



MALAWI  
Vulnerability  
Assessment Committee

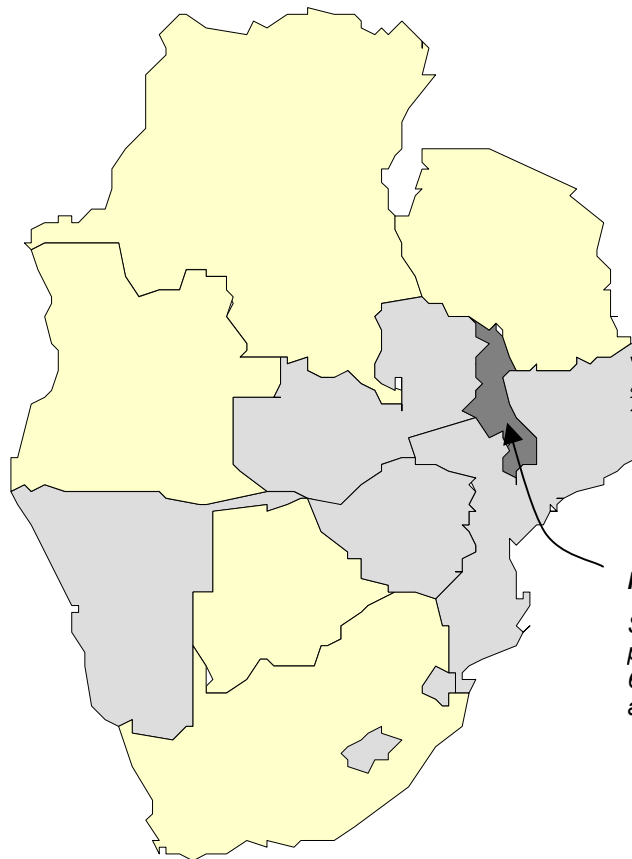
Malawi National Vulnerability Assessment Committee  
in collaboration with the  
SADC FANR Vulnerability Assessment Committee



SADC FANR  
Vulnerability  
Assessment Committee

# MALAWI

## Emergency Food Security Assessment Report



**MALAWI**

*Some 3,594,000 people (31.4% of the population) will require an estimated 65,359 MT of emergency food assistance through March 2003.*

20<sup>th</sup> January 2003  
Lilongwe

Prepared with financial support from DFID, WFP and USAID

## *PREFACE*

This emergency food security assessment is regionally coordinated by the Southern Africa Development Community (SADC) Food, Agriculture, and Natural Resources (FANR) Vulnerability Assessment Committee (VAC), in collaboration with international partners (WFP, FEWS NET, SC(UK), CARE, FAO, UNICEF, and IFRC). National VACs in each country - a consortium of government, NGO, and UN agencies - coordinated the assessments locally. This is the second of a series of rolling food security assessments to be conducted in affected countries throughout the region for the duration of the current food crisis.

The VAC assessment strategy has two principal axes. First, it uses a sequential process of 'best-practices' in assessment and monitoring, drawn from the extensive and varied experience of the VAC partners, to meet a broad range of critical information needs at both the spatial and socio-economic targeting levels. The sequential nature of the approach not only provides richer details of the "access side" of the food security equation, but it adds the very important temporal dimension as well. From an operational (i.e. response) perspective, the latter is critical. Second, by approaching food security assessment through a coordinated, collaborative process, the strategy integrates the most influential assessment and response players into the ongoing effort, thereby gaining privileged access to national and agency datasets and expert technicians and increases the likelihood of consensus between national governments, implementing partners, and major donors. This 'partnering' strategy links the major players and stakeholders including regional institutions, national governments, response agencies, NGOs and donors for on-going, intensive 'rolling' assessment coverage of food security conditions on the ground.

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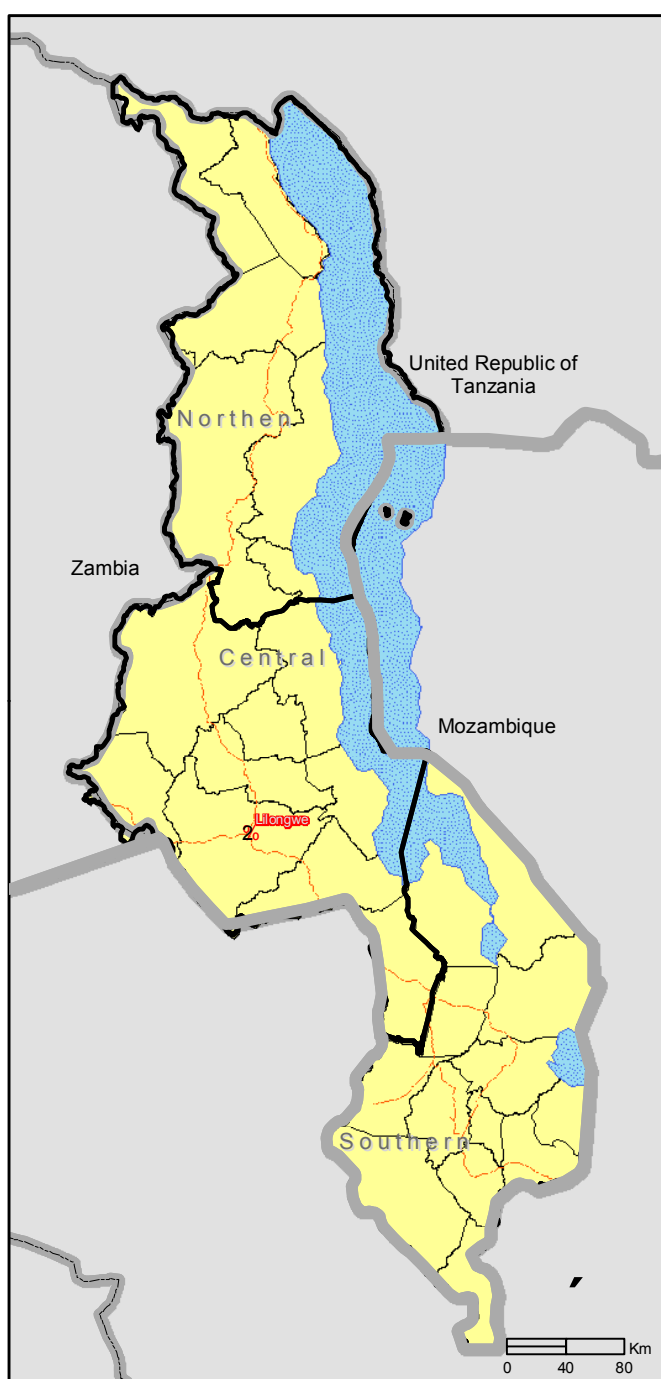
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## MALAWI EMERGENCY ASSESSMENT HIGHLIGHTS

- 2001-2002 maize production (1.6 million MT) was 8% lower than the ten-year average and 6% less than the previous year.
- Food balance analysis based on final crop estimates shows that Malawi faces a deficit of 216,000 MT maize equivalent. The government up to November 2002 imported 233,000 MT of maize currently being at a general subsidized price of MK17/kg.
- From November 2002, prices were in the range of MK12-23/kg, which is about the same price level as last year at the time. Currently prices are highest in the Central and Southern regions and lowest in the Northern region.



- Thirty-one percent of the population, or 3,594,700 people, are in need of food assistance between January and March. Comparison to estimates from the November assessment (29% of the population) show an increase of two percent of the rural population being in need of food assistance.
- According to information gathered at the household level, the most seriously affected areas in terms of the percentage of the population in need are found in the Central Region (34.6%), followed closely by the Southern Region (31.3%), while the Northern Region is least affected (21.5%).
- Key factors affecting household food security in the coming months include summer crop production, availability of casual labour (*ganyu*) for cash or food, and price of food in local markets.
- Main problem faced by the most vulnerable households in Malawi during this current crisis is not the availability of food in the market, but the accessibility, which is limited through their purchasing power and economic means.

## OVERVIEW

### A. MALAWI COUNTRY CONTEXT

Malawi is a predominantly rural (85%) land-locked country in Southern Africa with a population of approximately 11.4 million. The majority of rural households are small-holder farmers who are mostly reliant on a single harvest of maize for consumption but with chronic lack of access to seed and fertilizer. Other cereals being produced in much smaller quantities are rice, sorghum and millet.

Cassava is grown more widely in the less-populated Northern region while sweet potato production is increasing in Central and Southern regions but still on a very small scale. Most small-holder farmers also produce groundnuts and other legumes during the year. Major cash crops include: tobacco and groundnuts in the North and Central regions, pulses and cotton in the South and vegetables in all regions of the country.

Over the past 10-15 years Malawi has shifted from being a nationally self-sufficient producer of maize in non-drought years to being dependent on commercial food imports and foreign assistance to achieve a national food balance. The Malawi Government has attempted to alleviate poverty through market liberalization and targeted rural development programmes. However, agriculture still remains the predominant production sector at the macro-level. Increasing inflation has affected the value of the Kwacha.

At the household level, with decreased production and higher maize costs, smallholder farmers have become more vulnerable to food insecurity due to decreased purchasing power and increased reliance on purchase of maize from the markets. Smallholder farmers have become more dependent on off-farm earning opportunities for cash or food, most often in the form of agricultural labour or *ganyu*.

#### Current situation

After two bumper harvest in most of the country in the 1998-1999 and 1999-2000 agricultural seasons, smallholder farmers experienced significant production shortfalls in the 2000-01 season. The situation was exacerbated by low availability of maize and rapidly rising prices as well as late planting and erratic rains for the 2001-02 agricultural season.

Presently, Maize is available in most markets (both private and ADMARC) but the main problem is the accessibility of vulnerable households.

In **October 2001**, while updating their Household Economy Assessments (HEA) in three livelihood zones in Southern and Central Malawi, SC-UK realized that significant populations in rural Malawi were facing significant deficits in their annual food requirements. With prompting from SC-UK and after experiencing a dry spell in **early 2002** during a critical stage of maize development, the Government of Malawi declared a food crisis.

A meeting on the emerging Southern Africa food crisis was held in Rome in **March 2002** where SC-UK presented their findings, which helped to prompt an inter-agency assessment response to conduct an FAO/WFP CFSAM that was supported with qualitative vulnerability assessment activities.

Immediate targeted food assistance was provided through a bridging EMOP (April-July) and the results from the FAO/WFP mission and SC-UK assessments (**April-May 2002**) helped to determine that 3.2 million Malawians would be in need of food assistance between August 2002 and March 2003.

According to the **July 2002** FEWSNet Malawi Food Security Report, the final smallholder summer crop production figure (1.32 million tonnes) was 13% lower than last year. The final winter maize production estimates for 2001-02 are projected to be more than 70% the average winter maize production from the past three years (about 120,000 MT). The FEWS Net report, however, states

that these higher winter production figures are likely to be over optimistic. In addition it is estimated that a larger portion of the maize than usual will be consumed or sold green.

The **July-August 2002** Vulnerability Assessment Committee survey found that approximately 3.2 million Malawians will need food assistance before the next harvest. The November- December 2002 VAC assessment found even higher figures and calculated 3.594 million Malawians being in need of food assistance until March 2003. In addition, the results provided more detailed information on District level needs and characteristics and descriptions of vulnerable populations at the community level.

## **B. PURPOSE OF VAC ASSESSMENT**

The objective of the Malawi Vulnerability Assessment working group is to employ a series of rolling assessments to:

- Determine percentage of populations in need of food assistance at the district level.
- Provide input to assist geographic targeting of food resources from January through March 2003.
- Provide descriptions of most vulnerable populations at both the regional and community levels.
- Update the findings and assumptions of July/August 2002 VAC assessment.
- Monitor changes in the food security situation from December 2002 through March 2003.

## **C. OVERVIEW OF METHODS USED FOR MALAWI VAC ASSESSMENT**

### **Sampling**

Due to criticism on the sampling methodology used in the July/August VAC assessment 2002, the methodology for the Nov-Dec assessment has been revised and improved in order to have a systematic sampling frame. The assessment had a broader sampling frame with 136 villages sampled from 27 districts and about 12 households interviewed (from different wealth groups) per village. The Sample was drawn from a database used by DFID for the TIP programme from which villages were randomly selected using a computer programme. Households were selected by the survey teams using a random selection method with a village list of households. The majority of Livelihood zones with EPAs sampled from districts described as most vulnerable by the July/August 2002 VAC assessment. For districts that contain several different livelihood zones, the sample included EPAs from each of the main zones represented, according to population. SC-UK funded a consultant for technical support to improve the methodology of the sampling, who helped selecting the villages and replacement villages. Additionally, recommendation for the clustering of 2-3 districts that are similar had been posed, in order to have 12-15 villages per cluster, which would add more statistical rigor to the analysis.

### **Questionnaires**

Three separate questionnaires were used to obtain district, community and household level information.

- **District** – Interviews with district level agriculture officials to determine food security status by EPA and ranking in order of vulnerability.
- **Community** – Key informants/leaders to determine wealth groups, main sources of food and income, market access and prices, crop production, access to inputs and water and HIV/AIDS awareness.
- **Household** – 12 households per village from different wealth groups to collect information on past and present access to food and income - production, access to inputs, current asset holdings, livestock ownership, coping strategies, income sources, meals consumed and dietary diversity.

### **Data collection**

The Malawi National VAC Survey was conducted over a 3-week period in November and December 2002. The sample covered 1639 households in 136 villages, 65 EPAs, 19 Livelihood zones (of 21) and all 27 Districts. Eight teams of 4 persons each were represented by the National Economic Council, Ministry of Agriculture, Local Government, National Statistics Office, CARE, Action Against Hunger, Concern Worldwide, Catholic Relief Services, SC-UK, World Vision International, FEWS Net, FAO and WFP.

## **Analysis**

Data from the household surveys was used to calculate the percentage of households requiring food assistance from January through March. Then linear regression analysis was used to construct a model to predict the national food needs of vulnerable groups among the population. A weighted index was constructed for each household using 10 predictor variables weighted by their relative contribution to the food gap and controlling for interactions between predictors.

## **Results**

From there, the percentage of households requiring food assistance was calculated for each district in a cluster. The overall population in need of assistance from January through March is 31.4%, which is slightly higher than the 29% estimated in the last VAC assessment in July/August 2002. Although the percentages are significantly not different, the allocations among the districts have changed.

## **Methodology**

The November-December 2002 VAC survey used household level information to determine cereal requirements and the households' ability to meet those needs over the following 4 months. Although it appears to measure absolute needs, the method was used to predict relative needs due to the unreliability of information collected (misreporting by households; data collection errors; unsuitability of questions in particular regions, etc.) during the survey. The following are the variables that were used to calculate a food gap at the household level.

### **Household cereal requirements**

The number of persons in the household multiplied by 12 kgs/person \* 4 months. Relies on reliability of household demographic information.

### **Own production**

The amount of cereal left in stock from 2001-02 agricultural season, winter harvest or previous purchases.

### **Yet to harvest**

The amount of cereals yet to be harvested from the 2002 winter production season.

### **Direct sources**

Actual cereal the household expects to receive between time of survey and March 2003 from the following sources: agricultural labour (ganyu), Food for Work projects, gifts, or other sources. Did not include food aid.

### **Expected purchases**

The actual reported amount of cereal the household expects to purchase between December 2002 and March 2003.

### **Expected income**

Was calculated by adding expected income between December and March from all sources, including expected cash crop sales revenues.

### **Additional purchases**

Calculated using expected income amounts divided by MK 850 to represent additional purchases not reported by the household. This was calculated because many households reported income but no intention to purchase cereals although they had little or no other reported sources of food. It was used as a correction factor for under-reporting expected purchases.

### **Root and tuber production**

The cereal equivalents for cassava, sweet potatoes, and Irish potatoes were calculated based upon expected harvest between December and March. The conversion factors were provided by FEWSNet Malawi and include:

- Cassava – One kilogram raw cassava \* 0.27 (maize equivalent) \* 0.92 (losses)
- Sweet potatoes – One kilogram raw \* 0.31 (maize equivalent) – no losses expected.
- Irish potatoes – One kilogram raw \* 0.21 (maize equivalent) – no losses expected.

### Household availability

This was calculated by adding the following in kilograms: Own production + Yet to harvest + Direct sources + Expected purchases + Additional purchases + Root & tuber production (maize equivalents).

### Cereal gap

Household cereal requirements minus Household availability (creates a variable that is positive if there is a gap and negative if there is a surplus).

If a household had a gap of less than 10 kilograms over the next four months, they were not considered to be in need, due to the lack of precision in the methodology.

In addition, households with the following characteristics were **not** considered to have a gap:

- Those identified as 'wealthy' in the community wealth ranking because in every case, the 'wealthy' households had enough assets (both household and animal) to manage during the upcoming lean season.
- Those households identified as 'middle' in the community wealth ranking exercise and that had large asset holdings and high dietary diversity.
- Households owning cattle.
- Households owning significant numbers of goats, poultry and pigs.
- 'Poor' households owning a variety of household assets and reported eating 3 times per day or had high dietary diversity.

### District Clusters

To get significant results, the 27 districts had to be clustered. The grouping of districts was based on similarity of districts, with similar income sources, agricultural production patterns, geographical and economic settings. The clusters are as follows:

- Karonga and Chitipa
- Rumphu and Mzimba
- Nkhata Bay, Nkhotakota and Likoma Island
- Kasungu, Michinji and Lilongwe
- Ntchisi and Dowa
- Salima and Mangochi
- Dedza and Ntcheu
- Balaka, Machinga and Zomba
- Mwanza, Blantyre and Chiradzulu
- Thyolo, Mulanje and Phalombe
- Chikwawa and Nsanje

## D. KEY FINDINGS

Like in the July/August 2002 VAC assessment, poverty is a significant contributor to overall household food insecurity. Poor agricultural production from two seasons due to unfavourable weather conditions and lack of agricultural inputs has worsened the current situation.

Key factors affecting household food security in the coming months include crop production, availability of casual labour (*ganyu*) for cash or in-kind, and availability and prices of cereals in local markets. The food security situation in the coming months depends on agricultural production patterns. The production estimates for the season might be low due to late onset of rains and cyclone Delfina which has caused some flooding.

For the poorest households, there is a heavy reliance on labour for food and income. It was difficult for them to predict the amount of food or income they could receive from January to March 2003 but overall estimates show heavy dependence on *ganyu* for household food security.

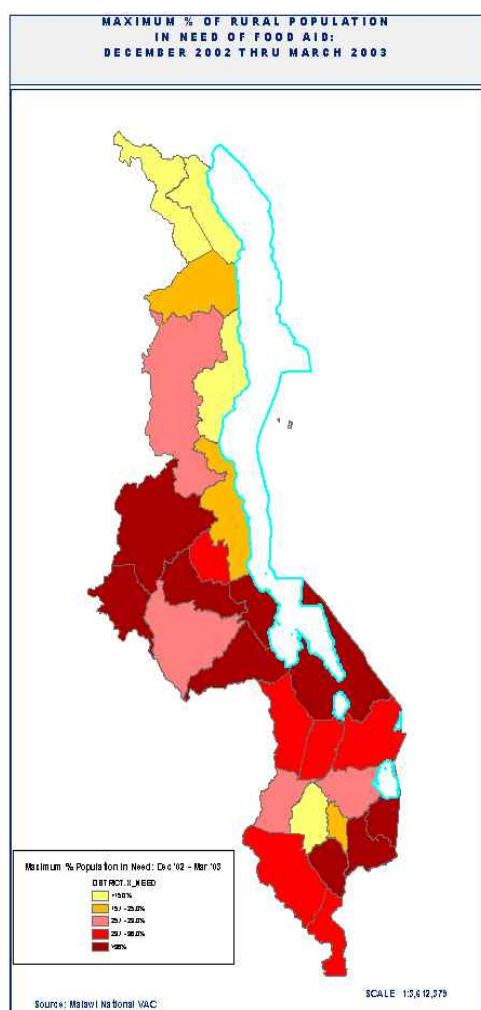
Analysis of the VAC survey data showed that 31.4% of the population in the country would require food assistance from January through March, which is slightly above the estimated level from the July/August assessment with 28%. The rationale is to keep the general ration distribution up to the end of the hunger gap and then halve the amount of the ration by April 2003. VAC estimates of population in need of food assistance and the approximate food needs for the time period. Food aid tonnage was calculated using 12 kgs/person/month.

The VAC assessment predicts that approximately 34.6% of the population in the Central region live in need of food aid, 31.3% in the South and 21.5% of the population in the North do need food assistance thru March 2003. According to percentage of total beneficiaries, the Southern region is now slightly worse of than the Central region. The North has even improved and decreased the number of beneficiaries from 10 to 8.5 %, which can be explained due to the cross border trade with Tanzania and the wide spread cultivation of cassava in the Northern districts of the country. Additionally, differences for the South in comparison to the last assessment can be argued due to the onset of the harvest, which starts in the South and goes up Northwards. Which means as well, that storages are finished earlier in the South, where the population then will be more vulnerable during the later stage of the hunger gap.

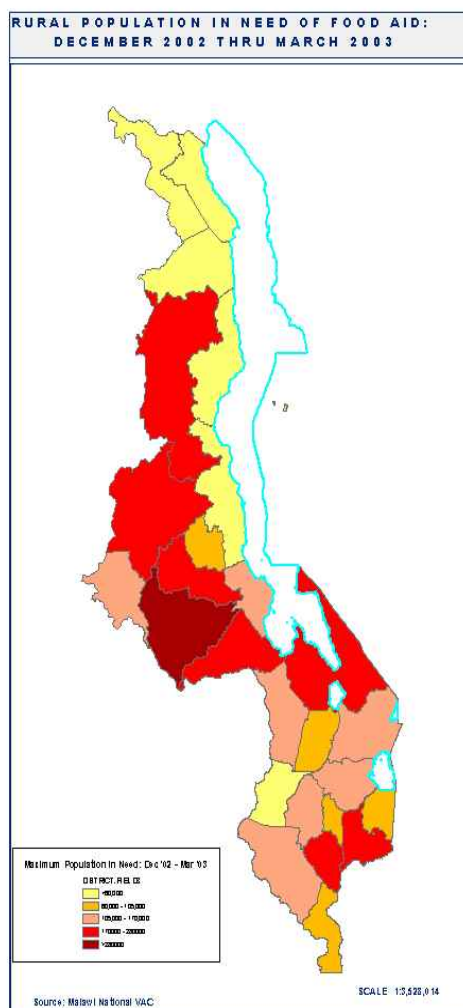
Figure 1 shows the absolute numbers of beneficiaries per district. Clearly showing that the Northern region has the smallest numbers of beneficiaries. Exception is Mwanza in the South with about 43,000 beneficiaries only. District with the highest number of beneficiaries is Lilongwe with a 444,000 beneficiaries. Map 2 shows districts with the highest percentage of population in need are clustered in the Central region with the exception of Phalombe, Thyolo and Mulanje with more than 36% of the population in need of food assistance.

As expected the poorest in a population are most vulnerable. Household with no more than just a hoe or axe are very vulnerable. Households owning assets such as bed, chair, table, bicycle, radio are likely not to need assistance, except when there has been illness or death of a productive member. Every community that was assessed by the VAC teams named the elderly, sick and disabled as the most vulnerable in the community. Other socio-economic targeting indicators are female headship, heavy reliance on labour for food or income, large number of dependents, low dietary diversity and meal consumption reduced to only one time a day.

**Figure 1.1: Absolute numbers of Population in need of food assistance**



**Figure 1.2: Maximum percentage of rural population in food need**



## I. EMERGENCY FOOD SECURITY OVERVIEW

### A. GENERAL FOOD DISTRIBUTION NUMBERS

The district needs have been analysed at regional and district levels. In Malawi there are three main regions: Southern, Central, and Northern regions. Regionally, the absolute number of population in need of assistance has gone up for the Southern and Central regions from 1,316,200 and 1,579,500 to 1,669,114 and 1,619,498 respectively for the period February/March 2003 as compared to what was previously predicted in the July/August 2002 VAC assessment. While the absolute needs for the Northern regions have gone down to 306,120 beneficiaries as compared to 354,200 beneficiaries predicted during the July/August 2002 VAC assessment.

#### 1. Regional Summary

The absolute needs for the Southern and Central regions have gone up due to low moisture content mainly in the Lower Shire for the production of winter maize, which is the main source of both food and cash income. Both the Southern and Central regions have also been experiencing

low maize imports from neighbouring countries, and therefore increases in maize prices have occurred.

**Table 4.1 Beneficiary numbers by region (MVAC, 2002)**

Region	Population	% of Population in need at Regional Level	Beneficiaries for February – March 2003	% of total beneficiaries per region
Southern Region	5,336,551	31.3%	1,669,114	46.4%
Central Region	4,682,862	34.6%	1,619,498	45.1%
Northern Region	1,420,587	21.5%	306,120	8.5%
<b>GRAND TOTAL</b>	<b>11,440,000</b>		<b>3,594,732</b>	<b>100.0%</b>

## 2. District Summary

The district needs have gone up from about 3.4 million of population (29.3% of total population) in need of assistance to about 3.6 million (31.4% of total population). The district needs have gone up with a difference of 237,132 people representing 2.1% from the findings of the July/August 2002 VAC assessment.

The districts with the highest percentage of vulnerable groups for February – March 2003 distribution are Salima (44.1%), Dedza (40.0%), Dowa (40.0%), Kasungu (40.0%), Mangochi (40.0%), Mchinji (40.0%), Mulanje (38.0%), Phalombe (38.0%), Thyolo (38.0%), Balaka (36%), Chikwawa (36%), Machinga (36%), and Nsanje (36%).

The districts with the highest absolute numbers of people in need are Lilongwe (444,196), Mangochi (281,104), Dedza (224,188), Kasungu (221,414), Thyolo (200,854), Dowa (189,504), and Mzimba (187,887).

Although the total district needs have gone up, some reductions for some districts have occurred while for others the needs have gone up as compared to what was previously predicted during the July/August 2002 VAC assessment. The needs for Kasungu, Mzimba, Chitipa, Mchinji, Salima, Blantyre, Nkhotakota, Rumphu, and Mwanza are lower than previously predicted while the needs for Mangochi, Mulanje, Phalombe, Machinga, and other districts have gone up. Likoma district will be targeted for the first time in the last phase of the EMOP.

The table below provides detailed information on district needs and the percentage changes from the July-August 2002 VAC assessment.

**Table 4.2: Numbers and percentage of beneficiaries by District**

District	Population	Population % in need predicted from the August Assessment	Beneficiaries predicted from the August Assessment	Dec-Mar % Pop Need from the November Assessment	Beneficiaries from the November Assessment	MT (maize alone) Required	Changes of absolute beneficiary numbers from August Assessment
<b>Northern Region</b>							
Chitipa	146,024	35.0%	50,500	15.0 %	21,904	398	(28,596)
Karonga	224,072	15.0%	33,600	15.0 %	33,611	611	11
Mzimba	703,630	33.0%	229,400	26.7 %	187,887	3,416	(41,513)
Nkhata Bay	189,741	6.0%	10,600	12.5 %	23,718	431	13,118
Rumphi	147,821	27.0%	40,400	25.0 %	36,955	672	(3,445)
Likoma	9,298	0.0%	0	22.0 %	2,046	37	2,046
<b>Central Region</b>							
Dedza	560,471	39.0%	218,000	40.0 %	224,188	4,076	6,188
Dowa	473,760	40.0%	189,500	40.0 %	189,504	3,446	4
Kasungu	553,535	50.0%	276,700	40.0 %	221,414	4,026	(55,286)
Lilongwe	1,550,490	28.0%	434,200	28.6 %	444,196	8,076	9,996
Mchinji	374,207	44.0%	166,700	40.0 %	149,683	2,722	(17,017)
Nkhota kota	264,250	23.0%	61,600	22.0 %	58,135	1,057	(3,465)
Ntcheu	426,970	31.0%	133,600	32.5 %	138,642	2,521	5,042
Ntchisi	193,333	21.0%	40,000	35.0 %	67,604	1,229	27,604
Salima	285,847	49.0%	140,000	44.1 %	126,132	2,293	(13,868)
<b>Southern Region</b>							
Balaka	291,472	30.0%	88,000	36.0 %	104,930	1,908	16,930
Blantyre	932,114	15.0%	138,000	14.1 %	131,406	2,389	(6,594)
Chikwawa	410,761	35.0%	144,200	36.0 %	147,874	2,689	3,674
Chiradzulu	271,839	24.0%	65,500	25.0 %	67,960	1,236	2,460
Machinga	425,653	27.0%	116,200	36.0 %	153,235	2,786	37,035
Mangochi	702,761	27.0%	193,300	40.0 %	281,104	5,111	87,804
Mulanje	493,262	24.0%	119,800	38.0 %	187,440	3,408	67,640
Mwanza	158,940	27.0%	43,400	27.0 %	42,914	780	(486)
Mzimba	703,630	33.0%	229,400	26.7 %	187,887	3,416	(41,513)
Nsanje	224,478	23.0%	51,000	36.0 %	80,812	1,469	29,812
Phalombe	267,163	24.0%	63,300	38.0 %	101,522	1,846	38,222
Thyolo	528,564	33.0%	176,000	38.0 %	200,854	3,652	24,854
Zomba	629,543	21.0%	134,100	26.9 %	169,063	3,074	34,963
<b>Total</b>	<b>11,440,000</b>	<b>29.3%</b>	<b>3,357,600</b>	<b>31.4%</b>	<b>3,594,732</b>	<b>65,359</b>	<b>237,132</b>

## **B. FOOD SECURITY AND CRITICAL ISSUES**

### **1. Nutrition and Health**

The latest round of nutrition surveys has just been completed in January 2003. Some NGOs have finished the analysis and preliminary results are available. Measurements of height, weight, MUAC (mid-upper arm circumference), age of children under 5 years of age and morbidity and mortality in the communities have been collected. Results presented show global malnutrition rates between 1.9% and 6.3% throughout the country. These results show that the food security situation in the country has not yet translated into increased numbers of malnutrition. Acknowledging the fact that the lean season is just half way through, it is recommended that another round of nutrition surveys in March/April 2003 shall be conducted, just before the harvest season, to investigate on the food security situation and its influence on the nutrition status of the Malawian population. A comprehensive overview about the nutrition and health situation in the country and its analysis has been compiled later in this report (Section VI).

### **2. Water**

The water and sanitation situation in Malawi has not been targeted during this emergency due to different reasons. Malawi has a low water table in general and especially in the low areas of the country. Water and sanitation has been identified as one of the sectors that will need more focus for development activities in the future, as the main problems include poor latrine coverage, hygiene practices and lack of waste disposal. During rainy season and times of flooding the possibility of cholera outbreaks are increased. Increased numbers of cholera and diarrhoeal diseases can of course have an impact on the nutritional status of the population; especially on young children and infants whose nutrition status would be majorly affected by a cholera epidemic. The economically active population would be affected as well and therefore the provision of food and income to the household would be negatively influenced. In the last few weeks, the country has experienced floods caused by the cyclone Delfina that left more than 15,000 people homeless in Malawi. The possible strengthening of the El Nino event might effect the agricultural production and therefore diminish the expected maize harvest (WFP, El Nino Bulletin, Jan 2003), which would obviously have an effect on the food security situation in Malawi.

### **3. HIV/AIDS**

HIV/AIDS infections in Malawi have increased rapidly over the last ten years from 1.7% in 1987 to 14.3% in 1997 as reported by the National AIDS Council. Not only adults mortality but children and infant mortality can as well be linked to the disease. In Malawi (1997), about half of the HIV/AIDS cases in Malawi are found in the female population, which has to take different factors into consideration like percentage of females in the population, social and cultural factors, as well as gender and age. The awareness about HIV/AIDS in rural communities in Malawi according to the VAC assessment community questionnaire is very low, and therefore rather alarming. Communities throughout the country are reluctant to talk about HIV or are not relating high numbers of orphan headed households and chronically sick people to the virus. Some communities in the South have reported that they spend more time taking care of sick people instead of taking care of their crop cultivations. The loss of human capacity and/or reduced time spend on agricultural activities clearly links to the emerging food security situation in the country. The VAC Malawi regarded HIV/AIDS as a very important issue and therefore decided to add a separate chapter on HIV and related matters to this report (see Section V).

## **C. FOOD INSECURITY IMPACTS**

### **1. Coping strategies**

Different mechanisms to cope with the food shortage have been employed by the Malawian population. Depending on the region and food economy zones various activities help families to overcome the shortage. The most frequent mechanisms are the reduction of the amount of food eaten and the number of meals, skipping entire days without eating, the consumption of wild foods, the reduction of expenditures on non-food items, sale of livestock and/or assets to purchase food and migration to search for work or food elsewhere. A short overview about the findings shall be given here, whereas in the later section a detailed analysis will be shown (see Section III).

The most frequently employed strategies in all of the regions, the North, Central and South of Malawi, are the reduction of amount of food and number of meals eaten and the reduction of non-food expenditure. All of these have been used by more than 60% of the population in all regions according to the current assessment. In the Northern region, the assessment indicated that a reduced percentage of the population compared to the August assessment is employing fewer coping mechanisms. In the Central and Southern region all of the activities show increased percentages of usage in comparison to the August assessment, except two in the South: consumption of wild foods and sale of household assets. The general conclusion could be that the North is much better off than the rest of the country, and therefore needs to utilise much less coping strategies. The two reduced strategies in the South might be due to seasonality of the availability of wild fruits and an already reduced number of household assets. It seems that the sale of livestock has not yet been pressurised as ownership numbers and market prices all over the country are stable and have been reported to be still higher than last year. All kinds of livestock are represented in all regions, with the majority of cattle, pigs and poultry in the North and sheep/goats being highest in the South. The Central region ranges in the middle in livestock ownership, except for poultry, which shows the lowest numbers in the country. Here again, the food security situation seems not yet to put as much pressure on the population as occurred in previous years, as some of the strategies even appear to be reduced in comparison of the August and the November assessment.

## **2. Gender issues**

The number of female-headed households in the country stands at about 20% of the rural households that were interviewed during the assessment. The North showed the smallest number of female-headed households (14%), followed by the Central and the South with 20% and 26% respectively.

According to the November assessment, female-headed households employ the strategy of reduced numbers of meals more than male-headed households compared to the August assessment. Livestock ownership was significantly higher in female-headed households for cattle, poultry and pigs as compared to households with male heads. Female headed households showed less ownership in tools like hoe, axe and panga knife compared to male headed households. On the other hand, female-headed households have lower percentages in selling household assets and migrating to find work and food. The lower migration figure on search for work is astonishing considering the fact that more than half of the female-headed households have no income source at all. Most important sources of income for male headed households is cash crop sales whereas female headed households stated ganyu as their main income source. Additionally, it has to be mentioned again, that the female population is more prone to be infected with HIV/AIDS than the male population due to higher susceptibility to infection, earlier sexual initiation and cultural practices that favour early marriage.

Overall, female households seem to be more affected by the food security situation as male headed households, as they have less income sources and less coping mechanisms to employ.

## **D. FUTURE FOOD SECURITY PROSPECTS**

### **1. Received and planned imports**

As a short-term measure to overcome the problem of food shortage, government planned to import 250,000 MT of maize for commercial sale. As of 28<sup>th</sup> December 2002, 233,000 MT of commercial maize had been received. As of 10<sup>th</sup> January 2003, approx. 13,000 MT of the ADMARC maize has been sold at a price of 17 MK/kg. Additionally, donors through World Food Programme (WFP) pledged 208,000 MT of Maize to be distributed for free to the most vulnerable people.

Due to the combination of government commercial stocks and the on going arrival and distribution of humanitarian food aid, the food security situation at national level is generally good and certainly much better than it was in the previous forecast.

However, according to results from this round of the assessment, the food security situation at household level is getting worse. Approximately 3.6 Million people will require food assistance for

the period between December 2002 and March 2003. This means there is an additional 200,000 people in need of food assistance from the previous round.

The worsening condition is an indication that despite the fact that the country has enough stocks at national level, the households are not able to access it even at a subsidized price of MK17/kg. Some of the reasons that can be attributed to this are as follows:

- Low purchasing power.
- Increasing number of vulnerable households which is forcing the targeted vulnerable households to share even the little that they receive under the humanitarian aid programme and because of the sharing aspect the food does not last as long as it estimated to.
- Ganyu (casual labour), which is one of the key sources of income for the rural areas, is not readily available this season because some of the households that normally offer ganyu are not able to do so because they have also been affected by the crisis.

## **2. Food Security Prospects**

As a medium term measure to address the food crisis, the government with assistance from its cooperating partners has put in place the following programmes:

- Continued provision of humanitarian aid basing the distribution plan on the November/December assessment
- Winter Targeted Input Programme-Some districts that have been affected by floods the Government with support from the cooperating partners will issue free seeds to be planted during the winter period.
- Several farmer credit programmes.

On agricultural production for the 2002/2003, it is difficult to predict the agricultural production in the absence of the first round crop estimates. These figures are expected to be released late in February 2003. However, the country is facing influences of El Nino weather conditions, which is characterized by heavy rainfall and floods in some areas and erratic spells in other areas.

## *II. NATIONAL LEVEL FOOD SECURITY*

### **A. UPDATE ON THE 2001-02 FINAL CROP PRODUCTION ESTIMATES**

The final round of 2001-02 summer crop production estimates were released on June 20<sup>th</sup> by the Ministry of Agriculture and Irrigation, and included estimates of winter crop production that were based on farmer's planting intentions. However, due to moisture stress that affected some parts of the country (FEWSNet, 2002), the winter crop production estimate was revised from 166,000 MT to 120,000 MT – about 27% less than originally predicted. In addition, it was reported that late delivery of inputs and consumption of green maize also contributed to the lower winter production estimates (FAO, 2002). The final production figures for 2001-2002 planting season are presented in Table 2.1 below and compared to the estimates from the FAO/WFP Crop and Food Supply Assessment Mission (CFSAM), which was conducted in April-May 2002.

Earlier this year, the Government predicted a significant increase in winter maize production over past years – almost twice as much as in the previous three years. Much of this estimated increase was due to the Government's Targeted Input Programme (TIP), which distributed maize and legume seed and fertilizer for winter cultivation to more than 300,000 households. Even though the final production figures were less than originally predicted, the winter TIP resulted in an increased winter maize production compared to the past three years – a total of 41,000 MT, or 34% of the total winter maize production. TIP beans accounted for 77% of total winter bean production this year (FEWSNet 2002).

The final smallholder maize production figure of 1.44 million tonnes is 6.5% lower than the CFSAM projection of 1.54 million tonnes. The final smallholder cereal production of 1.59 million tonnes was 6.0% lower than 1.69 million tonnes from the CFSAM estimates. With estate maize included, the final maize production figure of 1.56 million tonnes was 1.2% higher than the 1.54 million tonnes estimate from the CFSAM. A final cereal estimate of 1.61 million tonnes was 4.9% lower than the CFSAM estimate of 1.69 million tonnes.

**Table 2.1 – Comparison of CFSAM estimates and MoAI final estimates (Oct. 2002)**

2001-02 production	Final maize	CFSAM maize	Final cereal	CFSAM cereal
Smallholder summer	1,319,000 MT		1,468,000 MT	
Smallholder winter	120,000 MT		125,000 MT	
<b>Total smallholder</b>	<b>1,439,000 MT</b>	<b>1,539,000 MT</b>	<b>1,593,000 MT</b>	<b>1,694,000 MT</b>
<b>% Difference</b>	<b>6.5% lower</b>		<b>6.0% lower</b>	
Estate maize	118,000 MT		118,000 MT	
<b>Total</b>	<b>1,557,000 MT</b>	<b>1,539,000 MT</b>	<b>1,611,000 MT</b>	<b>1,694,000 MT</b>
<b>% Difference</b>	<b>1.2% higher</b>		<b>4.9% lower</b>	

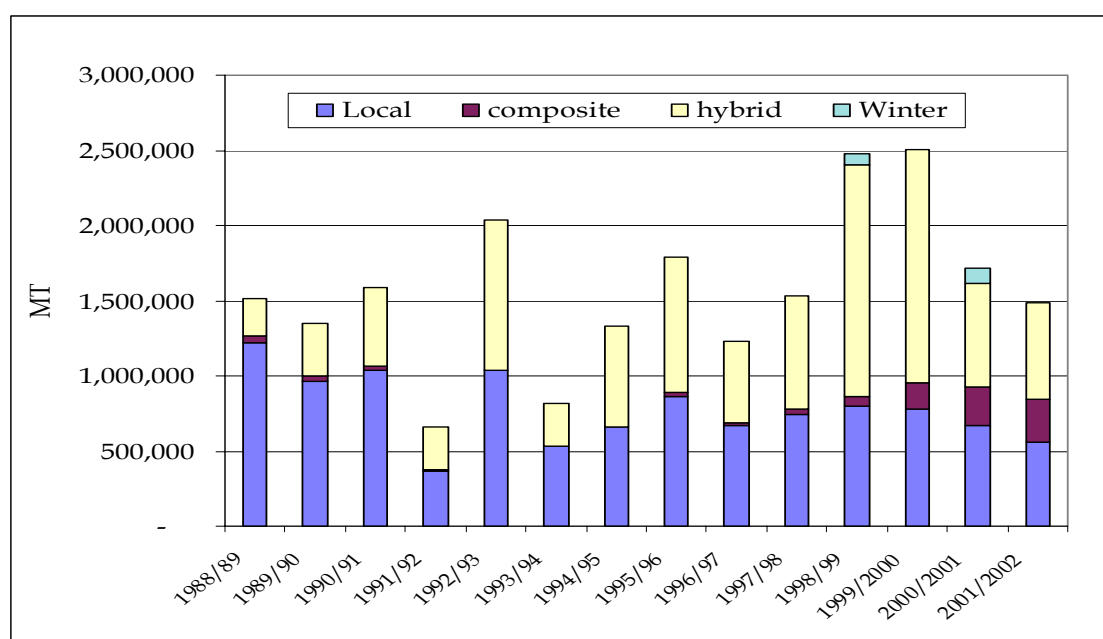
(Source: FAO/WFP CFSAM Special Report & FEWSNet Malawi)

## B. TRENDS IN CROP PRODUCTION

Data on crop production from 1989 to the present were collected and analyzed by experts from FAO Malawi with the results presented in a series of graphs below. Chart 2.1 shows trends in maize production over the years by type. It is apparent that in the years where total maize production was the best, more farmers had been using hybrid seed (1992-93, 1998-99, 1999-00). The use of local varieties has fluctuated over the years as well but the use of composite seed varieties has increased dramatically in the past three planting seasons.

Chart 2.2 shows the dramatic increases in legume production in Malawi over the years since the 1988-89 agricultural season. There is a noticeable increase in production between 1994-95 and 1995-96, which was primarily due to increases in peas and soya beans. Since then there have been steady increases in pea production with fluctuations in bean production each year. Even in the past two years, which were poor for cereal production, the pulse production was the highest in recent history.

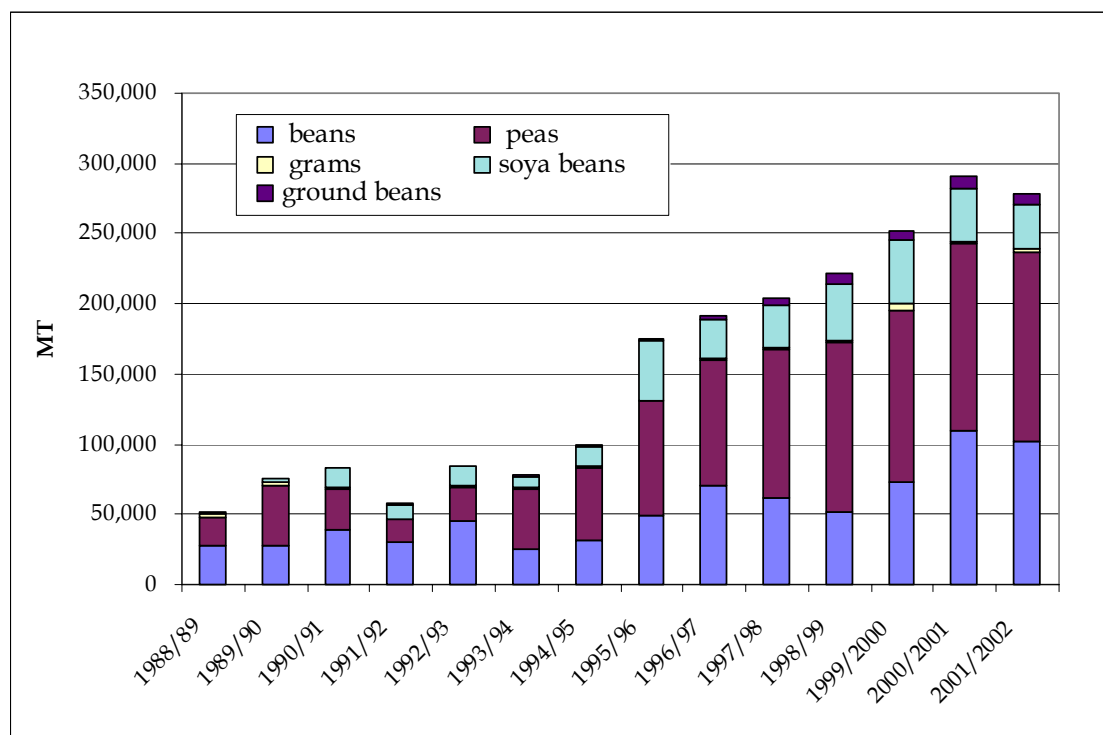
**Chart 2.1 – Trends in total maize production by agricultural season and variety (FAO)<sup>1</sup>**



<sup>1</sup> Data from the MoAI do not systematically separate winter from summer harvest (only in 1998-99 and 2000-01)

Groundnut production has also been increasing over the years and reached a high of 130,000 MT in the 2000-01 agricultural season but dropped slightly to just over 120,000 MT in the 2001-02 season. Groundnuts provide an important source of food and income for many rural Malawians, primarily in the Southern and Central regions.

**Chart 2.2 – Trends in total pulse production by agricultural season and variety (FAO)**



### C. NATIONAL FOOD BALANCE UPDATES

Table 2.2 compares the changes in the national cereal balance projections from August and December 2002 to the 5-year average for the country. ***There has been considerable discussion regarding the domestic requirements and for the purposes of this paper.***

A meeting was held in December 2002 with FAO, WFP, DFID, EU, FEWSNet, UNDP, SC-UK and CISANET and the following points were concluded regarding the food balance:

- Essentially, the Cereal balance column from the FAO/WFP CFSAM (May 2002) is not comparable to VAC Food balance columns as cassava and root production estimates are not included, while August and November VAC estimates include cassava but not wheat. Consequently, it was decided by the VAC committee to delete the FAO/WFP CFSAM.
- The five-year averages are not directly comparable to the other figures because they don't include cassava production and for most of those years, caloric requirements were estimated using 1800 kcals rather than the current 2200 kcals.
- In addition, the 5-year average domestic production is artificially high because it includes two years of bumper maize harvests (1998-99 & 1999-00). If the 10-year average were used, the domestic maize production would be around 1.69 million Mt, which is reasonably in line with the current year estimates (1.5 million Mt - see Chart 2.1). Thus the domestic production would amount to some 1.86 million Mt.
- Population figures should be mentioned for the calculation of the most recent food balance.

**Table 2.2 – Comparative national cereal balance based on a 2002 population of 11.44 million**

	August 2002 <sup>1</sup>	November 2002 <sup>2</sup>	5-Year Average <sup>3</sup>
Opening stocks	20,000	28,000	143,000
Domestic production <sup>4</sup>	1,827,000	1,772,000	2,081,000
<b>TOTAL AVAILABILITY</b>	<b>1,847,000</b>	<b>1,800,000</b>	<b>2,224,000</b>
Domestic requirements <sup>5</sup>	2,414,000	2,414,000	2,062,000
Planned Exports	0	0	24,000
Desired closing stocks	60,000	60,000	88,000
<b>TOTAL REQUIREMENTS</b>	<b>2,474,000</b>	<b>2,474,000</b>	<b>2,174,000</b>
<b>DOMESTIC CERIAL GAP</b>	<b>-627,000</b>	<b>-674,000</b>	<b>50,000</b>
Commercial Imports Received <sup>6</sup>	42,000	233,000	62,000
Food Aid Received	24,000	132,000	1,000
<b>TOTAL IMPORTS RECEIVED</b>	<b>66,000</b>	<b>365,000</b>	<b>63,000</b>
Commercial Imports Expected	208,000	17,000	0
Food Aid Expected	184,000	76,000	0
<b>TOTAL IMPORTS EXPECTED</b>	<b>392,000</b>	<b>93,000</b>	<b>0</b>
<b>TOTAL IMPORTS</b>	<b>458,000</b>	<b>458,000</b>	<b>63,000</b>
<b>CEREAL GAP/SURPLUS</b>	<b>-169,000</b>	<b>-216,000</b>	<b>113,000</b>

<sup>1</sup>Production and utilization estimates from FEWSNet Monthly Food Security Report (August 2002) and are ME, including cassava. Import figures are from WFP and NFRA.

<sup>2</sup>Production and utilization estimates from FEWSNet Monthly Food Security Report (November 2002) and are ME, including cassava. Import figures are from WFP and NFRA

<sup>3</sup>SADC Regional Early Warning Unit based on Government figures (1997-98 to 2001-02).

<sup>4</sup>All cereals plus cassava, converted to maize equivalent

<sup>5</sup>Includes food use (ME) and seed requirement (ME)

<sup>6</sup>Government imports only – excludes private trade

The food balance analyses based on the final crop estimates in November suggest that the country faces a deficit of 674,000 MT (maize equivalents) for the 2002-03 consumption year. The analysis included maize, rice, sorghum, millet and cassava. The change from the August assessment was due to an increase in opening stocks figures and a decrease in final domestic production estimates due to poorer than expected winter crop yields in the country.

Commercial imports have increased to about 93% of total expected imports (Dec. 28, 2002) while food aid received by January 8, 2003 was about 63% of the expected total for the agricultural year. Of course, none of this cereal balance takes into account the very active cross-border importing of maize from Mozambique and Tanzania, which has been estimated to be as high as 100,000 MT per year (FEWSNet Malawi, November 2002).

In conclusion, the emerging consensus of experts is that the current and expected supply of maize in the country is sufficient to cover the food gap through March 2003 for the following reasons:

- If private or informal trade and imports are considered, an estimate of around 100,000 MT have been brought into the country and are being used to fill part of the gap.
- Church groups and non-WFP pipelines (C-SAFE) are also bringing in considerable amounts of food, further reducing the food gap.
- Lastly, in an emergency, there is no reason to hold closing food stocks, which adds another 60,000 MT to fill the gap.

All in all, the humanitarian pipeline appears secure and commercial imports are significant. When these are combined with the smaller (yet significant) quantities available through cross-border trade, the private sector, through church groups, and from non-WFP pipelines, the country of Malawi should be able to have enough food to last through to the next harvest.

#### D. LEVEL OF COMMERCIAL IMPORTS REALIZED AND COMMITTED

Of the NFRA stocks, approximately 28,000 MT were carryover stocks from the last season and 27,000 MT were purchased by NFRA on behalf of the European Union to replenish the Strategic Grain Reserve (SGR). A final 233,000 MT were 93% of the 250,000 MT planned commercial imports by the NFRA to reduce the national maize deficit for the 2002-03 consumption year. Much of this maize is being purchased by ADMARC for sale in local markets at a subsidized price of MK 17 per kilogram (FEWSNet).

#### E. FOOD AID RESPONSE TO DATE

The World Food Programme office developed a four-month bridging EMOP from June through September that originally planned to distribute 54,000 MT of food aid in Malawi. Of that EMOP, 17,000 MT was received and 16,000 MT distributed.

According to recent figures (January 08, 2003) from the World Food Programme office in Malawi, the total amount of food received under the Southern Africa Regional EMOP 10200 (July 2002 to March 2003) is 132,000 MT. The balance to arrive is 76,000 MT. Primary donors for the EMOP include: United States, the European Union, the United Kingdom, Japan, UN CERF, Germany, Canada, ECHO, and Italy.

To date, the European Union is providing 55,000 MT of food aid to Malawi with 15,000 MT targeted for vulnerable groups (children under five years, expectant and nursing mothers, and the elderly). About 30,000 MT is being used for emergency food aid and the remaining 10,000 MT will be kept as a reserve for the future.

Since the beginning of 2002, the US Government has provided or pledged more than \$276 million in emergency humanitarian assistance in response to the food crisis in Southern Africa. USAID/OFDA has provided more than \$10 million for non-food programmes that are currently underway in the region as well as \$1 million to WFP to assist with its regional management and logistics coordination. Total assistance to Malawi is around \$57 million, with more than \$52 million through Title II Food and Emerson Trust assistance for approximately 100,000 MT of emergency food assistance.

**CoGuard Consortium – Supplementary Feeding Programme (SFP)** - Recently, a group of NGOs formed a consortium called CoGuard to implement a supplemental feeding programme in Malawi, from December 1, 2002 to May 31, 2003. CoGuard is funded by OFDA, is lead by Africare with membership from the following NGOs: Action Against Hunger (AAH), American Red Cross (ARC), CARE International, Catholic Relief Services (CRS), Emmanuel International (EI), Save the Children-UK, Save the Children-US, Salvation Army, and World Vision International (WVI). CoGuard plans to reach 391,000 children under five and 170,000 expecting and nursing mothers through more than 230 health facilities in 21 districts around Malawi. They will distribute approximately 10,500 MT of fortified blended food (CSB), 1,200 MT of oil, 3,800 MT of maize meal, 1,270 MT of pulses and more than 3 million iron-folate and vitamin A supplements. WFP will provide food commodities and will assist with transportation and logistics, with the support of C-SAFE (see below) while UNICEF will provide supplements and to conduct training of trainers on the new supplementary feeding protocols. It is proposed that OFDA will cover operational expenses. Additionally, C-SAFE has committed approximately 21,000 MT of CSB, maize meal, oil, and pulses to the CoGuard project and has earmarked additional funds to cover some transport costs as well as monitoring and evaluation exercises.

**C-SAFE Malawi** - The two-year action plan for C-SAFE in Malawi has been developed within the context of five-year strategic framework. This framework has four components:

1. saving lives with humanitarian assistance,
2. rebuilding and strengthening asset bases, safety nets and coping mechanisms at the local level,
3. developing viable marketing mechanisms and institutions and
4. assisting in the establishment of a macro safety net strategy.

The current C-SAFE proposal is a request to cover part of the estimated shortfall of maize for rural Malawians in the current crisis. It is managed by the NGO Consortium, which is chaired by CARE International. The C-SAFE proposal is to distribute approximately 22,000 MT through general distribution, 12,000 MT through food for work activities, and 25,000 MT through C-SAFE supplementary feeding activities.

#### F. IMPLEMENTATION AND COORDINATION

The Government of Malawi is working with cooperating partners to implement a Joint Emergency Food Aid Programme (JEFAP), which works to provide assistance to populations affected by the current food crisis. The Humanitarian Response Sub-Committee (HRSC), with membership from Government, NGOs and UN agencies, works with the VAC sub-working group to decide food allocations to districts as well as providing guidance on sub-district targeting (with VAC and NGO input).

At the District level, the Government, through the District Commissioner, has the responsibility of coordinating the program with WFP and NGOs to facilitate the process of identifying beneficiary communities, food aid deliveries and distributions. WFP has the responsibility of resourcing and transportation of food commodities into the country and to main warehouses as well as managing the warehouses and providing secondary transportation to Food Delivery Points.

**NGO Response** – The NGO consortium chaired by CARE International is a member of the HRSC. Their members include: Action Aid Action Against Hunger, Africare, CADECOM, CARE, Concern Universal & Worldwide, CPAR, CRS, Emmanuel, EAM, GOAL Malawi, Malawi Red Cross, Oxfam, Plan International, Salvation Army, Save-UK, Save-US, and World Vision International.

The Consortium is currently completing a review process that has covered all regions of Malawi working with staff from partners and local Government. Operating through a series of workshops, the review process compared JEFAP guideline recommendations with the activities that actually happened, compiling stories from the field. The main output of this process will be in the form of revised guidelines that incorporate lessons learned and established best practices, to be used as a handbook for the implementation of the general food distribution in Malawi.

**Food basket** – Starting in December 2002, the composition of the food basket will change slightly. Families will still receive a 50 kg bag of maize but instead of 5 kgs of pulses and 5 kgs of CSB, families will receive 10 kgs of each, to help them be better prepared for the upcoming 'lean' season. Oil will be distributed through the CoGuard supplementary feeding activities.

**Transportation** – Currently WFP is importing at a rate of 34,000 MT per month into Malawi with the dispatch requirement at 25,000 MT per month. With the movement of trains on the Nacala route and continued increased import rates WFP will be able to meet the requirement of 48,000mt per month. Dispatches to the FDPs are the most difficult now but with the IFRC trucks moving into position and with the availability of portable warehousing in preparations for the rains, it is anticipated that WFP Malawi will meet its targets. The challenge of milling all US yellow maize grain has added to the transport burden but it is felt that it can be met.

**Genetically modified maize** – The Government of Malawi decided early on in the emergency to accept genetically modified maize but wanted to take appropriate measures to ensure that GM seed would not be planted. As mentioned above, the US yellow maize coming into the country now will be milled before being distributed.

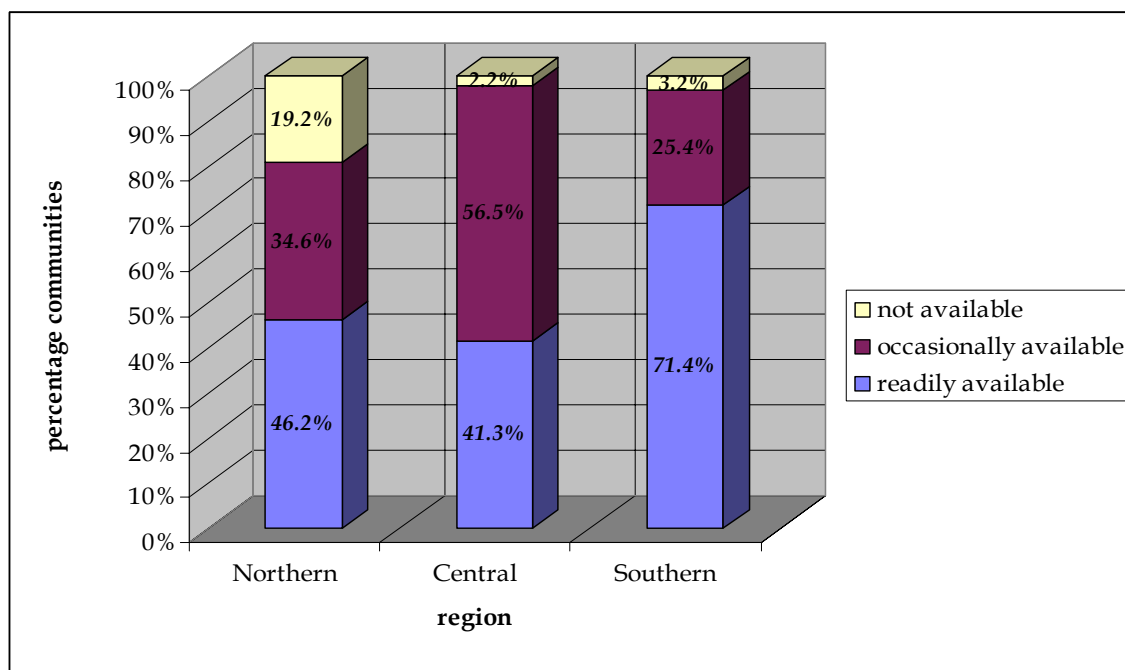
### III. SUB-NATIONAL LEVEL FOOD SECURITY

#### A. AVAILABILITY OF CEREAL

As of November 2002, maize is readily available in both ADMARC and local markets and comes not only from Malawi but also from Tanzania in the North and Mozambique in the South (FEWSNet Malawi). In general, there appeared to be little demand pressure in ADMARC markets as there are still households with maize left from their own production or have access to cheaper maize from private traders. For the poorer farmers, many prefer to purchase from the local markets where it is relatively cheaper and also easier to purchase in small amounts. ADMARC is more prepared this year than in the past, with maize in all their markets and a strategy to report any shortages to their main depot for replenishment.

In the Southern region people are reluctant to purchase maize from ADMARC due to rumors of cheating through tampering with scales. Many consumers still distrust the fact that maize will be available throughout the lean season in early 2003, based on the problems experienced earlier this year. Based on the situation earlier this year, it is apparent that many local traders bought stocks of maize from the market after harvest on the speculation that the price trends will repeat themselves in February and March 2003. However, the availability of maize at ADMARC will most likely undercut their business, if the ADMARC prices are maintained at their current level. Chart 3.1 shows that from the VAC community assessment, maize is most readily available to villagers in the Southern region and less available in the North, most likely due to the preference for cassava in many districts in that region.

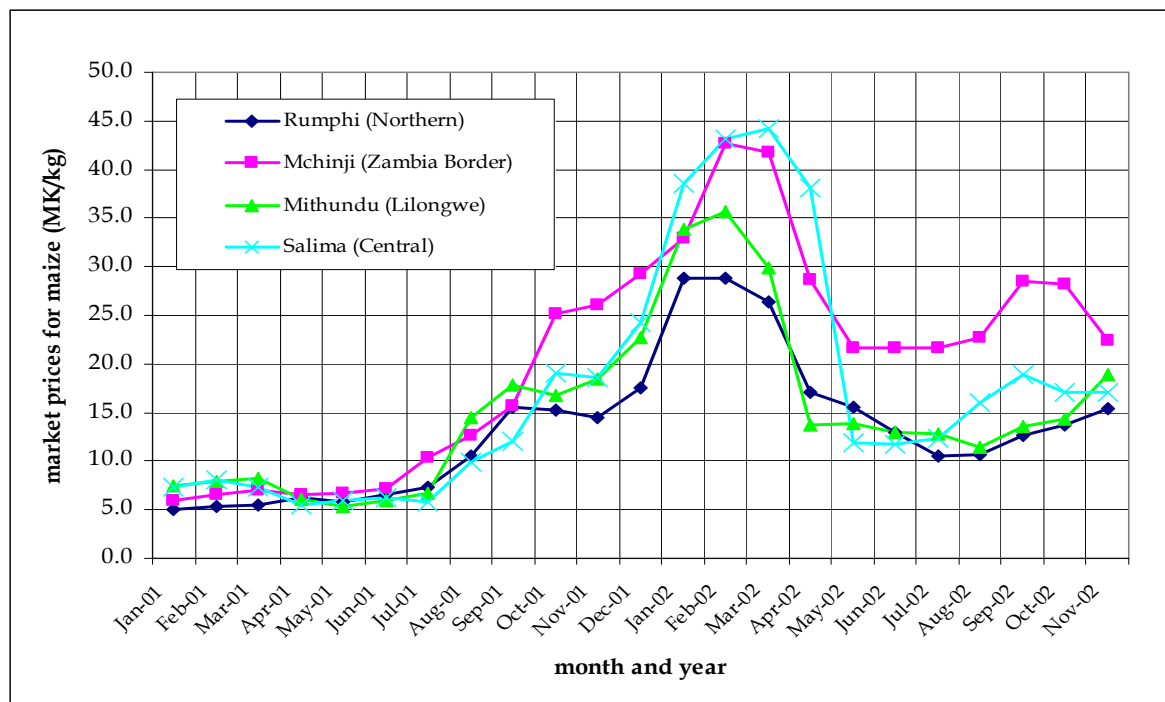
**Chart 3.1 – Availability of maize to local communities by region (Nov-Dec MVAC, 2002)**



#### B. MAIZE MARKET PRICES

Local market maize prices continued to drop in most areas after reaching unprecedented levels during the pre-harvest period in February-March 2002 when they were 5 to 6 times higher than the previous year. The official ADMARC price for maize is MK 17 per kilogram.

**Chart 3.2 – Trends in maize prices in North and Central markets** (Source: FEWSNet Malawi)



**Chart 3.3 – Trends in maize prices in Southern markets** (Source: FEWSNet Malawi)

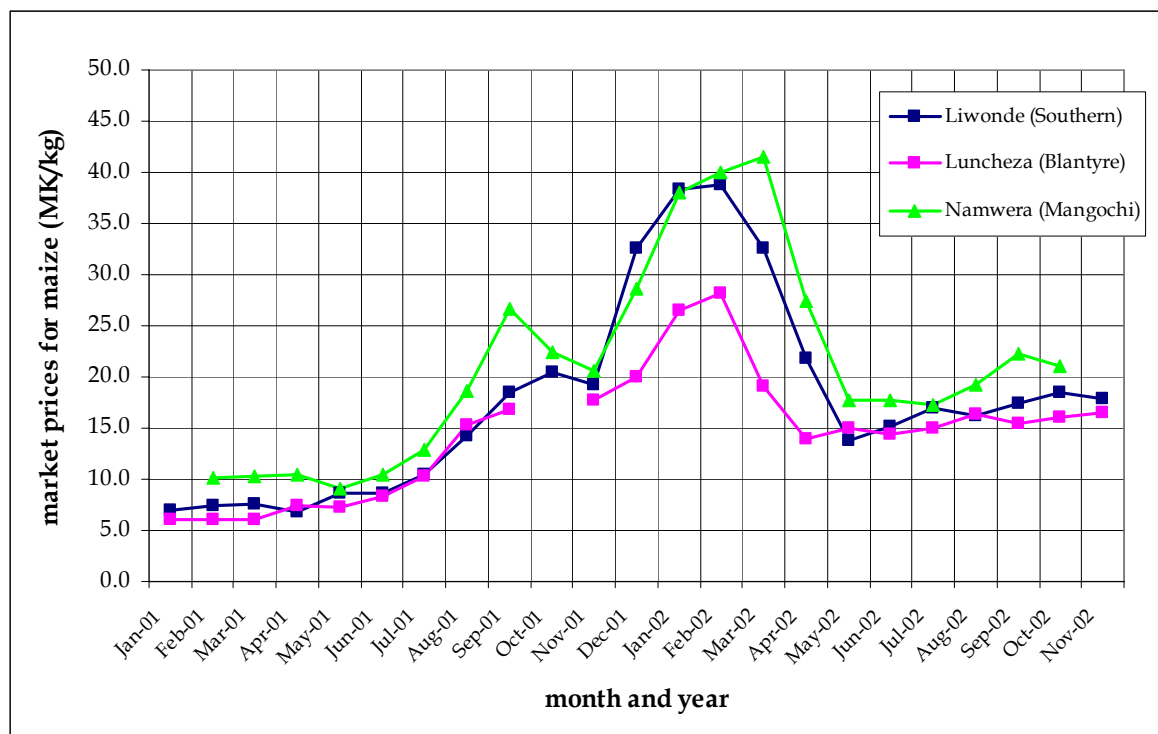


Chart 3.2 shows the trends in market prices of maize for Northern and Central regions, illustrating that the Central region was the worst hit by high prices earlier this year – especially in Salima and Mchinji, which still has the highest maize price in the country and many relate this fact to its proximity to the Zambia border. However, by November 2002 the average price of maize dropped below MK 25 per kilogram in that district. Maize prices are lowest in the Northern region – especially along the border with Tanzania.

The Southern region (Chart 3.3) also boasted some of the country's highest maize prices at the peak of the food crisis earlier this year with Mangochi still being above the ADMARC official price. In Nsanje district, the price of maize is also quite low, due to the movement of Mozambican maize into the country through informal but substantial cross-border trade. The cost of maize has been rising slowly since the harvest but for most places in the country, is still maintained around the official price. Nearly all the communities surveyed by the VAC team in November and December reported that the cost for 50 kilograms of maize in the market was between MK 600 and MK 850 (MK 17 per kilogram).

### C. UPDATE ON LIVESTOCK

In June, the Ministry of Agriculture and Irrigation released livestock figures from the Annual Livestock Census conducted in December 2001, before the onset of the food security crisis. The estimates showed that there were nearly 750,000 cattle, 1.67 million goats, 115,000 sheep, 456,000 pigs, and 7.3 million chickens when the census was conducted.

There is a general consensus that the current figures are substantially lower due to high livestock sales during the February-March 2002 peak of the hunger season. When the hunger period started in January 2002, people started selling livestock at very low prices. Normally cattle sell for MK 10,000 but sold as low as MK 2,000 during that period. For goats, the normal price is MK 1,200 but were sold at MK 200-400 during the crisis while chickens went for as little as MK 15-20 from a normal price of MK 150-200 (Department of Animal Health and Industry). The Agricultural Production Estimates Committee has agreed to conduct annual censuses in April-May 2003 when final crops estimates will be available as well.

The November-December 2002 VAC survey collected information from 136 communities regarding market selling prices for livestock. The median prices for cattle, goats, chickens and pigs are presented in Table 3.1 below, by region. Prices for all animals are much higher in the North, followed by Central and then the South. However, the price per one head of cattle in the South is the same as the North but only 26 out of 63 villages reported a market for cattle. Ownership and sales of pigs is highest in the Central region and more rare in the South where there is a substantial Moslem population. Overall, most communities reported stable market prices that were still higher than a year ago.

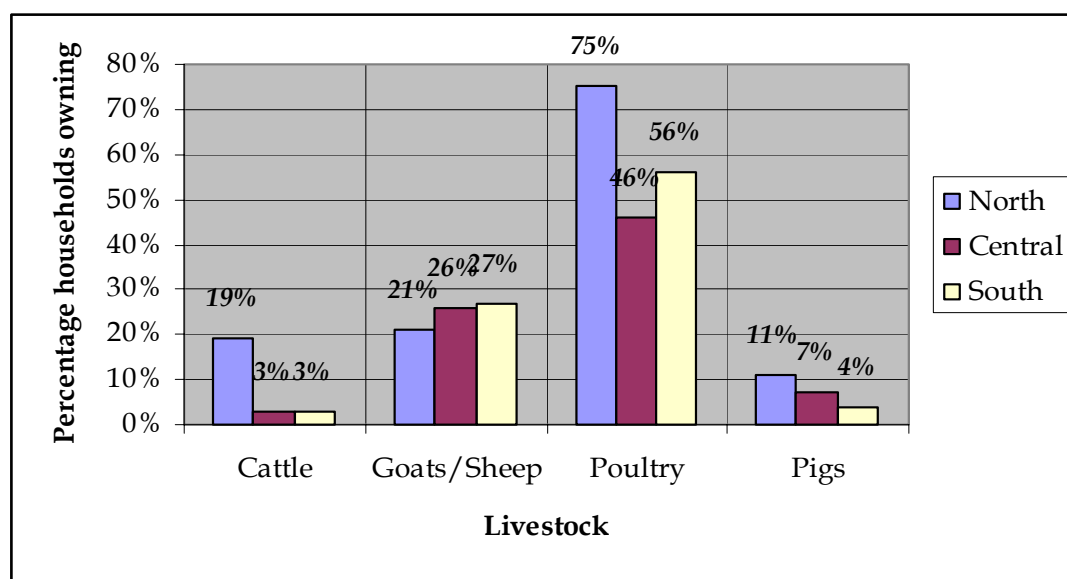
**Table 3.1 – Market selling prices per animal, by region**

	Cattle	Goats	Chickens	Pigs
North	MK 12,000	MK 1,200	MK 200	MK 2,300
Central	MK 9,000	MK 900	MK 100	MK 1,500
South	MK 12,000	MK 800	MK 90	MK 1,300

The November-December VAC household survey collected information on livestock ownership. Overall, 6% of households owned cattle while 26% owned at least one goat or sheep, 57% at least one chicken or duck, and 7% a pig. Cattle ownership was most prevalent in the far North - 35% of households in Chitipa/Karonga cluster. Fifteen percent of households from the Rumphu/Mzimba cluster and 12% from Chikwawa/Nsanje owned cattle. Goat ownership was consistent among the clusters (21-31%) with the exception of Thyolo/Mulanje/Phalombe, which was only 18% and Chikwawa/Nsanje cluster, which was 42 percent. Poultry ownership was highest in the Northern clusters with 81% of households in Chitipa/Karonga owning at least one chicken or duck. Only 40% of surveyed households owned a chicken or duck in the Ntchisi/Dowa cluster.

Chart 3.4 shows animal ownership by region, illustrating that households in the North have the highest ownership rates in the country for cattle, poultry and pigs. This is due to the fact that livestock ownership is regarded as a prestige by most tribes living in this region. It also appears that stress sales of livestock are not occurring there and have not begun elsewhere in the country, based upon selling prices and ownership rates.

**Chart 3.4 – Livestock ownership by region**



Livestock ownership was significantly lower ( $p < 0.001$ ) in female-headed households for cattle, poultry and pigs as compared to households with male heads. Goat ownership was also significantly lower, but at the  $p < 0.01$  level. For elderly-headed households, there were no differences in ownership when compared to households headed by persons  $< 60$  years of age, with the exception of goat ownership. Elderly headed households were significantly more likely ( $p < 0.001$ ) to own a goat (35%) than household heads younger than 60 years (24%). There were no significant differences in livestock ownership between households with a productive member who is chronically ill and those with no ill productive members. However, household with no productive members (19-60 years) were significantly less likely to own cattle ( $p < 0.05$ ) and poultry ( $p < 0.01$ ) than those with productive members.

#### D. HOUSEHOLD INCOME

The November-December survey collected information on household income sources by their relative importance (primary, secondary and tertiary), which household members participate in the income activity and the estimated income from each source. This report, will present information on income activities and their relation to wealth and vulnerability as they relate to food security. Overall, the most common economic activity in rural Malawi is agricultural labour or ganyu, which was reported by nearly half of all households interviewed. Cash crop sales were reported by 38% of the households while 13% relied on small business, 12% on firewood sales and 9% on petty trade for income.

#### Regional comparison

Participation in the different income generating activities varied by region which is not necessarily surprising since the different geographic characteristics can provide additional access opportunities to various economic activities. Table 3.2 below highlights some of the differences in economic activity by region.

**Table 3.2 – Income activities by region**

	North	Central	South
No income sources	12.5%	4.2%	3.0%
Ganyu	35.9%	50.7%	54.5%
Cash crop sales	36.5%	55.3%	26.9%
Small business	9.4%	8.7%	17.8%
Firewood sales	3.6%	20.5%	8.8%
Petty trade	4.3%	7.6%	11.5%
Brewing	14.3%	4.0%	3.4%
Remittances	3.0%	1.3%	6.2%
Fishing	6.4%	3.3%	2.1%

Significantly more households in the North reported no income sources when compared to the other regions. This is surprising since there are many opportunities for income in that region and thus this result could be due in part to data collection errors. Consequently, a higher percentage of households in the Central and Southern regions rely on ganyu for income, when compared to the North. Cash crop sales and firewood sales are important income sources in the Central region while small business and petty trade are more important in the South. Brewing and fishing are more important income sources in the North when compared to the other regions. Lastly, reliance on remittances is more important in the South – mostly in Blantyre, Chiradzulu and Nsanje districts.

**Income by relative wealth**

This analysis was conducted by using relative wealth categories based upon household asset ownership rather than community-reported wealth groups. Asset ownership is a good proxy indicator of relative wealth and this analysis allows for better understanding of how various socio-economic groups earn income. Wealth categories used were: 0-2 assets, 3-4 assets, 5-6 assets, 7-8 assets and 9 or more assets.

**Chart 3.5 – Income sources by relative wealth category**

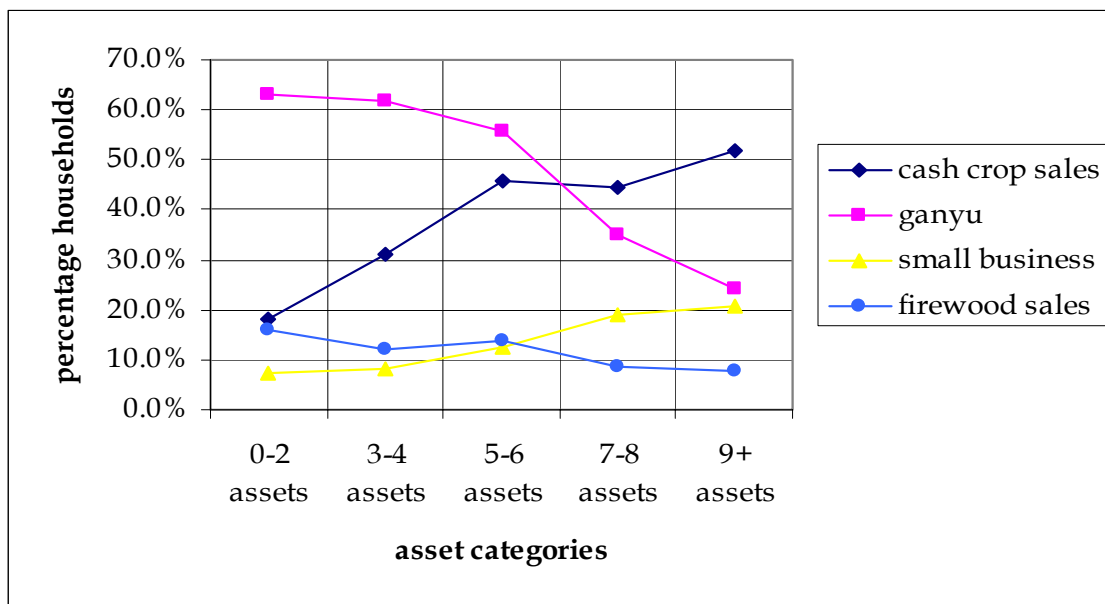
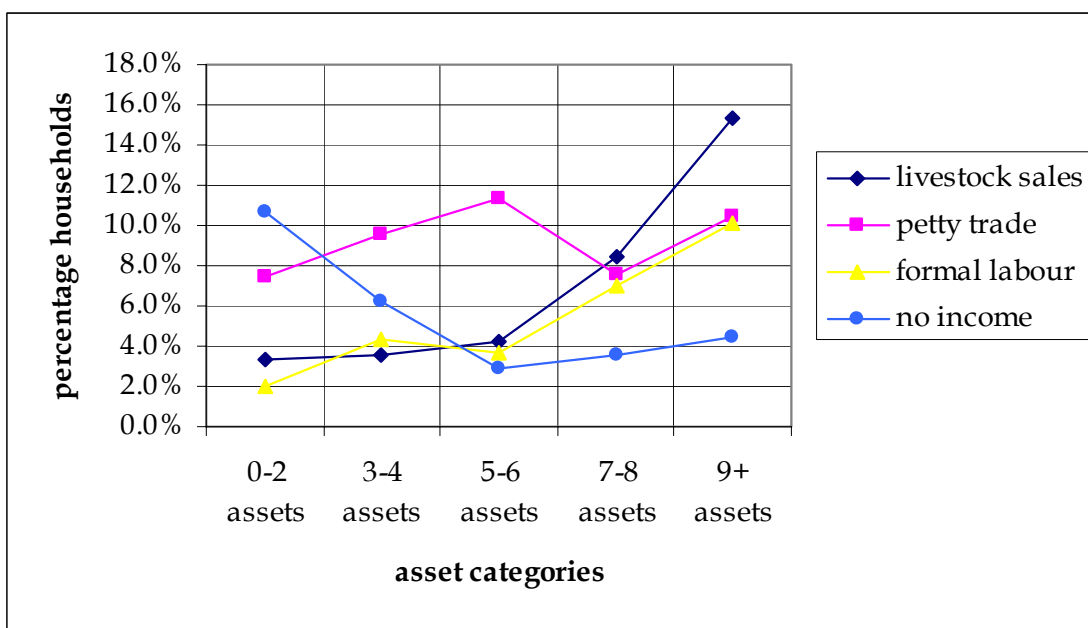


Chart 3.5 shows that the percentage of households relying on *ganyu* for income decreases with increasing wealth, but only significantly in households with 7 or more assets. For poorer or middle poor, *ganyu* is an important source of income. The poorest households are much less likely to rely on cash crop sales for income since in most cases they cultivate as subsistence farmers for own consumption only. Reliance on cash crop sales increases linearly with increased asset ownership only through the middle poor group. In the ‘wealthier’ households, reliance on cash crop sales is similar – most likely because these households are less reliant on agriculture in general. Reliance on small business income increases linearly with increased asset ownership but only in the wealthier groups. Firewood sales are most common in the households with fewest assets.

Chart 3.6 below shows additional trends in income sources by asset ownership category. More households with few assets reported having no income sources but still 4% of households with 9 or more assets reported no income sources, which is most likely due to data collection errors. As expected reliance on livestock sales increases linearly with increased asset ownership – especially in the wealthiest groups. Reliance on formal labour for income also follows those trends with very few of the poorest households having a family member with a job. Reliance on petty trade is most common in the middle-poor households.

**Chart 3.6 – Income sources by relative wealth category**

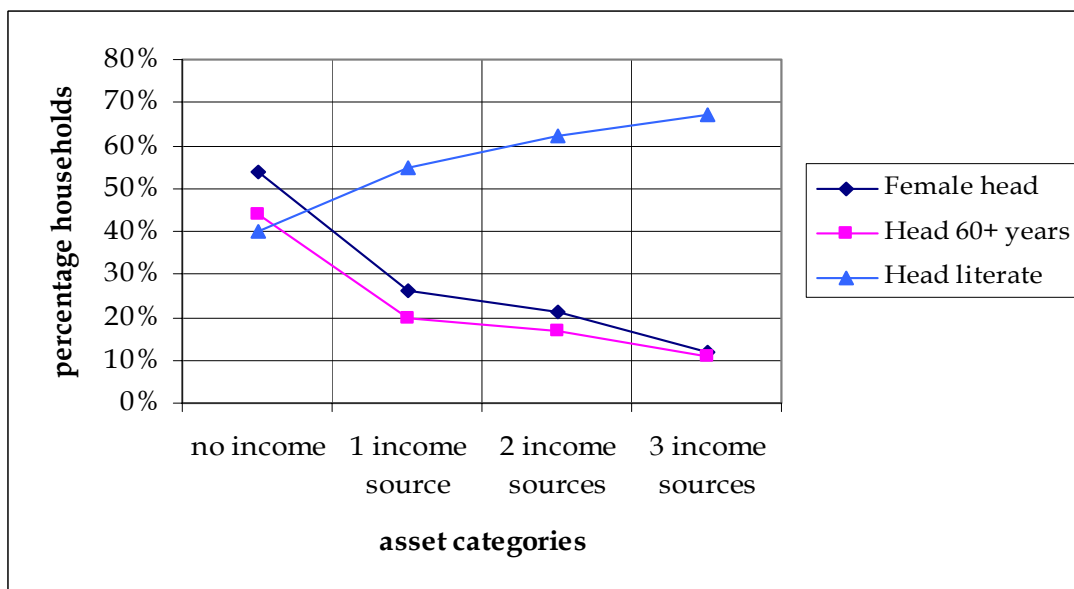


**Income by vulnerable groups**

The analysis conducted by vulnerable groups focused on the number of income sources reported by the households rather than the type of income activity. Households with reduced labour capacity (fewer productive members) are more likely to participate in fewer activities. Vulnerable groups included in the analysis were households with the following characteristics: female headed, elderly headed (60+ years), illiterate heads, supporting orphans, productive member (19-60 years) chronically ill, and no productive member. Charts 3.7 and 3.8 show the comparisons between number of income sources and these particular vulnerable groups.

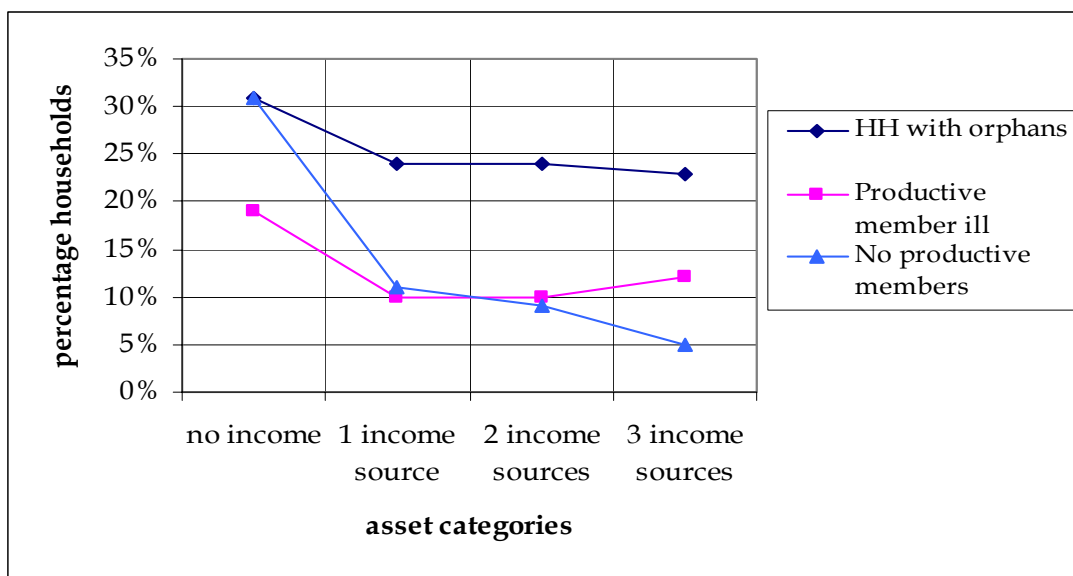
Chart 3.7 below shows that households with a female or elderly head are much more likely to have no income sources. The percentage of female or elderly headed households decreases linearly with increasing number of income sources. Thus it is safe to assume that female and elderly headed households are less likely to have sufficient access to income but that this assumption is not universal. Households with a literate head are more likely to have a variety of income sources but still there are 40% of households with no income sources that have a literate household head.

**Chart 3.7 – Number of income sources and vulnerable group**



The relationship between number of income sources and the presence of orphans in a household is interesting in that household with no income sources are more likely to be supporting orphans but that there is no difference between households with 1 or more income source and the likelihood of supporting orphans. Again, both poor and less poor households tend to be supporting orphans in Malawi. It is also important to note that HIV/AIDS and poverty are somehow related and can build a linkage between poverty and orphans caused by HIV/AIDS related death.

**Chart 3.8 – Number of income sources and vulnerable group**



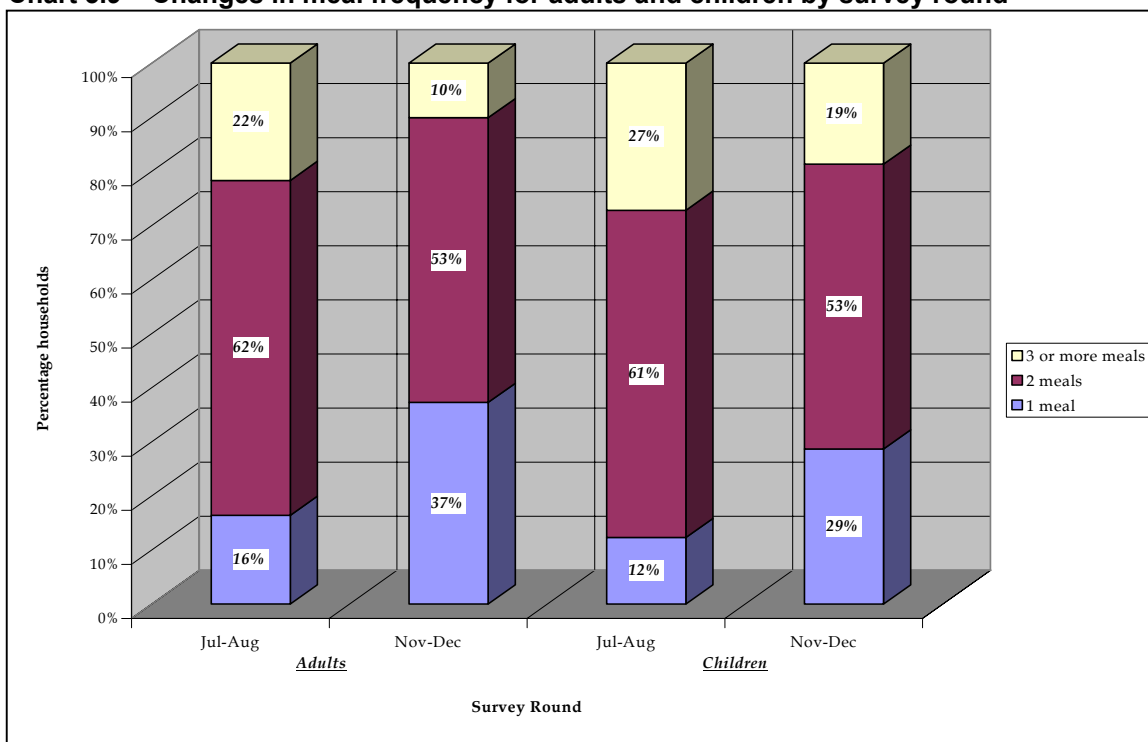
Households with no income sources are more likely to have a productive member who is chronically ill when compared to households with 1 or more income sources. This trend is interesting in that there are slightly more households with 3 income sources that have a chronically ill productive member when compared to those with 1 or 2 income sources. Perhaps this is due to the increased need for income to pay for medical expenses and these households have the additional labour available to expand their income source base.

More than 30% of households with no income sources have no productive members. This decreases to about 10% for households with 1 or 2 income sources and then down to 5% for those households with 3 income sources. This illustrates the importance of productive members in the household for participation in income generating activities.

#### E. HOUSEHOLD FOOD CONSUMPTION

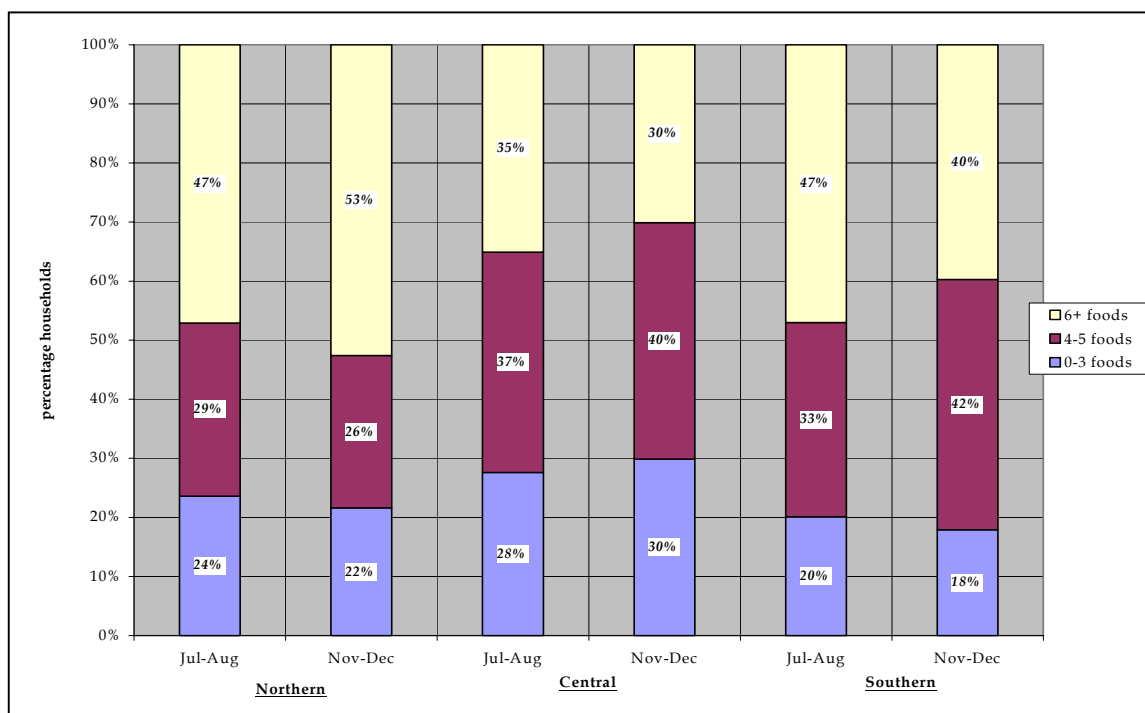
**Meal frequency** – Chart 3.9 shows the changes in meal frequency between survey rounds for adults and children. The percentage of adults eating one meal in the previous day increased from 16% to 37% between July-August and November-December survey rounds. The percentage eating 3 or more meals decreased from 22% to 10% while the percentage eating 2 meals remained about the same. Overall, it appears there is a general trend to reduce the number of meals eaten as the lean season approaches. For children there is a similar trend but with slightly fewer eating only one meal per day than adults as well as more eating 3 or more meals per day when compared to adults.

**Chart 3.9 – Changes in meal frequency for adults and children by survey round**



**Dietary diversity** – Households were also asked how many times in the past week they had eaten various types of foods including: cereals (maize, etc.), cassava/potatoes, sugar or sugar products, legumes/groundnuts, vegetables/relish, fruits (not wild), wild fruits, meat (chicken, beef, wild...) eggs, fish (fresh or dried), cooking oils/fats, and milk. This information was used to look at not only frequency of consumption but also at dietary diversity, which is a good proxy indicator of relative household food security. For the analysis, a dietary diversity was calculated and categorized as low diversity (0-3 foods per week), middle (4-5 different foods), and higher (6 or more per week). The percentage of households in each dietary diversity category was compared by region, between rounds to look at changes in consumption over time. Chart 3.10 shows the results, which indicate that the Northern region has the highest overall diversity in November-December, with 53% of households consuming 6 or more different foods per week. This was actually higher than the 47% from the July-August survey. However, the percentage of households with low diversity remained the same between rounds in the Northern region. For the Central region, the diversity changed a little with more households in the low and middle categories in the second round and fewer in the high diversity category. For the South, both low and high diversity decreased while the middle diversity category increased by nearly 10 percent.

**Chart 3.10 – Changes in dietary diversity by region and survey round**



When looking at the analysis clusters from the November-December survey, the one with the best diversity was the Nkhatabay-Nkhotakota-Likoma cluster, which had only 5% of households with low diversity and 65% with high diversity. Also, the Mwanza-Blantyre-Chiradzulu cluster had only 12% of households with low diversity and 47% with high dietary diversity. The same was found for Chikwawa-Nsanje cluster where only 12% of households reported low diversity and 52% had high dietary diversity. The worst clusters were Ntchisi-Dowa where nearly 40% of households reported low dietary diversity and 23% were consuming 6 or more different foods per week. Also, the Kasungu-Mchinji-Lilongwe cluster was 36% of households with low diversity and 24% with high diversity, which was similar to the Dedza-Ntcheu cluster where 32% of households had low diversity and 23% had high diversity.

#### F. COPING STRATEGIES

**Changes in Coping** – Table 3.3 compares the percentage of households in the July-August sample utilizing specific coping strategies with those from the November-December sample. The changes are relative since the samples were not drawn in the same manner but still the information can provide an idea of how the people in Malawi are dealing with the current food crisis

**Table 3.3 - Comparison of Two Survey Rounds**

<i>In the past 3 months, have household members...</i>	July-August	Nov-Dec
Regularly reduced amount of food eaten?	62%	73%
Regularly reduced number of meals eaten?	60%	76%
Skipped entire days without eating due to lack of money or food?	32%	48%
Relied on consumption of wild foods more than normal during this time of year?	11%	11%
Reduced expenditure on non-food purchases	33%	64%
Reduced expenditure on alcohol and tobacco?	6%	31%
Sold or traded livestock to purchase food?	10%	19%
Sold or traded household assets to get food?	5%	7%
Migrated to find work or food?	3%	9%
Borrowed food or money from family, friends or moneylenders?	32%	12%

The table shows fairly large increases in the number of households reducing amounts of food eaten, number of eating occasions, and skipping entire days without eating. Most commonly, people are reducing the number of meals eaten per day.

The table also shows that there was no change in the percentage of households reporting unusual seasonal reliance on consumption of wild foods – only 11% in each round. However, it is known that many rural Malawian households regularly rely on wild foods for consumption. The greatest changes were noted in the percentage of households that have reduced expenditure on non-food purchases and alcohol and tobacco. Of course, for households that do not use alcohol or tobacco, this question is obsolete (Muslim households). More households reported that they were selling livestock to buy food (19%) in November and December. This is probably a normal trend during the lean season but perhaps not during the pre-lean season (see above section on livestock). Migration to find work or food increased slightly from July-August while borrowing decreased. However, the questions on borrowing were not the same for the different questionnaires are not comparable but this can be due to the fact that most households have depleted their stocks and have nothing to lend to others.

**Northern Region** – Table 3.4 shows the changes in coping strategies over time in the Northern districts. Reduced consumption appears to have decreased since the last survey but there could be some explanations for this. Firstly, people in the North often mix production of maize and cassava – 50% of the households in November-December survey were growing cassava. Secondly, they have higher levels of food consumption – 75% of households reported adults eating 2 or more meals per day in November-December as compared to 52% in the Central region and 65% in the South. Therefore, they may be reducing their consumption from a higher base level than the other regions. Lastly, the people in the North may have exaggerated their situation, making it appear worse, in order to receive assistance.

**Table 3.4 – Northern region coping strategies**

<i>In the past 3 months, have household members...</i>	<b>July-August</b>	<b>Nov-Dec</b>
Regularly reduced amount of food eaten?	82%	71%
Regularly reduced number of meals eaten?	85%	67%
Skipped entire days without eating due to lack of money or food?	57%	44%
Relied on consumption of wild foods more than normal during this time of year?	24%	14%
Reduced expenditure on non-food purchases	56%	60%
Reduced expenditure on alcohol and tobacco?	18%	31%
Sold or traded livestock to purchase food?	14%	19%
Sold or traded household assets to get food?	14%	12%
Migrated to find work or food?	9%	16%

**Central region-** Use of all of the coping strategies has increased in the Central region since the July-August 2002 VAC assessment. Of particular interest is that 81% of the households have reduced the number of meals eaten per day – 48% adults in the Central sample were eating only one meal per day. There have also been increases in expenditure reductions as well as sales of assets, which could be alarming because households in the Central region have the fewest assets – only 46% with poultry and an average of less than five household assets in the sample.

**Table 3.5 – Central region coping strategies**

<i>In the past 3 months, have household members...</i>	<b>July-August</b>	<b>Nov-Dec</b>
Regularly reduced amount of food eaten?	56%	74%
Regularly reduced number of meals eaten?	54%	81%
Skipped entire days without eating due to lack of money or food?	27%	53%
Relied on consumption of wild foods more than normal during this time of year?	8%	12%
Reduced expenditure on non-food purchases	24%	71%
Reduced expenditure on alcohol and tobacco?	5%	34%
Sold or traded livestock to purchase food?	6%	14%
Sold or traded household assets to get food?	2%	8%
Migrated to find work or food?	3%	11%

**Southern region** – There were also increases in consumption-related coping strategies in the South as indicated in Table 3.6 below. In addition, there were large increases in the percentage of households reducing expenditure on non-food and alcohol & tobacco in the South. In addition, 22% of households reported selling livestock to purchase food – more than elsewhere in the country. Lastly, migration to find work or food increased from 1% to 12% in the region, which could be due in part, to availability of work opportunities on estates and other commercial projects.

**Table 3.6 – Southern region coping strategies**

<i>In the past 3 months, have household members...</i>	<b>July-August</b>	<b>Nov-Dec</b>
Regularly reduced amount of food eaten?	63%	74%
Regularly reduced number of meals eaten?	58%	77%
Skipped entire days without eating due to lack of money or food?	29%	45%
Relied on consumption of wild foods more than normal during this time of year?	10%	9%
Reduced expenditure on non-food purchases	35%	60%
Reduced expenditure on alcohol and tobacco?	3%	28%
Sold or traded livestock to purchase food?	13%	22%
Sold or traded household assets to get food?	5%	4%
Migrated to find work or food?	1%	12%

**Elderly headed households** – Table 3.7 compares use of coping strategies between households headed by persons over 60 years and those headed by younger persons. Households headed by younger persons are more likely to have skipped entire days without eating than elderly headed households. In addition, they are more likely to have sold or traded assets to get food than those headed by elderly, which could be because they are more likely to own more household assets. Lastly, households headed by persons less than 60 years are more likely to have borrowed money or food as a coping strategy when compared to households headed by the elderly. Elderly headed households have an average household size of 5 persons, which is significantly ( $p < 0.001$ ) less than households headed by persons under 60 years (6 persons).

**Table 3.7 - Elderly headed households coping strategies**

<i>In the past 3 months, have household members...</i>	<b>Head &lt; 60</b>	<b>Head 60+</b>
Regularly reduced amount of food eaten?	74%	72%
Regularly reduced number of meals eaten?	76%	76%
Skipped entire days without eating due to lack of money or food?	<b>49%*</b>	<b>42%</b>
Relied on consumption of wild foods more than normal during this time of year?	12%	9%
Reduced expenditure on non-food purchases	63%	66%
Reduced expenditure on alcohol and tobacco?	30%	35%
Sold or traded livestock to purchase food?	18%	20%
Sold or traded household assets to get food?	<b>8%*</b>	<b>4%</b>
Migrated to find work or food?	9%	6%
Borrowed food or money from family, friends or moneylenders?	<b>13%**</b>	<b>7%</b>

\*\*\* =  $p < 0.001$ , \*\* =  $p < 0.01$ , \* =  $p < 0.05$

**Female-headed households** - Table 3.8 compares use of coping strategies between female- and male-headed households. Significantly more female-headed households reported regularly reducing the number of meals eaten per day and also skipping entire days without eating, when compared to households headed by males. In addition, there were significantly fewer households headed by women that reported reducing expenditure on alcohol and tobacco. But this is likely due to the fact that they do not use these products. Significantly fewer households headed by women reported selling household assets to purchase food but the data shows that 37% of female headed households own 0-2 household assets which is significantly less ( $p < 0.001$ ) than the 9% of households headed by men, so this could be misleading. Lastly, significantly fewer households headed by women reported having a member migrate to find work or food.

**Table 3.8 - Female headed households and coping strategies**

<i>In the past 3 months, have household members...</i>	<b>Female Head</b>	<b>Male Head</b>
Regularly reduced amount of food eaten?	77%	72%
Regularly reduced number of meals eaten?	<b>84%***</b>	<b>74%</b>
Skipped entire days without eating due to lack of money or food?	<b>53%*</b>	<b>46%</b>

Relied on consumption of wild foods more than normal during this time of year?	9%	12%
Reduced expenditure on non-food purchases	67%	63%
Reduced expenditure on alcohol and tobacco?	23%***	33%
Sold or traded livestock to purchase food?	15%	20%
Sold or traded household assets to get food?	4%**	8%
Migrated to find work or food?	5%*	10%
Borrowed food or money from family, friends or moneylenders?	11%	12%

\*\*\* =  $p < 0.001$ , \*\* =  $p < 0.01$ , \* =  $p < 0.05$

**Households caring for orphans** – There were no significant differences in use of coping strategies between households caring for orphans and those that had no orphans. This information supports the World Bank Paper, “Poverty, AIDS and Children’s Schooling – A Targeting Dilemma (2002)” which found that there are orphans living in both poor and less poor households and therefore it is not safe to assume that households with orphans are always vulnerable.

**Households with a chronically ill productive member** – Households with a chronically ill productive member (aged 19 to 60 years) are more likely to have skipped entire days without eating and to have reduced expenditures on non-food items than those with no ill productive member. In addition, they are much more likely to have sold or traded household assets to get food, to have a member migrate to find work or food and to have borrowed food or money. All of these activities are indicative of the additional stress placed on families with chronically ill productive members in the context of the current food crisis.

**Table 3.9 - Productive member (19-60 years) chronically ill**

<i>In the past 3 months, have household members...</i>	No illness	Chronic illness
Regularly reduced amount of food eaten?	73%	76%
Regularly reduced number of meals eaten?	76%	76%
Skipped entire days without eating due to lack of money or food?	46%**	57%
Relied on consumption of wild foods more than normal during this time of year?	11%	14%
Reduced expenditure on non-food purchases	63%*	72%
Reduced expenditure on alcohol and tobacco?	30%	34%
Sold or traded livestock to purchase food?	18%	22%
Sold or traded household assets to get food?	6%***	15%
Migrated to find work or food?	8%***	18%
Borrowed food or money from family, friends or moneylenders?	11%***	22%

\*\*\* =  $p < 0.001$ , \*\* =  $p < 0.01$ , \* =  $p < 0.05$

**Households with no productive member (19-60 years)** – The coping strategies used by household with no member aged 19 to 60 years are very similar to those used by households with productive members, as indicated in Table 3.10. However, they are less likely to sell or trade household assets to get food, to migrate in search for food and work (too old or too young), and to borrow money or food. This may be because they are receiving gifts from family or friends as part of the remaining social safety nets in Malawi.

**Table 3.10 – Coping strategies of households with no productive member (19-60 years)**

<i>In the past 3 months, have household members...</i>	Have	None
Regularly reduced amount of food eaten?	73%	71%
Regularly reduced number of meals eaten?	76%	82%
Skipped entire days without eating due to lack of money or food?	48%	48%
Relied on consumption of wild foods more than normal during this time of year?	12%	8%
Reduced expenditure on non-food purchases	64%	63%
Reduced expenditure on alcohol and tobacco?	31%	31%
Sold or traded livestock to purchase food?	19%	15%
Sold or traded household assets to get food?	7%*	2%
Migrated to find work or food?	9%**	3%
Borrowed food or money from family, friends or moneylenders?	13%**	5%

\*\*\* =  $p < 0.001$ , \*\* =  $p < 0.01$ , \* =  $p < 0.05$

**Households with few assets (very poor)** – When comparing the use of coping strategies between the very poor (0-2 household assets) and those not as poor, a picture emerges of the effects of chronic poverty in Malawi. The very poor are significantly more likely to have regularly reduced the amount of food eaten, regularly reduce number of meals eaten, to have skipped entire days without eating, and to rely on wild foods more than normal when compared to the less poor. They are also more likely to reduce expenditure on non-food items as a coping strategy. Lastly, they are much less likely to have sold or traded livestock to purchase food – primarily because they are less likely to own livestock.

**Table 3.11 – Coping strategies of the poor (0-2 household assets)**

<i>In the past 3 months, have household members...</i>	<b>3 or more</b>	<b>0-2 assets</b>
Regularly reduced amount of food eaten?	<b>71%***</b>	<b>84%</b>
Regularly reduced number of meals eaten?	<b>73%***</b>	<b>91%</b>
Skipped entire days without eating due to lack of money or food?	<b>44%***</b>	<b>70%</b>
Relied on consumption of wild foods more than normal during this time of year?	<b>10%**</b>	<b>17%</b>
Reduced expenditure on non-food purchases	<b>63%*</b>	<b>71%</b>
Reduced expenditure on alcohol and tobacco?	31%	32%
Sold or traded livestock to purchase food?	<b>20%***</b>	<b>11%</b>
Sold or traded household assets to get food?	7%	5%
Migrated to find work or food?	9%	7%
Borrowed food or money from family, friends or moneylenders?	13%	9%

\*\*\* =  $p < 0.001$ , \*\* =  $p < 0.01$ , \* =  $p < 0.05$

#### IV. TARGETING

##### A. GENERAL PERSPECTIVE

Implementing NGOs have managed to convey the JEFAP targeting messages down to the group village headman and village headman levels. It is very rare to find a village headman not familiar with the terminology of food aid target group (the elderly, orphan, disabled, chronically ill, female headed households with no food). Not all community households however are well informed about the targeting criteria because not all village headmen inform their constituents of JEFAP intentions (Egon Westen, et al., November 2002).

The majority of targeted beneficiaries represents the most food insecure households. However, most of these food insecure households share the food aid with other food insecure households not targeted. As a result of sharing, the food aid does not necessarily last the estimated period before the next distribution.

In terms of wealth groups ranking, there is no significant differences although in some areas within a district there may be exceptional cases. From the different wealth group ranking across the country there is no clear line due to lack of universal definition of what is supposed to constitute a wealth group. During the November/December 2002 VAC assessment, it has been noted that the rankings from different communities are not comparable hence cannot form the basis for targeting. In short there is very little difference from one wealth group to another using different characteristics as understood by the local communities.

##### B. FIELD PERSPECTIVES ON GEOGRAPHIC TARGETING – SEPTEMBER – NOVEMBER 2002

The November-December 2002 survey teams were asked to provide their perspectives on the effectiveness of the targeting that took place between September and November for the current EMOP. The following are narratives from their experiences in the field.

**Far North** – For Chitipa, in the areas targeted, some were food secure (eg. Kameme) while others are food insecure (eg. Kavukuku). For Karonga, more beneficiaries were being targeted in areas that are food secure (eg. Kaporo North and Kaporo South) and food insecure areas such as Mpata, Lupembe, and Vinthukutu are being left out of the process. In Rumphi district, the

implementing partners are targeting food secure areas such as Nchenachena and Mhuju EPAs. At the household level, the IPs are not following the targeting guidelines. Both the poor and the wealthy groups are receiving food aid in most areas. Mostly the poor are sharing the food received from the implementing partners. In general, there is a need for re-orientation of the targeting mechanism and a need to monitor how the programme is progressing.

**Middle North** (Nkhatabay, Nkhotakota, Likoma, Mzimba) – Targeting does not seem to be going well in most of the areas included in the survey. The various relief agencies seem to be targeting the same areas again and again, while others in need are receiving nothing. In Likoma district there appears to be no food aid being distributed (true) while in Mzimba, the little that is being distributed is usually targeted to those living along the main roads. At the household level, the reports from the interviewees indicated that the targeting does not go well. Most of the individuals receiving the food are not necessarily the poorest but rather close relatives of the people doing the targeting (chiefs).

**Upper Central** (Dowa, Kasungu, Mchinji, Ntchisi) – Targeting at the EPA and TA levels is good. Almost all EPAs and TAs were well covered and represented. At the household level, mostly the poor and a few middle wealth group households were the most food insecure. Most of the needy households appear to be receiving food aid. However, there are many of the poor who are not being targeted, mainly due to village politics.

**Middle Central** (Dedza, Lilongwe, Ntcheu, Salima) – Targeting at the EPA and TA levels is somewhat effective since the areas have been affected differently by the crisis with particular areas having better food availability. However, at the household level, many of the wealthy families are receiving food aid where aid is implemented. These are mainly the relatives of the village heads and other influential people, despite their wealthy status.

**Lower Central** (Balaka, Machinga, Mangochi) – At the EPA and TA level, the targeting process is effective as it is done in a broader way. Geographic areas in greater need appear to be effectively selected for food assistance. However, findings during the assessment revealed that the food aid is not benefiting only the poor groups, but all wealth groups. Village heads are deliberately including members of their families regardless of their wealth status.

**Upper South** (Blantyre, Mwanza, Zomba) – With decentralization, some of the targeted areas are not within the said EPAs and RDPs. Topography of the areas are leading to difficulties in accessing villages sampled for the survey which in turn, may indicate problems in reaching those areas most in need of food assistance. At the household level, the poor might be targeted as beneficiaries but most of the targeted villages are redistributing the food to all households in the village. This does not lessen the effects of hunger on the needy families.

**Middle South** (Chiradzulu, Mulanje, Phalombe) – Geographically, vulnerable areas are being left out. In addition, the vulnerable people are not recipients of food aid – instead the better off families are receiving food aid. In vulnerable areas of Chiradzulu and Phalombe, there is no food assistance at all even though they are in need. In Chiradzulu, at the household level, wealthy households are being targeted. In some villages, 100% of households are beneficiaries while in other needy areas there are no households receiving assistance.

**Lower South** (Thyolo, Chikwawa, Nsanje) – At the geographic level targeting is not effective in the sense that even those areas such as Tea Estates which are known to provide sources of income and other economic opportunities are completely overlooked even though they may be vulnerable due to the current food security situation. In most areas, the poor are receiving food assistance but in some cases the wealthy people are also receiving food aid at the expense of the poor. This is mainly because these 'wealthy people' are included on the lists by the local leaders who are, in many cases, relatives or friends.

### C. VULNERABLE GROUPS BY CLUSTER

Table 4.1 compares the percentage of households with vulnerable characteristics (poor, female headed, elderly headed, keeping orphans, productive member ill, or no productive member) by the clusters selected for sub-national analysis. This is to provide relative guidance for social targeting for the remainder of the EMOP.

**Table 4.1 – Vulnerable groups by analysis cluster**

	Few assets (0-2)	Female headed	Elderly headed	Have orphans	Productive member ill	No productive member
Chitipa, Karonga	10%	6%	10%	30%	10%	2%
Rumphi, Mzimba	5%	18%	21%	34%	12%	13%
Nkhatabay, Nkhotakota, Likoma	6%	19%	13%	35%	14%	10%
Kasungu, Mchinji, Lilongwe	21%	18%	20%	20%	10%	7%
Ntchisi, Dowa	13%	17%	16%	29%	22%	8%
Salima, Mangochi	21%	23%	19%	28%	6%	11%
Dedza, Ntcheu	18%	25%	15%	17%	8%	13%
Balaka, Machinga, Zomba	17%	28%	23%	18%	5%	10%
Mwanza, Blantyre, Chiradzulu	17%	27%	25%	26%	9%	14%
Thyolo, Mulanje, Phalombe	17%	30%	16%	21%	13%	8%
Chikwawa, Nsanje	13%	18%	15%	22%	11%	6%

- The Chitipa-Karonga cluster appears to have the fewest vulnerable groups when compared to the rest of the clusters. Although 30% of households are keeping orphans, this does not necessarily mean that they are more vulnerable to the food crisis, as shown in Section III. There are many wealthy families who are keeping orphans, primarily because they can afford to support additional persons.
- The Rumphi-Mzimba cluster has one of the highest percentage of households keeping orphans and also a high percentage of households with no productive member. However, they have the fewest households with low asset ownership and therefore appear to be one of the wealthier clusters in the sample.
- The Nkhatabay, Nkhotakoa, Likoma cluster also has few 'asset poor' households in the sample but also have the highest percentage of households keeping orphans. This again illustrates the relationship between relative wealth and the likelihood of keeping orphans, especially in the North. There appear to be quite a few elderly headed households and thus a relatively high percentage of households with no productive members. Again, despite these demographic statistics, they appear to be fairly well off.
- The Kasungu-Mchinji-Lilongwe cluster has the highest percentage of asset poor households in the sample, which shows that perhaps this cluster is affected as much by chronic poverty as by the current food crisis. The demographic characteristics are not that different from the rest of the sample.
- The Ntchisi-Dowa cluster appears to have the greatest problem with productive members being chronically ill - an indication of perhaps a significant problem with HIV/AIDS. They are not too 'asset poor' when compared to the rest of the sample but do show a fairly high percentage of households keeping orphans.
- The Salima-Mangochi cluster also has the highest percentage of asset poor households as well as fairly high percentages of female headed and elderly headed households as well as those keeping orphans and thus may appear as one of the more vulnerable clusters from this analysis.
- The Dedza-Ntcheu cluster has a fairly high percentage of households that are asset poor as well as those with female heads. In addition, they have one of the highest percentages of households without productive members, in the sample.

- The Balaka-Machinga-Zomba cluster shows one of the highest percentages of households with female and elderly heads but a very low percentage of households with a chronically ill productive member and one of the lowest percentages of households keeping orphans.
- The Mwanza-Blantyre-Chiradzulu cluster also has one of the highest percentages of female and elderly headed households in the sample in addition to having a high percentage of households with no productive members. It appears that many households are headed by elderly females who rely on external assistance from relatives for support.
- The Thyolo-Mulanje-Phalombe cluster has the highest percentage of female-headed households in the sample but a low percentage of households with no productive member, indicating that perhaps these may represent extended families. However, there is a fairly high percentage of households with a chronically ill productive member which could contribute to a higher 'effective dependency ratio' when compared to other clusters.
- The Chikwawa-Nsanje cluster has a relatively low percentage of households in each of the vulnerable categories with perhaps the greatest problem being the presence of chronically ill productive members but with one of the lowest percentages of households with no productive members.

#### V. HIV/AIDS IN MALAWI

- Dependency ratio – There is no national information available on the changes in dependency ratio due to HIV/AIDS but it is common knowledge that the productive members of ANY population are most affected. For analysis of household data, it will be useful to assess linkages between poverty, household food security and high dependency ratios as well as other household demographic factors.
- Food demands – Through community outreach and other CBOs, specific nutritional considerations can be identified for those infected by HIV/AIDS. For the food basket, it is important in general, to have a ration that has a balance of protein, energy, fats and micronutrients.
- Since HIV testing is not common in the country, most people won't know they are infected but rather they will become ill and die of AIDS-related diseases or opportunistic infections. Therefore, for the populations being targeted for food assistance, the consideration of treatment costs, PMTCT projects and linkages with food distribution is inconsequential when people are reluctant to admit being HIV-positive.
- As mentioned in the paper, the HIV epidemic started as more of an urban problem and has increasingly spread to peri-urban and rural areas. There have been great losses to the productive sector in government – both nationally and locally. Agriculture and education sectors have been hard hit over the years leaving ministries with fewer and less experienced staff members. There are rumors of huge losses of teachers to the disease but there are no figures from the Government for confirmation.

#### B. HIV/AIDS AND FOOD SECURITY

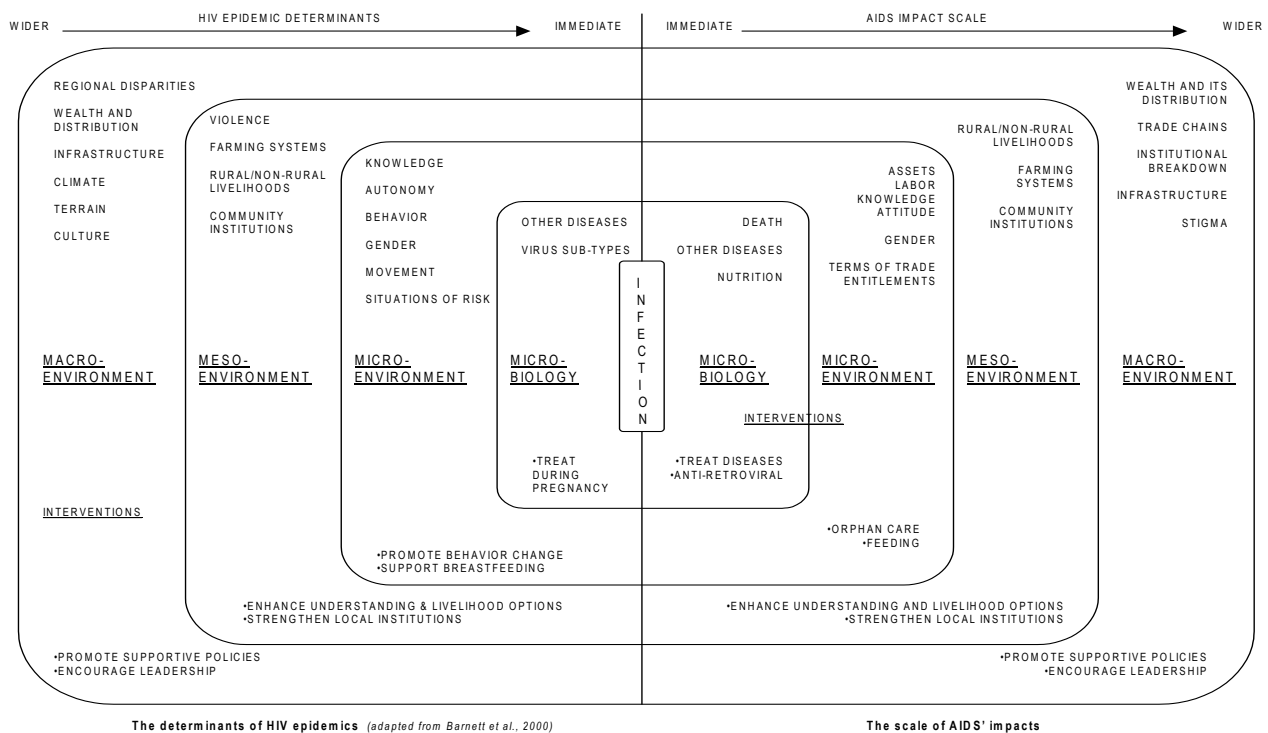
The majority of the information provided in this section is taken from a paper written by Naomi Ngwira, Sam Bota and Michael Loevinsohn for the Ministry of Agriculture and Irrigation (see Bibliography). They highlight the important linkages between agriculture & food security and HIV/AIDS for Malawi.

Figure 5.1 provides two frameworks for understanding the linkages between the determinants of the HIV/AIDS epidemic and its impacts on food security in a country. These frameworks are prepared in the context of four inter-linked levels: microbiology, the micro-environment, the meso-environment, and the macro-environment.

# 1. The determinants of the HIV/AIDS epidemic

- **Microbiology** – An individual’s nutritional status can increase the probability of infection due to decreased resistance of epithelial tissue to penetration by the virus. The likelihood of mother-to-child transmission is increased in individuals with micro-nutrient deficiencies, such as vitamin A.
- **Micro-environment** – Agricultural activities create opportunities for people to congregate and increase the likelihood of casual sexual contact, such as rural weekly markets and trading centres. Often this may be a small number of women having sex with a larger number of men, creating an epidemiological model of asymmetrical relationships, which are known to facilitate the spread of HIV. Markets for tobacco and sugar cane are examples in Malawi where men are away from their families for extended periods of time and where opportunities for sexual promiscuity abound. In addition, plantations and estates that have high demands for seasonal labour are also areas for increased risk of casual sex and subsequent infection.
- **Meso-environment** – Rural poverty, food insecurity and lack of livelihood opportunities also contribute to the susceptibility of infection, especially in young adults. Poor women may be forced to sell sex for food or money. For married women, poverty and illiteracy leave them economically dependent and with limited influence on use of condoms. For young men and women, lack of work opportunities in rural areas often forces them to move in search of employment.

**Figure 5.1 – The determinants and impacts of HIV/AIDS**



**Macro-environment** – National policies may actually contribute to greater food insecurity and thus increase risky behaviours or the opportunities for exposure to the virus. For example, poorly planned and managed market liberalization policies can remove guaranteed prices for cash crops and thus increase food insecurity among smallholder farmers. Some programs like Food-for-Work projects which create job opportunities and improve rural infrastructure can help prevent the spread of the disease through reduced migration.

## 2. The scale of AIDS' impact

- *Microbiology* – There are increased nutritional requirements for people living with HIV/AIDS – up to 50% more protein and 15% more energy. HIV/AIDS and related illnesses diminish the productive capacity of infected individuals.
- *Micro-environment* – The impact on the micro-environment can be considered from three levels: household labour supply, household resources, and attitudes and knowledge.
  - a) Labour supply - Not only is the quantity of labour reduced in a household because of the sick individual, but also because other members of the household are caring for that person. In addition, community productivity is reduced when people are spending time and money assisting affected households and attending funerals. Loss of adult labour has immediate impacts on the family, primarily in use of land and other resources – agricultural activities are delayed because family members are seeking work outside the home or may pursue non-agricultural activities that generate income quickly. Other studies have shown that when a primary adult male dies in a rural household, the actual amount of land cultivated in cereals may increase. This can be explained by the fact that women in Southern and East Africa traditionally take care of cereal crop production while men focus on cash cropping. Thus, when the male dies, the land for lucrative cash crops is used for cereal crops (Yamamoto & Jayne, 2002).
  - b) Household resources – Impacts on household resources are not limited to reduced income but also expenses related to care, especially from traditional healers which can be much more expensive than regular health care, especially in countries with poor rural health infrastructure. In addition, there are often various local traditions regarding funerals which further strain limited household resources. Often households resort to selling assets to cover these costs, usually receiving a fraction of their value due to the 'distress' nature of the transaction. According to Ngwira, Bota and Loevinsohn "The sequence of responses to illness and death – reduced production, shift to less demanding and remunerative enterprises, sale of assets, indebtedness – often misleadingly called "coping" – results in deepening impoverishment for many afflicted households." In addition, the other household members are thus left more vulnerable to malnutrition and infection – women may have no other options than to sell sex to make money to feed the family.
  - c) Attitudes and knowledge – People infected with HIV/AIDS and others affected by the illness often develop a short-term outlook and thus may prefer to participate in income earning activities that are less lucrative than agriculture but with quick returns on investment. In addition, children are often left without knowledge and skills necessary to participate in traditional agricultural and economic activities. When teachers drop out of school because of infection or to care for sick family members, entire communities are affected and the quality of education declines leading to lower enrolment rates.
- *Meso-environment* – HIV/AIDS affects rural communities also by eroding social security networks by spreading the burden of caring for the sick and orphans within the community – to both the better off and the poor households. The capacity of communities to absorb orphans will soon be stretched to their limits, increasing the vulnerability of girl orphans to abuse or to early marriage.
- *Macro-environment* – In African countries severely affected by HIV/AIDS the availability and quality of human resources in Government institutions is greatly reduced. The most obvious impact is by the death of staff in administration, extension and research. Additionally, the quality of human resources declines as persons with less experience and fewer qualifications fill empty posts. For Malawi, UNAIDS estimated that in 1998, more than 65% of the staff deaths in the Ministry of Agriculture were from AIDS-related illness.

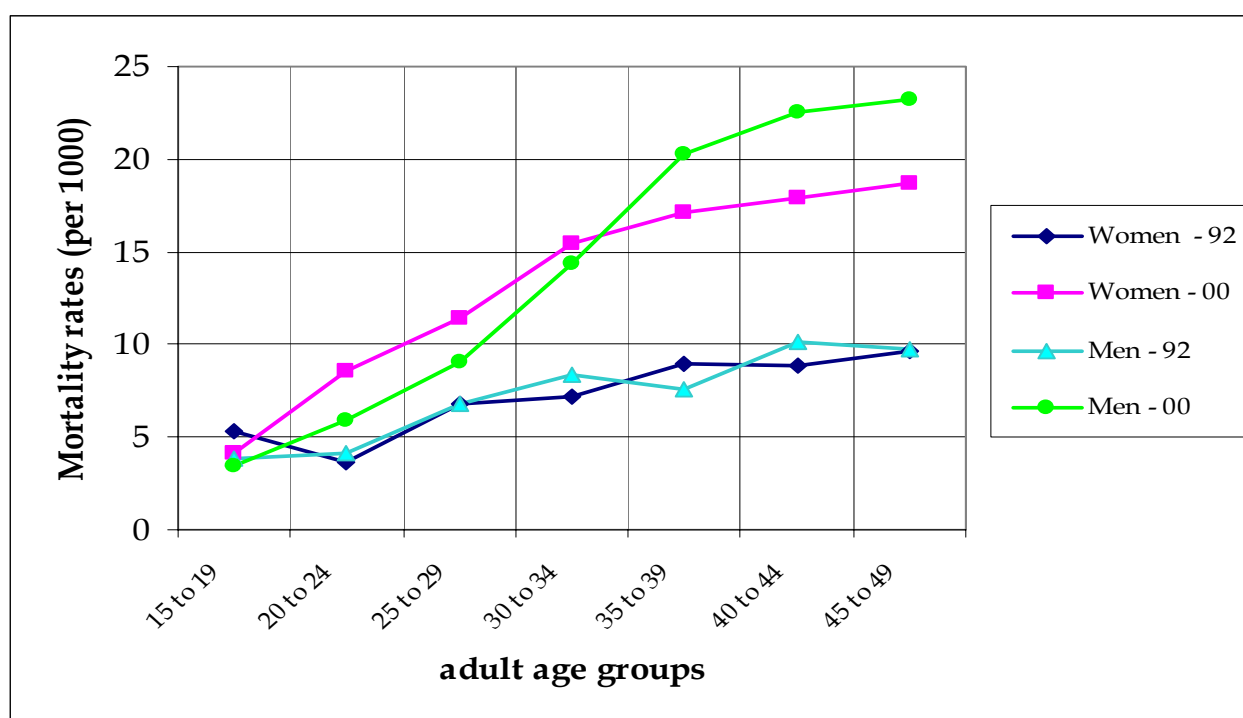
### C. SITUATION ANALYSIS FOR MALAWI

The following section presents information on adult mortality, HIV/AIDS infection prevalence, affected populations, orphans, and community perspectives on HIV/AIDS in Malawi.

#### 1. Mortality

The 1992 and 2000 Malawi DHS surveys collected information on adult mortality, 0-6 years before the survey. Therefore the centre of the reference period of the estimates are 1989 and early 1997 respectively. Mortality trends by age and gender are presented in Chart 5.1 below. From the 1992 survey, adult mortality increased similarly for both women and men, by age group with the only noticeable difference being found in women 15-19 years. There is speculation that early on in the Malawi AIDS epidemic the young women were more vulnerable to infection due to the custom of older men desiring sex with younger women. When compared to 2000, the summary measure of mortality for the 15-49 age groups shows a 74% increase in all-cause adult female mortality and a 76% increased in adult male mortality

Chart 5.1 – Trends in adult mortality by age group and gender



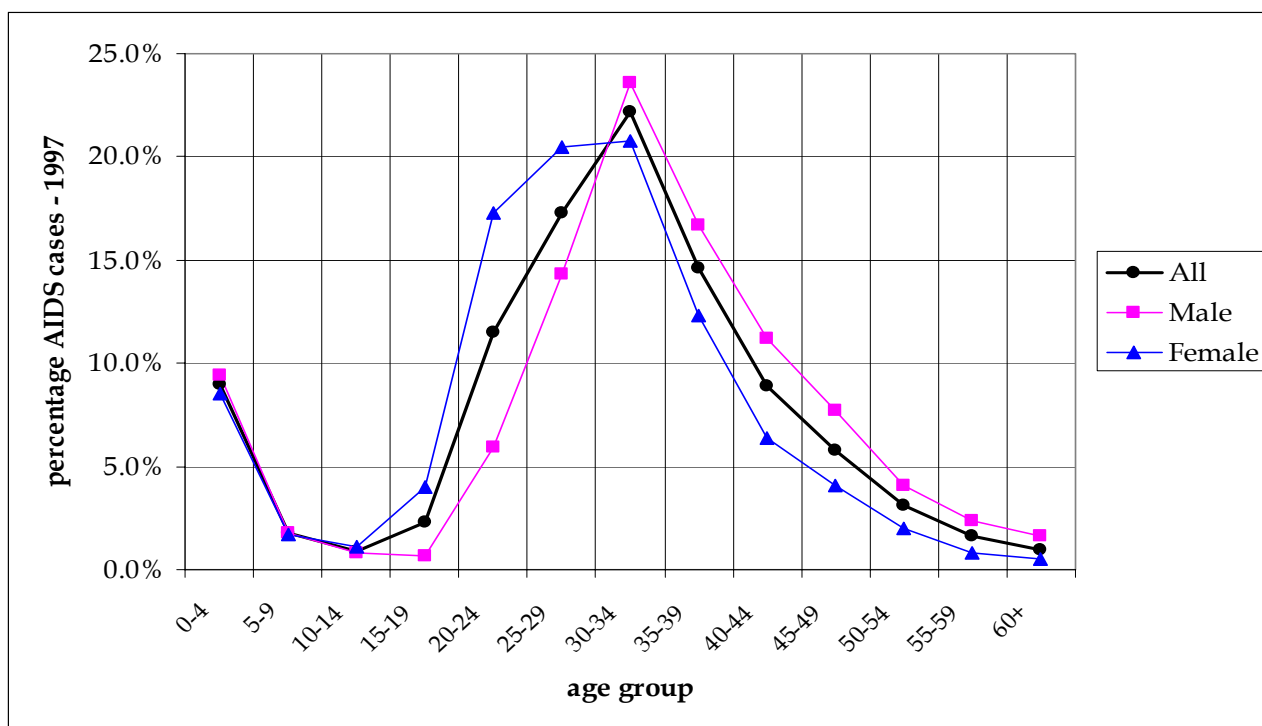
The largest changes in mortality for men occur from age 30 and older while for women, age 20 and older. The sex differential in the age pattern of the rise in mortality is consistent with the sex differential in HIV infection and AIDS related mortality in Sub-Saharan Africa, which in turn, is related to the age differential in sexual activity – older men with younger women (MDHS 2000).

#### 2. HIV/AIDS prevalence & affected populations

According to the National AIDS Council, the prevalence of HIV/AIDS infection has spread rapidly in Malawi over the past 15 years, climbing from 1.7% in 1987 to 14.3% by 1997. Most of the increase in adult mortality (see previous section) can be attributed to AIDS while large increases in infant and child mortality can also be linked to the epidemic.

It is estimated that 55% of the AIDS cases in Malawi are found in women – this can be attributed to the fact that there are more women in the population in addition to women being more physiologically susceptible to infection. However, there are social and cultural factors that contribute to the age and gender differential in prevalence of infection. Chart 5.2 below illustrates this differential, which is similar to the mortality trends in younger populations. The percentage of AIDS cases is higher in younger women (15-30 years) but higher in men over 30 years. Infection in women begins earlier, which reflects early sexual initiation and cultural practices that favour early marriage.

**Chart 5.2 – Percentage of AIDS cases by age and gender (UNAIDS, 2002)**



According to UNAIDS, there is a low level of HIV testing in the general population so infection rates and deaths from AIDS or AIDS-related infections is thought to be inaccurate and incomplete. However, the pattern of infection prevalence follows that of mortality with a lag period of about five years.

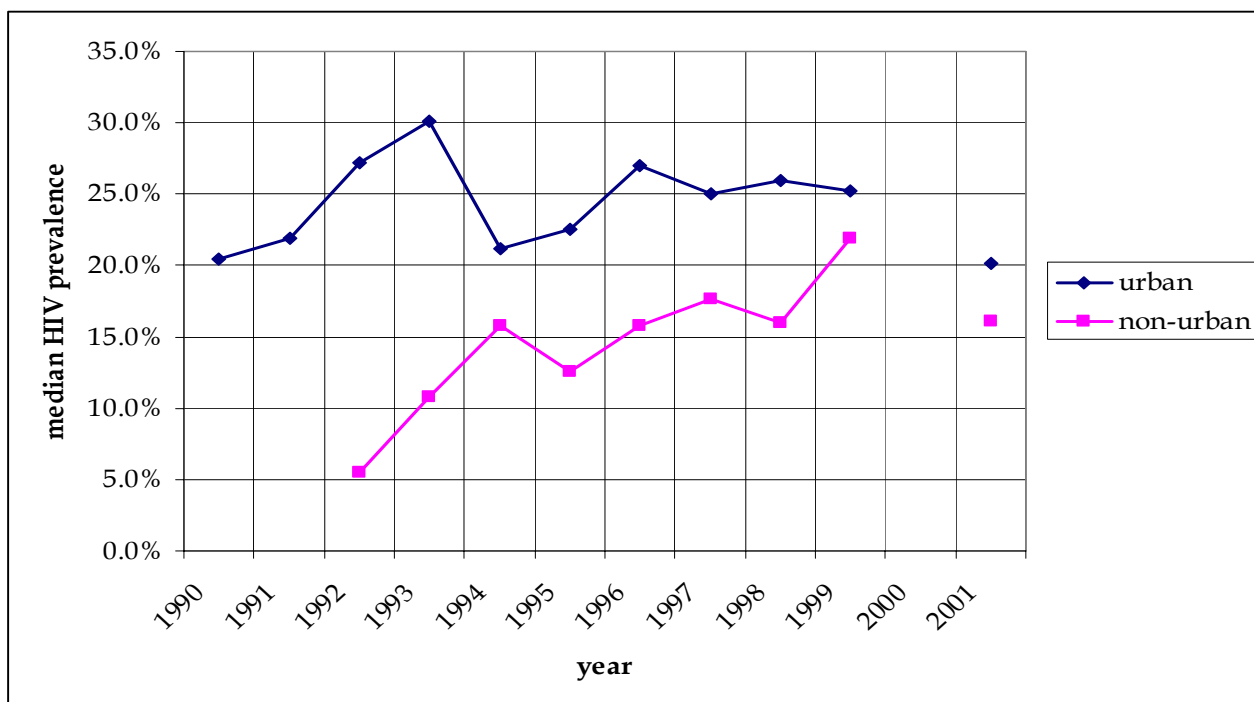
The National AIDS Control Commission in Malawi conducted a sentinel surveillance study in 2001 where women attending antenatal clinics in selected sites were tested for HIV. Approximately 20% of the women tested positive with 24.1% in the Southern region, which was statistically significantly higher than 17.5% in Central and 15.9% in the Northern region. Only 10.7% of women from rural areas were positive while 21.1% from semi-urban and 22.5% from urban areas were positive. When related to education level, an alarming 25.9% of women with post-secondary education were infected (Sentinel Surveillance Report, 2001).

However, overall death rates have increased more in the South than the other areas during the rapid rise in HIV infection in the country. **According to the National Economic Council (2000), higher death rates in the South may also be reflective of the greater prevalence and severity of poverty in that region.** In addition, there is likely to be a connection between poverty and HIV/AIDS although it may not be simple to illustrate – HIV is a result of poverty and inequalities yet AIDS is a major impoverishing force.

Early on in the epidemic in Malawi, HIV infection was far more prevalent in urban areas than non-urban (Malawi is 85% rural). As illustrated in Chart 5.3, the gap still remains but is closing rapidly although the logistical problems related to reporting are yet to be resolved. One of the primary causes of the rural-urban changes can be increased mobility of the rural population.

Rural industries such as plantations and estates or small-scale fishing areas attract seasonal workers and traders and thus increases the chances of exposure to infection.

**Chart 5.3 – Trends in median HIV infection prevalence by locality (UNAIDS, 2002)**



### 3. Orphans

There are three mutually exclusive types of orphans: ‘maternal orphan’ – a child under 15 years of age who has only lost his/her mother; ‘paternal orphan’ – has lost the father only; ‘two-parent orphan’ – a child who has lost both parents. According to the 2000 MDHS, 8% of children were paternal orphans and 5% were maternal orphans. Two percent of children were two-parent orphans while 11% of children had lost one or both parents. There were not many differences in orphanhood by background characteristics but the proportion of urban children who were paternal or two-parent orphans was slightly higher than in the rural children.

The study by Ainsworth and Filmer (WB, 2002) showed that orphans can be found in both poor and non-poor households and thus, households with orphans are not necessarily the poorest – most often because the poorest households do not have the resources to care for them. The study also shows that the greatest differentials in school enrolment are between poor and non-poor households – poor orphans are not attending school for the same reason as poor children living with their parents. They suggest that policies to increase enrolment among poor households would have a great impact on the most disadvantaged orphans.

The World Bank study made the following conclusions: (quote)

- Orphan status in most countries is not good targeting criterion for “traditional programs” aimed at raising enrolment rates, such as subsidized school fees, textbooks, and uniforms as orphans are not universally in need of assistance.
- Opportunistic redistribution of orphans is likely to occur when the benefits targeted to orphans are things other children may need, such as textbooks, uniforms, school fees, or supplemental feeding. A concentration of orphans in some households may or may not result in their improved welfare.
- Interventions that are linked solely to the special needs of orphans (grief counselling or health services for HIV-infected children) are unlikely to create incentives for opportunistic responses by households.
- Policies and programs that are focused on improving the welfare of the poorest households will also help the poorest orphans without creating adverse effects.

#### 4. November-December 2002 VAC results

The survey teams collected information from 136 communities regarding vulnerable groups in their communities and also about the presence of active Community Aids Coordinating Committee (CACCs), and/or Village Aid Coordinating Committee (VACCs) supporting People Living with AIDS through Home-based care and those supporting orphans.

The survey found that approximately 21% of all households in the communities were supporting orphans, ranging from a high of 31% in the North to 22% in the South and only 14% in the Central region. The communities were also asked about the presence of child-headed households in their village. Although 39% of the communities reported having child-headed households, they only accounted for about 3-4% of all in the village. In the Southern region 46% of the communities (n = 63) reported having orphan-headed households as compared to 30% in the Central (n = 46) and 35% (n = 26) in the North. Lastly, the teams asked about the percentage of female-headed households in the village. Overall, 29% of all households covered were headed by females – 34% in the South, 25% in Central and 23% in the North.

The survey team members were asked to give their impression of the presence of HIV/AIDS in the communities and whether the disease appeared to contribute significantly to household and community food insecurity. The following are their responses:

- *North (Chitipa, Rumphi & Karonga)* – The communities were reluctant and afraid to provide information on the presence of HIV/AIDS but in some areas it appeared that the number of orphans and female-headed households was increasing.
- *North Central (Mzuzu, Nkhatabay, Nkhotakota, Likoma)* – Most people were not comfortable talking about being HIV positive in their communities and therefore it was difficult to make any linkages to food security.
- *Central (Kasungu, Dowa, Ntchisi, Mchinji)* – There appears to be an increased number of orphans but not attributed to HIV/AIDS. However, the increases in orphans were seen more often in poorer households and thus increasing the demand for food.
- *South Central (Mangochi, Machinga, Balaka)* – It was difficult to get straight answers on HIV/AIDS from the communities since they didn't seem to be sensitized on the occurrence of the disease. However, the team noticed signs of HIV infection in some individuals.
- *Upper South (Blantyre, Mwanza, Zomba)* – The communities realized the presence of HIV/AIDS but didn't think it was a problem in their village, but perhaps the neighboring areas.
- *Middle South (Chiradzulu, Phalombe, Mulanje)* – The team seemed to notice that there were older parents taking care of more children and grandchildren and also an increase in the number of orphans.
- *Lower South (Thyolo, Chikwawa, Nsanje)* – There appeared to be a significant problem in Chikwawa and Thyolo (tea estates) and mainly in the well-off groups. Some of these households failed to cultivate their land properly because they spent too much time nursing the sick.

Overall, 20% of the communities visited had a Community Based Organization established to support orphans – 26% in the North, 13% in the Central and 22% in the South. In many cases, they had just been established and were still in need of funding. In addition, only 13% of the communities had a CBO established to support people living with AIDS – 15% in the North, 4% in the Centre and 17% in the South.

#### D. PROGRAMS & RESPONSES

According to the RENEWAL paper, there are four main types of responses being carried out by the Government, NGOs, and UN agencies in Malawi. They are presented below.

##### 1. Programs dealing with Epidemiology

- National AIDS Control Commission, in collaboration with UNAIDS, has designated sentinel sites for mapping and monitoring HIV prevalence in the country.
- The Ministry of Health, Planning Section is involved in tracking the incidence and prevalence of HIV-related diseases such as tuberculosis.
- The National Statistics Office worked to include sections on HIV/AIDS in the 2000 DHS.

## 2. Programs making efforts to prevent the further spread of AIDS

- The Malawi Poverty Reduction Strategy (Ministry of Finance and NEC) has recognised HIV/AIDS as a cross-cutting issue which impacts all the other sectors of the economy. The broad outline of the strategy is to mitigate the economic and social impacts of HIV/AIDS through activities that support those directly affected: orphans, widows, widowers and their households. It also includes recommendations to change legislation on inheritance, the introduction of less labour-intensive crops, and the provision of food to affected households, and proposes that all ministries include a budget line item for workplace programmes and other HIV related interventions.

## 3. Programs researching the links between agriculture and AIDS

- Department of Research Services, Ministry of Agriculture – the general impression was that agricultural research has yet to seriously consider HIV/AIDS in its research programmes.
- For the International Centre for Living Aquatic Resource Management (ICLARM) and the International Centre for Research on Agroforestry (ICRAF) – workplace policies have been adopted to prevent discrimination and provide counselling to staff with HIV/AIDS.
- There are plans to conduct studies on the impact of HIV/AIDS on adoption of agro-forestry technologies. **However there are methodological problems on how to identify AIDS affected or infected households and how to isolate the impacts of HIV/AIDS from those of general poverty.**

## 4. Programs to prevent the spread or mitigate the impact of HIV/AIDS on agriculture and livelihoods

- In 2001, FAO/UNDP commissioned a study to assess the impact of HIV/AIDS on the agricultural sector which was the basis for most of the RENEWAL paper. Project Hope, in collaboration with the Ministry of Education, developed an HIV/AIDS policy paper. They also have an HIV/AIDS component in all their activities. Youth Net and Counselling (YONECO) is a CBO that aims to assist youth in improving their economic and social situations through skills training. Their main focus is HIV prevention and targets youth, street children, commercial sex workers and community groups. Most of their work is done in Zomba district. Nkhotakota AIDS Support Organization (NASO) is a CBO formed with the aim of helping to prevent the transmission of the AIDS virus. They also support home-based care programmes. Oxfam has been working to mainstream programs to prevent and mitigate the impact of HIV/AIDS. They conducted a study in Mulanje to learn about factors that promote the spread of HIV and the local response mechanisms to the impacts of AIDS. Blantyre Christian Centre mostly focuses on counselling and care of AIDS patients but also supports orphan care programs.

## VI. FOOD SECURITY AND OTHER SECTORS

### A. NUTRITION SITUATION IN MALAWI

#### 1. Macro-nutrient malnutrition trends and comparisons (MDHS 2000)

The 2000 Malawi Demographic and Health Survey covered 15,421 households and 10,560 children 0-59 months of age. The data were collected between July and November in what is considered to be a 'normal' year for Malawi in terms of harvests, weather, and economic stability. Comparisons between the 1992 and 2000 MDHS are found in Table 6.1 below.

**Table 6.1 - Malnutrition in children 0-59 months**

	1992 MDHS	2000 MDHS					
		National	North	South	Central	Boys	Girls
Stunting <sup>2</sup>	49%	49%	39%	45%	56%	51%	48%
Wasting <sup>3</sup>	5%	6%	5%	6%	5%	5%	6%
Underweight <sup>4</sup>	27%	25%	17%	25%	28%	26%	25%

<sup>2</sup> A stunted child has a height-for-age Z-score that is below -2 SD based on the NCHS/CDC/WHO reference population. Chronic malnutrition is the result of an inadequate intake of food over a long period and may be exacerbated by chronic illness.

<sup>3</sup> A wasted child has a weight-for-height Z-score that is below -2 SD based on the NCHS/CDC/WHO reference population. Acute malnutrition is the result of a recent failure to receive adequate nutrition and may be affected by acute illness, especially diarrhea.

- a) Stunting (chronic malnutrition) has not changed between 1992 and 2000. There is much variation across regions with the highest in Central, middle in South and lowest in North. The prevalence of stunting is significantly higher among boys than in girls. Stunting in children < 3 years in Malawi (44% - DHS 2000) is 3<sup>rd</sup> highest in Sub-Saharan Africa – higher than Zimbabwe (27% - DHS 1999), Mozambique (36% - DHS 1997) and Zambia (42% - DHS 1996). The prevalence of stunting is significantly higher in rural areas (51%) than Lilongwe town (37%) or other ‘urban’ areas (33%). NGO surveys from September 2002 found 38% stunting in both Blantyre and Lilongwe.
- b) Wasting (acute malnutrition) is slightly higher in 2000 – appears to be an equilibrium over time and across regions. Wasting is slightly higher in girls than in boys. The prevalence of wasting is slightly higher in rural areas (6%) than urban areas (5%).
- c) Underweight (global malnutrition) has decreased slightly over time. It is quite low in the North and much higher in Southern and Central regions. The prevalence of underweight in children < 3 years is 28% which is in the mid-range for SSA – higher than Zimbabwe (14%), Mozambique (26%), and Zambia (26%).
- d) The vulnerable period for young children is 12-21 months – stunting is highest (69%) at 21 months, wasting is highest (12%) at 11 months, and underweight (40%) is highest at 17 months (MDHS 2000)
- e) Maternal malnutrition (low body-mass index) is 7% overall for mothers of children < 5 years of age – 5% in the North, 6% in Central and 8% in the Southern region. This compares to 4.9% in Zimbabwe, 10.9% in Mozambique, and 9.2% in Zambia.
- f) Summary – Central region has the worst nutritional outcomes for children < 5 years in the country, according to the MDHS 2000 results. The children in the North appear to be the least affected in the country.

## 2. Micronutrient overview

- a) Vitamin A – From the 2000 MDHS, 4% of all women who had given birth in the previous five years reported having some form of *night blindness* (sub-clinical vitamin A deficiency) during their last pregnancy. However, a recent national survey (UNICEF/MoHP?) found that 60% of pre-school children and 97% of pregnant women had *low serum retinol* levels (clinical vitamin A deficiency indicator) in their blood. According to the MDHS, *vitamin A supplementation* in women (2 months post-partum) was 42% overall – 50% in the North, 42% in the South, and 39% in the Central region. Vitamin A supplementation in children under five was 71% with little variation between the regions. *Measles vaccination* for children 12-23 months (standard age range for representative coverage) is 84% which is the second highest in SSA.
- b) Iodine - In 2000, adequately *iodised salt* was found in 54% of households with children < 5 years of age. Use of iodised salt was higher in the Northern region (60%) than Central (53%) and Southern regions (55%).
- c) Iron – The MoHP/UNICEF national survey found that the prevalence of *iron-deficiency anaemia* in pre-school children was 72 percent. From the MDHS, 67% of women surveyed received *iron supplements* in their last pregnancy. However, only 17% of those took the recommended dosages, indicating problems with compliance in this target group.
- d) Other micronutrient deficiencies - There are few reports of *pellagra*, *scurvy* or other rare micronutrient deficiencies in the country at this point. In populations that rely heavily on maize for nutrition, there will likely be regular seasonal outbreaks of *pellagra*. However, it is unlikely that unusual outbreaks will occur due to the fact that this is a slow-onset emergency and people do have access to a variety of other foods which can add diversity to the diet.

## 3. Child feeding practices (MDHS 2000)

- a) In Malawi, 45% of mothers exclusively breastfeed infants during the first six months, while 93% of mothers introduce complementary foods from six to nine months.
- b) The current food insecurity will affect care practices, due to the increased workloads of women as they search for food. The lack of adequate food also means that children may not get the quality and quantity of food required for healthy growth.

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<sup>4</sup> An underweight child has a weight-for-age Z-score that is below -2 SD based on the NCHS/CDC/WHO reference population. This condition can result from either chronic or acute malnutrition or a combination of both.

#### 4. Previous nutrition surveys in selected districts

Several NGOs have been conducting anthropometric surveys in particular regions in the country since 2001 and the results are presented in Table 3.2 below. Although most are not representative of the district as a whole, they still provide a basis for analysing trends over time and in various parts of the country. The majority used the 30 by 30 cluster sampling method to select children under five for weighing and measuring their height and mid-upper arm circumference (MUAC). In addition, some attempted to estimate crude mortality rates in their project areas.

**Table 6.2 – Previous anthropometric surveys conducted by NGOs**

Date	Region	District	Coverage	Prevalence global acute	Agency
October 2001	South	Machinga	Nayuchi ADP	6.8%	WVI
December 2001	Central	Mchinji	Mchinji District	10.2%	SC-UK
December 2001	Central	Salima	Salima District	6.6%	SC-UK
Dec-Jan 2002	Central	Dedza	Kabwazi, Linthipe, & Lobi EPAs	6.8%	Concern Universal
Jan-Feb 2002	South	Machinga	Kiyunga ADP	4.2%	WVI
Jan-Feb 2002	South	Machinga	Nayuchi ADP	4.1%	WVI
March 2002	South	Mulanje	Mulanje District	6.2%	Oxfam GB
March 2002	South	Thyolo	Thyolo District	7.2%	Oxfam GB
March 2002	Central	Mchinji	Mchinji District	12.5%	SC-UK
March 2002	Central	Salima	Salima District	19%	SC-UK
June 2002	Central	Mchinji	Mchinji District	7%	SC-UK
June 2002	Central	Salima	Salima District	9.7%	SC-UK
June 2002	Central-South	Dowa, Lilongwe, Balaka, Mangochi	Project areas in Districts	4.9%	CARE & SC-US

Based on the results presented in the above table, the prevalence of global acute malnutrition (at least moderate wasting and oedema) has remained quite low except in the areas where Save the Children-UK conducted surveys. Mchinji and Salima districts are two of the most affected by the current food crisis and thus one would expect to see higher prevalence of malnourished children in those areas. However, the increase (6.6% to 19%) and decrease (19% to 9.7%) found in Salima district are very unusual in cross-sectional surveys. Consultations with experts confirm that there might have been some errors in sampling and/or measurement during the March surveys and therefore the results are questionable.

#### 5. Admissions at the Nutrition Rehabilitation Centres

- There are over 90 Nutrition Rehabilitation Units (NRUs) around the country that treat severely malnourished children. The Government of Malawi, UNICEF and NGO partners are currently upgrading the existing structures in order to provide appropriate and systematic treatment to facilitate and support quick recovery for children – especially during the approaching lean period during the current food crisis.
- An assessment of 82 NRUs has been completed and shows that an NRU can admit an average of 19 patients per month during a normal year. However, in January 2002 average NRU admissions peaked at 50 children while six NRUs admitted over 80 children. Nationally, NRUs have the capacity to treat between 4,500 to 6000 malnourished children per month.
- As these NRUs cannot reach all potential and actual cases of severely malnourished children, it is necessary to have effective supplementary feeding programmes at community levels. NRUs and supplementary feeding programmes must also be complemented by a general ration distribution to ensure an adequate food supply at the household level.

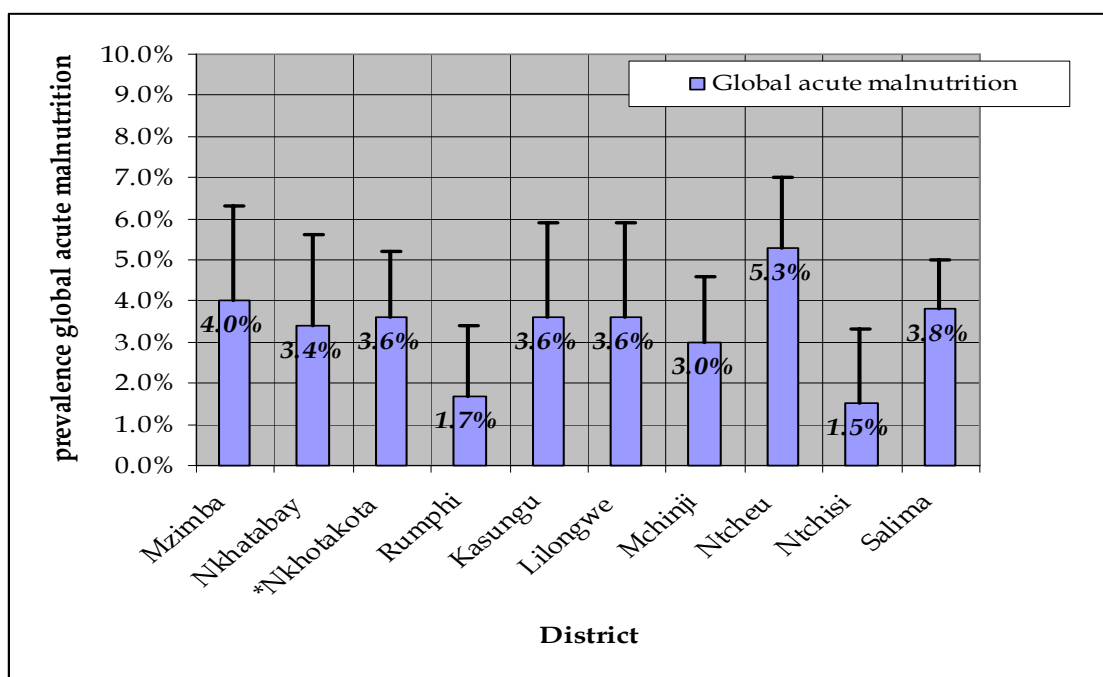
## 6. Malawi VAC Nutrition Surveys

- a) The Ministry of Health and Population (MoHP), UNICEF and a group of NGO partners agreed on *national nutrition survey guidelines* in August 2002. The agreement was the first of a three-step process towards development of a common approach to monitor nutrition status in pre-school children in Malawi. The steps include:
  - Agreement on a common methodology
  - Agreement on the optimum timing of surveys
  - Agreement on priority areas for surveys and the responsibilities of the various organizations.
- b) The *primary objective* of the surveys was to assess the nutritional status of the under 5 population in Malawi. *Secondary objective* was to assess the following: crude and under 5 mortality rates, two-week period prevalence of morbidity in the under 5 population, measles vaccination and vitamin A supplementation coverage, and feeding centre coverage.
- c) Methodology – The sampling methodology was a two-stage randomised cluster sample with the first level or cluster being the lowest level of population data (village or village group) which was made available from the National Statistics Office (NSO). Then a random direction was chosen within the first cluster and all children between 6 and 59 months (65 to 100 cm) were measured – at least 30 per cluster.
- d) Timing – It was assumed that the fluctuations of acute malnutrition would follow the agricultural season in Malawi, as the majority of the rural population is reliant on subsistence agriculture for their food and livelihoods. Thus, the peak in malnutrition would be in the period before the April harvest – in February and March – towards the end of the lean season. In addition, it was assumed that acute malnutrition would be lowest after the harvest, around May and June. Until now, there has never been an attempt to measure seasonal trends in acute malnutrition. Three rounds of data collection were planned to monitor changes in child nutrition status during the current humanitarian crisis: September 2002 (completed), December 2002 (in progress), and April/May 2003.
- e) Who and where – Most NGOs were interested in conducting surveys in the districts where they were already active. In some cases, the NGOs had adequate funding, technical expertise and equipment to conduct the surveys. For others, UNICEF, MoHP and Action Against Hunger (AAH) provided training, equipment and funding in order to ensure that common approaches were used so the data collected would be comparable. AAH provided additional technical support in the analysis of the nutritional data. In total, 20 districts out of 27 plus 2 urban areas were covered in Round One. NGO members include: Action Against Hunger (AAH), Africare, World Relief, SC-UK, SC-US, Emmanuel International, CRS, WVI, GOAL, OXFAM and MSF-Luxembourg.

## 7. Results of Round 1 VAC nutrition surveys

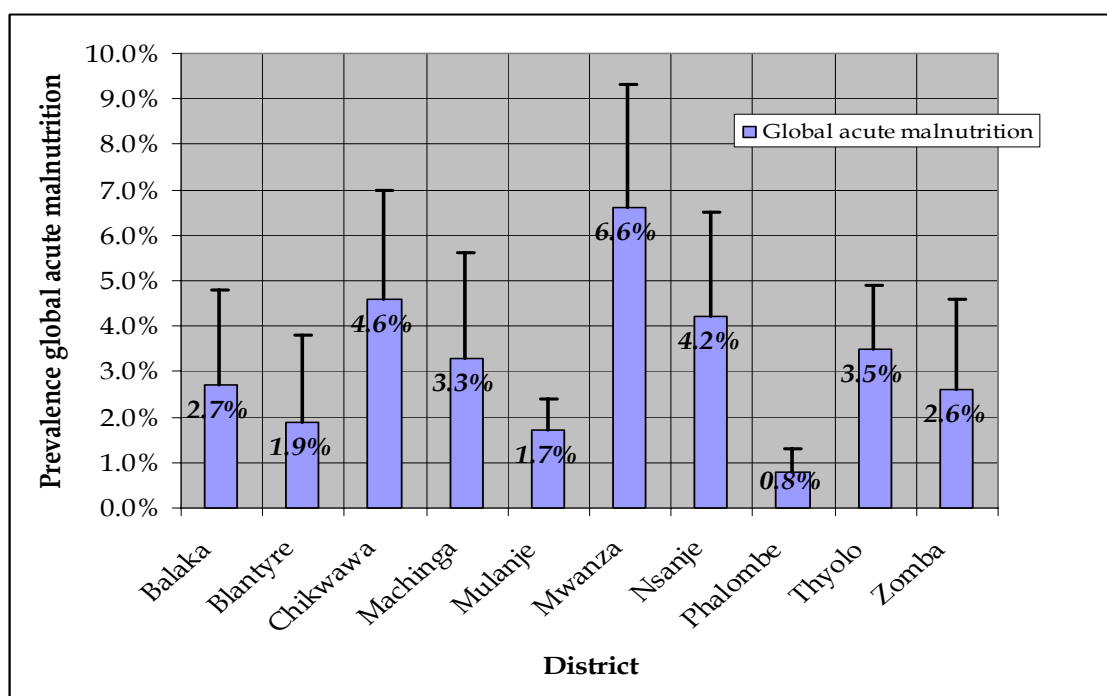
- a) The results from the first round of nutritional surveys are presented in Charts 6.1 and 6.2 – global acute malnutrition (at least moderate wasting and oedema) along with the upper 95% confidence interval. The highest prevalence was found in Mwanza district (6.6%) in the Southern region while the lowest was found in Ntchisi district (1.5%) in Central region.
- b) In addition to the rural areas, surveys were conducted in Blantyre and Lilongwe urban areas which found 1.9% GAM and 2.5% GAM respectively. Again it is important to mention that the methodology for these surveys included any child with oedema to be malnourished while the MDHS 2000 did not, so the results are not directly comparable.

**Chart 6.1 – Results of VAC anthropometric surveys in North and Central regions (9/02)**

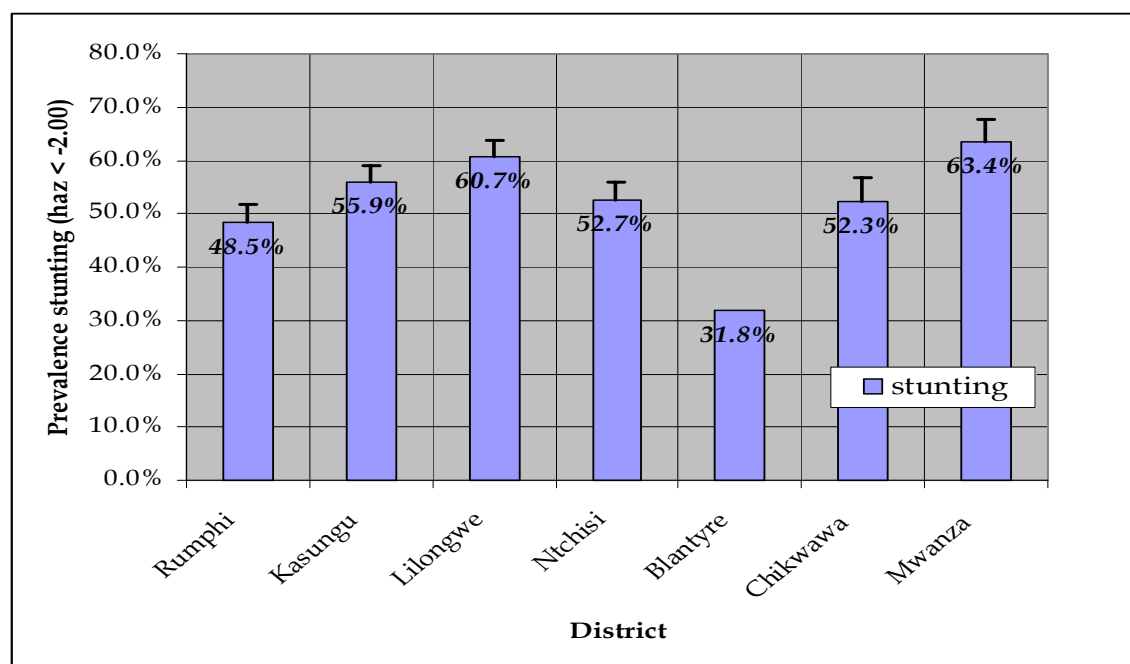


- c) According to the VAC Nutrition Final Report, the surveys indicate that the stress of food insecurity on the under five population has not yet begun to express itself in the form of acute malnutrition since the prevalence is still quite low. Since there is little variance between districts, these results don't provide additional information for detecting 'hot spots' or prioritising districts or regions for increased humanitarian assistance.
- d) In certain districts the prevalence of chronic malnutrition or stunting was assessed and found to be quite high – even more than the national figure of 49 percent. Chart 6.3 shows that nearly all had a stunting prevalence of more than 50% with the highest being 63% in Mwanza. Stunting in Blantyre district was low – only 32% of the children but 24% were severely stunted.

**Chart 6.2 – Results of VAC anthropometric surveys in the Southern region (9/02)**



**Chart 6.3 – Results of VAC anthropometric surveys – Chronic malnutrition (9/02)**



- e) Due to the nature of the current food crisis and the early response by the humanitarian community and Malawian government, there will still likely be a decline in nutritional status of the under five population but it will be a slow process. In addition, historical reports indicated a similar 'slow moving' decline in the 1992 famine.
- f) Assessment of adult malnutrition, especially in mothers of children < 5 years of age, may be a useful additional indicator in monitoring the effects of the current crisis on anthropometric outcomes of rural Malawians. Results from the July-August VAC Household survey indicated that adults were eating less often than children and thus may experience a more rapid decline in nutritional status due to lower intake but higher caloric requirements and energy expenditures.
- g) Two-week period prevalence of diarrhoea, acute respiratory infection (ARI) and measles was also assessed and results are presented in the health section below.
- h) Crude and U5 mortality – The mortality rates were calculated using a 3-month recall of mortality using a questionnaire which was completed in every household chosen, regardless of whether a child aged 6-59 months was present. Results indicated that mortality rates were within normal ranges for all districts surveyed.
- i) Measles vaccination coverage – Assessment of measles vaccination coverage was done using standard EPI methodology for children aged 9 months and older, using first the health card or passport and secondly the recall of the mother. The results for every district surveyed were more than 80% using the recall method, which is very good and comparable to the results of the 2000 MDHS. Additional results from the VAC survey will be presented in the health section.

## 8. November-December 2002 Nutrition Surveys

### Preliminary Nutrition Survey Results, Nov-December 2002 Malawi

The preliminary results of the second round of national nutrition surveys are presented below. There are still a few surveys outstanding of which the results are expected end of January however initial results indicate similar trends across each district.

These results indicate no significant deterioration or improvement in the rates of acute malnutrition from the initial round, three months prior. Mortality rates again do not demonstrate a significant deterioration or improvement from the initial findings in August September.

Additional data was also collected on morbidity, household demographics and food security indicators. This data has not as of yet been analysed and will be done so once all the datasets have been collected at a national level. These results should be available in February and thus a more complete analysis of the nutritional situation and the potential underlying causes will be explored.

**Table 6.3: Nutrition Surveys by conducting NGOs, districts with Results**

Date	Agency	District	GAM Z-Scores	SAM Z-Scores	Crude Mortality *	<5yr Mortality*
Nov 02	SC-US	Mangochi	2.8% (1.7-3.9%)	1.1% (0.4-1.8%)	Over 5yrs mortality 0.83	1.9
Nov 02	SC-US	Balaka	2.1% (1.2-3.1%)	0.9% (0.3-1.5%)	N/a	N/a
Nov 02	AAH	Kasungu	4.5% (2.9-6.9%)	1.0% (0.3-2.5%)	0.29	0.7
Nov 02	AAH	Lilongwe R	4.8% (3.1-7.3%)	1.3% (0.5-2.9%)	0.29	0.7
Nov 02	AAH	Ntchisi	2.6% (1.4-4.5%)	1.0% (0.3-2.5%)	0.23	0.4
Dec 02	AAH	Rumphi	3.0% (1.7-5.1%)	0.6% (0.1-2.0%)	0.48	0.31
Dec 02	AAH	Lilongwe U	4.2% (2.6-6.6%)	1.0% (0.3-2.5%)	0.06	0.31
Dec 02	AAH	Blantyre U	2.8% (1.6-4.9%)	0.3% (0.0-1.5%)	0.35	0.51
Dec 02	SC-UK	Salima	2.1% (1.2-3.1%)	0.1% (0.1-0.3%)	0.54	0.79
Dec 02	SC-UK	Mchinji	2.9% (1.5-4.3%)	1% (0.3-1.7%)	0.18	0.47
Dec 02	Oxfam	Mulanje	1.9% (1.1-2.8%)	0.9 (0.3-1.5%)	0.7	1.3
Dec/ Jan 02/03	Africare	Ntcheu	4.1% (2.5-6.5%)	1.7% (0.7-3.5%)	1.4	2.2
Dec/ Jan 02/03	Africare	Mzimba	1.9% (0.9-3.7%)	1.2% (0.5-2.8%)	0.3	0.3
Dec/ Jan 02/03	Africare	Nkhata Bay	6.3% (4.9-8.1%)	1.1% (0.4-2.7%)	1.2	1.9

**GAM-** Global Acute Malnutrition (< -2 Z Scores Weight for Height) U= Urban, R= Rural

**SAM-** Severe Acute Malnutrition (< -3 Z Scores Weight for Height)

\*Crude Mortality References: Number of deaths per 10,000 total population per day

**1/10,000/day= Alarm**

**2/10,000/day= Emergency**

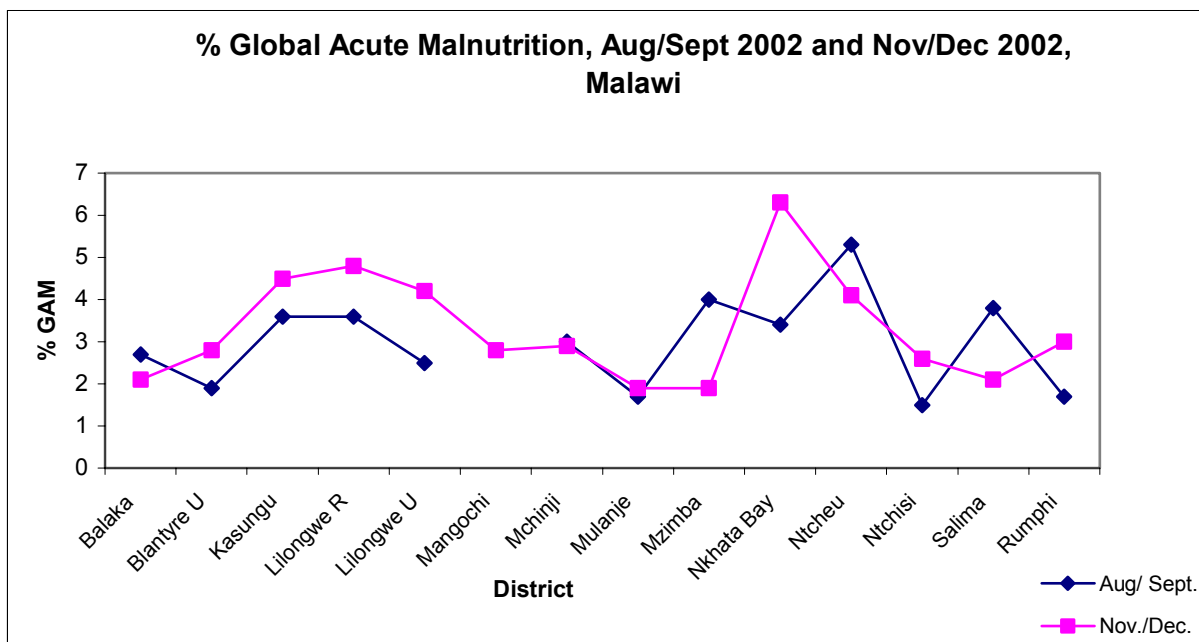
\*\*Under 5 years mortality: Number of deaths per 10,000 under 5-year population per day

**2/10,000/day= Alarm**

**4/10,000/day= Emergency**

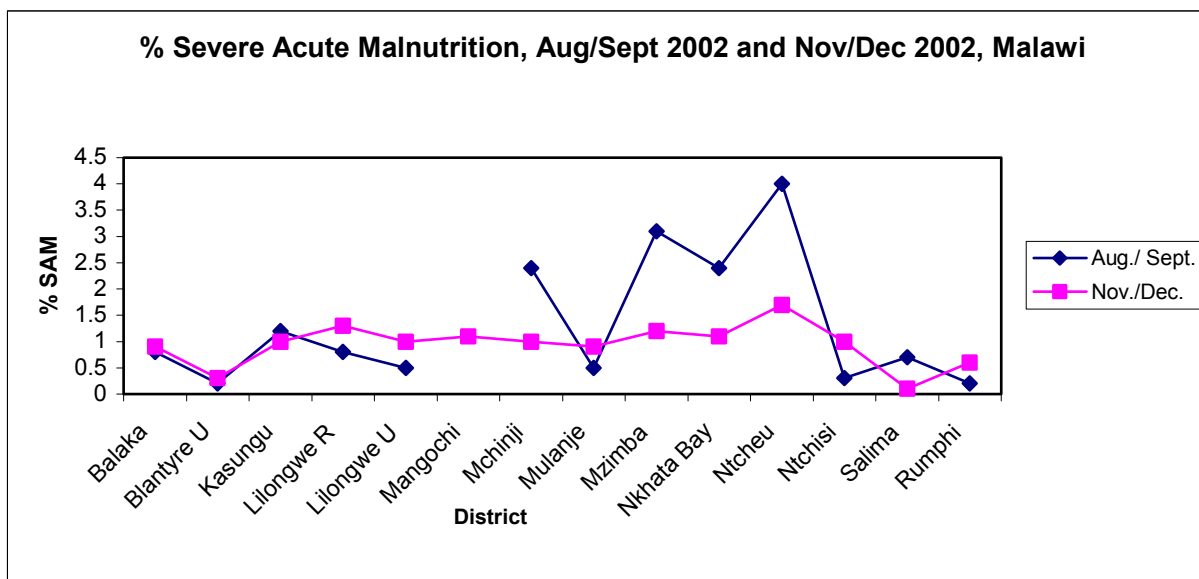
The graphical comparison below of the % Global Acute Malnutrition and % Severe Acute Malnutrition between the two rounds of surveys demonstrates no statistically significant difference between the 2 rounds of surveys. Again this is illustrated by the fact that in **all** surveys, the confidence intervals overlap for both classifications of acute malnutrition.

**Chart 6.4: % Global Acute Malnutrition, August, September 2002 and November, December 2002**



\* Note for August/ September surveys, Mangochi was not surveyed thus no % GAM is available.

**Chart 6.5: % Severe Acute Malnutrition, August, September 2002 and November, December 2002**



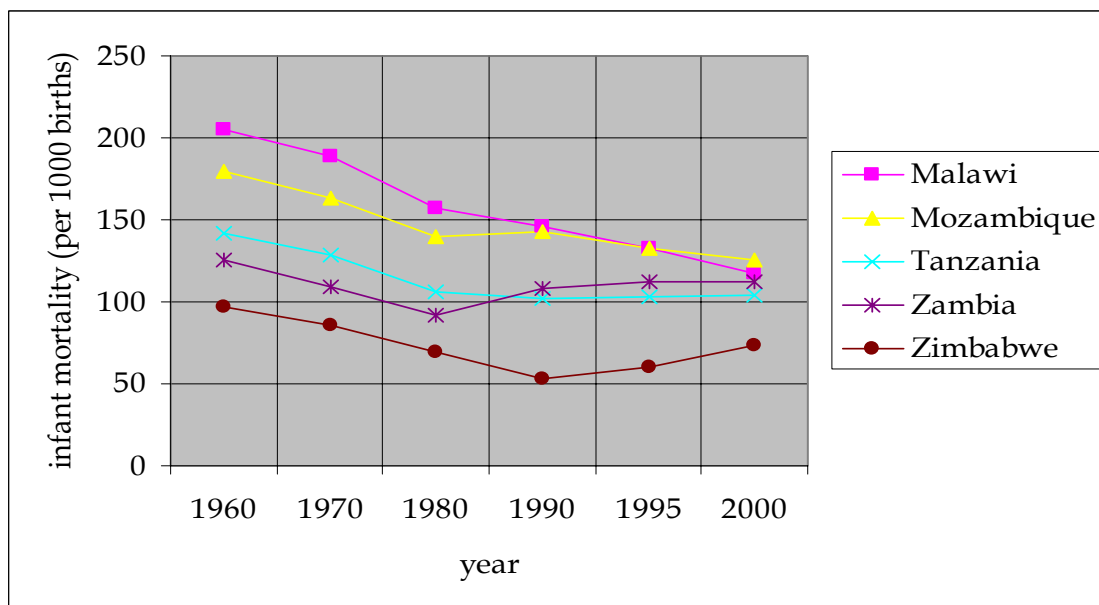
\*Note, as above, for August/ September surveys, Mangochi was not surveyed thus no % SAM is available

In all surveys the same methodology of 30x30 randomised cluster surveys was applied and standardization was reinforced through the application of the national level MoHP guidelines on survey methodology, which refer to international standards. A national level 3-day training was also conducted to ensure common understanding and methodology.

**B. INFANT AND CHILD MORTALITY**

Over the years, Malawi has had the highest infant and child mortality rates in the region. In the past 4 decades, it has steadily declined, most likely due to improved immunization coverage and increased access to health care and general economic improvement. Chart 6.4 shows the changes in infant mortality in the region since 1960.

**Chart 6.6 – Changes in infant mortality in Southern Africa countries (UNICEF, 2002)**

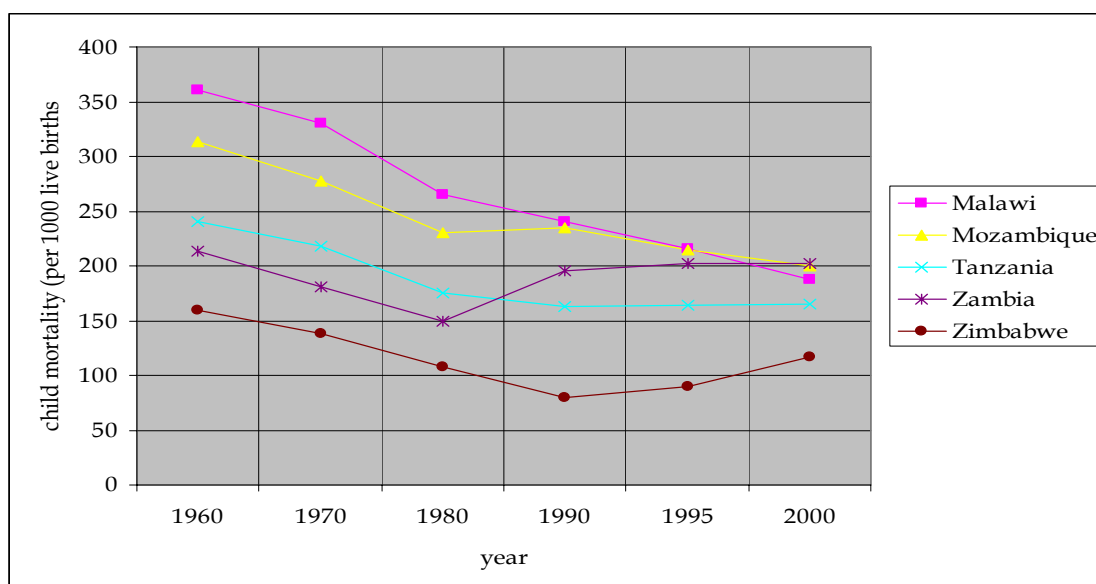


For all countries listed, infant mortality decreased from 1960 to 1980. However, between 1980 and 1990, the prevalence increased for Mozambique but then continued to decrease – most likely due to the civil conflict. In Zambia, infant mortality increased through to 1995 where it stabilized. This increase and that seen in Zimbabwe from 1990 to 2000 are most likely due to the effects of HIV/AIDS in those countries. However, the effects of HIV/AIDS are not yet apparent in trends in infant mortality in Malawi but the downward curve will most likely flatten out over the next few years, similar to that seen in Tanzania.

Child mortality continues to decrease in Malawi as well, as indicated in Chart 6.5. Again, this is most likely due to improved access and utilization of health care in the country and general economic development. In 1995, it was still the highest in the region but by 2000, the effects of HIV/AIDS in Zambia and Zimbabwe brought the child mortality rates in those countries higher than Malawi. Most likely, the increased mortality rates are not all just due to infection in infants in children but also to indirect effects as a result of illness and death of parents within the household, leading to neglect and inadequate caring practices for the children.

Again, as HIV/AIDS infection rates continue to rise and as social safety nets continue to deteriorate in Malawi, declines in infant and child mortality rates are predicted to stabilize over the next five years.

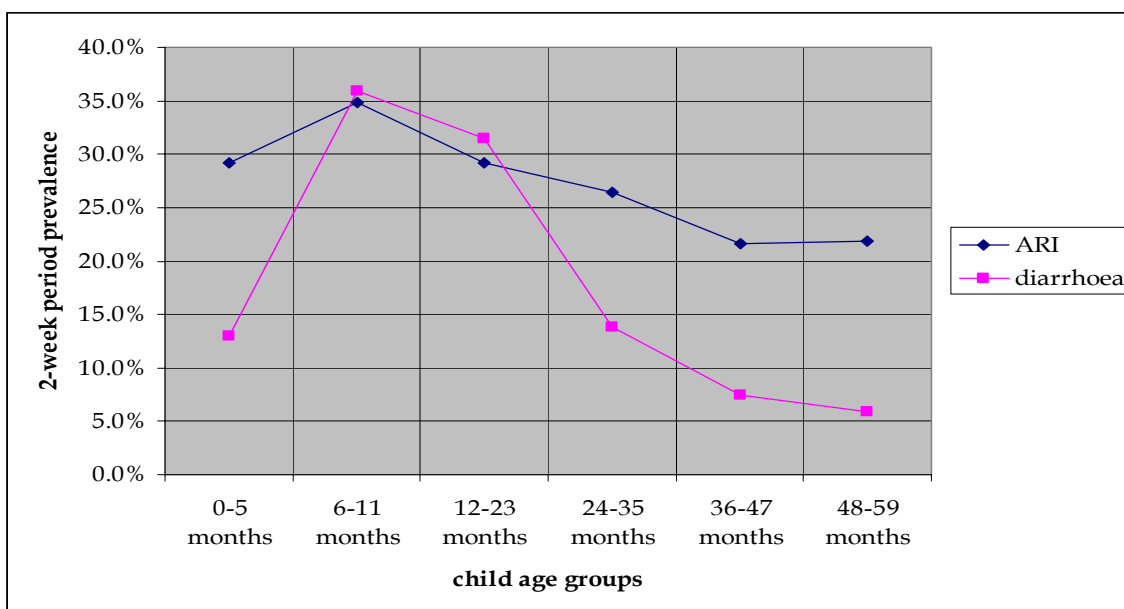
**Chart 6.7 – Trends in child (under fives) mortality in Southern Africa countries (UNICEF 2002)**



### C. SUMMARY OF THE HEALTH SITUATION

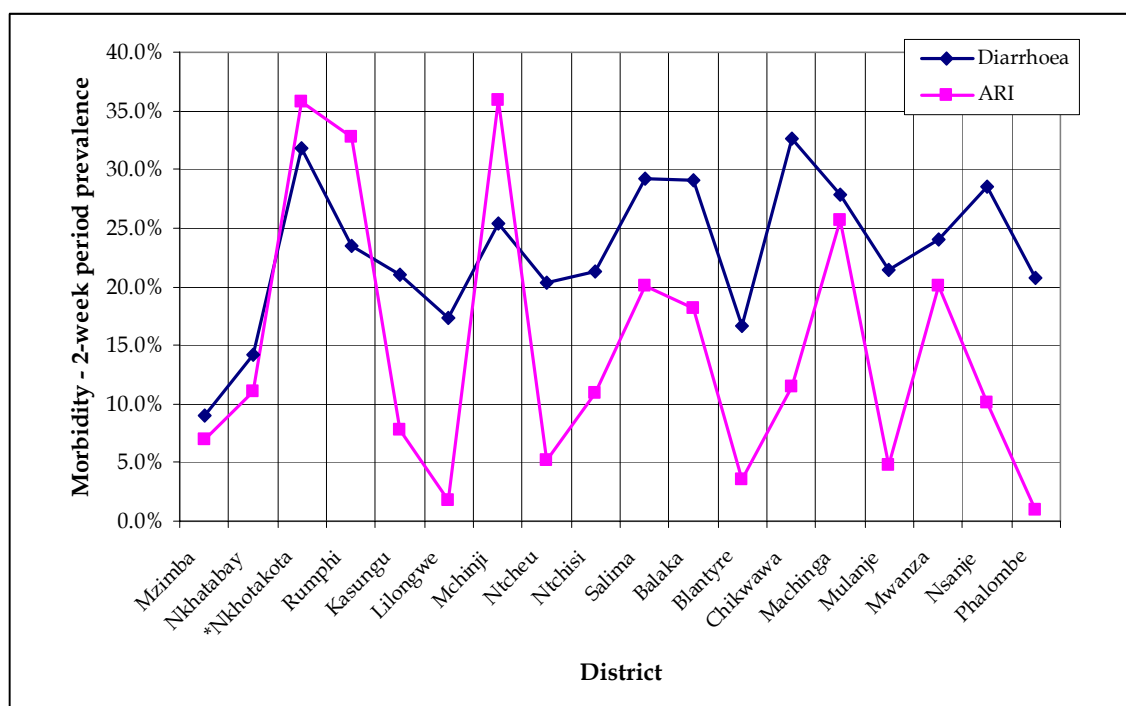
- a) *Measles* – In the early 1990s, Malawi continued to experience significantly high rates of measles morbidity and mortality despite reasonable immunization coverage. In 1998, it was decided to implement a supplemental immunization or ‘catch-up’ campaign to deal with this problem. The campaign targeted children from 9 months to 15 years and was successful in preventing any measles outbreaks in the country since then. A WHO Health Assessment Mission to Malawi in April-May 2002 found no *measles outbreak* during the food crisis and a routine EPI campaign was conducted in August 2002 so the VAC nutrition survey found that the measles immunization was more than 90% in most districts.
- b) *Vitamin A* coverage was quite high as well with most districts above 80% and several above 90%. Although the vitamin A capsules are distributed during the measles vaccination campaign the coverage is lower. These results require further investigation.
- c) *Cholera outbreaks* were reported during the lean season in February-April 2002 with a case-fatality rate of 2.8%, which was of endemic proportions. The WHO team learned that there are seasonal cholera epidemics every year but in times of hunger crisis, they are more severe and thus the health community should be poised to prevent more severe outbreaks before the 2003 harvest.

**Chart 6.8 – Prevalence of morbidity in children by age group (MDHS 2000)**



- c) The 2000 MDHS found that the percentage of children under five who were ill with a cough accompanied by short, rapid breathing (*symptoms of ARI*) was 26.7 percent. Chart 6.6 outlines the two-week period prevalence of ARI by child age group, showing that it starts high in very young children and peaks at 35% in children 6-11 months of age, followed by a gradual but steady decrease. So far, there are no unusual outbreaks of ARI in the communities have been reported and the second round of nutrition surveys will collect updated information on the prevalence of ARI.

**Chart 6.9 – Prevalence of morbidity in children < 5 years (Round 1, VAC Nutrition Surveys)**



- d) The two-week period prevalence of *diarrhoea* found during the MDHS was 17.6% for children < 5 years of age. It was slightly higher in males (18.4%) than in females (16.7%) and higher in rural areas (18.1%). By region, diarrhoea prevalence was lowest in the North (12.8%), 17.3% in the South and highest in the Central region (19.1%) which mirrors the same trends found in prevalence of underweight and stunting in children. Chart 6.6 shows the prevalence by age group, indicating a peak in children 6 to 23 months of age and very low prevalence in the oldest age groups.
- e) The *morbidity estimates* from the VAC nutrition surveys are somewhat inconsistent (Chart 6.7) but show a general trend that reported diarrhoea prevalence is higher in most areas than acute respiratory infection (ARI). There don't appear to be any regional trends either. The VAC Nutrition working group questions the validity of the results due to problems with interviewer bias and recall of the respondents.
- f) WFP Malawi received \$50,000 for *de-worming* activities for primary students attending schools supported by WFP school feeding activities in Salima, Ntcheu, Thyolo and Nkhatabay districts. The intention is to de-worm 50,000 children twice a year with 26,000 already de-wormed in May 2002. In addition, UNICEF and WFP will work together to de-worm 110,000 children in 145 primary schools, funded through the current Regional EMOP.

#### D. WATER AND SANITATION

##### 1. Drinking water

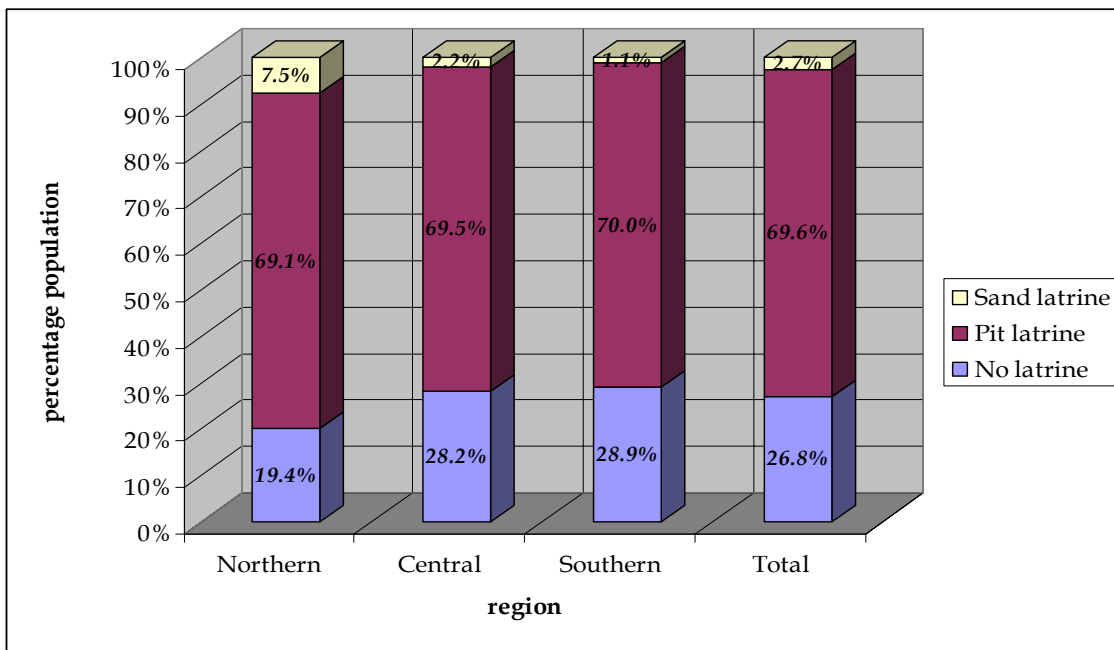
- From the MDHS survey report, the main sources of drinking water in Malawi were from a well (67%) or taps where water is piped in to the dwelling (23%). Only 11% of households reported using surface water.
- The July-August VAC community survey, 63% of communities got their water from safe sources (boreholes or protected wells) – 54% in the North, 50% in the Central and 76% in the South. Around 25% of the communities felt they do not have enough water currently while 50% predict there will be a problem accessing water before the next rains.

- The November-December 2002 VAC assessment found that 57% of 136 communities interviewed were getting their drinking water from a safe source. The highest was in the Southern region (65%) with about half of the communities in Central and Northern region using safe drinking water sources. There were many reports of broken boreholes with complaints of villagers not receiving training or equipment for repairs. In addition, many communities reported having boreholes that were drilled through Government contractors but were never completed. Many communities in the North were using river, stream or lake water for drinking.
- About 65% of the communities reported that they had enough water at present with the highest being in the North (70%) and lowest in Central region (59%). Consequently, 63% of the communities in the Central region thought there would be problems accessing enough water in the near future – especially if the rains continued to be delayed. About 40% of the communities in the North and South thought there might be a problem accessing enough water in the near future.

**2. Sanitation**

- Regarding sanitation, 80% of households in Malawi use pit latrines, 2% have flush toilets, and 18% have no facilities, according to the 2000 MDHS survey.
- Additional information regarding sanitation in rural communities was collected in the second round of VAC household assessments and is presented in Chart 6.8. Approximately 70% of the households in the sample of communities were using pit latrines with only 3% having sand pit latrines. A total of 27% of households had no latrine facility at all. This varied by region, with a higher percentage of households in the Central and South having no toilet facility – nearly 30 percent.

**Chart 6.10 – Types of latrines used by households in sampled communities, by Region**



**E. EDUCATION**

- In the 2000 MDHS survey, information on *educational attainment* was collected for every member of the household. The proportion of the population over age 6 that has achieved any education varies among the regions and districts in Malawi. The Northern Region has the highest education levels for both males (92%) and females (85%). The lowest level for females is found in the Southern Region (68%) and for males, in the Central Region (82%). The lowest educational attainment for adult men and women was found in Mangochi district where the median years of education was 1 for men and 0 for women.

- b) The *rates of school attendance improved* greatly between 1992 and 2000 where it was found that only 7% of children **10-14 years** of age had never been to school. The government introduced tuition-free primary education in 1994. However, in 2000 there were still 26% of girls and 28% of boys **6-9 years** of age who had never attended school.
- c) The *Net Attendance Ratio* (NAR) for primary school is the percentage of the primary-school-age (6-13 years) population that is attending primary school. From the 2000 MDHS, it was found that the NAR for girls was slightly higher than boys (79 versus 77 percent). The primary NAR was highest for children in the Northern Region (88%) compared to the Central and Southern regions (77% each).
- d) The *repetition rates* (percentage of students in a given standard who are repeating that standard) are much higher in children in rural areas (47.1%) but with little variation between regions – 42.7% in the North, 46.7% in Central and 44.6% in the South.
- e) *Dropout rates* (percentage of students in a given standard in the previous school year who are not currently attending school) are slightly higher in boys (3.3%) than girls (2.2%) – three times higher in rural areas (2.9%) than urban, and much higher in the Southern region (3.9%).
- f) As already mentioned, WFP is supporting *emergency school feeding* programmes in 145 primary schools as well as feeding primary school children in 4 other districts for a total of about 160,000 students.

g) **Preliminary findings from the November-December VAC assessment**

The survey team members were asked for their impressions on school attendance and dropouts in the past 3 months, based on their recent field experience and interviews with 1600 households around the country. The following are summaries of their responses:

- *North (Chitipa, Rumphi & Karonga)* – Dropping out of school was not a significant issue in the districts, with no difference across wealth groups.
- *Central (Kasungu, Dowa, Ntchisi, Mchinji)* – School dropouts are mainly due to poverty with the parents being unable to feed and clothe the children properly. When asked why children were not attending school, the parents cited ‘laziness’ as a common reason rather than lack of food or funds.
- *Central (Lilongwe, Salima, Dedza, Ntcheu)* – The main reason for children not being in school is because the parents don’t know the importance of school – this is more pronounced in families from poor and middle wealth groups. Most of the school-aged children are involved in *ganyu* (agricultural labour) for cash and food.
- *South Central (Mangochi, Machinga, Balaka)* – School drop-outs are due to parents’ ignorance about the importance of education. The current food crisis has just accelerated the situation. This is more pronounced among the poor and middle wealth groups with school-aged children doing *ganyu* for cash or food.
- *Upper South (Blantyre, Mwanza, Zomba)* – For most children who were reported to have dropped out of school, the main reasons cited were a lack of interest in education or a lack of access to necessities such as clothes and school materials. None of the respondents indicated the food crisis as a direct reason for dropping out of school (or a lack of funds for fees). However, most dropouts were from poor families where children were involved in doing *ganyu* to raise income for their families.
- *Middle South (Chiradzulu, Phalombe, Mulanje)* – In the areas visited, there was not much evidence of school drop-outs. However, since school was not in session, most children were busily engaged in household chores.
- *Lower South (Thyolo, Chikwawa, Nsanje)* – From the recent field experience, nothing was observed regarding school dropouts relative to the current food crisis. Only a few cases were reported and were mainly due to a lack of school clothes. However, some families reported that children had dropped out in the past 6-12 months but that was not during the reference period of the survey questionnaire and was not followed up by the enumerators.

## F. PROTECTION

In Malawi there is a committee represented by SC-UK, UNICEF and WFP, which is organizing a plan of action for the "Prevention of Sexual Exploitation and Abuse Against Women and Children in a Humanitarian Crisis." They have a plan to conduct a series of four workshops and one ongoing training session for about 1700 people between December 2002 and February 2003. They include:

- Workshop One – Formulation of structures and procedures to report sexual exploitation. Participants include Government and key stakeholders from the NGO consortium.
- Workshop Two – Strategic planning session with 12 Selected NGO trainers.
- Workshop Three – Training field staff and operational managers in the protection and women and children against sexual exploitation and abuse. Participants will include approximately 450 field members from around the country.
- Workshop Four – Training of project managers and managers of commercial transport companies on the protection of women and children against sexual exploitation and abuse. This workshop will include 20 managers from the NGO consortium as well as the commercial transport company employees.

In addition, there is a sub-committee chaired by Oxfam, which focuses on sensitisation, awareness and advocacy issues for the protection of vulnerable groups. Additional information will be made available in a later version of this report.

## VII. FUTURE AGRICULTURAL PRODUCTION PROSPECTS

### A. GENERAL CONDITIONS FOR 2002-03 AGRICULTURAL SEASON

#### 1. Climatic conditions

According to the Republic of Malawi Meteorological Services Bulletins, for the Decad 1-10 November 2002, many areas in the country experienced substantial amounts of rainfall, especially in southern and northern Malawi. Planting commenced in those areas that received the most rainfall, as rainfall were in line with the historical patterns, but most farmers had not yet begun planting. As a result the main activities of farmers were the procurement of inputs and preparation of land for planting.

For the period from 11-20 November, the country experienced dry weather conditions over most of the country. Normally, planting rains begin in early November in the South and parts of Central region before progressing northwards. Practically, this coincide with decadal rainfall over 20 mm and cumulative rainfall over the initial 50 mm. According to the Met Services, the 'agricultural window' for planting in most southern areas was narrowing towards the end of November and farmers were be encouraged to plant early maturing crop varieties where possible which would reduce the risk of water stress at tasseling and maturing periods. However, this is often not the case since most farmers plant whatever types of seeds they have available – mainly medium term varieties. Heavy rains were experienced in most parts of the country from 10 December to 10 January, creating floods and water logging. Damages on crops are reported by the Ministry of Agriculture and Irrigation in Salima, Ntcheu, Balaka, Nsanje, Karonga.. Charts 7.1 through 7.3 compare the rainfall for the 2002-03 agricultural season to "normal" rains for the same periods, by region.

**Chart 7.1 – Cumulative rainfall for northern Malawi compared to ‘normal’**

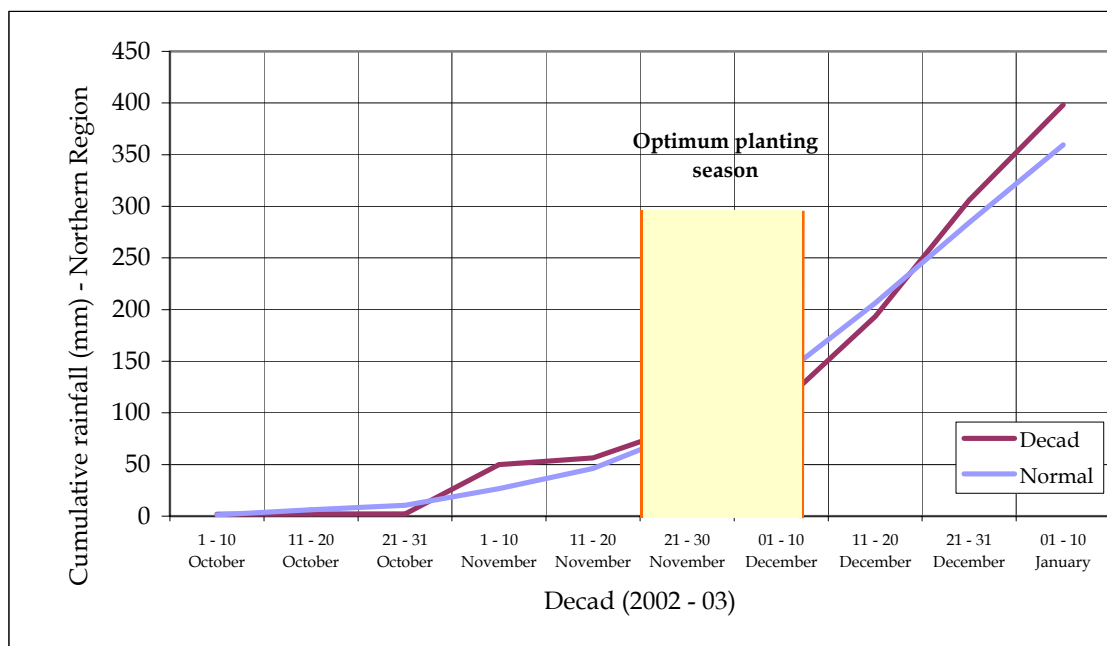


Chart 7.1 shows that the rainfall for the planting period of the 2002-03 agricultural season was above normal in the Northern region of Malawi in early November due to excessive rainfall in Mzuzu, Karonga and Chipita the first decad of November (87 mm average comparing to 10 mm in normal years), while the region received only 53 percent of normal rains in the following month (optimum planting period), impacting negatively the crops that have been planted early November.

**Chart 7.2 – Cumulative rainfall for Central Malawi compared to ‘normal’**

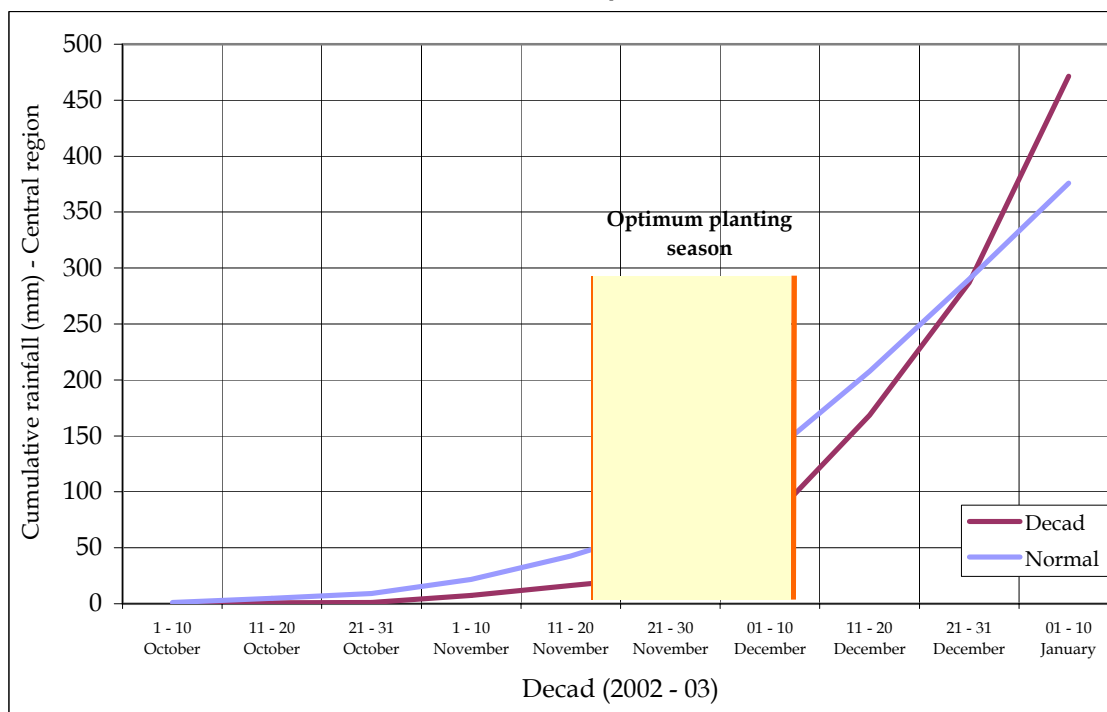


Chart 7.2 shows that in the Central Region, the cumulative rainfall was about 65% below normal by the end of November, delaying dramatically the planting of summer crops while the gap was closed by the end of the year and excessive water was reported early January (184 mm in average, with some picks over 340 mm, compared to 86 mm in normal years), creating floods and water logging in Salima, Bwanje valley, Ntcheu.

**Chart 7.3 – Cumulative rainfall for Southern Malawi compared to ‘normal’**

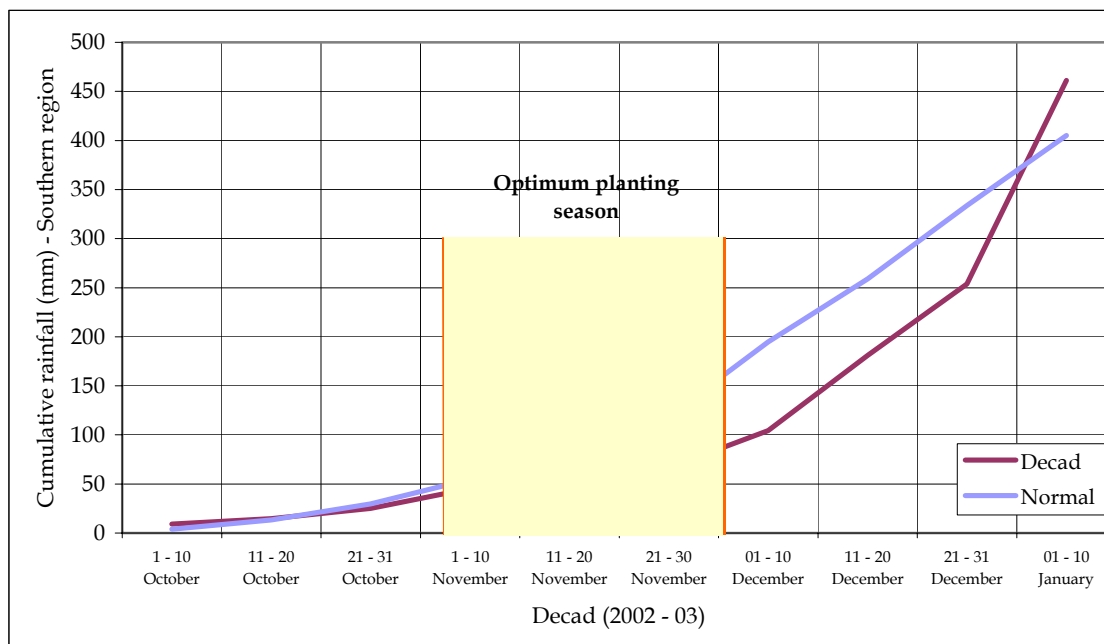


Chart 7.3 shows that in the Southern Region, the rains were following a normal pattern, encouraging farmers to plant early November, but slacked off during the middle decad of November. By the end of November, cumulative rainfall was 44% below normal, while December rainfall were in line with historical figures (190 mm average compared to 210 mm in normal years). Excessive rainfall were recorded during the first decad of January in the Southern Region (210 mm instead of 70 mm in average), with maximum of 297.3 mm at Makoka met station, resulting in floods in Nsanje and Balaka Districts.

**2. Seeds/Fertilizer**

As of mid-November, farm inputs were generally available in most parts of the country (FEWSNet Malawi)., the offer being reasonably in line with the demand. There were a few places in the Southern region such as Mulanje, Chikwawa, Nsanje, Dedza districts and Nkhatabay in the North where the availability of maize seed was uncertain.. However, lack of inputs became more obvious in December, when the planting rains materialised Prices of fertilizer have remained stable at around MK 1,000-1,700 for 50 kgs while maize seed was selling at around MK 800-1000 for 10 kilograms.. However, there is still a problem with purchasing power - the average rural farmer cannot afford inputs at those prices, especially during the current food crisis. As a result, the Government of Malawi decided to scale up its free inputs program to ensure most farmers have timely access to seed and fertilizer.

On October 8, 2002 the Expanded Input Program (ETIP) was launched to provide 3 million packs of maize and legume seed as well as fertilizer to smallholder farming households. This programme is an expansion of what began as the ‘Starter Pack’ in the 1998-99 farming season that targeted all smallholder farmers. The Starter Pack was distributed for 2 seasons and then was scaled down to 1.5 million beneficiaries in the 2000-01 season and 1 million in the 2001-02 season when it was renamed the Targeted Inputs Program (TIP). The ETIP is funded by the Malawi Government, DFID, the Norwegian government and the World Bank.

In addition to the ETIP, FAO and various NGOs are actively implementing various farm input programs but which have local coverage. Some areas of the Central and Southern region benefited from free distribution of inputs for winter cropping but many households failed to plant due to moisture stress and retained these inputs for the current planting season (2002-03).

The November-December VAC survey conducted group interviews in 136 communities across the country and found that approximately 71% of households reported that they would have access to seed for cereal production for the 2002-03 agricultural season while 46% reported that they would

have access to fertilizer. In the North, 60% of the households would have access to seed and 18% would use fertilizer while in the South, 71% would access seed and 58% planned to use fertilizer. In the Central region, 77% of the households reported access to cereal seed and 44% reported fertilizer access. Table 7.1 shows the sources of seed and fertilizer by region and percentage of responses from community interviews.

**Table 7.1 – Sources of inputs by region – percentage of responses (MVAC, Dec.2002)**

	Own stocks	Purchase	Borrow	Government	Don't know
Sources of cereal seed					
North	50%	87.5%	8%	58%	33%
Central	70%	91%	4%	91%	9%
South	24%	59%	2%	97%	6%
Sources of fertilizer					
North	0	74%	5%	68%	5%
Central	11%	74%	9%	85%	0
South	0	49%	0	97%	3%

As the table illustrates, community groups named several sources of seed and fertilizer – mostly likely because the amount provided by the ETIP (2 kilograms) is not enough to plant the entire field. Nearly all the communities in the South and Central regions indicated that they would receive or had received seed from the government but also large numbers in the Central were relying on either their current stocks, winter TIP inputs or purchases. Since reliance on cereal production is not universal in the North, fewer communities named the Government (ETIP) as a source of inputs.

In addition, there are reports that some farmers managed to plant early but then their crops had been damaged by army worms (2,000 Hectares reported by FAO in December) or suffered from water stress (mainly in the South). Their access to additional seed is likely to be limited, even seed of poor quality.

### 3. Tools

The ownership of different tools in the households interviewed has been assessed. Hoes, axe, plough and panga (machete knife) mentioned as the most often owned. The ownership varied among male and female-headed households. Out of the females headed households 20% owned a hoe compared to 77% of the male-headed households. 11% of the female-headed and 59.7% of the male-headed households owned an axe. Most significant difference was notable in the ownership of a panga knife: only 6.4 % of the female-headed households but 50.4% of the male headed households stated having a panga knife.

#### B. GOVERNMENT POLICIES AND ACTIONS

As already mentioned, the Government is actively involved in facilitating the commercial importation of maize for ADMARC markets. In addition, through funding from the EU, they have been able to purchase about 27,000 MT of maize locally to replenish some of the stores in the Strategic Grain Reserve in preparation for worsening food security conditions early in 2003. The Government is also actively supporting the distribution of inputs through the Targeted Inputs Programme (TIP) for winter planting and the Expanded Inputs Programme (ETIP) for the 2002-03 agriculture season through DFID and other organizations.

In response to the current crisis, the Government, along with cooperating partners, is implementing a Joint Emergency Food Aid Programme (JEFAP) to provide assistance to affected people. Between June and August 2002 the programme has been targeting half million beneficiaries. The JEFAP increased the number of beneficiaries to 2.1 million in September, and

will increase the number of beneficiaries to 2.6 million in January 2003, with plans to scale up operations to assist 3.2 million during the hunger season between December and March 2003.

The Government of Malawi launched a fertilizer and seed loan scheme for salaried employees in the public and private sectors on 11<sup>th</sup> October 2002. The loan is at an administrative interest rate of 5 percent with a repayment period of six months. The scheme is one of the strategies the Government is implementing to help avoid future food crises.

Other Government activities include:

- Promoting the use of compost manure as an alternative to organic fertilizer, which is often too expensive for poor households to purchase.
- Encouraging rural households to use irrigation schemes rather than relying solely on rainfed irrigation for cereal production.
- For rural people who have no land, the Government is planning to implement a resettlement scheme in order to ensure they have arable land for production.

A new initiative from the Food Crisis Joint Task Force Technical Secretariat is the formation of the Food Security Policy Sub-Committee, which is tasked, with the development of food security policy for Malawi. The sub-Committee consists of representatives of the Government, NGOs, and multilateral and bilateral agencies. A Food Security Policy Working Group, under the guidance of the Sub-Committee will be responsible for drafting the food security policy. It has been recommended that the Working Group be composed of 4 to 6 persons with varying backgrounds in: agricultural economics, health and nutrition, rural economics and macro economics, all with particular knowledge of and experience in Malawi. The main implication for policy is that food insecurity should be addressed in the broader framework for poverty reduction and sustainable development. It is suggested that a food security policy for Malawi have the following objectives:

- Ensure a balanced strategy that emphasizes inter-sectoral links that contribute to the overall goals of poverty reduction and food security;
- Improve stakeholder ownership of rural development at all levels
- Improve market access and utilization in rural areas as well as local and international logistics.
- Commercialise and privatise to ensure an appropriate level of involvement of the private sector, including financial institutions.
- Mainstreaming of environmental and social concerns into all levels of food security policy, including not only the poor, but also households and communities affected by HIV/AIDS and related chronic illnesses, as well as gender.
- Ensure coherence between sector strategy and sector expenditure plans and programmes.

### *VIII. RECOMMENDATION AND CONCLUSIONS*

#### **A. WINTER CROP**

After realizing that there is an impending failure of the main crop, MoAI embarked on winter maize crop TIP with the assistance from DFID and other collaborating partners. The main objective was to boost maize production that was affected by drought as well as floods in other areas. The initial winter production estimate was put at 166,000MT but was reduced to 120,000MT due to moisture stress. Despite the fact that the programme had some problems like late inputs delivery and in addition, most of the maize suffered from moisture stress, the winter crop had an impact on the availability of maize as well as food security in the country. Winter TIP contributed 41,000MT or 34% of the total winter maize production. In this case, it is imperative that the government through MoAI should put a mechanism in place for it to move swiftly in distributing free inputs or selling the inputs at an affordable price when there is an indication of main crop failure, this will encourage local production of the grain rather than encourage consumption of the imported maize grain which is very expensive.

#### **B. HYBRID MAIZE SEED**

Based on the ten year analysis of production trend, there is an indication that good uptake of hybrid maize seed improved the production of the grain as compared to when more local variety

was used by the smallholder farmers. The VAC assessment indicates that approximately 71% of the households will have access to seed for cereal production while 46% will be able to apply fertilizer this season. However, the majority of them depended on TIP. There is need for the government to find ways for which smallholder farmers can easily access improved maize varieties. This can be done through the MoAI by intensifying seed multiplication programmes by smallholder farmers in addition to increasing the number of beneficiaries in safety nets programmes such as TIP, Inputs for Work etc.

From the assessment it has been observed that groundnuts which is one of the main source of both food and income for many rural Malawians especially in Central and Southern regions has been increasing over the years but dropped lately. The main reason for the drop has been cited as lack of reliable market and unpredictable prices. The government through the MoAI/MCI should organize the farmers into associations in order for them to bargain for better prices and improve their income. In addition, there is need to explore other markets outside Malawi. In general, pulse production has increased for the past years. This can be partly attributed to TIP especially on soya and groundnuts. There is need for Government to continue making sure that seed is available and accessible by many smallholder farmers as these legumes improve both nutrition as well as soil fertility.

### C. FOOD AVAILABILITY AND ACCESS

The food balance analysis, which was based on the final crop estimates that were released in June, 2002 indicated that the country faces a deficit of about 674,000MT (maize equivalent) for the 2002/03 consumption year. As of now, Malawi received about 458,000 MT of import maize leaving the cereal gap of about 216,000 MT. (*All the food aid captured in this assessment is handled by WFP*). It is believed that the gap has *significantly been reduced* by private trader imports especially those from Mozambique and Tanzania, and other non-WFP food aid assistance. In addition, the gap looks bigger due to the fact that government needs 60,000MT for closing food stocks, which is on the higher side in an emergency situation. All in all, the humanitarian pipeline appears secure and commercial imports are significant. When these are combined, Malawi should be able to have enough food to last through to the next harvest.

From the VAC community assessment, maize is most readily available to rural community in the Southern region and less available in the North, most likely due to the preference or availability of both cassava and rice in some districts in the region. The assessment showed that ADMARC is more prepared this year than in the past with maize in all their markets and a strategy to report any shortage to their main depot for replenishment. But for the poorer farmers, many preferred to purchase from local markets where it is relatively cheaper and also easier to purchase in small amounts. This is due to the fact local traders bought stocks of maize from the market after harvest on speculation that the price trends will be like they were last season but the availability of maize at ADMARC has most likely undercut their business.

The cost of maize has been rising slowly since the harvest but for most places in the country, is still maintained around the official price (K17/kg). (*Availability of maize in ADMARC markets has kept the maize price at this price, at least as of November.*) Nearly all the communities surveyed by the VAC team reported that the cost for 50kg bag of maize was between MK600 and MK850. The cheaper one being imported either from Mozambique or Tanzania. However, this is based on availability and not access. Based on the ADMARC sales figures, it is apparent that local communities in the remote areas are finding it hard to access the maize despite the fact it is sold at a subsidized price of MK17 per kilogram. Lack of purchasing power is the main factor considering the fact that these rural people live on less than a dollar a day. That is why the number of food aid beneficiaries has increased from 3.2 million to 3.6 million despite the fact that maize is available in almost all the markets in the country. In this case, government and all other partners should find a way of reaching out these people otherwise the situation has worsened as compared to first assessment in August/September. 2002.

Government should continue encouraging farmers to go into small scale irrigation in order to boost maize production. There should be arrangement to provide equipment such as treadle pumps and other inputs to groups of smallholder farmers.

#### D. LIVESTOCK OWNERSHIP

In Malawi, livestock sales are one of the coping strategies when there is a food shortage in addition to being source of food and income. The fact that only 6% of households owned cattle while 26% owned at least one goat or sheep tells a story that the majority of the rural people had little assets or nothing to turn to when there is a problem like food shortage. This *indicates that households have not recovered from last year's food crisis. Government should intensify its programme on improving livestock assets in rural areas through 'pay back in kind' loan scheme.* During the assessment, some of the households indicated that they had no other means apart from selling the only livestock they had. Even the figures released by MoAI portray the decreasing livestock scenario due to high livestock sales during February-March peak of the hunger season. Since livestock are both a source of food and income, the dwindling numbers in almost all the categories need to be checked upon. There is need to put much effort in livestock production in order to broaden the asset base of the rural community which will assist during the crisis like this one.

#### E. HOUSEHOLD INCOME

Overall, the most common economic activity in rural Malawi is agricultural labour, which was reported by nearly half of all households interviewed. Only 38% realize their income through cash crop sales. This shows that good populations of the rural poor smallholder farmers are engaged in real subsistence farming whereby they just produce for own consumption and no more. In addition, this scenario shows that rural communities have very limited economic base as the failure of the crop means no income. *The assessment indicates that there are very few NGO or government food-for-work programmes in the rural areas to mitigate against shortage of household assets.* There is need to start programmes that can broaden their economic base such as provision of small credit, food for assets to the rural poor communities especially female headed households who are more reliant on ganyu or little crop sales.

There is an increase in the number of households relying on coping mechanisms, particularly on reducing amount of food eaten (73% during November assessment versus 62% during August/September assessment); reducing number of meals eaten (76% during November assessment versus 60% during August assessment); skipping entire days without eating due to lack of money (48% during November assessment versus 32% during August assessment); and reducing expenditure on non-food purchase (64% during November assessment versus 33% during August assessment). As noted above, this reflects lack of purchasing power of the households to purchase from the market. In addition, dietary diversification is very important as even those with cassava or sweet potato regard themselves as having nothing to eat. This can be attributed to lack of proper storage techniques in the case of sweet potatoes and lack of proper preparation and processing in the case of cassava that renders rural community to depend on maize for food. It is important for the government to engage in training the rural communities on how best they can store other crops as well as good preparation and food processing methods.

Silence still surrounds the HIV/AIDS epidemic due to the stigma associated with the epidemic. Households could not talk freely and frankly about the pandemic. About from measuring the level of awareness, which is very high, the level of prevalence could not be ascertained. This area requires a special study to help link the epidemic to food security. Recently, WFP advertised for consultancy on the area. It is envisaged that VAC will be able to use the study findings in the next assessment report.

Some communities indicated inability to feed and cloth children as the major factor contributing to school drop out. This is likely to worsen as the households get into the critical lean period (January – March 2003).

There are indications that crops in some parts of the country have been damaged by army worms or suffered from water stress. Other parts experienced floods. The significance of these factors should be assessed. This could come clearly in the next round of assessment.

The VAC assessment indicates that the stress of food insecurity on the under five population has not yet begun to express itself in the form of acute malnutrition as the prevalence is still low with Mwanza being the highest at 6.6% GAM. Due to the nature of the current food crisis and early response by humanitarian community and Malawi government, the likelihood of a decline in nutritional status of the under five population is still there but will be a slow process *that need to be closely monitored by the concerned parties.*

Some of the factors highlighted by the communities as causing food shortage are disasters such as floods. Some of these disasters can be prevented or their impact lessened if government with assistance from the donors, could come up with Disaster Mitigation programmes.

There is need to strengthen the food security monitoring system at all levels in the country. This will make information to be available on time for proper decision-making and avoid panicking when there is an impending food shortage. Donors should assist in capacity building in the area of food security monitoring in the Ministry of Agriculture as well as the Vulnerability Assessment Committee (VAC)

There is an urgent need for the government to come up with a well articulated Food Security Policy that will outline what to be done in times of crisis like this one and state clearly the role of each stakeholder or institution.