

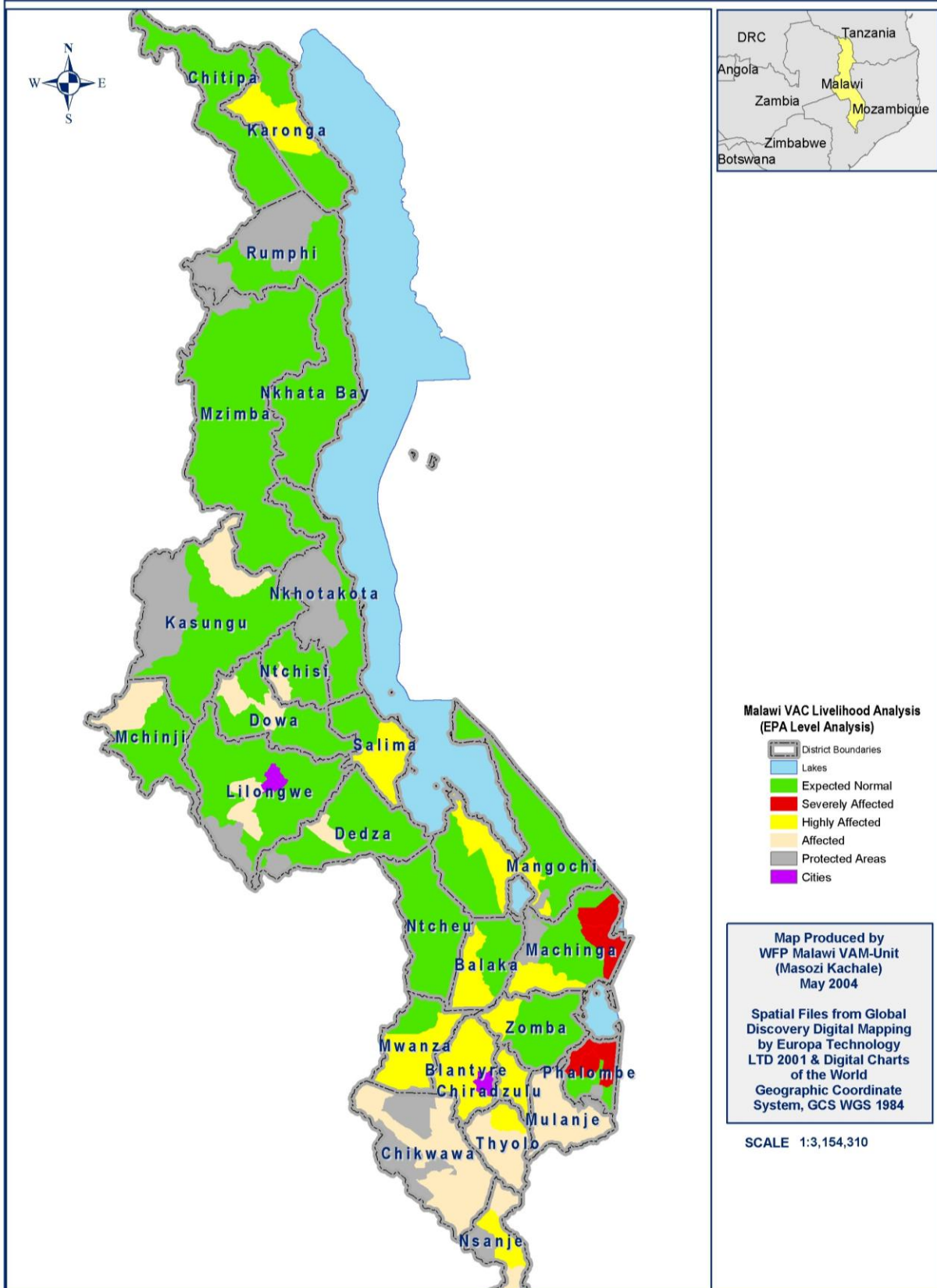
Food Security Monitoring Report

Malawi

May 2004

Highlights

Food Deficit Areas based on Malawi Vulnerability Assessment Committee (MVAC) Analysis, April 2004 - March 2005.



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Glossary of Abbreviations Used in this Document

ADD – Area Development Division – Spatial unit used by the Ministry of Agriculture, Irrigation and Food Security. It usually comprises two or three districts but is smaller than a region.

EPA – Extension Planning Area – sub-district spatial unit used by the Ministry of Agriculture, Irrigation and Food Security

FAO – Food and Agriculture Organization

FEWS-Net – Famine Early Warning System – Network

MEP&D – Ministry of Economic Planning and Development

MoAIFS – Ministry of Agriculture, Irrigation and Food Security

MT – Metric Tonnes

MVAC – Malawi Vulnerability Assessment Committee

NSO – National Statistics Office

RDP – Rural Development Programme, a spatial unit used by the Ministry of Agriculture, Irrigation and Food Security. RDPs are now equivalent to districts.

SC-UK – Save the Children United Kingdom

WFP – World Food Programme

Food Security Monitoring Report – May 2004

Introduction and National Overview

Introduction

In 2003, the Malawi Vulnerability Assessment Committee (MVAC) conducted a livelihood zoning exercise and a Household Economy Approach (HEA) baseline survey in 11 out of 17 livelihood zones in Malawi. The livelihoods-based approach adopted by the MVAC aims to provide relevant information and analysis on food access and livelihoods to various Government Ministries, as well as to international organizations and civil society to inform early warning, rural development strategies, poverty reduction and safety nets programming, and food security policy formulation.

This report uses these baseline data in combination with information from the April 2004 VAC assessment and secondary sources (principally the NSO/MoAIFS Second Round Crop Estimates) to develop projections of food access for various parts of the country between now and the next harvest at the end of March 2005.

Methodology¹

The basic principle underlying the household economy approach, also widely known as the food economy approach, is that analysing local livelihoods is essential for a proper understanding of the impact – at household level - of shocks or hazards² 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 that can make up the production shortfall, such as livestock to sell or relatives living elsewhere that can provide assistance. The food economy baseline captures this essential information on local livelihoods and coping strategies, making it available for analysing hazard impacts.

Livelihood patterns vary from one area to another, according to local 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 basically the same patterns of access to food, including crops and livestock and have the same access to markets.

Where a household lives is one factor determining its options for obtaining food and generating income. Another is wealth, since wealth determines access to the means of production and/or income generation. Wealth groups are typically distinguished from one another by differences in land holding, livestock holding, capital, education, skills, labour availability and/or social capital. 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 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 objective is to investigate the effects of a hazard 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:

¹ See the VAC Document: Baseline Profiles for Malawi for a more detailed description of the methodology and conducting baseline assessments. A detailed guide has also been published by Save the Children UK, see *The Household Economy Approach – A Manual for Practitioners*, by T. Boudreau and @@@@, Save the Children UK,

² A hazard may be defined as change in environmental, economic or social conditions that impacts negatively on people's lives. The change may occur very rapidly or its onset may be slow and less immediately noticeable.

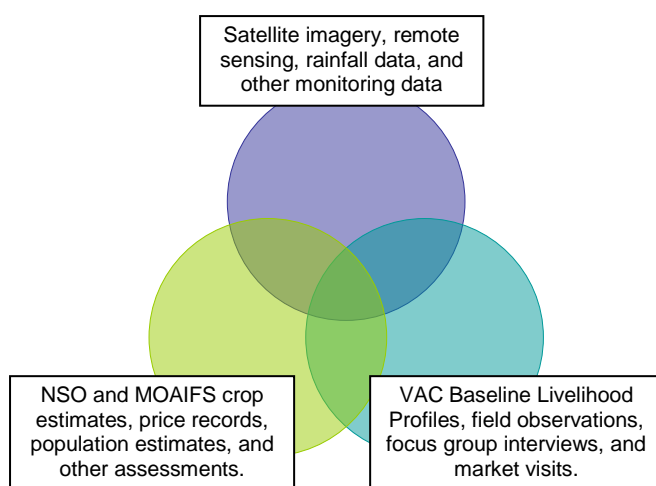
*Outcome is a function of the **Baseline**, the **Hazard** and the **Response***

Or

Outcome = f (Baseline, Hazard, Response)

Activities and Areas Covered in this Assessment

Figure 1 - VAC Assessment Methodology - Triangulation



Activities. The VAC assessment and analysis methodology involves triangulating diverse information and data sources, as shown in **Figure 1**, left. By reviewing secondary source information, the assessment team was able to identify the worst affected areas to be selected for field visits. VAC members from MEP&D, MoAIFS, NSO, SC-UK, Concern Worldwide, FEWS-Net, WFP, and FAO³ then spent ten days in the field with the objective of investigating how crop production would impact on household food entitlements over the coming year. To do this, they had to verify the first-round crop production figures⁴, decide how the crop figure for the district should be broken down to enable a comparison to be made between different years for crop production in *livelihood units*. The teams visited ADD, RDP and EPA offices to do this, as well as officials in the NSO. The teams also visited villages (usually one per EPA) and held semi-structure focus group interviews with groups of farmers from different wealth groups. These interviews were short and results were assimilated at the end of the day. It is important to note that the interviews followed a basic structure but not a questionnaire-type format. This is because the interviews were carrying out in a format that encourages a probing enquiry;

information should be analysed, crosschecked and confirmed by interviewers as they go along, while any interesting developments should be explored as well.⁵

Field observations were then compared with second-round crop estimates at EPA level, as most EPAs fit wholly with in a livelihood zone. Data was then organised into comparisons; an element for *this year* was compared with that in the *baseline* and expressed as a percentage change⁶. The percentage change in food and income sources from the baseline was used to derive problem specifications that were used to calculate deficits and lack of food entitlements.

Areas Covered. Eight Livelihood zones, for which baselines have been established and which were considered the worst affected after reviewing their background information, were covered by fieldwork in this assessment. Three livelihood zones for which baselines are available – Mzimba Self Sufficient zone, Western Rumphu and Mzimba zone and the Nkhata Bay Cassava zone – were not visited as preliminary information indicated they did not have a problem this year. The VAC therefore decided to focus its limited resources on problem areas⁷.

³ The VAC members were grouped together into four teams that were allocated groups of areas to study. There were 3-5 people in each team.

⁴ At the time of the fieldwork, only the first-round figures were available. These figures were also only aggregated to district level, and so to obtain information on livelihood zones or affected parts of livelihood zones, the data had to be disaggregated down to units that are common with livelihood units (in most case, EPAs fit wholly into both livelihood zones and districts).

⁵ This methodology was adopted because it was realised that with the resources of people and time available, it would not be possible to conduct any kind of valid sampling.

⁶ For ease of calculation, the VAC expresses its percentage changes as a ratio, not as a difference ratio; for example, if this year's production is eight instead of ten units, the percentage change is expressed as 8/10 or 80%, rather than -20%.

⁷ Quick 'desk analyses' were done for other parts of Rumphu and Mzimba but no deficits were found.

Areas not covered but for which there is concern. The VAC has recognised areas of concern on the basis of NSO/MOAIIFS second round crop estimates and other information from NGOs and UN agencies. These areas include Southern Chitipa District (Chisenga and Kavukuku EPAs), Nkhotakota – the Rift Valley Escarpment and Lakeshore (Mwansambo EPA), Ntcheu – Rift Valley Escarpment Area (Nsipe, Kandeu, and Sharpevale EPAs), and Mangochi – the Phirilongwe Hills (Mbwadzulu and Nasenga EPAs). These areas were not assessed because there is no baseline, however they will be prioritised for completion in July 2005, along with an assessment of their current situation. This July assessment will also be able to incorporate third round crop estimates.

Current Hazards (Changes)

In the context of the current analysis, 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. 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 detail here:

Partial crop production failure. Although overall rainfall in Malawi was just less than average, the season's rainfall began late, was erratic and was not evenly distributed across the country. The areas that received less than expected were mostly in the country's Southern Region, resulting in below-average crop production for most of that Region. Some EPAs in Central and Northern Regions also suffered local failures; these are highlighted in the individual livelihood zones.

Maize and other cereals: Nyachilenda, Mpatasa and Mogoti are the three worst hit EPAs for summer maize production (around 20% when compared with baseline). All three are in Nsanje district and are in Lower Shire Livelihood Zone (Shire Valley ADD). Households in this zone also grow significant amounts of sorghum and millet, both of which also did badly, although the failure in these crops was not as complete as with maize. Parts of Mwanza district in the Middle Shire Valley Livelihood Zone also experienced a poor season, achieving production levels that are around 35% of baseline. Most of the other areas identified in this assessment achieved production levels around 50-60% of baseline.

Cassava: Over the last two years, there has been a drive by both Government and international agencies to diversify the range of staples available to Malawians and this has included the distribution of [@@@Dominique](#) cassava cuttings to farmers. Consequently, there has been a dramatic increase in cultivation of the crop, although from the perspective of vulnerability to food insecurity over the coming year, it is important to bear the following in mind:

- Some of the plantings this year will not be ready until after the 2005 summer harvest. This factor is mitigated to some extent by the fact that there are now mature plants that were planted two years ago;
- Plants did not establish in all areas in the country, mostly due to dry spells during the season.

However, in many areas, including those where maize harvests were reduced, farmers were at least able to recover some of their food production losses through increased cassava production.

Other crops: The other notable change was in Lower and Middle Shire, where farmers increased areas under cotton. This is in response to the expectation of good prices and the provision of inputs on credit (to be repaid from production). However, in the Lower Shire and in the Middle Shire livelihood zones, production has been affected by dry spells that have harmed flowering; this will affect yields and grading –the latter will impact on prices.

Maize purchase price. Since this monitoring analysis has been carried out as an *early warning* function to project possible food security outcomes based on crop estimates for the main 2003-04 season forecasts, prices should reflect the period during the year when most purchases are made. The analysis covers the whole of the consumption year (in this case from Apr'03-Mar'04) and for most households, this is the period from October to March, although the poorest groups will begin purchasing in August and some will purchase from as early as June.

Scenarios have to be made to allow comparison of the period under review with the baseline. Based on requests from partners, the VAC decided to use two scenarios: Scenario 1 placing the maize purchase price at a level concomitant with inflation and scenario 2 placing it somewhat higher, at 30 percent above the inflation rate. The assumptions used for the two chosen scenarios are explained in Box 1 above.

Ganyu payment rates and availability. *Ganyu*, or casual labour, payment rates are known to fall in Malawi at times of food shortage. Providing *ganyu* is a social obligation for wealthier households in the community but the system is informal and depends as much on what employers can afford as on needs. In general, poor households prefer to receive their payment for agricultural *ganyu* in food when food production in their area has been poor, this is because cash pay rates seldom keep pace with staple price rises during shortages. Conversely, local community agricultural employers prefer to pay in cash during poor food production years. In practice, employers will set aside as much food as they can afford to release for *ganyu*, after which they insist on providing cash.

The fall in both availability and payment rates will depend on the timing and performance of the coming 2004/05 season, in addition to resources remaining from the 2003/04 season. Good crop prospects (both in terms of favourable weather and market conditions) will influence the investment that households who provide *ganyu* opportunities make. The assumption is that the coming season will be *normal*.

In most areas, *ganyu*-for-food availability has been pegged at a rate that is linked to local staple (cereals and root crops) production. In the affected areas identified in this report, this means that between half and three-quarters of the amount of *ganyu*-for-food available in the baseline will be available this year. *Ganyu*-for-cash is pegged at a higher rate (usually 100 percent, or *normal*), since this depends more on the employers' basic resources (income and capital) than on production of the payment commodity.

The assumption was usually made that *ganyu* cash pay-rates will not keep pace with inflation; rather they will stay at the same levels (i.e., 100 percent) as those in the baseline. This is a reflection of the increased labour supply as more households seek work to overcome their production losses and the fact that local wage rates usually lag behind inflation.

Other changes. In some areas that have suffered consecutive failures, such as Lower Shire (Shire Valley ADD), households have been selling livestock each year at unsustainable rates. This means that household animal holdings have been reduced, affecting this source of income.

Similarly, a reduction in fish populations in some areas has restricted income from fish sales or from other income sources associated with fishing, such as fishing-*ganyu* or fish trading. However, incomes derived from fishing-related activities have been mitigated by rises in prices.

Box 1 – Assumptions

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 teams and 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.

1. The analysis here has considered that the exchange rate will remain 'reasonably' stable. From a food security vulnerability point of view, the important thing is the ratio between what a household can earn against what it needs to spend on food (and other essential services). Therefore, if a sudden devaluation occurs between the main crop-selling period (June to September) and the food-purchasing period (December to March), households will be severely disenfranchised.
2. It is assumed that prices for most commodities will continue to rise at the current prevailing inflation rate. There are a few exceptions to this, notably the price cotton. Prices offered at the start of the season are substantially above those in the baseline (roughly 2.5 times the baseline) and the VAC decided to reduce this twice the baseline, to compensate for repayment of debts on inputs and possible loss of quality. Assumptions on prices are easily monitored and adjusted as the situation develops.
3. 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 massive imports at rates that exceed 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 year that is in line with inflation (i.e. around MK 22-25 per kg) and **Scenario 2** has the staple (maize) price rising to 30% above inflation (i.e. around MK 28-35 per kg).
4. It is assumed that households will maximise their opportunities to obtain income or food in order to meet their minimum energy requirements¹, i.e. they will not reduce intake instead or engaged in risky practices to obtain food or cash.
5. Opportunities for labour (*ganyu*) in neighbouring countries are normal and there is not excessive emigration. This assumption will be revised according to developments that take place in the areas where cross-border movement is more likely.
6. The coming summer agricultural season, starting in October 2004, will be normal and on time.
7. The analysis also excludes interventions, such as public works programmes or wide-scale income transfer projects. This is because it seeks to inform these interventions.
8. Population figures and the missing food entitlements are based on population extrapolations devised by the National Statistics Office following the 1998 National Census, as well as the MoAIFS' EPA population tables. These may or may not reflect the actual numbers of people on the ground in 2004-2005.

Response Strategies

A relatively limited number of strategies will still be available to rural Malawian households to respond to common food security threats. The resilience of 'poor' households to shocks is constrained by three important factors in many parts of Malawi:

- Their dependence upon relatively un-diversified livelihood and cropping patterns, especially high dependence upon casual labour combined with domestic maize production
- The very limited ability of local agricultural labour markets to meet the additional supply of labour in bad years
- The very low levels of income that households derive out of their livelihood activities; this means that they are unable to easily recover lost resources and nor are they able to accumulate resources that can be used to mitigate against shocks

Further notes on the strategies incorporated into the current analysis are provided in the table below, and additional details can be found in the document 'Malawi Baseline Livelihood Profiles', available from the MVAC.

Table I - Response Strategies in Malawi

Response Strategy	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 (Ganyu)	Attempting to expand ganyu is one of the main response strategies pursued by both 'poor' and 'middle' households at times of crisis. The overall effectiveness of the strategy may be questioned however, since there is little evidence that local work opportunities increase significantly in a bad year, and labour rates most definitely fall when food is scarce. Out-migration in search of labour does occur (to towns and to neighbouring districts/countries), and was noted in 2001-02, but this is probably not an option that can be pursued by the majority of 'poor' or 'middle' households. More households in the Lower and Middle Shire Valleys and on the Lake Chilwa/Phalombe Plain will likely seek employment in Mozambique, however it is difficult to estimate the extent of the opportunities there in the coming season. A mitigating factor in Lupembe EPA (formerly a part of Central Karonga) in Karonga will be the possibility of seeking ganyu in neighbouring EPAs and districts 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 more 'normal' years.
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 and if the overall increase in national acreage results in more production, will be more plentiful.
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 (3,540 MK per household per year) has been defined on the basis of the observed patterns of expenditure by the 'poor' living in the lower income zones in the country. As such it reflects the actual expenditure minimising strategies employed by the 'poor' in Malawi.
Wild foods	There is very little access to wild foods that can yield significant amounts of food energy, such as wild grains or wild roots and tubers. This severely limits the effectiveness of wild food consumption as a response to crisis in Malawi.

Outcome

After running the analysis, the better-off households in all areas of the country do not appear to be facing a deficit in the coming agricultural year (April 2004 to March 2005). Only two areas in the Lake Chilwa - Phalombe Plain livelihood zone show deficits for the 'middle' households for scenario 1⁸ while the some of the 'middle' households from Middle Shire Valley will be facing a deficit in scenario 2⁹.

Food deficits in this report refer to the *missing* percentages of the annual energy needs for an average household. The energy needs

are based on an average minimum requirement of 2100 kcal per person per day. Therefore, if a household is expected to face a food deficit of 50%, the household is missing half of its total minimum annual food needs --a very serious situation. **Table II** below shows the individual household deficits for both scenarios. What is clear is that for those households with large deficits (>15%), staple price increases that are substantially above the inflation rate do not drive up their deficits¹⁰. This is explained by the fact that the households with large deficits have low incomes; these households are unable to purchase grain at any price and so are not as affected by the price.

Box 2 – A Note About Numbers

The figures below exclude households in unaffected areas that nevertheless may have some characteristic that would make them vulnerable, e.g. a household whose productive members suffer from a chronic, disabling disease such as HIV/AIDS.

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

The Malawi VAC produced all data and information in this document and any quotation from it should be credited to the Malawi VAC. However, total cash requirements, food gaps, and numbers of affected populations are based on population projections provided by the National Statistics Office (NSO). The Malawi VAC takes no responsibility for accuracy of these projections.

The Malawi VAC is a consortium of organisations working to reduce vulnerability in Malawi, including Government, UN Agencies and NGO's. The Ministry of Economic Planning and Development in the Government of Malawi chair it. This document does not necessarily reflect the views of the Government of Malawi or any single member of the VAC.

Table II - Table of Deficits by Districts, EPAs and Livelihood Zones for Each Scenario

Affected Area			Deficits			
			Scenario 1		Scenario 2	
District	EPAs	Livelihood Zone	'Poor'	'Middle'	'Poor'	'Middle'
Balaka	Phalula, Bazale, Utale	Middle Shire	25-35%		30-40%	0-5%
Blantyre	Lirangwe, Chipande	Middle Shire	25-35%		30-40%	0-5%
	Ntonda, Kunthembwe	Shire highlands	20-30%		25-40%	
Chikwawa	Kalambo, Livunzu, Mbewe, Mitole, Mikalango, Dolo	Lower Shire Valley	10-25%		15-30%	
Chiradzulu	Thumbwe, Mom	Shire highlands	20-30%		25-40%	
Dedza	Linthipe, Kapuka	Kasungu Lilongwe	10-20%		20-35%	
Dowa	Bowe, Mponela	Kasungu Lilongwe Plain	10-15%		10-20%	
Karonga	Lupembe	Central Karonga	25-40%		30-40%	
Kasungu	Kaluluma	Kasungu Lilongwe Plain	10-15%		10-20%	
Lilongwe	Malingude, Sinyala, Mpingu	Kasungu Lilongwe	10-20%		20-35%	
Machinga	Chikweo, Nampeya	Lake Chilwa & Phalombe Plain	35-45%	0-5%	35-40%	5-15%
Mangochi	Maiwa	Shire highlands	20-30%		25-30%	
	Mbwadzulu, Nasenga	Southern Lakeshore	15-25%		25-35%	
Mchinji	Mkanda	Kasungu Lilongwe Plain	10-15%		10-20%	
Mulanje	Msikawanjala, Mulanje Boma	Thyolo Mulanje Tea Estates	0-10%		10-20%	1-10%
Mwanza	Lisungwi, Mwanza	Middle Shire Valley	30-40%		40-50%	
Nsanje	Nyachilenda, Mpatsa, Mogoti	Lower Shire Valley	20-35%		25-40%	
	Makhanga, Zunde	Lower Shire Valley	10-25%		15-30%	
Ntchisi	Chipuka	Kasungu Lilongwe Plain	10-15%		10-20%	

⁸ Scenario 1 refers to an assumption where the maize price to increase from previous yearly high points (during the 'hunger season') at the inflation rate. This equates to a actual price of MK 22-25 per kg.

⁹ Scenario 2 refers to an assumption where the maize price to increase from previous yearly high points (during the 'hunger season') at a rate that is 30% higher than the inflation-adjusted price. This equates to an actual price of MK 28-35 per kg.

¹⁰ With the price hike, deficits will rise a little but not as much as one might intuitively expect.

Phalombe	Kosongo, Mpinda, Tamani	Lake Chilwa & Phalombe Plain	45-55%	10-25%	45-60%	20-30%
Salima	Chipoka, Thembwe	Southern Lakeshore	15-25%		25-35%	
Thyolo	Khonjeni, Thekerani, Thyolo Boma, Masambanjati	Thyolo Mulanje Tea Estates	0-10%		10-20%	1-10%
	Matapwata	Shire highlands	20-30%		25-40%	
Zomba	Chingale	Middle Shire	25-35%		30-40%	0-5%
	Chingale, Ntubwi	Shire highlands	20-30%		25-40%	

On the other hand, households that are just able to meet their needs (borderline cases) and those that are facing low deficits will experience a larger increase food shortage when prices increase. These households have greater incomes than those with the high deficits; however, income is only useful when prices are stable.

Table III - Cash Requirements to Alleviate Deficits

Affected Parts of Livelihood Zone	Household Yearly Incomes (MK) Required to Overcome Deficit			
	Scenario 1		Scenario 2	
	'Poor'	'Middle'	'Poor'	'Middle'
Thyolo Mulanje Tea Estates	1,005		5,274	1,811
Kasungu Lilongwe Plain – Dedza & Lilongwe	2,755		4,411	
Kasungu Lilongwe Plain – Dowa, Kasungu, Ntchisi & Mchinji	2,252		3,898	
Lower Shire Valley – Nyachilenda, Mpatasa & Mogoti EPAs	7,094		10,547	
Lower Shire Valley – Chikwawa district and Makhanga & Zunde EPAs	4,514		7,488	
Middle Shire Valley – Lisungwi & Mwanza EPAs	9,353		14,325	
Middle Shire Valley – Blantyre, Balaka & Zomba districts	7,804		11,600	976
Lake Chilwa & Phalombe Plain – Phalombe district	13,026	4,244	17,192	8,269
Lake Chilwa & Phalombe Plain – Machinga district (R2)	10,158	202	13,633	3,262
Shire highlands	6,405		10,211	
Southern Lakeshore	5,481		9,970	
Central Karonga			14,332	

Since the calculations on deficits include incomes and expenditure in determining food entitlements, it is then possible to calculate the amount of money a household from a particular wealth group will need to overcome that their deficits. This can be called the 'income requirement'. In general, the larger the food deficit, the larger the income deficit will be. **Table III** above shows the income deficits for each scenario in each of the affected parts of livelihood zones presented above in **Table II**. Notice the larger increase in income requirement between the two different scenarios. This is not in keeping with the relatively smaller change in deficits. This is because the amount of cash required to overcome the deficit is affected by the change in the deficit as well as the change in the staple price.

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

		Scenario 1	Scenario 2	Remarks
Total Population affected	TOTAL	1,260,200	1,598,800	
Missing Food Entitlements (MT)	July-September	790	1,490	Scenario 1: Only the 'poor' in Lake Chilwa – Phalombe Plain Scenario 2: Addition of some 'poor' from Middle Shire
	October-December	11,210	21,670	Scenario 1: Only the 'poor' Scenario 2: Addition of some 'middle' from Lake Chilwa – Phalombe Plain
	January-March	37,970	53,110	'Middle' and 'poor' wealth groups
	TOTAL	49,970	76,270	
Change in Food Entitlement from Scenario 1 to Scenario 2		+53%		
Cash needed to Overcome Missing Food Entitlements	Malawi Kwacha (K)	1,130,830,000	2,116,420,000	
	US Dollar (\$)	10,568,400	19,779,600	Assumes an exchange rate of MK 107 to \$1
	Euro (€)	8,904,100	16,664,724	Assumes an exchange rate of MK 127 to \$1
Change in Money Requirement from Scenario 1 to Scenario 2		+87%		

The deficits can be combined with population figures to obtain a ‘missing food entitlement’¹¹ for particular administrative areas. This has been done and the summary for the whole country is presented in **Table IV**, while breakdowns that are more detailed are available in the Appendix in **Table V** and **Table VI**.

Missing food entitlements are not a ‘food-aid need’, rather they are the amount of food required to replace the deficits in the identified households. Food-aid needs will depend on many other factors as well, including (but not limited to) the amount of cash (income) the household receives from other interventions, the ‘off-take’ from the planned food rations and the actual food intake by the beneficiaries (including mis-targeted food) and the food requirements for households with other specific chronic vulnerability. Population figures and the percentages affected in each zone are listed in each Livelihood Zone Profile in the next main section of this document.

The missing food entitlements will increase as the agricultural marketing year (April 2004 – March 2005) goes on. **Table IV** shows a break-down of this missing food entitlement over three three-month periods where it is assumed that in the last three months the deficit will be at its maximum (but no higher than 75%¹²). If a deficit of 75% does not account for all the missing food, a deficit is also projected for the period October to December, again to a maximum of 75%. In the most extreme cases, notably those of the affected parts of Lake Chilwa – Phalombe Plain livelihood zone as well as a part of Middle Shire Valley in scenario 2, there is a small missing food entitlement from July to August. This is summarised in **Table IV** above and in **Figure 3**.

As with the missing food entitlements, the total cash required to replace the food gaps can be calculated. This is shown for each livelihood zone in **Table IV** above and in **Figure 4**.

Notice that the missing food entitlement (in MT) is 53% higher in scenario 2 than in scenario 1 but the cash needed to overcome that lack of entitlement is 87% higher (almost twice as much) in scenario 2 than in scenario 1. This makes sense, because the staple-purchasing price is what defines the difference between each scenario. The important thing to note is that if food entitlements are assured by using cash, prices **must** be kept reasonably stable.

Figure 2 - Missing Food Entitlements

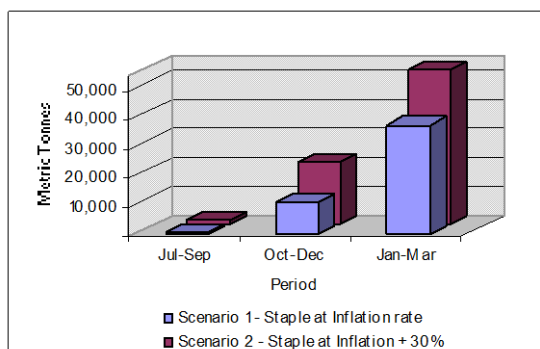
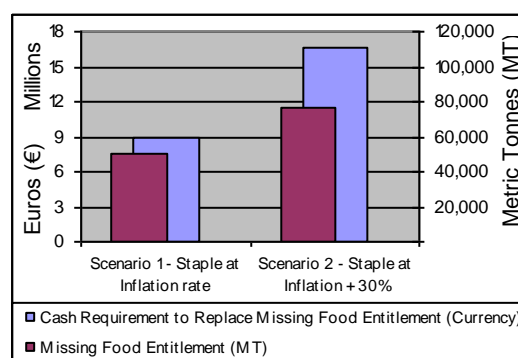


Figure 3 – Graph of Total Missing Food Entitlement and the Cash Requirement for Scenario 1 and Scenario 2



¹¹ More precisely, this should be referred to as the ‘missing food energy entitlement’, as the calculations have been based on energy calculations alone. While it is theoretically possible to factor the other important components of diet (such as protein, fats, micro-nutrients) into the calculations, the added complexities (and the time and resources required for them) are not easily justified.

¹² From a study of the livelihood zones’ seasonal calendars, it is reasonable to say that if deficits are replenished in preceding months, households will be able to meet approximately 25% of their food needs in the last three months of the agricultural marketing year.

Appendix

Table V - Missing Food Entitlements for the Affected Parts of Each Livelihood Zone for Scenario 1

Affected Parts of Livelihood Zone	Total Affected Pop.	Missing Food Entitlements (MT)					Whole Year
		Jul-Aug	Oct-Dec	Jan-Mar			
		'Poor'	'Poor'	'Poor'	'Middle'	TOTAL	
Thyolo Mulanje Tea Estates	267,900			2,350		2,350	2,350
Kasungu Lilongwe Plain – Dedza & Lilongwe	74,400			2,380		2,380	2,380
Kasungu Lilongwe Plain – Dowa, Kasungu, Ntchisi & Mchinji	98,400			2,570		2,570	2,570
Lower Shire Valley – Nyachilenda, Mpatsa & Mogoti EPAs	48,200		960	2,020		2,020	2,980
Lower Shire Valley – Chikwawa district and Makhanga & Zunde EPAs	198,200			7,800		7,800	7,800
Middle Shire Valley – Lisungwi & Mwanza EPAs	21,500		850	900		900	1,750
Middle Shire Valley – Blantyre, Balaka & Zomba districts	167,200		4,350	7,020		7,020	11,370
Lake Chilwa & Phalombe Plain – Phalombe district	56,200	620	880	880	780	1,660	3,160
Lake Chilwa & Phalombe Plain – Machinga district	98,800	170	1,560	1,560	70	1,630	3,360
Shire highlands	154,200		2,130	6,480		6,480	8,610
Southern Lakeshore	73,400		420	3,080		3,080	3,500
Central Karonga	1,800		60	80		80	140
TOTAL	1,260,200	790	11,210	37,120	850	37,970	49,970

Table VI - Missing Food Entitlements for the Affected Parts of Each Livelihood Zone for Scenario 2

Affected Parts of Livelihood Zone	Total Affected Pop.	Missing Food Entitlements (MT)							Whole Year
		Jul-Aug	Oct-Dec		Jan-Mar				
		'Poor'	'Poor'	'Middle'	TOTAL	'Poor'	'Middle'	TOTAL	
Thyolo Mulanje Tea Estates	502,400					9,840	3,380	13,220	13,220
Kasungu Lilongwe Plain – Dedza & Lilongwe	74,400		1,430		1,430	3,120		3,120	4,550
Kasungu Lilongwe Plain – Dowa, Kasungu, Ntchisi & Mchinji	98,400					3,560		3,560	3,560
Lower Shire Valley – Nyachilenda, Mpatsa & Mogoti	48,200		1,510		1,510	2,020		2,020	3,530
Lower Shire Valley – Chikwawa, Makhanga & Zunde	198,200		2,010		2,010	8,330		8,330	10,340
Middle Shire Valley – Lisungwi & Mwanza EPAs	21,500	340	900		900	900		900	2,140
Middle Shire Valley – Blantyre, Balaka & Zomba districts	271,300		6,480		6,480	7,020	1,140	8,160	14,640
Lake Chilwa & Phalombe Plain – Phalombe district	56,200	750	880	330	1,210	880	880	1,760	3,720
Lake Chilwa & Phalombe Plain – Machinga district	98,800	400	1,560		1,560	1,560	840	2,400	4,360
Shire highlands	154,200		4,490		4,490	6,480		6,480	10,970
Southern Lakeshore	73,400		2,010		2,010	3,080		3,080	5,090
Central Karonga	1,800		70		70	80		80	150
TOTAL	1,598,800	1,490	21,340	330	21,670	46,870	6,240	53,110	76,270

Table VII – Missing Food Entitlements and Cash Requirements and for the Affected Parts of Each Livelihood Zone

Affected Parts of Livelihood Zone	Missing Food Entitlement		Cash Requirement (Malawi K million)		Cash Requirement (US \$)*		Cash Requirement (€)*	
	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2
	Thyolo Mulanje Tea Estates	2,350	13,220	53.85	367.52	503,300	3,434,800	424,000
Kasungu-Lilongwe Plain – Dedza & Lilongwe	2,380	3,120	40.97	65.60	382,900	613,100	322,600	516,500
Kasungu-Lilongwe Plain – Dowa, Kas, Ntchisi & Mchinji	2,570	3,560	44.30	76.67	414,000	716,500	348,800	603,700
Lower Shire Valley – Nyachilenda, Mpatsa & Mogoti	2,020	2,020	68.330	101.58	638,600	949,300	538,000	799,800
Lower Shire Valley – Chikwawa, Makhanga & Zunde	7,800	8,330	178.95	296.85	1,672,400	2,774,300	1,409,100	2,337,400
Middle Shire Valley – Lisungwi & Mwanza EPAs	900	900	40.26	61.67	376,300	576,400	317,000	485,600
Middle Shire Valley – Blantyre, Balaka & Zomba	7,020	8,160	260.93	408.17	2,438,600	3,814,700	2,054,600	3,213,900
Lake Chilwa & Phalombe Plain – Phalombe district	1,660	1,760	84.65	130.45	791,100	1,219,200	666,500	1,027,200

Lake Chilwa & Phalombe Plain – Machinga district	1,630	2,400	77.79	141.35	727,000	1,321,000	612,500	1,113,000
Shire highlands	6,480	6,480	197.58	314.99	1,846,500	2,943,800	1,555,700	2,480,200
Southern Lakeshore	3,080	3,080	80.49	146.41	752,200	1,368,300	633,800	1,152,800
Central Karonga	80	80	2.73	5.16	25,500	48,200	21,500	40,600
TOTAL	49,970	76,270	1,130.83	2,116.42	10,568,400	19,779,600	8,904,100	16,664,724
Change in Value from Scenario 1 to Scenario 2	+53%		+87%					

* The values in the US \$ and the € columns assume exchange rates of 107 and 127 to the Malawi Kwacha respectively.