **526,603 people**) is likely to be exhausted from November 2012 to January 2013 and would need immediate intervention to rescue their livelihoods. Those who fall under minimal stressed conditions would have their food security fairly adequate until January 2013, when their physical stocks and their other means for accessing food will be running low in case the food security situation does not improve.

The report is recommending short-term, medium-term and long-term food and non-food interventions, which among others include rescuing people's livelihoods.

1.0   Introduction

1.1   Background of the Assessment

During the month of May 2012, the Ministry of Agriculture Food Security and Cooperatives (MAFC) conducted a Preliminary Food Crop Production Forecast Survey to ascertain the food crop harvest status for 2011/2012-production season and the corresponding food availability for the year 2012/2013. The report by MAFC estimated an overall national food crop production to reach 13.573 million MT, comprising of 7.558 million MT of cereals and 6.014 million MT of non-cereals. The report further established the total food requirement for 2012/2013 consumption year to be 11.990 million MT. A comparison of the estimated production in the 2011/2012-production season with the 2012/2013-food requirement indicates that on the overall the country will attain a Food Self Sufficiency Ratio (SSR) of 113 percent. This SSR is slightly above that of the 2011/2012 - consumption year, which was 112 percent, indicating a general food surplus of about 1.583 million MT out of which 0.708 MT constitutes cereals and 1.576 MT of surplus is non-cereals.

Although an overall satisfactory food availability situation is forecasted at the national level during the 2012/13 marketing year, major inter and intra-regional and councils variations exist due to localized food crop failures of varying magnitudes and vulnerability. In total, MAFC identified that 63 councils in 17 regions of Shinyanga, Arusha, Kilimanjaro, Tabora, Dodoma, Tanga, Manyara, Singida, Mwanza, Pwani, Mara, Lindi, Morogoro, Iringa, Kagera, Mbeya and Mtwara (arranged in the order of severity) may experience food shortage and will require close monitoring and in-depth follow-up measures and interventions.

Planning and implementation of this particular Food Security and Nutrition Assessment (FSNA) took into account the findings of the MAFC 2011/2012 Preliminary Food Crops Forecast. The initial work of the assessment involved getting an update of the food and nutrition situation from the regions and

councils by the MUCHALI national team; to complement findings of the forecast and confirm information from regions and councils through which an in-depth FSNA survey will be conducted. Based on the updated reports from relevant sector ministries and institutions, regions, councils and other food security and nutrition stakeholders', the areas with food security problems were revised to 40 councils in 14 regions and formed part in the FSNA survey of September-October, 2012.

Twenty-one teams from the national MUCHALI team were composed of a multi-sectoral representation from government institutions, development partners; and national and international non-governmental organizations (NGOs). The national teams were joined with selected regional and council food and nutrition security (FNS) professionals.

1.2 Overview of the National Food and Nutrition Security Situation

1.2.1 Climate

1.2.1.1 Review of the Long Rains (Masika) 2012

Generally, unfavorable rainfall condition was experienced during March to May 2012 season (*Masika*) in most parts of the country. The performance was sporadic, featured well in some areas of Lake Victoria basin but mainly poor in many places where temporal and spatial distribution were erratic. The overall performance indicates that most of the country received below normal rainfall accompanied by long dry spells in many places which led to crop failures, lack of water (Human being and livestock) and pastures (**Figure 1**).
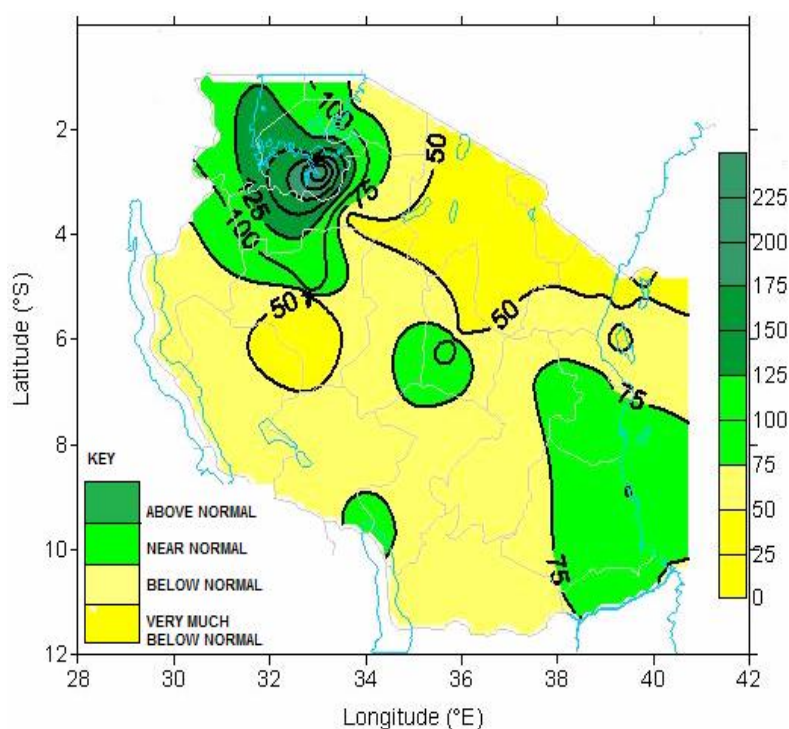
Figure 1: *Masika* Rainfall Performance (Percent of Normal)

1.2.1.2 Outlook of the October to December Rainfall Season

During the October-December 2012 rainfall season, warm Sea Surface Temperatures (SSTs) are predicted over the Tropical Pacific Ocean, which implies a likelihood of weak El-Nino conditions. Westerly wind anomalies are expected in October, November and December, 2012 over the southwestern Indian Ocean, thus moderate northeasterly to easterly wind are expected towards the East African coast. However, the likelihood of increased warming across much of the southwestern Indian Ocean during the month of December is likely to trigger enhanced westerly wind across the country and probable occurrence of tropical cyclones over the southwestern Indian Ocean.

The October to December rainfall season (Vuli) which is more significant for bimodal areas, is likely to feature normal to above normal rains over most of the areas. The November to April rainfall season (*Msimu*) which is more significant for unimodal areas, is likely to feature normal to above normal rains

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over most of the areas. Therefore, there is an increased likelihood of normal to above normal rainfall over most of Tanzania during the next *Vuli* and *Msimu* rainy seasons with particularly heavy rains are expected in central, Lake Victoria basin and some parts of western regions (**Figure 2**).
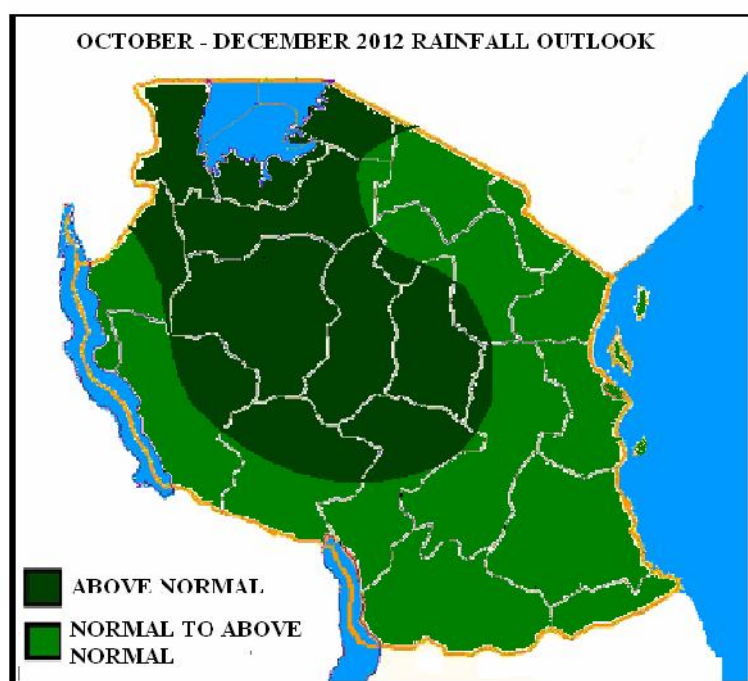
Figure 2: October – December 2012 Rainfall Outlook

1.2.2 Crop production

Generally, the overall food availability at National level for the year 2012/2013 continues to be fairly satisfactory following a good crop harvest realized during the 2011/2012 crop season and carry-over stocks from the 2010/2011 marketing season.

Based on the MAFC 2011/2012 Preliminary Food Crop Production Forecast report of June 2012, the crop-wise proportional contribution of major food crops grown is as shown in **Figure 3**. The figure shows that major cereal crops in terms of their contributions to the overall food availability include maize, rice, sorghum, millets and wheat for cereal crops while the non-cereals

include pulses, potatoes, banana and cassava. Out of the 13.573 million MT of food produced, cereal crops contribute 56% while non-cereal crops contribute 44%, with maize - a major staple contributing 39% of the total food produced.
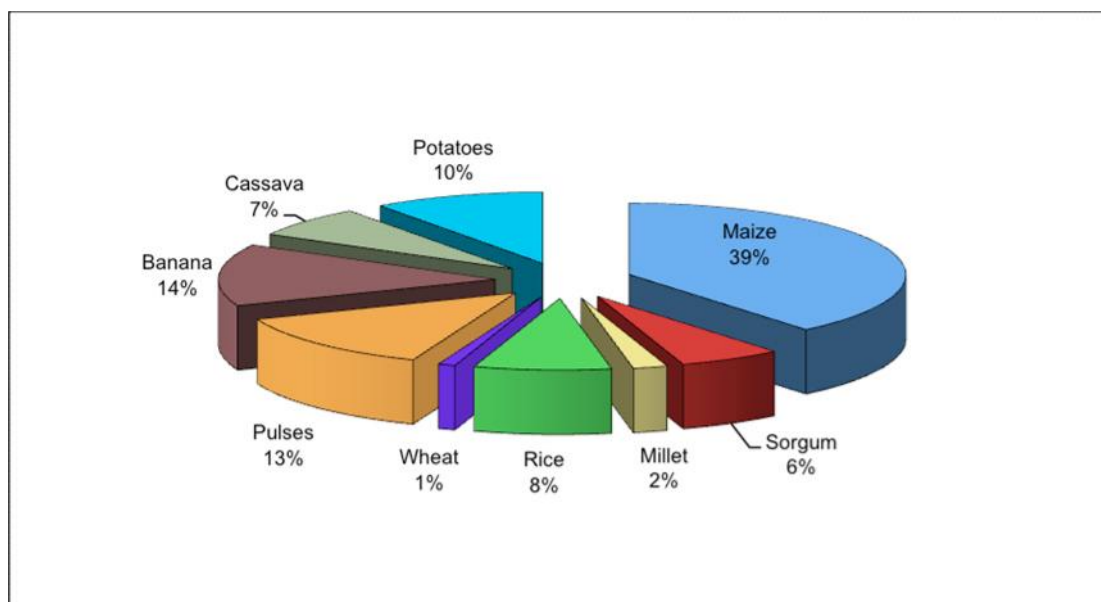
Figure 3: Tanzania Preliminary Food Crop Production Forecast for 2011/2012 Crop Season

Amidst the general food surplus of about 1,583 million MT for the year 2012/2013, a slight cereal surplus of about 7,097 MT prevails, the result of which is mainly from maize and rice with a surplus of 0.475 and 0.312 million MT, respectively; millets and wheat registering deficit of about 0.653 and 0.127 million MT. A substantial non-cereal of about 1.576 million MT prevails. Thus, maize and rice being the most tradable food crops within and outside the country offer an opportunity for farmer, particularly in regions with surplus production to increase their farm incomes; food and nutrition security; and production and productivity through increased trade activities, should this opportunity be addressed appropriately.

The report further establishes carryover stocks (COS) of about 0.462 million MT including 0.078 million MT that were held in National Food Reserve Agency (NFRA) premises, 0.153 million MT in private stockiest premises and

0.231 million MT of estimated farm level retention at the beginning of 2012/2013 marketing year. If these carryover stocks are added to the 1.583 million MT of the forecasted food surplus, the total food available, over and above national requirement of 11.990 million MT becomes 2.045 million MT.

At the sub-national level, total food supply from the 2011/12 production is expected to meet food requirement for 2011/13 in 15 regions out of which 7 regions of Ruvuma, Rukwa, Iringa, Kagera, Mbeya, Mtwara and Kigoma will have surplus food with SSR ranging from 173 to 138 percent while the remaining 6 regions of Mara, Singida, Pwani, Tanga, Morogoro, Lindi, Mwanza and Dodoma will be food self-sufficient with their SSR ranging from 119 to 101 pecent. Deficit regions are Dar es Salaam, Shinyanga, Tabora, Kilimanjaro, Arusha and Manyara – SSR ranging from 2 to 97 percent.

Notwithstanding the inter and intra-regional and district variations and localized food crop failures of varying magnitudes, the reports identifies pockets of vulnerable areas scattered over 63 districts in 17 regions in which, 4 surplus producing regions have 4 councils, 8 self-sufficient regions have 28 councils and 5 deficit regions have 31 councils. The forecast further establishes that, the rampant vulnerability amidst self-sufficient and food surplus food security status indicates that descending from the national to the lower levels, the worse the conditions. The national self-sufficient status masks the true colours that are better reflected at lower levels down towards households/individuals (**Figure 4**).
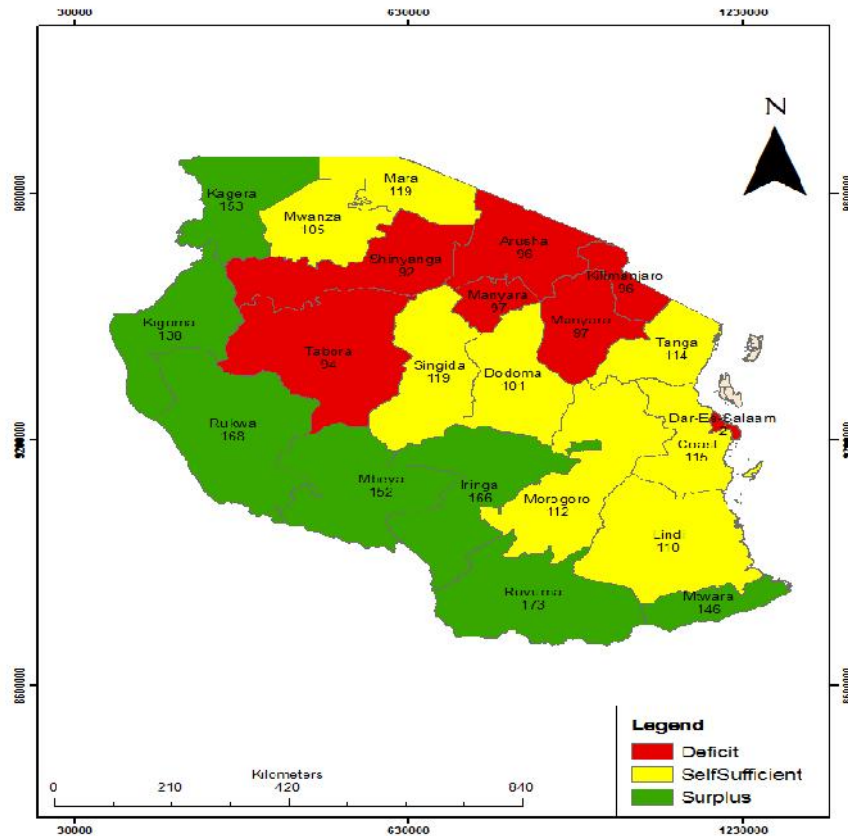
Figure 4:

Tanzania Total Food Supply Forecast at Region Level for the 2012/2013 Marketing Year

1.2.3 Livestock Production

Livestock production is one of the major agricultural production activities in the country, which has critical importance to the country's economy and well being of the rural population. Livestock plays multiple roles in the livelihood strategies of these people. It is intricately linked to social status through accumulation of wealth and savings provide variety of benefits to rural communities such as risk mitigation, food security and improved nutrition through food supply (meat, milk and eggs). It facilitates income generation, employment, provision of manure and draught power; and is also used for cultural purposes.

Livestock populations in the country have been increasing steadily over the years. According to the report released in the year 2011 by National Bureau of Statistics the livestock populations are estimated at 22.8 million cattle, 15.6 million goats, 7.0 million sheep, 2.01 million pigs, 35.5 million indigenous chickens and 24.5 million improved chickens. More than 90% of the livestock population in the country is of indigenous types, having characteristic of low production and productivity but well adapted to the existing environment and resistant to diseases.

Livestock keeping in the country is categorized into two major production systems namely intensive and extensive. The intensive system, though limited in size, has been receiving more emphasis in investment and improvement because of its contribution to the market oriented economy. Extensive system is mostly agro-pastoralism and pastoralism. Pastoralism is concentrated in the northern savannah plains where climatic and soil conditions do not favour crop production (Arusha, Manyara) while agropastoralism is found in low rainfall of western (Shinyanga, and Tabora) and central (Dodoma and Singida). Other areas with agro-pastoral characteristic include Lake, Eastern and Southern highland zones.

Land, water and rangelands are the main resources which support this vast system of livestock production. The continued shrinking of land for grazing due to population pressure and conversion of traditional grazing areas to other land uses greatly constrains the sustainability of extensive livestock production system. Moreover, a conflict between crop farmers and migrant livestock keepers in search of water and pastures has been a persistent problem in many regions and districts in the country.

Currently condition in pastoral and agropastoral areas were normal but if the 2012/13 rains (vuli and msimu) shall not rain as expected livestock conditions may deteriorate from normal to below normal. Condition of water and pasture for livestock in most high, mid and low lands areas is poor. Generally, availability of pasture and water will continue to decline in the north-eastern,

central, western low rainfall areas (Tabora, Shinyanga) until the vuli and msimu rains start.

Livestock marketing infrastructure supports the supply chain from the producer to the consumer. The infrastructure includes primary, secondary and border markets, holding grounds, veterinary checkpoints and slaughter facilities including abattoirs but the most important to agropastoralists and pastoralists is primary markets. However, the results from the survey revealed that primary markets have not been fully developed, despite the large number of cattle, sheep and goats in these areas. Few markets exist and most of the livestock market infrastructures are absent or not working thus it becomes difficult for pastoralists and agro-pastoralists to reach the markets.

Livestock prices trend normally rises in January and reach peak in July through August (when pastures and water availability are adequate) and starts to decline from September to the lowest in December (when pastures and water availability are constrained). The current survey showed that livestock prices in many parts of the country were relatively lower compared to the year 2011 due to increased number of households selling livestock in order to buy food.

1.2.4 Fisheries Production

Fisheries provide a vital source of food, which is among the most important sources of animal protein. It provides macro-nutrients such as protein, lipids, carbohydrates and wide range of essential amino and fatty acids. Furthermore, it provides employment, trade and economic wellbeing of the people. The fisheries resource base include inland water surface area, which covers about 62,000 km^2, which is 6.5 per cent of the total land area and is distributed as follows; Lake Victoria 35,088 km^2; Lake Tanganyika 13,489 km^2; Lake Nyasa 5,760 km^2; Lake Rukwa 3,000 km^2; Lake Eyasi 1,000 km^2, and small water bodies (small lakes, rivers, and dams) 1,000 km^2. Most of these water bodies have substantial fisheries resources.

On the marine side, the country has a territorial sea area of about 64,000 km^2 and a coastline of 1,424 km from the northern border with Kenya to the southern border with Mozambique. The Exclusive Economic Zone (EEZ) is up to 200 nautical miles covering an area of 223,000 km^2 providing the country with additional marine area and potential fisheries resources.

In terms of fish production, fresh water bodies contribute about 85 percent of the total annual fish landings while marine waters contribute about 15 percent. Of the three great lakes, Lake Victoria has the highest fisheries potential followed by Lake Tanganyika, while Lake Nyasa having the least potential in terms of fresh water fishery. Other important water bodies with significant fish resources include Lake Rukwa, Mtera and Nyumba ya Mungu Dams.

Aquaculture in the country is an emerging industry that is currently dominated by tilapia species and is dominated by small-scale farmers producing fish for household consumption and for the domestic market. Small-scale fish farming is being widely practiced in the country, but mostly practiced in the regions of Arusha, Mbeya, Iringa, Morogoro, Kilimanjaro, Ruvuma, Tanga, Coast, Dar es Salaam, Lindi and Mtwara.

Fish production has been decreasing over the past five years; the use of improper fishing practices had led to destruction of fish production sites. This situation has led to the closure of fishing practices in Nyumba ya Mungu dam. Small scale kind of piracy has been reported to be going on in Lake Victoria and use of undesirable fishing tools, high prices of fishing gears, vessels, boats and fuel used for fishing has influenced the increase of fish prices.

1.2.5 Nutritional Status

According to Tanzania Demographic and Health survey (TDHS 2010) the major three anthropometric indicators of the nutritional status in children is height for age (stunting), weight for height (wasting) and weight for age (under weight). At the national level, 42% of under five have low height for age or are stunted, 5% have low weight for height or wasted and 16% have low weight

for age, which reflect both chronic and acute under nutrition. The children in the Central and Southern Highlands zone are particularly disadvantaged; at least half are stunted, which reflect long-term under nutrition in the area while these areas are highest food production regions and the main source of food in the country.

1.3   Objectives of the Assessment

The objectives of the assessment were to:

I.   Determine the impact of the food production (crop and livestock) shortfall from the 2011/12 production year on the livelihoods of, and food and nutrition status among the population in the affected areas;

II.   Identify populations vulnerable to food insecurity and malnutrition during the 2012/2013 consumption year; and

III.   Recommend appropriate short, medium and long-term interventions.

1.2.6   Methodology

The assessment considered a holistic livelihood-based approach incorporating the four pillars of food security (availability, accessibility, utilization and stability); nutritional status, mortality rates and diseases. In addition, weather (particularly rainfall); current and anticipated hazards and coping strategies employed by households and communities were assessed.

1.2.7 Sampling Process

1.2.7.1 Food Security

The assessment teams used a set of tools composed of regional, council, village, and wealth ranking and household questionnaires to gather data. Villages in each council were classified into three categories according to their food (crop and livestock) performance during the 2011/2012-production year as compared to normal. Levels of food production were used, as a basis for assessment because crop and livestock constitute the main stay of majority in the rural communities. The categories used are as follows:

- Category No. 1: Acute villages - 0 to 30% of crop and livestock production

- Category No. 2: Mild villages - 31 to 60% of crop and livestock production

- Category No. 3: Normal villages – 61 and above of crop and livestock production

Households in categories 1 and 2 compared to category 3 are more likely to be at a high risk of becoming more vulnerable to food insecurity and malnutrition in the event of encountering a food and nutrition related hazard.

Thus, from the list of categories 1 and 2, villages were mapped in order to identify the agro-economic activities they are engaged in. Then, three acute food deficit villages and one mild food deficit villages were purposively selected to represent the identified agro-economic activities. In total, four villages from each council were selected for the assessment.

1.2.7.2 Nutrition

Data on nutritional status were collected using the MUAC from 100 children aged 6-59 months in each of the four sampled villages in each council. The 100 children in each village were obtained by random sampling from the households who have those children. However, children aged 6-59 months from the 15 households, which were selected for detailed interviews were automatically included for MUAC measurement.

1.2.7.3 Assessment Tools

The assessment teams collected data and information from regional, council, village and household levels using standard questionnaires and checklist. A separate questionnaire was developed for each administrative level—region, council and village. In addition, discussions were held with government officials in the assessed regions, councils and villages (also with village key informants and opinion leaders). In-depth interviews were conducted with

head of households.

At the village level the assessment teams together with village government officials and key informants grouped households into three wealth categories of **resource weak**, **middle** and **better off**, delineating the percentages of households falling into each category. The wealth ranking categories were pre-defined based on the livelihoods parameters like acreage under cultivation, livestock holding, type of assets owned and other key income generating activities. From each village, 15 households were interviewed with five households representing each wealth rank category. Overall, 60 households from each Council were interviewed.

At household level, information on food security problems encountered by different wealth groups for each zone and the required interventions were identified based on the current options used to meet basic food and non-food items. The teams explored sustainability of present coping strategies and alternative sources of food and cash for current and projected period. Records on livelihood assets, food prices, hazards and coping strategies that households currently use or plan to resort to in the coming months should food shortages arise were also gathered.

1.2.8 Data Collection

The teams conducted the assessment from regional to household level in 40 councils in 14 regions. The assessment used different methodologies including observations, discussions with key informants, interviews using questionnaires (structured and open ended questions) and direct measurements particularly for nutrition indicators—to which the Mid-Upper Arm Circumference (MUAC) was used as a proxy indicator for malnutrition.

1.2.9 Data Analysis

The data collected from councils, villages and households were entered into computers and analyzed using pre-coded analysis templates in Excel. The

analysed data and information were transferred into the Integrated Food Security Phase Classification (IPC) - Version 2.0 templates. The delineation defines the five-phases of severity classification, namely: Non/Minimal, Stressed, Crisis, Emergency and Catastrophic/Famine (**Annex 1**). The IPC-Version 2.0 tools and protocols facilitated phasing Councils as well as, determining populations currently facing or likely (in the coming months) to experience food and nutrition security problems. These scenarios support making recommendations for appropriate responses/ interventions.

2.0   Food and Nutrition Security Analysis

2.1 Hazards and Vulnerability

2.1.1   Rainfall Performance

Rainfall was reported to be one of the major shocks that affected most parts of the surveyed councils in which sporadic rains accompanied by long dry spells that prevailed in critical stages of crop development led to reduced crop production. The assessment revealed that on average, the performance of the 2011/2012 March to May (MAM) rainfall in the assessed councils was 50% and 40% below normal in the bimodal and unimodal rainfall regimes, respectively (**Figure 5**).
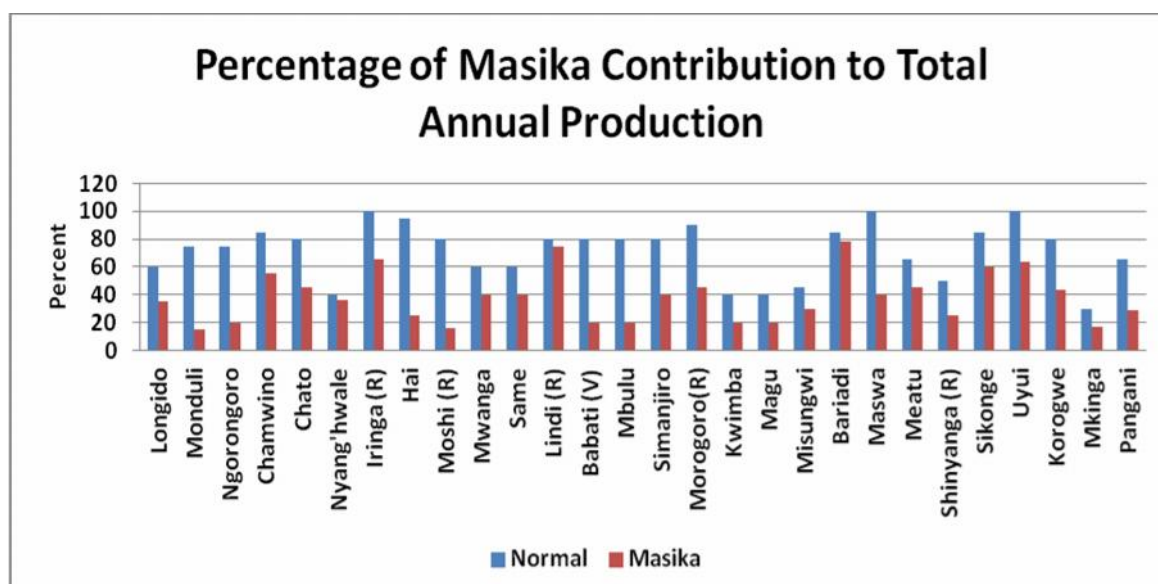
Figure 5 : Percentage of Masika contribution to total annual production

2.1.2 Diseases (crop and livestock)

During the assessment no serious crop diseases reported, though cassava mosaic disease was reported to affect cassava crop at different stages of growth in some areas e.g. Chato council.

The common livestock diseases that were reported to affect livestock production and productivity in the surveyed areas include Lumpy Skin Disease, Foot and Mouth Disease, Tick Borne Diseases (Heart water, ECF, Anaplasmosis and Babesiosis), Newcastle and Fowl Pox. However, Newcastle disease was found to be most prominent hindering chicken production. It was observed that the I-2 vaccine for controlling Newcastle Diseases is not readily available at village level and awareness regarding its existence and importance are lacking.

2.1.3 Conflicts

During the assessment a number of conflicts were reported to destabilize livelihood systems in some of the surveyed councils. Examples of such conflicts are among others, the invasion of livestock keepers to farmers' fields in Morogoro and Mvomero councils, conflict between Rubondo fish-folks in the villages and the new leadership of Rubondo conservation area in Chato Council that has led to a number of social problems such as: denying the villagers from social services they use to enjoy from the authority, confiscation of fishing boats and gears owned by fish-folks, loss of lives and endanger livelihoods of fish sector in bordering wards. Other conflicts are the small-scale kind of piracy that was reported to take place in Lake Victoria.

2.2 Food Availability

Food availability means ensuring sufficient food for all people through production (crop, livestock and fisheries), stocks, trade and food aid. In Tanzania the major source of food supply is from local production. On

average Tanzania produces about 95 percent of its food requirements.

During the September FSNA assessment the Self Sufficiency Ration (SSR) - percentage ratio of gross domestic production (crop and livestock) to gross domestic food requirement - and months of food needs met were mainly used to determine the food availability in the councils. Other factors considered were food availability in the market and income spent by households to purchase food. The overall results of IPC phasing of the food availability determinant factors in the accessed councils are as shown in **figure 6.**
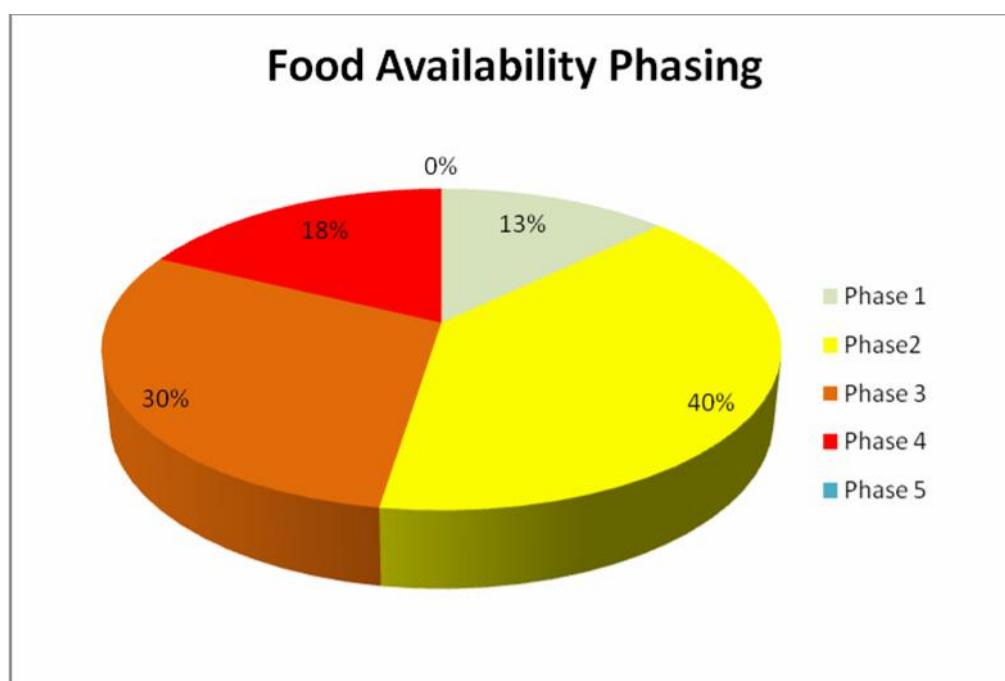
Figure 6: Food Availability Phasing

Results indicate that most of the assessed councils (40 percent) had stressed food insecurity (IPC phase 2), while 13 percent faces minimal food insecurity (IPC phase 1).

The councils that were categorized in phase 2 based on SSR ranged from 101 to 113 and 12 months of food needs met. Though crop production was reported to be low, the agro-pastoral councils were enhanced by presence of good livestock production and good food availability in the markets.

The phase 1 councils were Chato, Nyan'gwale, Iringa (DC), Bariadi and

Kahama. The councils had SSR ranging from 113 to 120 with months of food needs met of 14 to 15. Food availability in the market was normal to above normal and majority of households in this phase spent 0 to 25% of their income to purchase food (indicating that livelihood in these councils were not so much affected).

Other surveyed councils, 30% and 18% were categorized into phase 3 and 4, respectively. Most of the councils had SSR < 100 with number of food needs met covering less than 11 months. Food availability in the market was below normal and majority of households spent more than 50% of their income to buy food (an indication of poverty i.e. spending a big proportion of income in food purchase – HBS 2001).

2.3 Food Accessibility

One of the significant constraints to achieving food security through accessibility is poor infrastructure within assessed area and Tanzania as whole. Most of the feeder roads in rural areas are unpaved roads, and many routes become impassable after heavy rains, only passable during dry seasons. Poor transportation infrastructure impacts food accessibility within many assessed areas as it restricts the flow of food commodities from surplus to deficit areas, which result to food commodities not efficiently distributed, inaccessible or unavailable in some areas. The situation also increased transport costs for farmers (in surplus areas) and traders and hence causes higher prices to food commodities in deficit area. Another factor that might be significant constraints to food commodities accessibility is market structure. In many assessed areas there are no modern market structures but local markets like *minada* and *magulio* are available to meet the demand.

2.3.1 Food Commodities Prices:

Higher food prices are associated with more limited food access for the resource weak population. In accessed area, the influence of estimated low food &livestock production and poor infrastructure are likely to put an upward

pressure on food prices in those areas.

During the assessment in September 2012 the nominal prices of major food crops (maize, sorghum, rice and beans) has been increasing from July while of those both big and small livestock were lower compared to the same period last year. The nominal prices of maize in August 2012 in the 82% of the assessed districts, increased between 21% and above from the prices of five averages of the same months (Table 1). Further more, the August maize prices in 34% of the assessed districts were above the average prices of all districts.

Table 1: Percentage Changes of Maize Price in August 2012.

Food prices: 2012 % different with 5YA ≤10%	Food prices: 2012 % different with 5YA 11 - 20%	Food prices: 2012 % different with 5YA 21-30%	Food prices: 2012 % different with 5YA 31 - 50%	Food prices: 2012 % different with 5YA >50%
5%	13%	47%	24%	11%

2.3.2 Terms of Trade:

The changes of nominal prices for both crops and livestock have lowered the purchasing power of both crop producers and pastoralists. The terms of trade between selling livestock and buying food were better in the year 2011 compared to year 2012 to pastoral contrary to crop producers. For instance, in Simanjiro district, one goat sold in August, 2011 could purchase 275 kilograms of maize and 233 kilograms - four year average (2008-2011) (**Figure 7)** against only 150 kilograms of maize in August 2012.
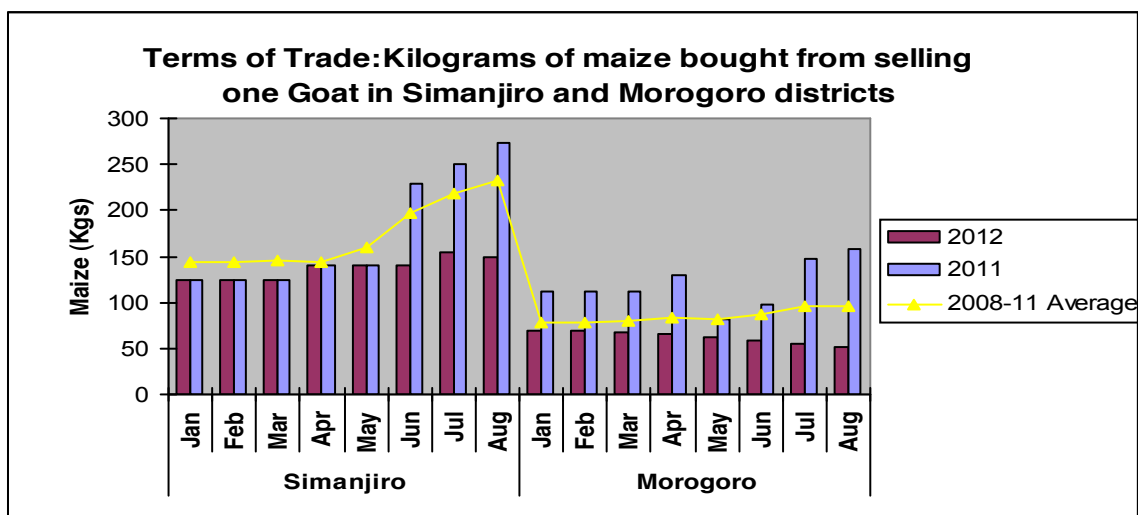
Figure 7: Terms of Trade Maize versus Goat in Simanjiro and Morogoro Districts

In Sikonge however, one chicken sold in August 2011 could purchase 14 and 13 kilograms of maize in for four-year (2008-11) average, respectively against only 10 kilograms in August 2012 **Figure 8.** However, due to weather forecast, which indicates that, the rains are expected to be normal to above normal over most of the country, it is expected that the coming season might lead to good crop production and improvement of pasture and water availability that will increase food and livestock commodities supplies hence stabilize prices.
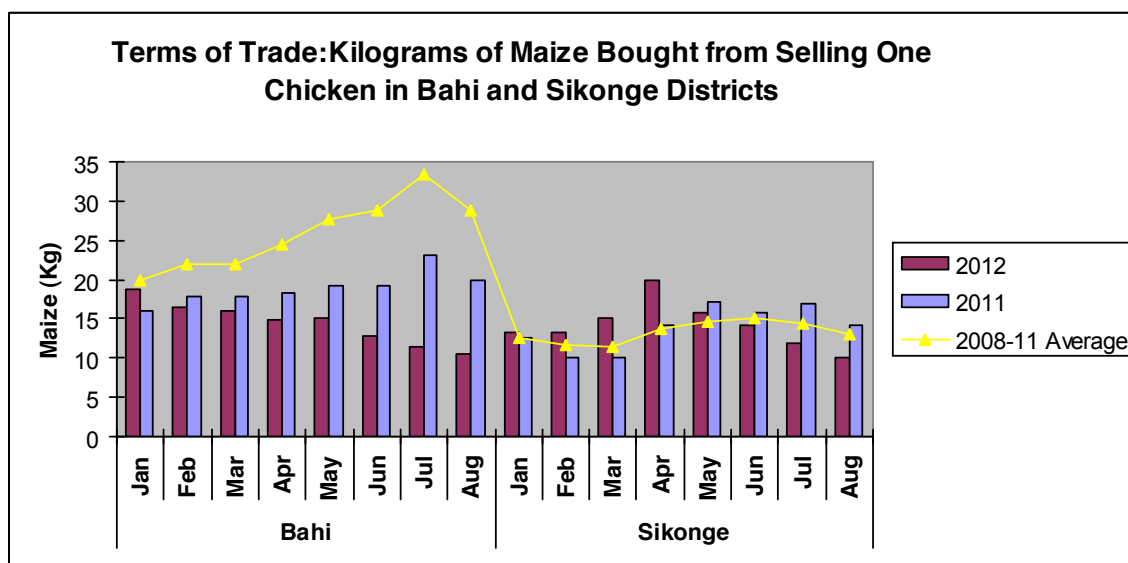
Figure 8: Terms of Trade Maize versus Chicken in Bahi and Sikonge Districts

2.4 Food Utilization and Consumption

2.4.1 Water

Sufficient, clean and safe water access for human use in the close proximity for the councils assessed continued to lag behind the National Strategy for Growth and Reduction of Poverty (MKUKUTA) target, which commit the Government to provide, by 2010: clean and safe water to 65% of the population in rural, with access timeframe of 30 minutes.

The number of surveyed households indicated that water access was mainly from unprotected sources, including rivers and dams, with availability worsening during dry seasons, the timeframe to collect water from sources also has worsened to the above-agreed timeframe especially during dry season.

The amount of water consumed per person per day (PPPD) in the sampled households was below the Sphere Standard (and WHO) threshold of 15 litres PPPD. Human Development Report point out that clean water and sanitation are among the most powerful drivers for human development. They extend opportunity, enhance dignity and help create a virtuous cycle of improving

health and rising wealth (HDR, 2007). In Tanzania, however, some of the assessed councils specifically the pastoralist areas of Maasai, the households surveyed responded to have no adequate and quality water. Furthermore they lack latrines and hence they normally defecate in the fields and bushes. District phasing by quality and amount of water for use 40% were categorized under phase 1 (minimal stress) that households in these districts get adequate water for daily use as recommended **(Figure 9).** However, about 8% of the districts were categorized in phase 4 (emergency) as they were getting about 4-7liters of water per person per day.
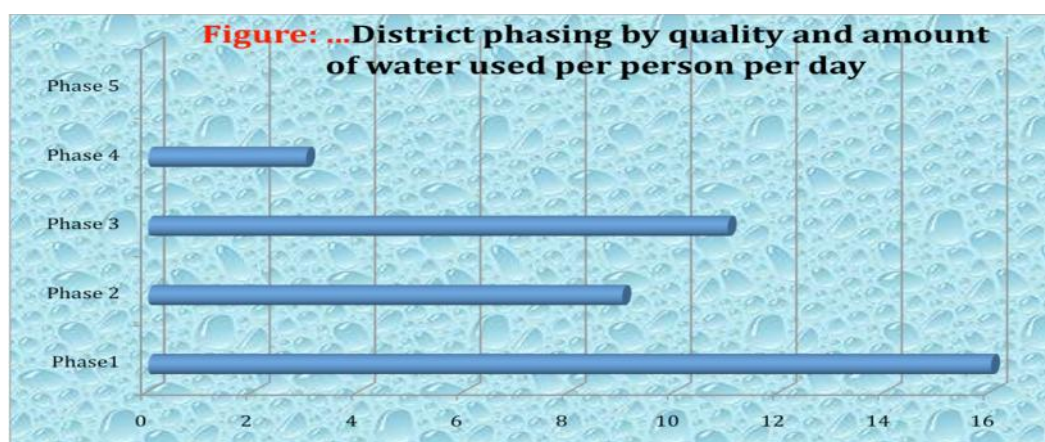
Figure 9: Council phasing by amount and quality of water used per person per day

The Ministry of Water in collaboration with development partners, embarked on the huge of water sector development programme (WSDP) and some remarkable investment in water projects to improve the quality and quantity of water for human use (drinking and sanitation services) has been realized. The Water Sector Status report (2011) reveals some improvement. For example the Rural Water Supply and Sanitation component planned to increase access to clean and safe water supply from 54% in 2003 to 65% in June 2010 as per MKUKUTA I target, which is equivalent to addition of 8.0 million new beneficiaries in rural areas by 2010. By December 2010, the status on targets was as follows: water supply coverage increased 55.7% in 2006 to 57.1% in

2008 and to 58.7 in December 2009, the improvement realized as a result of implementation of quick win projects in LGAs, declined to 57.8% in December, 2010.

The decline is due to various reasons; including drying off of water sources as a result of droughts in various parts of the country in 2008/2009; and inadequate continuity in implementation after completion of the quick win project implementation while the population was increasing at greater pace than investment. The coverage has continued to decline in 2011/2012 water coverage where coverage was is 56.57%. However, the government is struggling to reverse the scenario some projects has been launched such as ten village water projects, where ten villages in each district council will benefit from this project and some councils has started implementation of these projects. Therefore the water supply in rural area is expected to improve more than before.

2.4.2 Sanitation

The assessment shows that an average of 86% households had access to sanitation facilities (Latrine) while 10% of the households had no latrines in the surveyed councils. More than half (70%) of households in Longido councils had no sanitation facilities. All (100%) households in Uyui, Sikonge, Magu and Lindi had access to latrines **(Figure 10).**
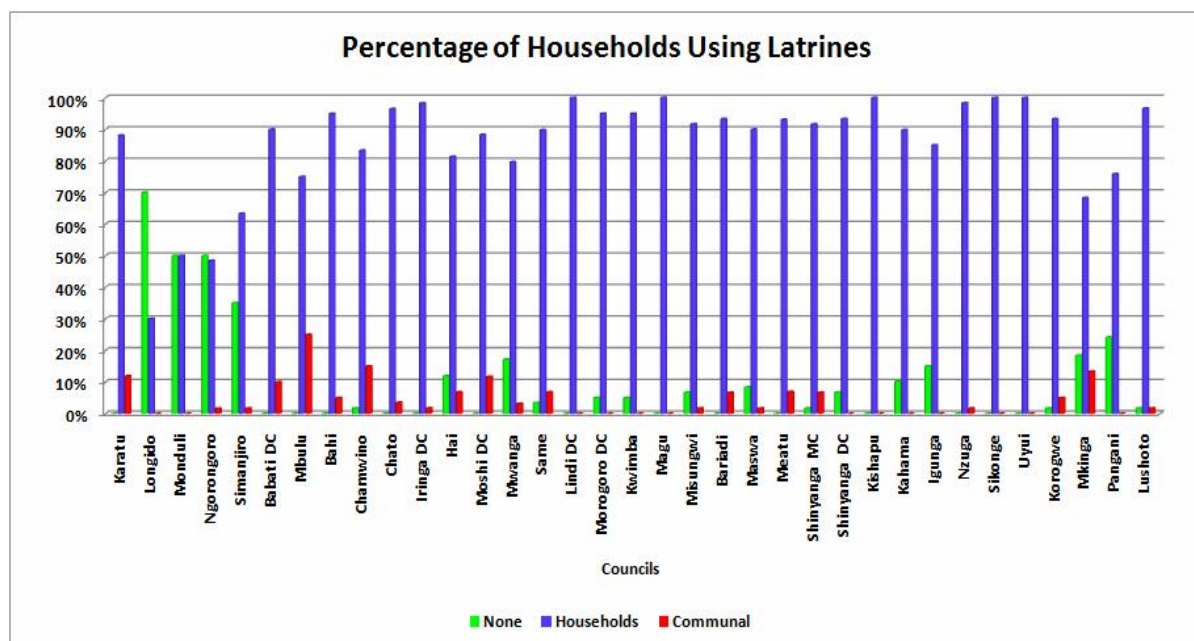
Figure 10: Percentage of Households Using Latrines

2.4.3 Food Consumption

Based on the twenty-four hour dietary recall taken in the households, there were slight dietary diversifications practiced in the surveyed areas compared to findings of March 2012. About 42% of the HH in the surveyed districts consumed at least 3-5 different type of food groups and 33% consumed 6-9 food groups. The most consumed food groups include cereals, root/tubers, vegetables as well as sugar/honey. However, there was low consumption of protein rich foods such as meat, milk, fish and pulses even in districts where livestock keeping is the main livelihood. Likewise the consumption of fruits was also low. Furthermore, findings indicate that most households surveyed had three meals per day although their meal composition as well as size had changed from normal.

District food consumption status was determined by measuring the household's potential access to adequate food to give each member a minimum of 2100 kilocalories per day. Majority of the districts surveyed (50%) were categorized in phase 1 (minimal), which meant that most of the household members in those districts had adequate energy intake equal or

exceeding 2100 kilocalories as depicted in Figure 11. However, about 35% of the districts fell in phase 5 (catastrophic), in which household members had an intake of less than 1700 kilocalories per day. These districts might have been categorized in that phase due to number of reasons. (i) Inadequate or missing information on livestock off-take, since most of these districts are agro-pastoral. (ii) Information on the coping strategies in these areas was not captured as households could cope by selling their animal stocks or selling labour in non-agricultural activities such as in the mining industry.
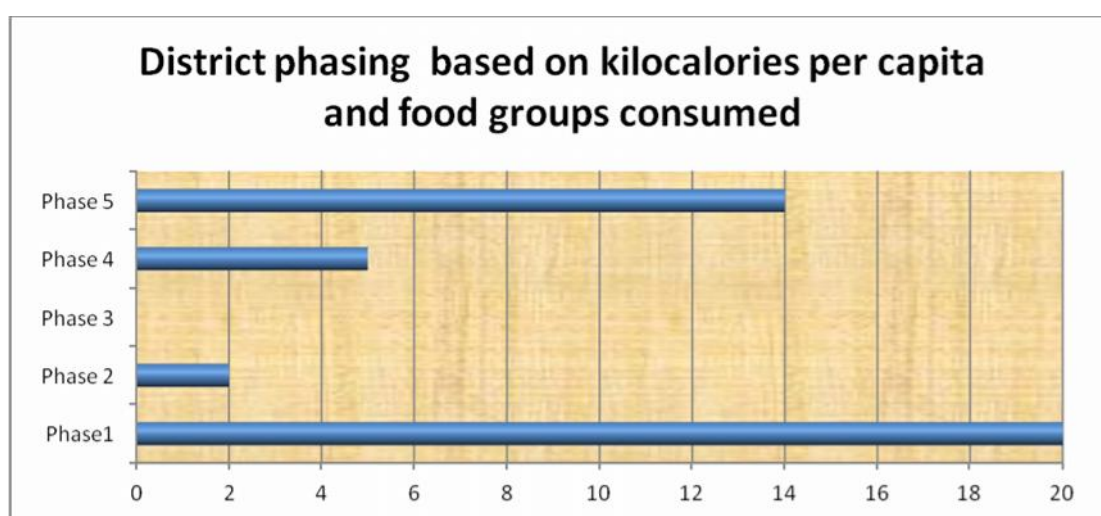
Figure 11: District Phasing Based on Kilocalories Per Capita and Food Groups Consumed

2.5 Nutritional Status

Nutrition assessments conducted in September 2012 in 14 regions consisting of 40 districts in total indicate static levels of acute malnutrition compared to March 2012 report. MUAC and oedema measurements were obtained from a total of 15,695 children aged 6 – 59 months in 40 districts. Overall, the prevalence of proxy SAM (MUAC <11.5 cm) was 0.4 percent and the prevalence of proxy GAM (MUAC <12.5 cm) was 2.7 percent same prevalence recorded in March 2012. The overall average GAM for all the districts assessed was less than 5% categorized as acceptable. However, there were variations between districts. In addition, oedema was present in

223 children, a prevalence of 1.4 percent.

According to the Food Security Analysis Unit (FSAU) Framework for Estimating the Nutrition Situation, MUAC data obtained from rapid assessments is classified as shown in Table 2.

Percentage of children with MUAC <12.5	Category
< 5%	Acceptable
5 - 9.9 %	Serious
10 - 14.9 %	Critical
>15 %	VERY CRITICAL

Table 2: Nutrition Situation Framework

A total of 33 (80%) districts were categorized as acceptable and categorized under phase 1 (minimal) as having less than 5% of the children with MUAC less than 12.5 cm as indicated in Appendix 1 and Figure 12. D**istricts** found to be Serious include Shinyanga DC (7.8%), Bariadi (5.9%), Meatu (5.7%), Longido (8.7%), Monduli (5.6%) and Ngorongoro (8.6%) all categorised under phase 2 (stressed). In addition Kishapu district was found to be in a critical condition (19.3%) amongst all districts surveyed, which fell under phase 4 (emergency).
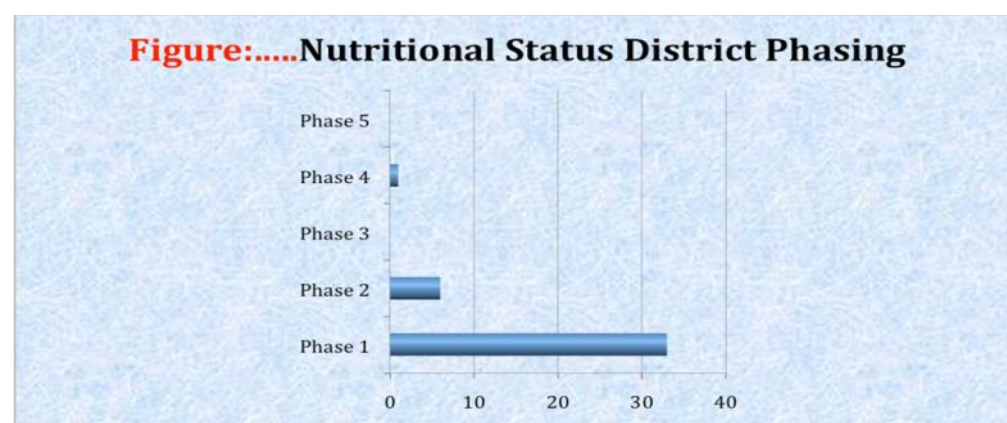
Figure 12: Nutrition Status Council Phasing

In the same assessment a total number of 5,722 children below the age of

two years were assessed (**Table 3**). Out of all children, 48 were severely malnourished and 270 were moderately malnourished. The age below two years referred to as the window of opportunity is very crucial to intervene to prevent permanent damage, which may occur if they are left unattended until they reach the age of three years. And those who are moderately malnourished they can easily fall to severe conditions after two weeks with no proper interventions to eradicate moderate wasting.

Table 3: MUAC categories by age of the children assessed

Age Category of Children	Nutritional Status Category	Frequency	Percent
6 months to <24 months	Severe Malnourished	48	.8
	Moderate Malnourished	270	4.7
	Well Nourished	5404	94.4
	Total	5722	100.0
24 months to 36 months	Severe Malnourished	7	.2
	Moderate Malnourished	58	1.7
	Well Nourished	3406	98.1
	Total	3471	100.0
> 36 months to 59 months	Severe Malnourished	3	.0
	Moderate Malnourished	38	.6
	Well Nourished	6461	99.4
	Total	6502	100.0

The trend for severe acute malnutrition from 2009 to 2012 is shown in **Figure. 13**. The district that has emerged consecutively for three years (2009, 2010 and 2012) with unacceptable trends of SAM is Longido. However, the trend shows to decrease as seen by the width of yearly legends. There are three districts, which had unacceptable SAM levels, namely, Monduli, Ngorongoro

and Shinyanga DC. Monduli district has not shown much difference in 2009 compared to 2012, but Ngorongoro district has significant difference from the levels seen in 2012 compared to those of 2009. On the contrary the prevalence SAM in Shinyanga DC, increase significantly in 2012 compared to 2009. Other district with no trends are the ones which had acceptable SAM levels in other years but appeared with unacceptable SAM levels in the respective years when the assessments were done. The same trends were seen for GAM levels as explained for SAM. Bariadi district did not have any differences in GAM levels in year 2011 and 2012. However, very critical values for GAM in 2012 were seen in Kishapu district with levels reaching 19.3% as depicted in **Figure 14.**
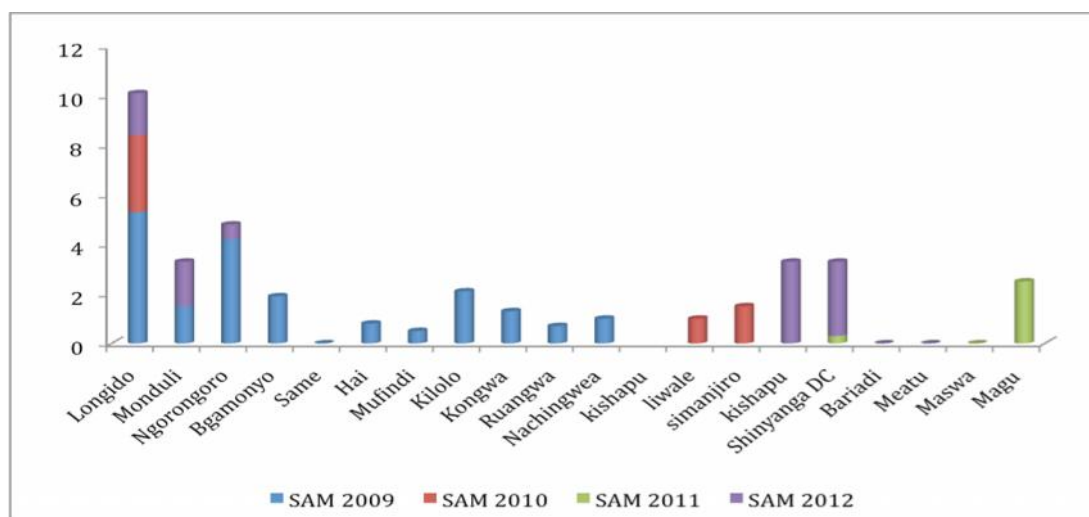
Figure 13: Trend for Severe Chronic Malnutrition September Surveys 2009-2012
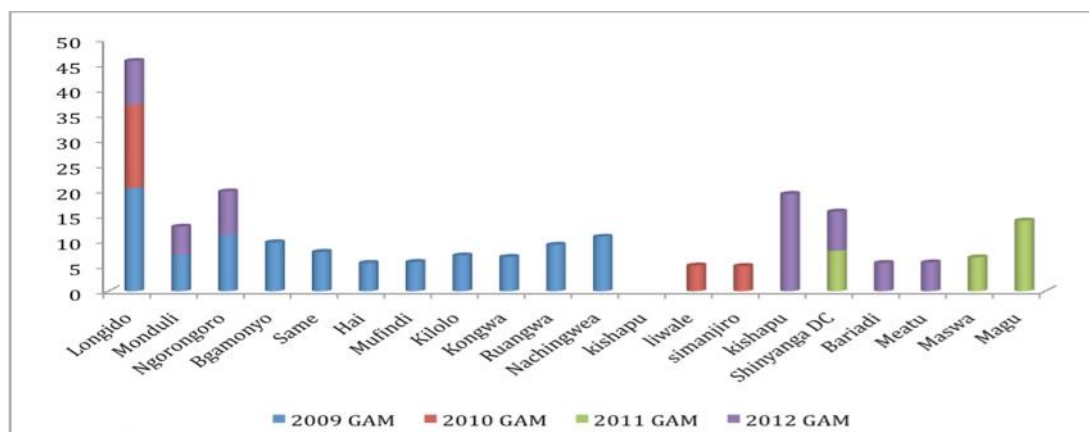
Figure 14: Trend for Global Acute Malnutrition September Surveys 2009-2012.

Generally the assessment revealed the most common diseases in the surveyed districts to be Malaria, Diarrhoea, Upper Respiratory Track Infection (URTI), Anaemia and Pneumonia. Malaria and Diarrhoea remain to be the leading diseases in the districts as was reported in Tanzania Demographic Health Survey 2010. Furthermore, the Global Acute Malnutrition (which subject children prone to diseases attack) has repeatedly been of serious concern for four consecutive years (2009 – 2012) in the following districts; Longido, Shinyanga DC, Bariadi, Meatu, Kishapu, Ngorongoro and Monduli. When compared to other district mentioned above, Kishapu district has been reported to have high malnutrition rate (GAM 19.3). On the other hand, the immunization programme against Measles and Polio has registered very good success as all surveyed districts have reported higher rates than the national average.

2.6 Livelihood Characteristics

In general, the effects of hazards and vulnerability stress livelihood and food consumption were observed. About 80 percent of the assessed districts were under stressed situation (phase 2) or worse while 20 percent were under normal situation (phase 1). This implies that, they lost some of their assets

like livestock and for district councils like Morogoro and Mvomero have reduced their ability to invest in their fields because of conflicts between livestock keepers and farmers. Therefore, some actions are required for disaster risk reduction and to protect livelihoods.

This assessment identified the coping strategies used in ensuring food security among assessed households in Tanzania. To meet the food needs of the households during months of inadequate household food provision, respondents engaged in multiple coping strategies. These strategies included work for food (18%) followed by reduced number of meals (17%), reduced size of meals (14%) and sold more livestock (10%). Other coping strategies are as shown in **Figure 15**. The coping strategies employed by households were reversible, i.e. they were not detrimental to livelihoods and future food security situation of the households.
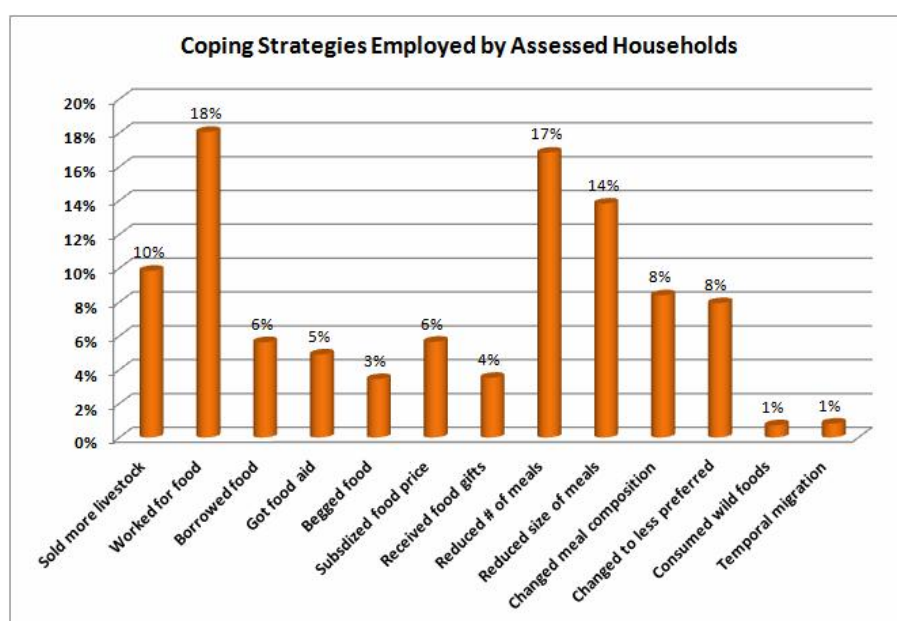
Figure 15: Coping strategies employed by surveyed households

2.7 Overall Phasing

The map in **figure 16** shows overall results of IPC phasing of the food security and nutrition determinant factors in a livelihood perspective.

Figure 16: IPC map showing food and nutrition security situation

Further results in the accessed councils only revealed that 70 percent of the councils had stressed food insecurity (Phase 2) i.e. most of households in these councils had minimal adequate food consumption and were unable to afford some essential non-food expenditures. This implies that, most of the households were under stressed livelihood strategies and assets characterized by high expenditure on food purchasing and low ability to invest for improvement of their livelihoods. Thus some actions are required for

disaster risk reduction and protect livelihoods of the households in the councils.

Figure 16: General IPC Phasing of the Assessed Councils
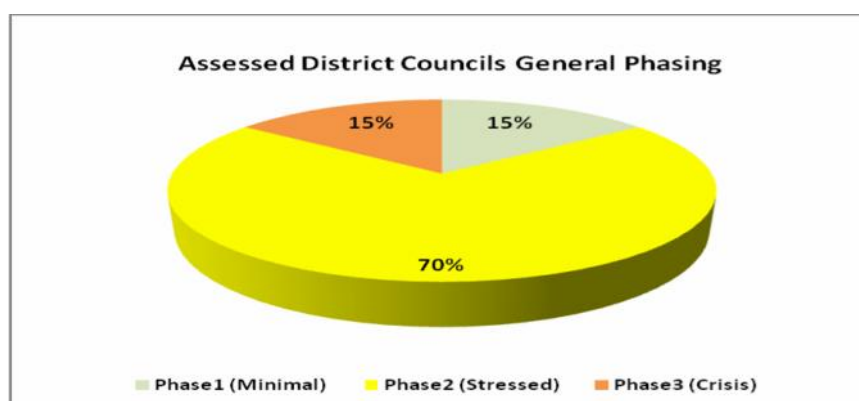
The results further indicated that 15 percent of the surveyed councils were under crisis food insecurity Situation (Phase 3) in which most of households are marginally able to meet minimum food requirements with accelerated depletion of livelihood assets (e.g. selling of livestock) that led to food consumption gaps.

Moreover, 15 percent of the councils were under minimal food insecurity situation (Phase 1) in which most of households in these councils are able to meet essential food and non-food needs without engaging in typical, unsustainable coping strategies to access food and income, including any reliance on humanitarian assistance.

3.0 Conclusions and Recommendations

3.1   Conclusion

Generally the overall assessment has revealed that the food and nutrition security is not so alarming. However, a total of **526,603 people** – in Phase 3 and 2 (4% of the total population in the assessed councils) in 35 councils out of 41 councils (Annex 1), have been identified to have various food and nutrition security problems due to:

➢ Inadequate availability of water for human and livestock use,

➢ Food shortage,

➢ High food prices,

➢ Poor feeding and inadequate pasture,

➢ Human diseases (malaria diarrhea) and,

➢ Crop (cassava mosaic virus) and livestock (Newcastle) diseases.

Further findings have indicated that:

➢ Currently (October – December 2012) some households will have difficulties to access food and seeds for 2012/2013 planting season, and if the rainfall season proves failure, more households are projected to drift to difficulties in accessing food between January and March 2013.

➢ Poor performance of 2011/2012-rainfall season contributed to inadequate food supply in the assessed areas.

3.2   Recommendations

While agricultural production plays a major role in reduction of food and nutritional insecurity, promoting agriculture alone cannot solve food and nutrition security problems but attention should also be given to the whole issue of food and nutrition security in a livelihood perspective. Therefore, the

September 2012 FSNA recommends the following:

3.2.1 Immediate Interventions

i. A total of **18,417.8 MT** of food aid to be distributed to **526,603 people** falling in IPC phase 2 and 3 in 35 district councils between November 2012 and January 2013.

ii. Different kinds of seeds amounting to **1,501.8 MT** of early maturing and drought tolerant crops varieties are distributed to **531,720 households** in acutely food and nutrition insecure areas.

iii. Government and relevant stakeholders should sensitize farmers to ensure timely land preparations for agricultural activities in the 2012/2013 seasons.

iv. Relevant authorities should ensure that food commodities supplies in the market are steady in order to ensure food accessibility in the affected areas.

v. Conflicts that hinder sustainable food and nutrition security in a livelihood perspective in the assessed areas should be dealt with.

vi. Intensify community sensitization, participation and training in treatment and protection of water sources

3.2.2 Medium to Long Term Interventions

i. Rehabilitation and establishment of irrigation schemes should be enhanced.

ii. Facilitation of farming inputs and implements to smallholder farmers should be considered.

iii. Improvement and construction of roads in the assessed areas in order to enhance easily accessibility of food and non food commodities.

iv. The Ministry of Livestock and Fisheries Development and

relevant stakeholders should intensify the use of I-2 Newcastle vaccine to increase chicken production in the rural areas.

v. The Government and relevant stakeholders should continue to establish concrete livestock recovery strategies.

vi. The Ministry of Livestock and Fisheries Development in collaboration with other stakeholders should strengthen the livestock early warning system to ensure sustainable food security.

vii. Strengthen construction of water facilities such as boreholes and dams in areas with poor or low access to safe drinking water

viii. Promote rainwater harvesting to improve water availability.

ix. Awareness creation among households with regard to hygiene and sanitation is crucial in promoting good health and also minimizing chances of acquiring diseases especially in areas where even toilets do not exist.

x. Nutrition education is supposed to be given especially in areas where diverse foods are available but the level of malnutrition is high.

xi. Robust nutritional survey is advisable to be carried-out in areas falling under phase 4.

4.0 Appendices

- Appendix 4.1: Regions and Districts with Acute Food Shortage - National Summary - September, 2012

- Appendix 4.2: Regions and Councils with Moderate Food Shortage - National Summary - September, 2012

- Appendix 4.3: MUAC Category by District and Phasing

| APPENDIX 4.1: | REGIONS AND DISTRICTS WITH ACUTE FOOD SHORTAGE - NATIONAL SUMMARY - SEPTEMBER, 2012 | | | | | | | | | | | | | |

Region	District	Total population	Resource Weak Population	% Resource Weak Population	Resource Weak Households	Population in Different Phases		Duration for Intervention	Total Food Requirement (MT)	Food Relief				Seed Requirement (MT)
						Phase 2	Phase 3			Destitute population	Free Food Relief (MT)	Able Body population	Subsidized free Food (MT)	
Arusha	Karatu	255,484	4,677	2	3,150	2,011		2	48.3	201	4.8	1,810	43.4	9.4
Arusha	Longido	70,682	18,940	27	12,001		12,311	2	295.5	1,231	29.5	11,080	265.9	37.9
Arusha	Monduli	181,754	27,384	15	16,867	19,169		2	460.1	1,917	46.0	17,252	414.0	54.8
Arusha	Ngorongoro	177,325	10,386	6	11,908	6,543		2	157.0	654	15.7	5,889	141.3	20.8
Total		685,245	61,387	9	43,926	27,723	12,311	2	960.8	4,003	96.1	36,030	864.7	122.8
Dodoma	Bahi	236,778	4,003	2	3,905	3,722		3	134.0	372	13.4	3,350	120.6	7.0
Dodoma	Chamwino	301,353	12,925	4	15,311	11,115		3	400.2	1,112	40.0	10,004	360.1	21.5
Total		538,131	16,927	3	19,216	14,838		3	534.2	1,484	53.4	13,354	480.7	28.5
Kilimanjaro	Hai	174,471	5,475	3	4,619		2,738	2	65.7	274	6.6	2,464	59.1	11.0
Kilimanjaro	Mwanga	146,631	6,093	4	7,175		2,437	2	58.5	244	5.8	2,194	52.6	12.2
Kilimanjaro	Same	270,388	37,802	14	26,724	5,670		2	136.1	567	13.6	5,103	122.5	63.0
Total		591,490	49,371	8	38,518	5,670	5,175	2	260.3	1,085	26.0	9,761	234.3	86.1
Lindi	Lindi (DC)	476,892	8,078	2	7,033	2,423		3	87.2	242	8.7	2,181	78.5	13.5
Total		476,892	8,078	2	7,033	2,423		3	87.2	242	8.7	2181	78.5	13.5
Mara	Musoma (DC)	460,403	22,157	5	17,778	18,579		2	445.9	1,858	44.6	16,721	401.3	3.1
Mara	Rorya	302,012	16,420	5.4	14,842	13,957		2	335.0	1,396	122.7	12,561	301.5	73.7
Total		762,415	38,577	5	32,620	32,535		2	780.8	3,254	167.3	29282	702.8	76.8
Manyara	Babati (DC)	319,695	12,132	4	13,650		9,798	3	371.2	1,031	37.1	9,281	334.1	24.3
Manyara	Mbulu	355,912	6,582	2	5,469		5,606	3	201.8	561	20.2	5,046	181.6	13.2
Manyara	Simanjiro	212,860	32,288	15	21,692	27,445		3	988.0	2,744	98.8	24,700	889.2	53.8
Total		888,467	51,002	6	40,811	27,445	15,404	3	1,561.1	4,336	156.1	39027	1,405.0	91.2
Morogoro	Morogoro (DC)	313,745	3,885	1	6,156	2,603		2	62.5	260	6.2	2,342	56.2	7.8
Morogoro	Mvomero	320,292	3,561	1	5,035	3,276		2	78.6	328	7.9	2,948	70.8	7.1
Total		634,037	7,445	1	11,191	5,879		2	141.1	588	14.1	5291	127.0	14.9
Mwanza	Kwimba	407,737	55,341	14	23,789		52,574	2	1,261.8	5,257.4	126.2	47,317	1,135.6	110.7
Mwanza	Magu	545,232	57,960	11	30,926	46,368		2	1,112.8	4,637	111.3	41,731	1,001.6	115.9
Total		952,969	113,302	12	54,715	46,368	52,574	2	2,374.6	9,894	237.5	89048	2,137.2	226.6
Shinyanga	Bariadi	925,234	85,664	9	29,398	69,388		4	3,330.6	6,939	333.1	62,449	2,997.6	171.3
Shinyanga	Kahama	919,795	37,259	4	40,330	23,101		4	1,108.8	2,310	110.9	20,791	998.0	74.5
Shinyanga	Kishapu	367,425	75,347	21	26,106		37,674	4	1,808.3	3,767	180.8	33,906	1,627.5	150.7
Shinyanga	Maswa	470,437	59,955	13	25,402	52,161		4	2,503.7	5,216	250.4	46,945	2,253.3	119.9
Shinyanga	Meatu	381,570	39,969	10	12,201	13,190		4	633.1	1,319	63.3	11,871	569.8	79.9
Shinyanga	Shinyanga (DC)	417,264	11,285	3	30,055		6,545	4	314.2	655	31.4	5,891	282.7	22.6
Shinyanga	Shinyanga (MC)	232,246	7,518	3	3,449	3,007		4	144.3	301	14.4	2,706	129.9	15.0
Total		3,713,971	316,997	9	166,941	160,846	44,219	4	9,843.1	20,506	984.3	184558	8,858.8	634.0
Singida	Iramba	481,437	20,593	4	20,074	11,738		2	281.7	1,174	28.2	10,564	253.5	41.2
Singida	Manyoni	285,868	7,634	3	11,041	4,351		2	104.4	435	10.4	3,916	94.0	15.3
Total		767,305	28,226	4	31,115	16,089		2	386.1	1,609	38.6	14,480	347.5	56.5
Tabora	Igunga	452,282	28,339	6	19,140	19,554		2	469.3	1,955	46.9	17,599	422.4	56.7
Tabora	Nzega	582,583	13,093	2	10,210	9,034		2	216.8	903	21.7	8,131	195.1	26.2
Tabora	Sikonge	186,459	8,173	4	4,671	5,640		2	135.3	564	13.5	5,076	121.8	16.3
Tabora	Uyui	372,758	11,186	3	5,571	9,829		3	353.9	983	35.4	8,847	318.5	28.5
Total		1,594,082	60,791	4	39,592	44,058		2	1,175.3	4,406	117.5	39,652	1,057.8	127.7
Tanga	Korogwe	338,302	21,177	6	25,791	4,659		2	111.8	466	11.2	4,193	100.6	9.3
Tanga	Lushoto	527,845	15,430	3	15,137	3,395		2	81.5	339	8.1	3,055	73.3	5.6
Tanga	Pangani	57,827	6,241	11	5,114	4,992		2	119.8	499	12.0	4,493	107.8	8.3
Total		923,974	42,847	5	46,042	13,046		2	313.1	1,305	31.3	11,741	281.8	23.2
Grand Total		12,528,979	794,951	6	531,720	396,920	129,683	2	18,417.8	52,712	1,931.0	474,405	16,576.0	1,501.8

SOURCE: MUCHALI ASSESSMENT SEPTEMBER 2012

Regions and Councils with Acute Food Shortage	National Summary	Total Population	Food Insecure Population	% of Food Insecure Population	Duration for Intervention	Food relief				
						Total food Requirement MT)	Destitute population	Free Food Relief (MT)	Able Body population	Subsidized free Food (MT)
Arusha	Karatu	255,484	13,734	5	2	330	1,373	33.0	12,360	297
	Ngorongoro	177,325	13,494	8	2	324	1,349	32.4	12,145	291
	Longido	70,682	5,227	7	2	125	523	12.5	4,704	113
	Monduli	181,754	9,108	5	2	219	911	21.9	8,197	197
Total		**685,245**	**41,563**	**6**	**2**	**998**	**4,156**	**99.8**	**37,406**	**897.8**
Dodoma	Bahi	236,778	13,505	6	2	324	1,350	32.4	12,154	292
	Chamwino	301,353	11,014	4	2	264	1,101	26.4	9,912	238
Total		**538,131**	**24,518**	**5**	**2**	**588**	**2,452**	**58.8**	**22,066**	**529.6**
Geita	Chato	564,274	40,979	7	2	983	4,098	98.3	36,881	885
	Nyangware	159,606	21,098	13	2	506	2,110	50.6	18,988	456
Total		**564,274**	**62,077**	**11**	**2**	**1,490**	**6,208**	**149.0**	**55,869**	**1,340.9**
Iringa	Iringa DC	280,100	15,463	6	2	371	1,546	37.1	13,917	334
Total		**280,100**	**15,463**	**6**	**2**	**371**	**1,546**	**37.1**	**13,917**	**334.0**
Kilimanjaro	Mwanga	146,631	10,501	7	2	252	1,050	25.2	9,451	227
	Same	270,388	5,876	2	2	141	588	14.1	5,289	127
	Moshi DC	483,936	7,599	2	2	182	760	18.2	6,839	164
	Hai	174,471	10,449	6	2	251	1,045	25.1	9,405	226
Total		**1,075,426**	**34,427**	**3**	**2**	**826**	**3,443**	**82.6**	**30,984**	**743.6**
Lindi	Lindi DC	476,892	10,637	2	2	255	1,064	25.5	9,573	230
Total		**476,892**	**10,637**	**2**	**2**	**255**	**1,064**	**25.5**	**9,573**	**229.8**
Mara	Rorya	302,012	1,232	0.4	2	30	123	3.0	1,108	27
	Musoma DC	460,403	3,741	1	2	90	374	9.0	3,367	81
Total		**762,415**	**4,973**	**1**	**2**	**119**	**497**	**11.9**	**4,476**	**107.4**
Manyara	Babati DC	319,695	18,732	6	2	450	1,873	44.9	16,859	405
	Mbulu	355,912	16,619	5	2	399	1,662	39.9	14,957	359
	Simanjiro	212,860	17,006	8	2	408	1,701	40.8	15,306	367
Total		**888,467**	**52,357**	**6**	**2**	**1,257**	**5,235**	**125.6**	**47,121**	**1,130.9**
Morogoro	Morogoro DC	313,745	9,351	3	2	224	935	22.4	8,416	202
	Mvomero	320,292	9,853	3	2	236	985	23.6	8,867	213
Total		**634,037**	**19,204**	**3**	**2**	**461**	**1,920**	**46.1**	**17,283**	**414.8**
Mwanza	Kwimba	407,737	50,935	12	2	1,222	5,094	122.2	45,842	1,100
	Magu	545,232	26,206	5	2	629	2,621	62.9	23,586	566
	Misungwi	333,632	8,939	3	2	215	894	21.5	8,045	193
Total		**1,286,601**	**86,081**	**7**	**2**	**2,066**	**8,608**	**206.6**	**77,473**	**1,859.2**
Shinyanga	Bariadi	925,234	50,737	5	2	1,218	5,074	121.8	45,663	1,096
	Kahama	919,795	47,684	5	2	1,144	4,768	114.4	42,916	1,030
	Kishapu	367,425	24,327	7	2	584	2,433	58.4	21,894	525
	Maswa	470,437	47,791	10	2	1,147	4,779	114.7	43,012	1,032
	Meatu	381,570	63,477	17	2	1,523	6,348	152.3	57,129	1,371
	Shinyanga MC	232,246	3,305	1	2	79	330	7.9	2,974	71
	Shinyanga DC	417,264	12,316	3	2	296	1,232	29.6	11,084	266
Total		**3,713,971**	**249,637**	**7**	**2**	**5,991**	**24,964**	**599.1**	**224,673**	**5,392.2**
Singida	Iramba	481,437	1,712	0.4	2	41	171	4.1	1,541	37
	Manyoni	285,868	26,793	9	2	643	2,679	64.3	24,113	579
Total		**767,305**	**28,504**	**4**	**2**	**684**	**2,850**	**68.4**	**25,654**	**615.7**
Tabora	Igunga	452,282	36,760	8	2	882	3,676	88.2	33,084	794
	Nzega	582,583	39,336	7	2	944	3,934	94.4	35,402	850
	Sikonge	186,459	5,563	3	2	134	556	13.4	5,007	120
	Uyui	372,758	35,940	10	2	863	3,594	86.3	32,346	776
Total		**1,594,082**	**117,599**	**7**	**2**	**2,822**	**11,760**	**282.2**	**105,839**	**2,540.1**
Tanga	Korogwe DC	338,302	6,151	2	2	221	615	22.1	5,535	199
	Lushoto	527,845	4,012	1	2	96	401	9.6	3,611	87
	Mkinga	134,576	3,209	2	2	77	321	7.7	2,888	69
	Pangani	57,827	1,389	2	2	33	139	3.3	1,250	30
Total		**1,058,550**	**14,761**	**1**	**2**	**428**	**1,476**	**42.8**	**13,285**	**385.3**
Grand Total		**14,325,497**	**761,799**	**5**	**2**	**18,357**	**76,180**	**1,836**	**685,619**	**16,521**

SOURCE: MUCHALI ASSESSMENT SEPTEMBER 2012

Appendix 4.3: MUAC category by District and Phasing

District surveyed	Well Nourished		Moderate Malnourished		Severe Malnourished		GAM	Category (MUAC<12.5)
	Frequency	Percent	Frequency	Percent	Frequency	Percent		
Mwanga	200	100.0	0	0	0	0	0	🟩
Same	400	100.0	0	0	0	0	0	🟩
Nzega	387	96.8	11	2.8	2	.5	3.3	🟩
Igunga	396	99.0	2	.5	2	.5	1	🟩
Sikonge	404	100.0	0	0	0	0	0	🟩
Uyui	405	99.8	1	.2	0	0	0.2	🟩
Lushoto	395	98.5	6	1.5	0	0	1.5	🟩
Korogwe	397	99.3	3	.8	0	0	0.8	🟩
Mkinga	397	98.8	2	.5	3	.7	1.2	🟩
Pangani	399	99.3	3	.7			0.7	🟩
Kishapu	323	80.8	64	16.0	13	3.3	19.3	🟥
Shinyanga dc	369	92.3	30	7.5	1	.3	7.8	🟧
Bariadi	383	94.1	24	5.9	0	0	5.9	🟧
Meatu	379	94.3	23	5.7	0	0	5.7	🟧
Maswa	396	99.0	3	.8	1	.3	1.1	🟩
Kwimba	393	98.3	6	1.5	1	.3	1.8	🟩
Misungwi	398	99.0	4	1.0	0	0	1	🟩
Magu	406	99.3	2	.5	1	.2	0.7	🟩
Lindi DC	394	98.5	6	1.5	0	0	1.5	🟩
Iringa DC	391	97.8	6	1.5	3	.8	2.3	🟩
Musoma DC	403	97.8	8	1.9	1	.2	2.1	🟩
Rorya	395	98.5	4	1.0	2	.5	1.5	🟩
Moshi DC	394	98.5	5	1.3	1	.3	1.6	🟩
Shinyanga MC	399	99.8	1	.3	0	0	0.3	🟩
Kahama	385	96.3	13	3.3	2	.5	3.8	🟩
Iramba	387	96.8	13	3.3	0	0	3.3	🟩
Manyoni	391	97.8	6	1.5	3	.8	2.3	🟩
Morogoro DC	377	99.5	2	.5	0	0	0.5	🟩
Mvomero	402	98.8	5	1.2	0	0	1.2	🟩
Chamwino	402	98.5	6	1.5	0	0	1.5	🟩
Bahi	396	97.3	11	2.7	0	0	2.7	🟩
Chato	390	97.5	8	2.0	2	.5	2.5	🟩
Longido	366	91.3	28	7.0	7	1.7	8.7	🟧
Monduli	377	94.5	15	3.8	7	1.8	5.6	🟧
Karatu	467	98.7	6	1.3	0	0	1.3	🟩
Ngorongoro	299	91.4	26	8.0	2	.6	8.6	🟧
Simanjiro	408	100.0	0	0	0	0	0	🟩
Babati DC	335	98.8	3	.9	1	.3	1.2	🟩
Mbulu	289	96.7	8	2.7	2	.7	3.4	🟩
Hai	397	99.3	2	.5	1	.3	0.8	🟩

SOURCE: MUCHALI ASSESSMENT SEPTEMBER 2012