

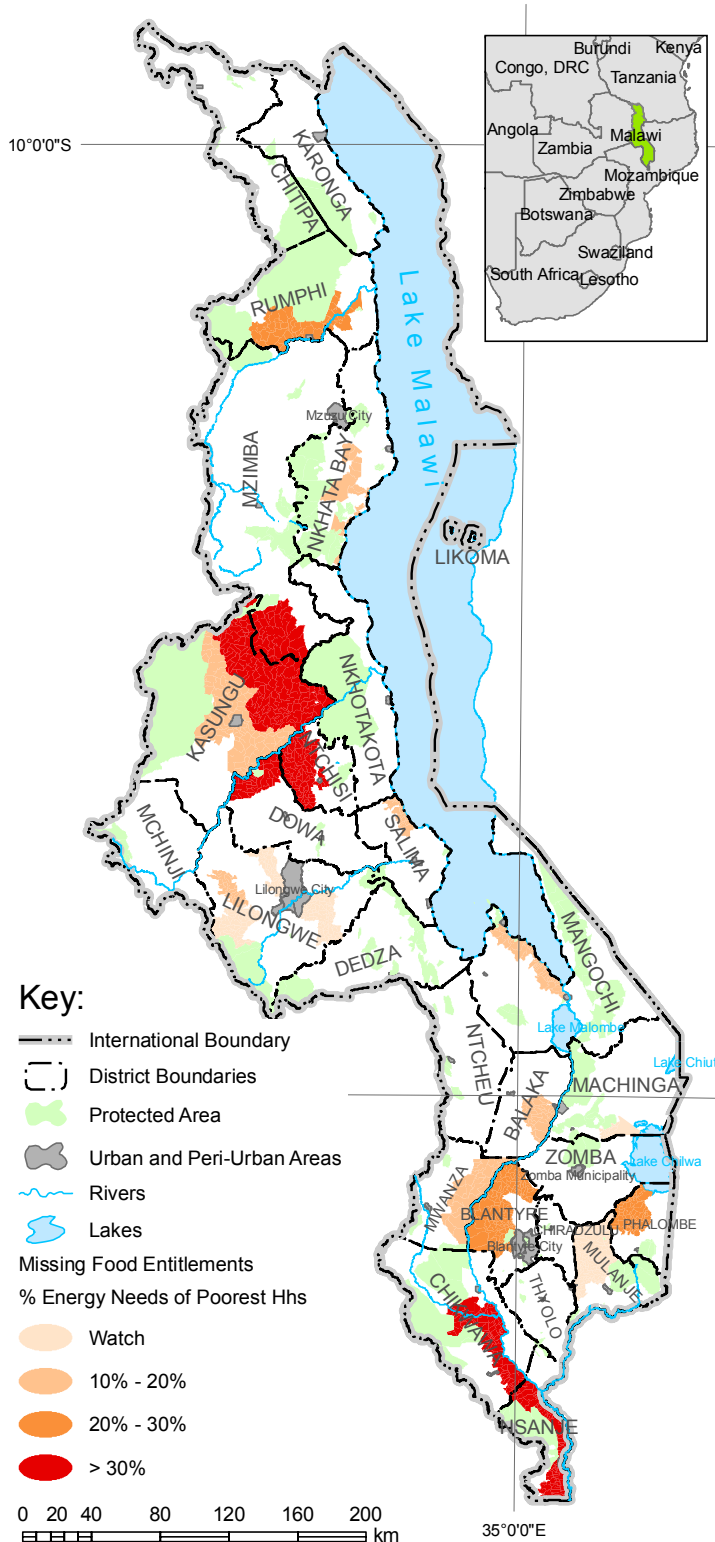
Food Security Monitoring Report

Malawi

June 2006

Vulnerable Areas in Malawi

Poorest Households: Forecast for April 2006 to April 2007



MALAWI
Vulnerability
Assessment Committee

**Malawi
Vulnerability
Assessment
Committee**

In collaboration with

**The SADC-
FANR
Regional
Vulnerability
Assessment
Committee**



SADC FANR
Vulnerability
Assessment Committee



Government of the
Republic of Malawi

Participating Agencies

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5. United Nations Children's Fund (Nutrition assessment, nutrition-socio-economic correlations)
6. FEWS-NET (price data)
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Box 1: What are 'Missing Food Entitlements'?

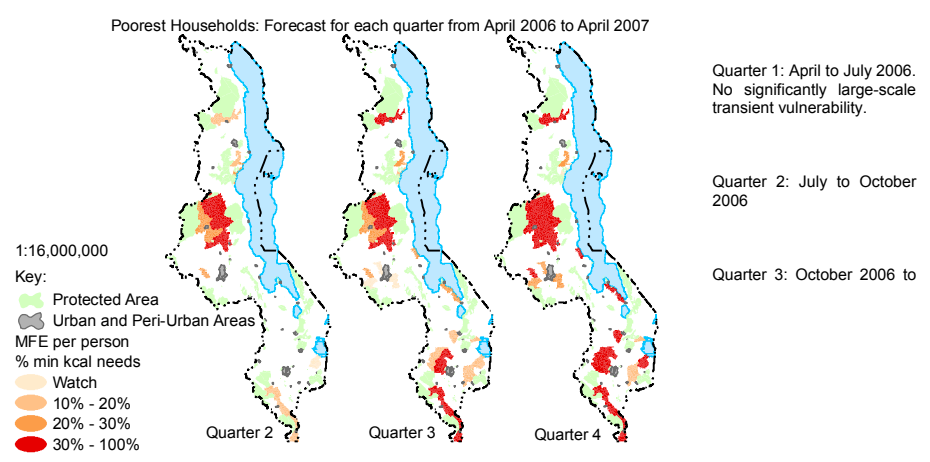
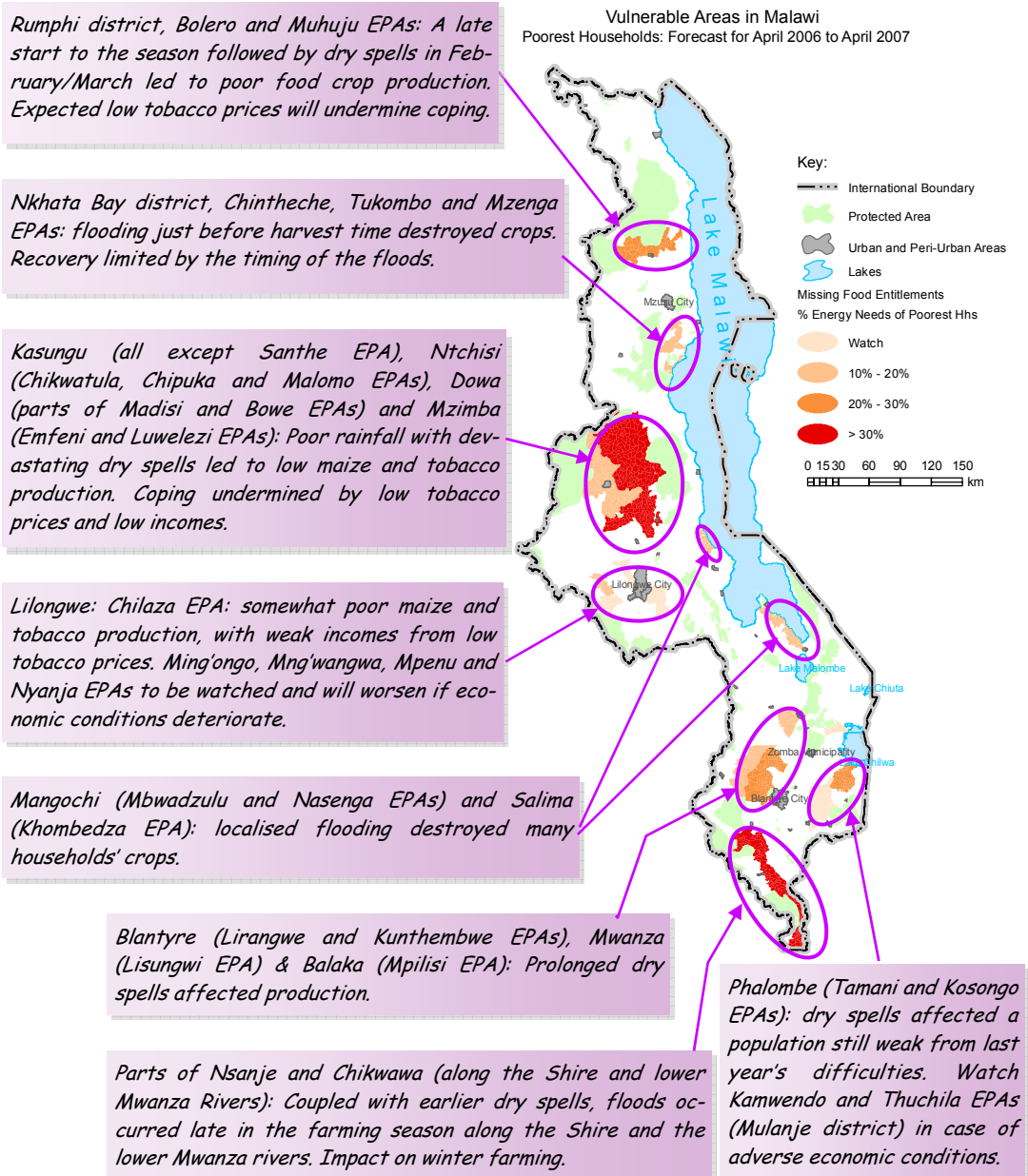
The term 'missing food entitlement' is used rather than 'deficit' because the latter term is usually associated with the *shortfall in production only*. The shortfall in production actually tells us how much food needs to be imported in order to meet local *average* consumption but it does not tell us whether people will be able to get their hands on that food. The missing food entitlement is the sum of all the food that is missing at household level, *after households have exhausted all the options* they have for obtaining it. It therefore represents the total missing calories from people's intake or consumption, rather than from their produc-

<i>Table I – Total Missing Food Entitlements and Cash Requirements</i>		
	Scenario 1	Scenario 2
Maize Purchase Price Increase from Feb 2005-	+13% (MWK 19-23/kg)	+93% (MWK 32-40/kg)
Change in price from sce-	+71%	
Overall Population Af-	4,224,400	4,612,200
Missing Food Entitlements	269,600 MT	414,400 MT
Change in food from sce-	+54%	
Cash Requirements	MWK 6.04 billion, US\$ 48.7 million	MWK 18.02 billion, US\$ 145.3 million
Change in cash from sce-	+198%	

Box 2: Total Missing Food Entitlements (in cash or in maize equivalents)

The MFE totals in Table are meant as overall planning figures, they are not meant to be used to determine precise targeting at sub-district levels. Rather, selective targeting should be based on the criteria for the wealth groups, presented in Table in the Appendix. These wealth descriptions can be combined with other characteristics, such as dependency ratios, degrees of loss or failure, etc. to obtain precise targeting criteria.

Maps



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Glossary of Terms and Abbreviations

Food Security Monitoring Report—June 2006

National Overview

Introduction

The Malawi Vulnerability Assessment Committee (MVAC) is a consortium of organisations working to assess and reduce vulnerability in Malawi; it includes Government, United Nations' Agencies and Non-Government Organisations. The Ministry of Economic Planning and Development in the Government of Malawi chairs the MVAC.

Despite a good agricultural season resulting in favourable prospects for the main 2006 harvest, Malawians continue to experience unacceptably high levels of vulnerability and food insecurity, although this year, much of it is chronic and predictable. Economic changes such as worsened terms of trade for agricultural commodities grown by the rural poor, moderately high inflation and a steadily weakening local currency have combined with degraded soils, shrinking land holdings, illness and a succession of unfavourable and erratic weather patterns to reduce the ability of the poorest households to secure sufficient income and production to meet their basic needs. This situation is acute in certain parts of the country.

The livelihoods-based approach used by the MVAC provides relevant information and analysis on the rural poor's food access and entitlements, informing Government ministries, international organisations and civil society. This year the MVAC has also supplemented its livelihoods information with a nutritional component that provides an annual starting point on well-being (particularly for children) and uncovers information of food utilisation.

In so doing, the MVAC aims to provide early warning of pending disasters, guidance on rural development strategies, safety nets programming and to assist in policy formulation on food security and poverty reduction.

The Aim of this Assessment

This assessment is an annual exercise conducted by the MVAC to inform its stakeholders in obtaining a forecast for vulnerability to food insecurity in Malawi for the coming agricultural consumption year, from April 2006 (in the South) and May 2006 (in the Centre and North) to March and April 2007. This is based on emerging information from the main harvest that begins in April and is normally concluded in July. Therefore, the analysis builds a framework for interpreting future monitoring information. Examples of this monitoring information include crop estimates and numbers of households without food from the Ministry of Agriculture and Food Security (MoAFS), health and nutritional status data from the Ministry of Health (MoH) or the Department of Nutrition, HIV and AIDS, economic data from the National Statistics office (NSO), data and analysis by FEWS-NET, surveillance data from Action Against Hunger (AAH), the Community Household Surveys from the World Food Programme (WFP) and others.

In spite of the good national production of food and high aggregate availability, food in the country does not necessarily automatically translate into food at home or in bellies. Some areas had poor or even failed harvests and in these areas, people may be so poor that they are unable to secure food offered up in the markets. Therefore, the question "what is the humanitarian need?" remains. This is a question about whether people are able to get their hands on enough food, whether

the sum of all the decent means they can employ for getting food, called their **entitlements**, are sufficient. Food entitlements are not as straight forward as food being around; they are determined as much by people's *exchange* options as their *productive* options. This report is largely concerned with answering this question, with relation to the sufficiently large-scale shocks that nevertheless occurred or could occur in parts of the country.

In 2003 and 2004, the MVAC conducted livelihood-zoning exercises, completing the Household Economy Approach (HEA) baseline surveys in all 18 rural livelihood zones in Malawi. This report draws from these baseline data in combination with information from the April/May 2006 MVAC assessment and secondary source data (principally the MoAFS Second Round Crop Estimates, population data and economic data) to develop projections for populations at risk and the missing food entitlements they face, between now and the next harvest at the end of March 2005. In addition, the MVAC collected basic information on market chains in the places they visited, as well as conducting a pilot nutritional survey in three of the affected areas.

The MVAC does recognise that in many parts of Malawi vulnerability and hunger persists from one year to another, regardless of climatic conditions and the ensuing growing season—this may be due to some long term shocks such as illness, loss of labour, higher dependency ratios or the irreversible loss of productive assets. Much of the above baseline information already contains information on this, and the MVAC is working providing more answers to the questions associated with this 'chronic' vulnerability; with the aim of ensuring the design successful long-term predictable social protection programmes.

This Report

The first section of this report, pages 1 to 6, consists of the Cover, the Executive Summary, the Table of Contents and a Glossary of Abbreviations. The next section, from page 7 to 24, contains the National Overview for the country. The next seven sections (pages 25 to 42) detail the expected conditions in each affected livelihood zone. The last section (from page 43) is an appendix with notes and tables that details the methodologies and the results for in different parts of the assessment .

Except where cited, the MVAC produced the information in this document and any quotation from it should be credited to the MVAC. However, all total missing food entitlements in either cash or food equivalents and numbers of affected populations are based on the official district population

The Methodology and the Areas Covered by this Assessment

The Forecast Analysis: Household Economy Baselines

The basic principle underlying the household economy approach⁵, is that analysing local livelihoods is essential for a proper understanding of the impact —at the household level— of shocks or hazards such as drought, conflict or market dislocation. Crop failure may, for example, leave one group of households destitute because the failed crop is their only source of staple food, while another group may be able to cope because they have alternative food and income sources, such as livestock or a trading business, that can make up the production shortfall. The household economy baseline captures this essential information on local livelihoods and coping strategies, making it available for analysing the impacts of a given hazard.

5 See the following documents VAC for more detailed descriptions of the methodology and for conducting baseline assessments: MVAC, "*Baseline Profiles for Malawi*" and Lawrence, M, "*Food Economy Scenario Analysis – a Guide for the Malawi VAC*" FEWS-NET and MVAC, 2004. For a full description of the approach and methodology, see Seaman, J et al "*The Household Economy Approach: A Resource Manual for Practitioners*", Save the Children UK, London (2000)

6 "Cash" income and income consumed directly by the household, e.g., crops that are grown and consumed as food.

Livelihood patterns vary from one area to another, according to many local geographical factors including climate, soil, and access to markets. The first step in a food economy analysis is therefore to prepare a **livelihood zone map**; that is, a map delineating geographical areas within which people share similar approximate patterns of access to income⁶, including crops and livestock and have similar access to markets. The livelihood zone map for Malawi is shown in the **Appendix III, “Map of the Livelihood Zones in Malawi”**, page 59. This map also shows the spatial relationships between these zones, the districts and the Ministry of Agriculture’s extension planning areas (EPAs).

The location of a household is one important factor that helps to determine its options for obtaining food and generating income. A household’s capital and in particular, asset holdings or wealth are also other contributing factors, since these determine access to the means of production or income generation. Wealth groups are typically distinguished from one another by differences in land holding, livestock holding, finance, education, skills, labour availability or social capital (kinship ties). Defining the different wealth groups in each zone is the second step in a food economy analysis, the output from which is a **wealth breakdown**.

Having grouped households according to where they live and their wealth, the next step is to generate **household economy baseline** information for typical households in each group for a defined reference or baseline year. Food access is determined by investigating the sum of the ways households obtain food —what food they grow, gather or receive as gifts, how much food they buy, how much cash income is earned in a year, and what other essential needs must be met with income earned. Once this baseline is established, an analysis can be made of the likely impact of a shock or hazard in a bad year. This involves assessing how food access will be affected by the shock, what other food sources can be added or expanded to make up initial shortages, and what final deficits emerge.

The Forecast Analysis: Entitlements and the Outcome

The objective is to investigate and to derive an outcome that describes the effects of a hazard⁷ on future access to food and income, so decisions can be taken about the most appropriate interventions. The rationale behind the approach is that a good understanding of how people have survived in the past provides a sound basis for projecting into the future. Three types of information are combined; information on baseline access, information on hazard (i.e. factors affecting access to food/income, such as crop production or market prices) and information on response strategies (i.e. the sources of food and income that people turn to when exposed to a hazard). The approach can be summarised as follows:

<p><i>Outcome is a function of the Baseline, the Hazard and the Response</i></p> <p>OR</p> <p><i>Outcome = f (Baseline, Hazard, Response)</i></p>
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The hazard is defined by a ‘problem specification’ that is essentially a comparison between conditions this year and those in the baseline. An added advantage of this type of analysis is that by looking at year-on-year changes, small errors in the source data do significantly alter the outcome⁸.

7 A hazard may be defined as any event or factor, be it environmental, economic or social conditions that is likely to affect access to food or income at household level (see the section ‘Current Hazards (Changes)’ on pages 12. The change may occur very rapidly or its onset may be slow and less immediately noticeable.

8 For example, a small error in crop production (say 10%) would do little to the problem specification calculation but such an error may have serious consequences on other analyses, such as the national food balance sheet.

Entitlements are all the means people have at their disposal to meet their basic needs. In a sense, entitlements are like property rights; the work that they do, their production and their assets and savings should suffice to provide them with the bare minimum⁹ to live on. In this analysis, entitlements are the sum of all the ways that people can reasonably meet their minimum needs. Entitlements are ‘what people have’, rather than ‘what they are entitled to’. When entitlements fall short of people’s basic needs then we say there are ‘missing entitlements’. When hunger is the primary want among households in an area, they might do everything they can to maximise their access to food and, after allowing for some non-food consumption and access to basic services, we can call the difference between entitlements and needs ‘missing food entitlements’¹⁰.

Hence, the forecast outcomes are normally expressed as **numbers of people at risk** and as **missing food entitlements**. Missing food entitlements are a very different measure from the amount of food households may be storing, for example, because while a household may have no stocks, it may also have money or some item that it can easily exchange for food (including the labour of the household members). Missing food entitlements also differ from the ‘national deficit’ in the food balance sheet, the latter being associated with the shortfall in production or supply. The shortfall in production actually tells us how much food needs to be imported in order to meet local average consumption but it still does not tell us whether people will be able to get their hands on that food. The missing food entitlements are the food that is missing at household level, after households have exhausted all the options they have for obtaining it. In this analysis, it represents the total missing food calories from people’s intake or consumption, rather than from their production.

Missing food entitlements are expressed in three different ways in this analysis:

- As a percentage of an individual’s minimum average daily energy requirements, or 2100 kcal per person per day. For example, if each member in a household were missing 210 kcal per day then the missing food entitlement would be 10 percent.
- As the amount of cash that the household would need in order to purchase sufficient food to cover the missing energy from their minimum needs with the most affordable commodity available. This is called the ‘cash equivalent’. In MVAC calculations, sufficient cash is also ‘set aside’ for the household to purchase its other minimum non-staple needs (including other food-stuffs) –this applies to all missing food entitlement representations. The cash equivalent is normally given in local currency units.
- As the amount of a particular food commodity that the household would need to consume to cover the missing food from their minimum needs. This is normally given in terms of kg of maize, and is called the ‘maize equivalent’. Like the cash equivalent, the maize equivalent is derived from a missing food entitlement that takes into account other non-staple minimum needs.

The purpose of doing an analysis at harvest time is to provide a timely prediction of acute food insecurity later on in the consumption year, so decisions can be taken about the most appropriate

9 Many would say that considering that we are living in an age with the Millennium Development Goals and one in which we are aiming to ‘make poverty history’, we should set the standard for needs somewhat higher than the ‘minimum’ used by the MVAC in its analysis. This is true, but in order to achieve the many different needs households have, including improved nutrition (dietary diversity), asset accumulation, time for taking part in community activities, education and health, household incomes would have to rise many fold. It would be very costly to merely plug the ‘higher’ entitlement gap with welfare transfers; it would be far more sustainable to ‘grow’ households’ economies as well. This has been the subject of much debate on growth, safety nets and social protection. However, where entitlements cannot even cover minimum needs, there is a general consensus that free direct transfers (either in cash or in kind) will be necessary for those most at risk.

10 More precisely, this should be referred to as the ‘missing food energy entitlement’, as the calculations have been based on energy calculations. While it is theoretically possible to factor in the other important components of diet (such as protein, fats, micronutrients) into the calculations, the added complexities make it difficult to find the time and resources required to solve them.

interventions. Therefore, the analysis presented in this report is an attempt to peer into the near future; an attempt that is nevertheless based on assumptions and other forecasts (for example, it is not possible to know for sure what future prices may be). The forecast does not include agency interventions, precisely because it seeks to inform these interventions. The forecast does aim to show where hunger and acute malnutrition are likely to occur, as well as how bad they could be, *assuming that no intervention takes place*. By intervening, it is hoped that this will be mitigated against.

Forecasts do need to be tested. It is obvious that they can be tested by comparing other outcome measures with the forecast, as that outcome data becomes available. To do this requires that the outcome measures be collected by consistent spatial, temporal and socio-economic units to those used in the forecast. Moreover, it must be remembered that an outcome that is measured independently of the livelihoods forecast (such as number or quality of meals, anthropometry) will most likely also *include* the effects of an intervention.

Nutrition Survey Rationale and Objectives

Adding nutrition indicators to the food security vulnerability assessment complements and strengthens the already existing food security-based predictive tool that MVAC and Government of Malawi have put in place. This could facilitate early diversification of responses to forthcoming or expected food and nutrition crisis and help to control acute malnutrition and reduce mortality among children under the age of five years.

The nutrition section of this therefore seeks to provide nutrition indicators that could be included in the MVAC assessment for the 2006/2007 consumption year. The results of this study are part of this report as it is hoped that future surveys and nutrition surveillance information will also be part of the MVAC report.

Three cross-sectional surveys were performed to meet the following broad objectives in areas of rural Malawi that differ but that have in common to be at risk of food insecurity:

- To provide nutrition indicators to complement food security indicators collected by Malawi Vulnerability Assessment Committee
- To provide timely food security and nutrition information for use by government and donors in the preparedness and planning for food and nutrition response in areas in need.

Specifically, the nutrition surveys aimed to:

- To estimate the rates of malnutrition in children 6-59 months of age
- To estimate the rates of morbidity in children 6-59 months.
- To estimate the mortality rate of children under 5 years of age.
- To estimate the under five and crude mortality rates and suspected causes of death.

Details on the survey methodology, trainings and instruments can be found in **Appendix II**

Using the Information

Combining diverse data sources appears to both analysts and users as a somewhat daunting task; simply adding indicators or weighting them into an index would not provide any extra clarity nor would it explain the spatial, temporal and economic dynamics between them.

The Spatial Dimension

It is obvious that comparisons between indicators need to be done for the same spatial units and

that sampling frames need to coincide. Surprisingly, this rarely the case and in Malawi data are presented in a range of different spatial units, while ultimately, most interventions need to be designed in the common administrative units.

To make spatial comparisons easier, the MVAC has 'zoned' each and every Enumeration Area (EA) used in the previous national census to livelihood (livelihood zones) and to agricultural units (EPAs). It is possible, then, to design surveys aggregation can be possible for a range of geographic or spatial units, provided (in the case of a two-stage sampling design) the basic geographical cluster is equivalent to an EA and provided that there are enough clusters in the area of interest for aggregation. Even if surveys are not designed to be compatible, as long as the EA is the basic cluster, it may be possible to mine them for aggregation into different units.

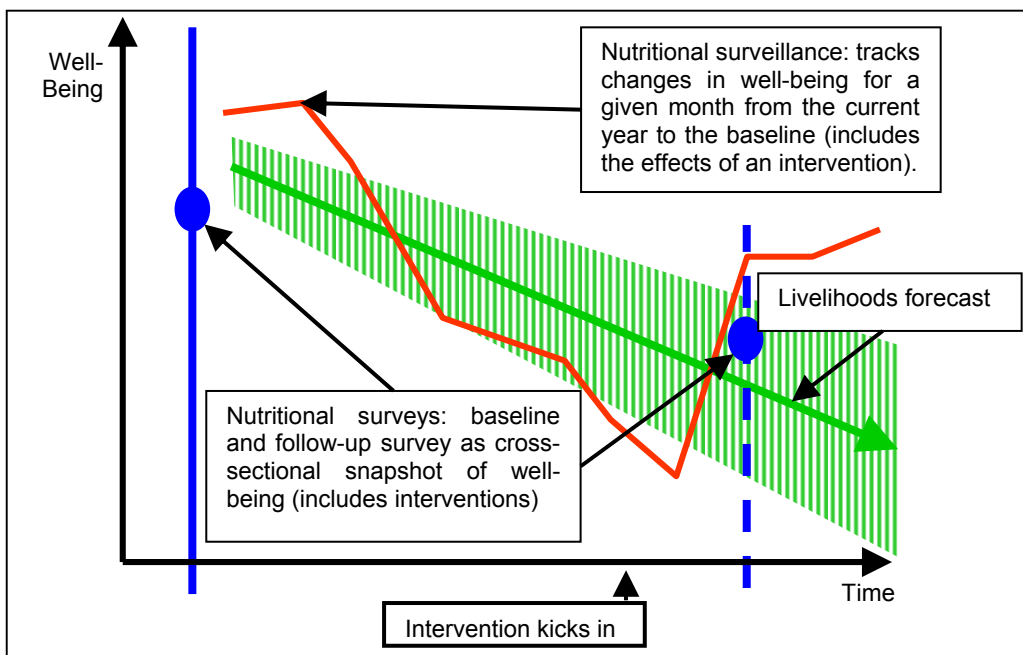


Figure 1—Sketch showing the longitudinal relationship between the livelihoods-based forecasts, nutritional surveys and the surveillance information systems

Even if surveys are not designed to be compatible, as long as the EA is the basic cluster, it may be possible to mine them for aggregation into different units.

The Temporal Dimension

Having sorted out the geography, it is then important to consider the timing of different data sets. The key to this is to look at household budgeting and to work in similar temporal units. In Malawi, rural households usually budget from one main harvest to the next. This period is called the agricultural consumption year. **Figure 1** overleaf is a sketch that explains how the critical inter-linking of different sources of information should be understood in Malawi.

The sketch describes a hypothetical area that experiences a decline in well-being over a period of one consumption year (time). There are three informational elements in this sketch: the entitlement forecast (green), the nutrition survey (blue) and the surveillance tracking (red).

First of all, the forecast provides a picture of the potential decline in well-being that arises out of a number of factors, primarily from production and exchange options. The forecast necessarily contains an element of error, since it is based on a scenario (or scenarios) that contain many assumption as to how certain key elements of people's livelihoods will turn out in future. The variability also increases with time and is shown on the graph as the green shading.

However, the livelihoods forecast is concerned with *change* and it is also important to know the starting point, that is, whether people were already weak when the consumption year began. Then change (in this case a forecast decline in well-being) can be measured against this starting point. The starting point this year was obtained with the nutritional survey component led by UNICEF, providing a cross-sectional 'snapshot' of child and by extension, household, well-being. By this, it is meant that for the areas surveyed, an instantaneous view of households' standards of living was taken that is comparable from one survey area to another and, within limits defined by sample

sizes, among different groups of households within each area. This survey is shown as the blue line and dot on the left hand side of **Figure 1** and the anthropometric component of the survey (as a ‘late’ indicator) provides information on the factors affecting well-being *before* the consumption year.

It is possible to follow-up this survey with another later on in the consumption year and, provided the geographical units are kept the same, the results should be comparable. This follow-up survey is shown as the blue dashed line and dot on the right. Notice, however (as is illustrated in the sketch) that the outcome from the follow-up is not as bad (relative to the starting point) as that predicted by the livelihoods forecast. This is because this follow-up survey includes the effects of the intervention; something the forecast deliberately leaves out.

To provide continuous real-time tracking, there is also the sentinel site surveillance information, which is collected and analysed monthly. It is not as easy to get the surveillance sample to be statistically large enough to enable cross-sectional comparisons (except, perhaps over large areas such as regions) but there is extremely useful value in the regular provision of data for longitudinal comparisons. Leaving aside the data that are input into the livelihoods forecast (which are presented in the section “**Problem Specification**” on **page 14**), outcome indicators for a given month for the consumption year under review can be compared with previous years. The change can then be plotted against the forecast and this is shown as the red line in **Figure 1**.

Notice that in the sketch the surveillance line does not coincide with either the livelihoods forecast or the cross-sectional survey. This is unsurprising as the data, the methodology for collecting it and the analysis frames are all different. What is to be sought is a similarity in the *story* portrayed by all information sets; if substantial differences arise then the forecast needs to be looked at again and all measured changes and assumptions more rigorously checked and tested.

The Wealth Dimension

Different households have access to different resources and at different levels. A key discriminant is household income; households with more income are able to send their children to school, obtain health care and afford sufficient quantities of the right types of food. However, measuring income in rural communities where patterns are diverse and households consume much produce (though not all, as is commonly thought) themselves can be tricky and does not lend itself easily to a few questions in a survey instrument.

However, if a survey can include this wealth dimension (through proxies for income), then interesting relationships can be explored: for example, are the poorest in such deprivation because they are systematically excluded (through marginalisation, stigma or some kind of social discrimination) or are they victims of unfortunate chains of events (in other words, are they just plain unlucky)? Proxies that link in with the MVAC’s livelihoods approach include but are not limited to basic asset holdings; land, livestock, some physical assets, whether the household being interviewed sought *ganyu*, offered *ganyu* or both, as well as some social (kinship ties) and human capital (education).

Although the nutrition component found no significant relationship between these assets and child nutrition status, it must be remembered that the survey was conducted at harvest time, when malnutrition rates are at their lowest for the year. If rates rise significantly among the poorest groups, this will signify an increasing link between child malnutrition and the lack of food access.

Livelihoods Forecast: Current Hazards (Changes)

In the context of the current analyses, a hazard is any event or factor that is likely to affect access to food or income at household level. For the hazard to be incorporated into the analysis, it has to be expressed in quantitative terms, e.g. a 50% reduction in maize production, a 20% increase in

maize purchase prices, etc. Some common hazard definitions or problem specifications are given in **Table A2** in **Appendix III**. Specific details of the hazards incorporated into the current analyses are given for each livelihood zone in later sections of this report. Three general hazards are considered in this section.

Crop Production

Overall national crop production for the 2006 harvest exceeded expectations, despite a late start to the season and some isolated pockets of failure. Encouraged by higher commodity prices and the availability of cheap, subsidised fertiliser, smallholder farmers grew more food crops this year, despite less-than-ideal weather conditions.

Maize remains the most significant staple food grown and consumed in Malawi, although more and more root crops, especially cassava, are being grown. A significant disadvantage of root crops, however, is that of marketing: roots crops are difficult to store (once harvested) and transport. This discourages surplus production and the crop remains largely for household subsistence use, although it is often offered (fresh) as payment for *ganyu* or traded locally.

According to **Figure 2**, maize production has become very erratic since the failures of 1991/92 and 1993/94. The trend is hard to discern, with bad years spiked by very good ones. A linear trend applied over the period from 1983 to this year shows a gradual average increase in total production, although the average annual trend in per capita production shows a decline (see **Figure 3**).

The impact of market prices is often left out when crop failures and successes are being discussed. Most presentations focus on the weather and the availability of inputs. The simple truth is that some farmers produce more staple crops than they require and many do not. Those that do not, depend on other means such as purchase with their cash income or direct *ganyu*-for-food to meet their requirements. The farmers that do produce a surplus judge what they expect the price of maize to be and then decide

Figure 2—Total national production of the main cereal crops in Malawi 1983-2006 (Source: Ministry of Agriculture and FEWS-NET)

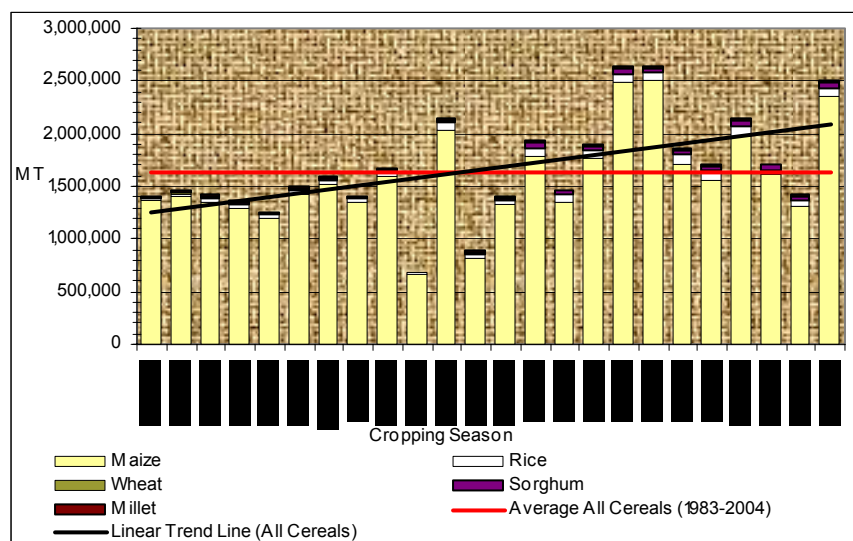


Figure 3—Total average per capita production of the main cereal crops in Malawi 1983-2006 (Source: Ministry of Agriculture and FEWS-NET)

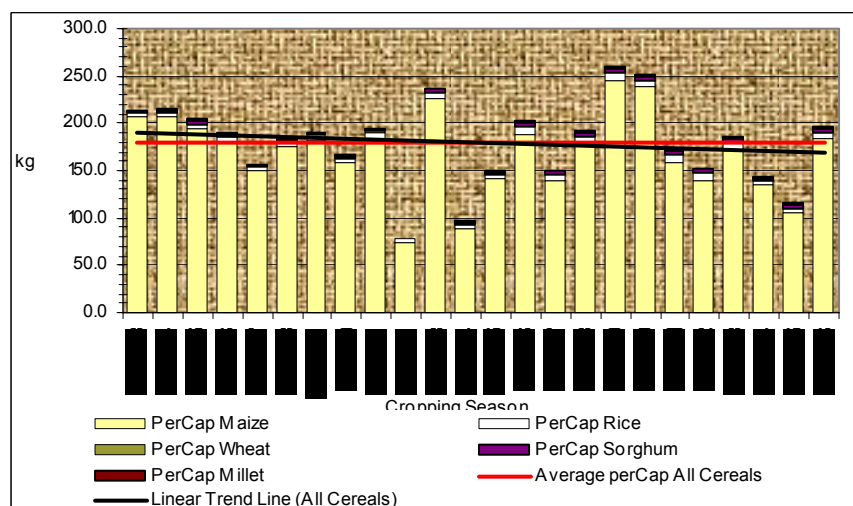


Figure 4 – Total national production of the main legume crops 1983-2005 (source: Ministry of Agriculture and FEWS-NET)

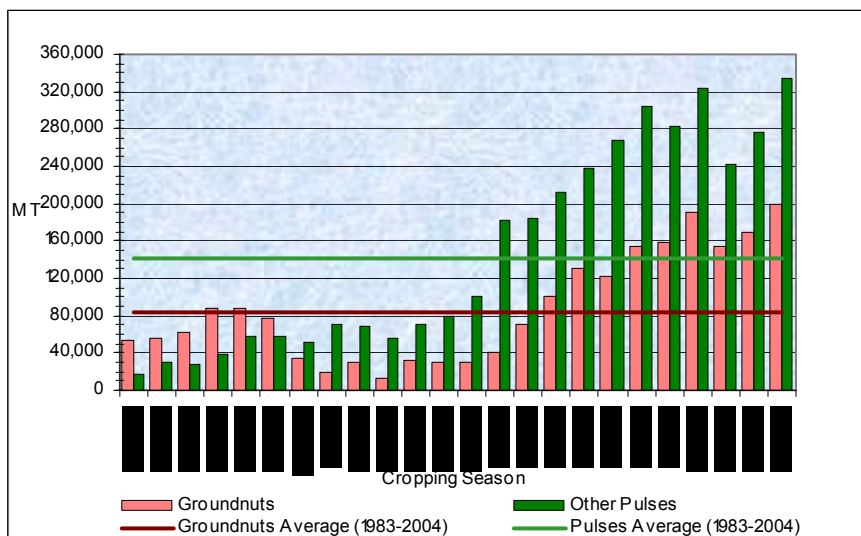


Figure 5 – Average per capita production of the main legume crops 1983-2005 (source: Ministry of Agriculture and FEWS-NET)

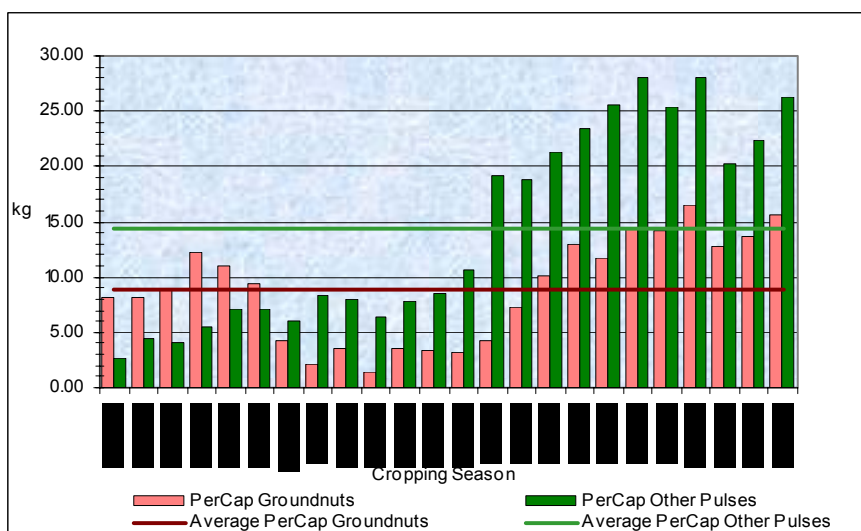
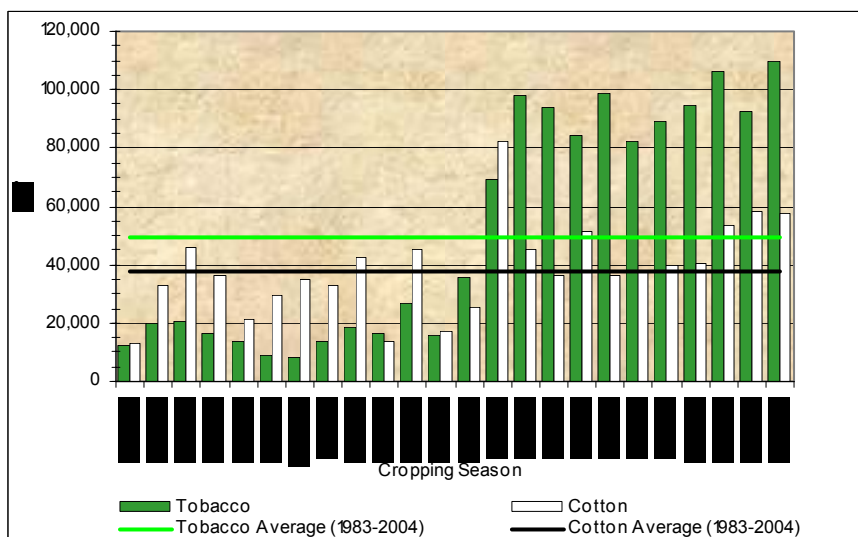


Figure 6—Total national production of tobacco and cotton in Malawi 1983-2005 (source: Ministry of Agriculture and FEWS-NET)



whether they will place undue effort in cereal production or focus on other crops. Clearly, when prices have been in steady decline (and input costs are rising), these farmers will reduce their effort and grow for their own consumption only.

This small total increase or per capita decline is not evident in other crops. For pulses, there was a dramatic increase from the mid-1990s to 2000, although the figures seem to indicate that this has levelled off since then, especially in per capita terms. Groundnuts used to be a major export crop from Malawi and after a hiatus in the late-1980s and early-1990s, production of this crop has recovered and increased in per capita terms. Figures 4 and 5 show the total and per capita production respectively for these important crops since 1983.

The story for cash crops is a little mixed. There was a dramatic increase in tobacco production in the mid-1990s, corresponding with the liberalisation in the industry that allowed smallholder farmers to compete in the market. Since then, production appears to have levelled off, hinting that this crop has reached its potential with existing farming systems. Tobacco farmers in Malawi are under pressure from a difficult world market and increasing competition from neighbouring farmers, especially in Mozambique.

In summary, it can be seen that in national aggregate

terms, this year is one of the positive 'spikes' of improved production. The food balance sheet prepared by the Ministry of Agriculture and Food Security (MoAFS)

Markets and Economic Changes

Blah blah

Staple purchase Price

Blah blah

Ganyu Availability and Payment

Blah Blah

Box 3 – Assumptions and Scenarios

The deficits and resulting food gaps reported in this document are based on *scenarios* for the coming year, which are subject to many assumptions. The assumptions were derived from *projections* that the team considered likely but which may actually end up being quite different. It would be useful for those agencies that regularly monitor specific sites (for example, on a monthly basis) to pitch their questions at testing these assumptions. Findings that are at variance with the chosen scenarios can then be incorporated into the analysis and the results amended.

The analysis here has considered that the exchange rate will remain 'reasonably' stable. From the point of view of vulnerability to food insecurity, the important thing is the ratio between what a household can earn against what it needs to spend on essential services and food. Therefore, a sudden devaluation occurring between the main crop-selling period (June to September) and the food-purchasing period (December to March) will drive up food prices (as food will likely be imported) and severely disenfranchise households. This may lead to a reaction of hoarding (as the 'better-off' fear that *they* will not be able to afford their needs), undermining the poor's ability to access food or income through *ganyu* or kinship ties.

It is assumed that prices for most commodities will continue to rise at the current prevailing inflation rate. This is 35% more than the price in the baseline marketing year, i.e. the agricultural marketing year April 2002 to March 2003. There are a few exceptions to this, notably the price of cotton. Prices offered at the start of the season are substantially above those in the baseline (roughly 1.8 times the baseline, or 80% more than baseline). Assumptions on prices are easily monitored and adjusted as the situation develops.

Instability in the national supply of cereals can seriously affect staple prices and this year there are fears that national requirements will not be met without imports or domestic purchases at an end price that exceeds normal inflation-adjusted levels. To allow for this possibility, two scenarios for the staple price have been created:

Scenario 1 allows for a staple price at the end of the consumption year that is a projection of current year-on-year inflation rates (i.e. around MWK 19-23 per kg)

Scenario 2 is based on maize being landed in Blantyre at \$220/MT and then sold at cost parity. Adding further storage and distribution costs as well as a 5% contingency will place the staple (maize) price well above current inflation-based projections (i.e. around MWK 31-40 per kg).

- It is assumed that households will maximise their opportunities to obtain income or food in order to meet their minimum requirements, i.e. they will not reduce intake instead or engage in risky or destructive practices to obtain food or cash. In reality, these 'coping' strategies are regularly adopted and will be manifest with greater asset depletion and increased malnutrition.
- Opportunities for labour (*ganyu*) in neighbouring countries are normal and there will not be excessive emigration. This assumption will be revised according to developments that take place in the areas where cross-border movement is more likely.

The coming summer agricultural season, starting in October 2005, will be normal and on time.

The analysis also excludes interventions, such as public works programmes, wide-scale income transfer projects or food aid. This is because it seeks to inform these interventions.

Maize remains the preferred source of energy for households in the affected areas, although Government and other organisations are endeavouring to diversify the food basket.

Household Responses

Table III— Response strategies for households in Malawi

Response Strat-	Notes
Livestock sales	To supplement income, households that own livestock may sell additional animals, as they did to cope with high maize prices during the 2001-02 marketing year. This is an important strategy for 'middle' and 'better-off' households, but is less of an option for the 'poor', since few 'poor' households own significant numbers of animals. In this year's worst hit areas of crop production, particularly Lower Shire, Middle Shire and the Phalombe Plain, households have been unable to recover their asset holdings due to successive bad years.
Casual labour (<i>Ganyu</i>)	Attempting to expand <i>ganyu</i> is one of the main response strategies pursued by both 'poor' and 'middle' households in times of crisis. The effectiveness of the strategy may be questioned, however, since there is little evidence that local work opportunities increase significantly in a bad year, while labour rates most definitely fall when food is scarce. Out-migration in search of labour does occur (to towns and to neighbouring districts or countries). This was noted in 2001-02, but is probably not always an option that can be pursued by many of the 'poor' or 'middle' households. Many in the Lower and Middle Shire Valleys and on the Lake Chilwa and Phalombe Plain will likely seek employment in Mozambique; however, it is difficult to estimate the extent of coming opportunities. Casual labour could also be a mitigating factor in Lupembe EPA in Karonga district because of <i>ganyu</i> availability in neighbouring EPAs where production was good this year.
Changes in the balance between the sale and consumption of food crops.	This is potentially quite an important strategy in zones where 'poor' households sell rather than consume a proportion of their food crops. This is especially the case where the crop is sold post-harvest at a relatively low price. For the purposes of the current analysis, it has been assumed that in a bad year all types of household will to some extent switch from selling to consuming staple food crops that are sold in years that are more 'normal'.
Increased cassava consumption	Cassava is an important reserve crop in a number of zones, especially in the north of the country. However, as with other crops, the 'poor' tend to plant smaller areas of cassava than either the 'middle' or the 'better-off' and may therefore have little reserve to fall back on in a bad year. The 'poor' may switch from purchasing maize to purchasing cassava, which, although requiring more preparation, is cheaper. If the production estimates are trusted, it will be plentiful in the north but the inability of cassava (even dried cassava) to 'travel' will limit this option in the south.
Switching expenditure from non-food items to staple foods.	Again, this is potentially quite an important strategy, especially in areas where the 'poor' cultivate tobacco and have a significant net income from this source. The approach in this case has been to define a minimum basket of non-staple food expenditure (soap, salt, dry fish, etc.) and to calculate potential purchasing power on the basis that any additional income over and above this can be spent on purchasing staple foods. The value of this minimum basket (MWK 3,540 per household per year) has been defined on the basis of observed patterns of expenditure by the 'poor' who live in the lower income zones in the country. As such, it reflects the actual expenditure minimising strategies employed by vulnerable households in Malawi.
Wild foods	Access to wild foods that yield significant amounts of food energy, such as wild grains or wild roots and tubers is severely limited in Malawi. This limits the effectiveness of wild food consumption as a response to crisis.

Forecast Outcome

The Forecast Missing Food Entitlements and the People At Risk

Blah blah

Box 2 – Vulnerability not covered but for which there is still concern

The MVAC recognises that there are small areas, communities, and households whose livelihoods and food security are of concern, even though they are outside of this assessment. In particular, there are many people who face hunger and vulnerability every year, regardless of whether the season was good or bad. While not wishing to condone this undesirable level of chronic vulnerability, this report seeks to understand and report on the larger and more acute levels of vulnerability resulting from the previous season's crop failures.

This analysis is also based on projections, assumptions and scenarios; if reliable monitoring information arises that challenges these assumptions, then the MVAC will review its calculations and outcomes.

Blah blah

Box 4 – A Note about Numbers

The figures below exclude households in unaffected areas that nevertheless may have some characteristic that would make them vulnerable, for example, extreme poverty or an impoverished household whose productive members also suffer from a chronic, disabling disease such as HIV/AIDS.

Total missing food entitlements and numbers of people at risk are provided to assist agencies in determining the overall scale of vulnerability. They should not form the basis of precise targeting. They are based on population projections calculated by the NSO, following the 1998 National Census. The MoA's EPA population tables are also used. These may or may not reflect the actual numbers of people on the ground in 2005-2006.

All figures reported here are only approximations and may be subject to revision at any time at the discretion of the Malawi VAC.

Markets

Blah blah

Affected Area			Deficits (Percentage of 2100 kcal)					Population At Risk		
			Scenario 1		Scenario 2			'Poor'	'Middle'	'Better-Off'
District	EPAs	Livelihood Zone	'Poor'	'Middle'	'Poor'	'Middle'	'Better-off'			
Balaka	Bazale, Mpilisi, Phalula, Rivirivi, Ulongwe, Utale	Middle Shire Valley	50-65%	20-35%	60-70%	35-45%		152,500	95,000	
Blantyre	Chipande, Kunthembe, Lirangwe	Middle Shire Valley	50-65%	20-35%	60-70%	35-45%		117,800	73,400	
	Chipande, Ntonda	Shire highlands	15-25%		30-40%			45,100		
Chikwawa	Dolo, Kalambo, Livunzu	Lower Shire Valley	55-65%	50-60%	>80%	>80%		159,400	188,800	
	Mbewe, Mikalango, Mitole	Lower Shire Valley	50-60%	30-45%	65-75%	50-65%				
Chiradzulu	Mbulumbudzi, Mombezi, Thumbwe	Shire highlands	30-40%		45-55%	5-15%		66,400	96,600	
	Thumbwe	Lake Chilwa & Phalombe Plain	55-70%	15-30%	60-70%	30-45%		23,300	38,800	
Chitipa	Chisenga, Kavukuku	Chitipa Maize & Millet	25-35%		25-40%			12,300		
Dedza	Golomoti, Mtakataka	Rift Valley Escarpment	15-30%	10-25%	35-45%	30-40%	10-20%	15,700	19,000	
	Golomoti, Mtakataka	Southern Lakeshore	10-20%		35-45%			20,200		
	Linthipe, Lobi	Kasungu Lilongwe Plain	15-30%		20-35%			31,900		
	Mayani	Kasungu Lilongwe Plain	5-15%		10-25%			17,000		
Dowa	Bowe, Chivala, Mvera, Chinguluwe	Kasungu Lilongwe Plain	5-15%		10-25%			29,000		
	Mponela	Kasungu Lilongwe Plain	15-30%		20-35%			19,400		
Karonga	Lupembe	Central Karonga	20-35%		40-50%	0-5%		3,500	4,200	
	Vinthukutu	Nkhata Bay Cassava	0-10%		5-15%			13,200		
Kasungu	Chamama, Nkhamenya	Kasungu Lilongwe Plain	15-30%		20-35%			63,000		
	Chulu, Santhe	Kasungu Lilongwe Plain	5-15%		10-25%			35,500		
Lilongwe	Chilaza, Chileka, Malingunde, Ming'ongo, Ukwe	Kasungu Lilongwe Plain	15-30%		20-35%			75,800		
	Chitekwele, Chiwamba, Mng'wangwa, Mpenu, Mpingu	Kasungu Lilongwe Plain	5-15%		10-25%			94,600		
	Chikweo, Nanvumbu		55-	15-						

MVAC Monitoring report

Seasonality

Blah blah

Figure 7 – Progression of Missing Food Enti-

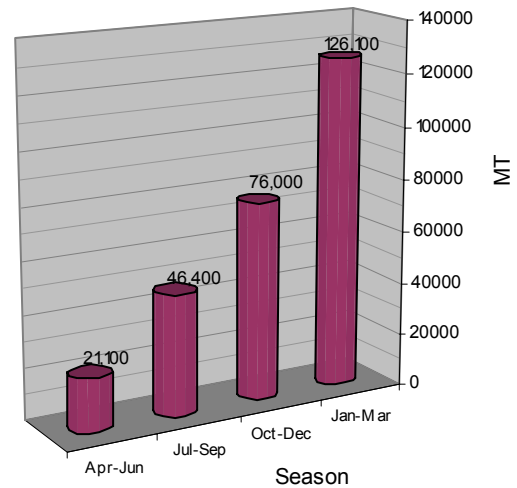


Table — Table of Main Food Security Outcomes: Missing Food Entitlements and Cash Requirements

		Scenario 1	Scenario 2	Remarks
Staple Price on which the scenario is based		MWK 19-23/kg	MWK 32-40/kg	
		+71%		
Total Popula-	TOTAL	4,224,400	4,612,200	
Missing Food Entitlements	TOTAL	269,600	414,400	
Change in MFE Maize Equivalent from Scenario 1		+54%		
Cash needed to Overcome Missing Food Entitlements	M a l a w i Kwacha (K)	6,042,000,000	18,017,000,000	
	US Dollar	48,728,000	145,300,000	Assumes an exchange rate of MWK 124 to \$1.00
	Euro (€)	40,282,000	120,114,000	Assumes an exchange rate of MWK 150 to €1.00
	P o u n d	26,736,000	79,722,000	Assumes an exchange rate of MWK 226 to £1.00
Change in Money Requirement from Scenario 1 to		+198%		

Table VI — Progression by season of missing food entitlements and populations at risk

Season	Populations affected	Missing Food Entitlements maize equivalent (MT)
April 2005 – June 2005	1,571,600	21,100
July 2005 – September 2005	2,883,500	46,400
October 2005 – December 2005	3,993,300	76,000
January 2006 – March 2006	4,224,400	126,100
Total	4,224,400	269,600

Nutrition Survey Results

Sample characteristics

This section illustrates the sample characteristics, in terms of the number of LZ, districts that have been surveyed in each region, the number of surveyed EPAs, the number of household and children that have been surveyed (**Table VI**) and the completion of information (**Table VII**).

Table VI— Sample characteristics

Livelihood zones	Western Rumphu and Mzimba	Kasungu-Lilongwe Plain	Lake Chilwa-Phalombe Plain
Districts	Rumphu, Mzimba	Mzimba, Kasungu, Ntchisi, Dowa, Mchinji	Phalombe
EPAs	Muhuju, Bolero, Mpherembe, Bwengu	Luwelezi, Kaluluma, Emfeni, Chamama, Kasungu-Chipala, Malomo, Bowe, Madisi, Kalulu, Santhe, Lisasadzi	Tamani, Kasongo
Number of households	901	924	922
Number of children	1061	1063	914

Table VI shows the variations in the numbers of districts that have been surveyed as well as the number of EPAs. The surveyed areas remained representative of the sampling frames that have been presented for each region in the section “3.2” of this report. It is important to understand that the results of these three surveys are not representative of the districts or the livelihood zone that are within the sampling frame.

Table VI also indicates that between 901 and 924 children have been surveyed in the various region. The number of household that have been surveyed in Phalombe area (914) is lower than the number of surveyed household in the northern (1061) and the central region (1063).

Table VII (next page) indicate that most of the household head were present during the household interviews (between 61% and 71.2%). Compliance of household respondent was elevated in the northern and central surveyed areas as only 1.4% and 3.2% of the household potential respondents refused to be interviewed. In Phalombe area, 6.9% of them refused to be interviewed and accordingly Phalombe is the area where we have the lowest percentage (93.1%) of completed interview and anthropometric measurement during the first visit.

Household characteristics

For the purpose of this survey, a household was defined as people eating from the same pot.

Tables VII to XII give information about composition of households by age, sex, marital status, educational level of household heads, average household size and main occupation of household head.

The average household size for the three livelihood zones was 5.4 persons for Mzimba and Kasungu respectively and 4.7 persons for Phalombe. The average household size is higher than the

Table VII— Completion of information

	Western Rumphu and Mzimba areas	Kasungu-Lilongwe plain areas	Lake Chilwa-Phalombe Plain areas
Presence of the household head during the interview	61.0%	64.3%	71.2%
Refusal from the respondent to be interviewed	1.4%	3.2%	6.9%
Questionnaire and measurement completed during the first visit to households	98.6%	96.8%	93.1%
Questionnaire and measurement completed after revisiting households	6.2%	7.3%	4.7%

one in the 2004 MDHS survey (4.4 persons).

The next table (4) shows that the majority of the respondents were married and most households were headed by men. There were however, variations among the surveyed areas in that in Phalombe zone, a greater proportion of households were headed by women (23.5%) compared to Mzimba (10.5%) and Kasungu areas (9.8%). Phalombe differs from the other areas with elevated proportion of widowed (8.3%) and divorced household heads (8.3%).