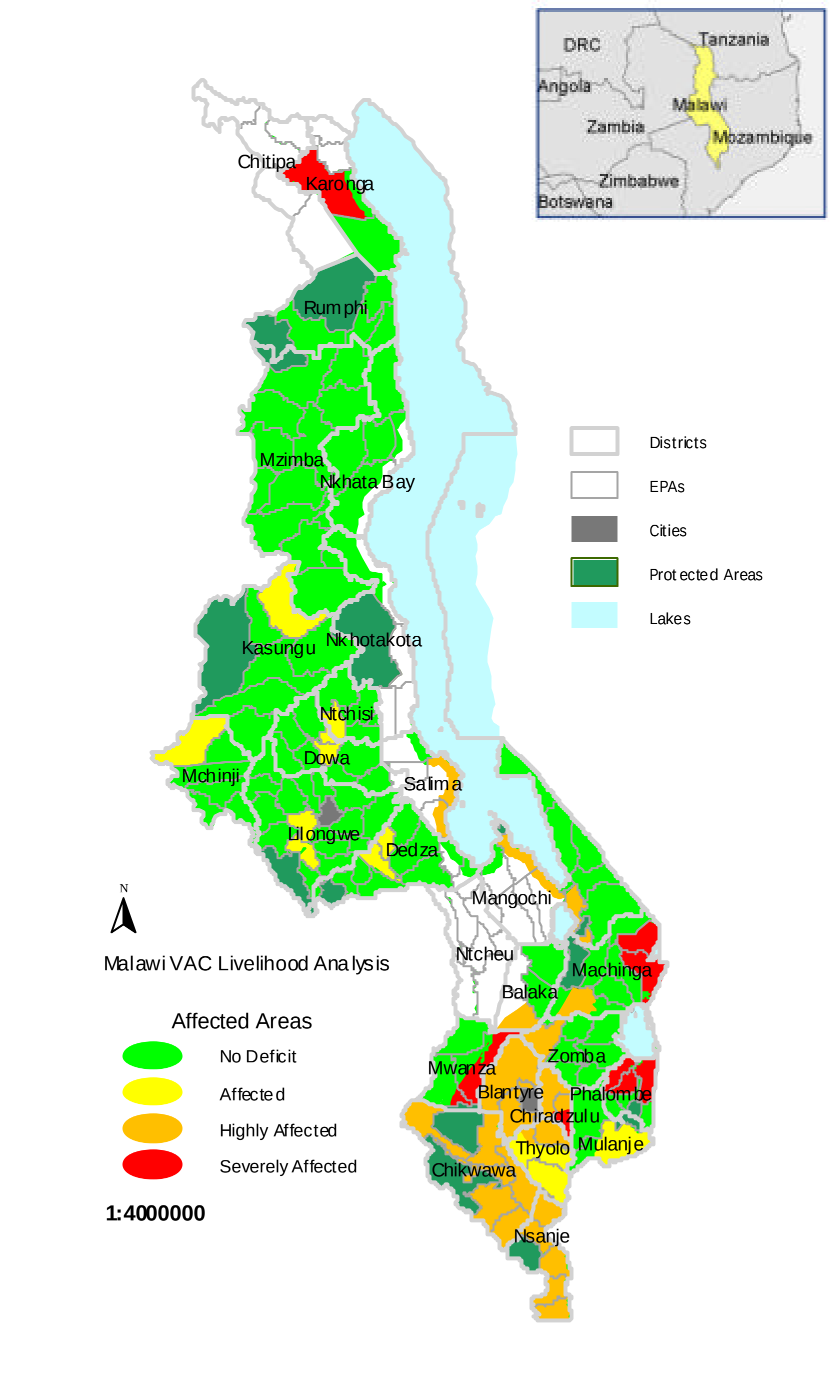
Food Security Monitoring Report

Malawi

May 2004

Food Deficit Areas: April 2004 – March 2005



MALAWI
Vulnerability
Assessment Committee

Malawi National Vulnerability Assessment Committee

In collaboration with

SADC FANR Vulnerability Assessment Committee

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FEWS NET

Save the Children UK

World Food Programme

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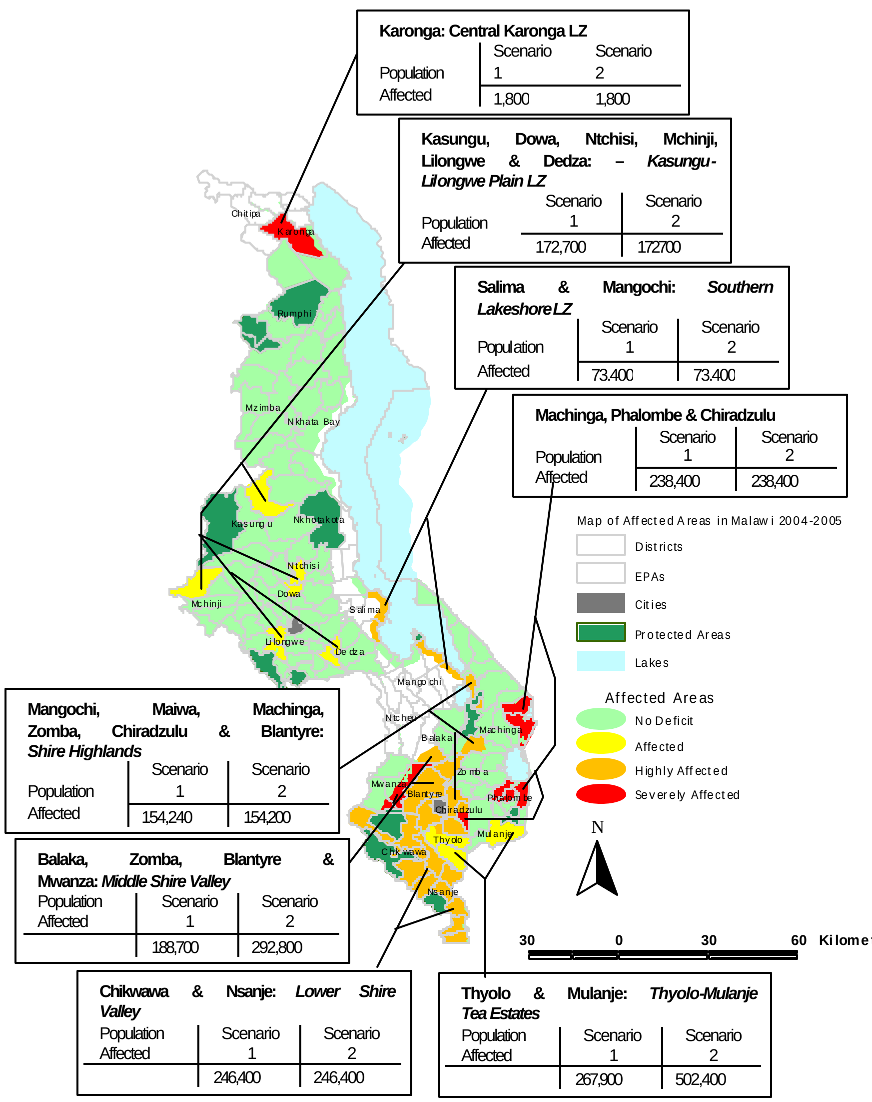
Executive Summary

The Malawi Vulnerability Assessment Committee (MVAC) has developed a series of livelihood profiles that describe how households go about getting their primary food requirements; these studies are called *baselines* and they depict the sources of food and income, as well as the expenditure patterns that households employ to survive. When these baselines are combined with monitoring information that describes *changes* in terms of these elements, the result can be put in food terms. In other words, it is possible to describe how households' access to food changes with changes in important components of their livelihoods, such as food crop production, cash crop production, *ganyu* availability and payment rates or staple prices. Livelihood profiles exist for 11 out of the 17 livelihood zones (spatial areas of reasonably homogenous livelihood systems) in Malawi, describing the baselines for each *wealth group* within each zone.

In late March, the MVAC members also visited several areas, all of them identified as having had problems during the preceding season and most of them in the south of the country. Results and data were then combined with other sources (chiefly, the second round crop estimates[1]) and used to answer the question: "Given the levels of production in various parts of the country at harvest-time in April 2004, what would food security be like until the next major harvest in 2005?" The MVAC answered this question by combining the crop estimates with real observations on the ground and projections of some variables in the food security analysis using scenarios and assumptions that are based on experience of previous years. The MVAC recognises that many factors contribute to vulnerability, including HIV/AIDS, chronic and deep poverty and gender issues. However, the focus was kept on a 'problem specification' defined by the cropping season because the chief interest was in deciding how this season's output affects short-term food security; other, longer-term issues will be investigated later.

Figure 1 - Map Of Affected Areas



Since it is extremely difficult to predict the future maize price in Malawi (a number of factors influence its level, many of which are equally difficult to predict), two possible scenarios were chosen to describe this variable. ***Scenario 1*** *assumes that the maize price during the purchasing period (December to March) will rise to a level that reflects previous years and is adjusted for the current rate of inflation,* while ***scenario 2*** *assumes that the maize price will rise to a level that is 30% higher than the inflation-adjusted rate.*

In each affected part of a livelihood zone, the MVAC calculates a food energy deficit, expressed as a percentage of the minimum average energy requirement, or 2100 kcal[1] per person per day. The deficits are then used to calculate the total

[1] National Statistics Office (in collaboration with the Ministry of Agriculture, Irrigation and Food Security)

missing food entitlement[2]. The missing food entitlement is the total amount of cereal (maize) that is needed to ensure that households are able to meet their *minimum* food energy requirements[3].

Table I – Total Missing Food Entitlements and Cash Requirements

	Scenario 1	Scenario 2
Overall Population Affected	1,343,600	1,682,200
Missing Food Entitlements	56,030 MT	83,550 MT
Change in food from scenario 1 to scenario 2	+49%	
Cash Requirements	MK 1.26 billion, US$ 11.7 million or € 9.9 million	MK 2.31 billion, US$ 21.6 million or € 18.2 Million
Change in cash from scenario 1 to scenario 2	+84%	

It is obvious when studying the baselines that household incomes are very low for a great many Malawians. Baseline income figures range from around MK 8,000 (or US$ 90, € 80) per household per annum to MK 25,000 per annum for the poorest third of most communities. At current prices, if *all the income* of a household from the lower end of the above range is put into staple purchase only, the household will get only 45% of its needs. Clearly, many households do not have the means to purchase their way out of any production failure – even for a short period. In addition, given that households have expenditure other than staple food, it becomes necessary to seek cash whenever they can. This means that they are forced to sell produce at harvest-time for a low price and then, if they have any money, they will have to purchase it back again later on in the year at a high price.

The total missing food entitlements for each scenario and the cash required to replace them are given in **Table I**. Notice that if staple prices increase by 30% more than the inflation-adjusted level, the total income required to replace the missing food entitlement increases by an extra 84%, whereas the missing food entitlement is only 49% more. This means that prices need to be reasonably stable if cash-transfer programmes are to be effective.

The information in this report should inform the design of indicators for regularly monitoring food security; the scenarios should be tested and variations used to change the projections. The VAC will adjust all scenarios regularly. This will be done at least once this year, at the start of the next planting season.

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[2] The term 'missing food entitlement' is used rather than 'national deficit' because the latter term is usually associated with the *shortfall in production*. 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 production.

[3] For simplicity, other nutritional needs such as proteins, micronutrients, etc. are not included in the calculations. This statement by no way implies that these needs are not also important.

Contents

Glossary of Abbreviations Used in this Document

ADD – Agricultural 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

LZ – Livelihood Zone

MEP&D – Ministry of Economic Planning and Development

MK – Malawi Kwacha, the local currency in Malawi. At the time of writing US$1 = MK 107 and € 1 = MK 127

MoAIFS – Ministry of Agriculture, Irrigation and Food Security

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.

RVAC – Regional Vulnerability Assessment Committee

SC-UK – Save the Children (United Kingdom)

VAC – Vulnerability Assessment Committee (see also MVAC, RVAC)

WFP – World Food Programme

Food Security Monitoring Report – May 2004

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, UN Agencies and NGO's. The Ministry of Economic Planning and Development in the Government of Malawi chairs the MVAC.

In 2003, the 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 organisations 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 MVAC assessment and secondary sources (principally the NSO/MoAIFS Second Round Crop Estimates) to develop projections of food security for various parts of the country between now and the next harvest at the end of March 2005.

The first section of this report (pages 6 to 13) contains the national overview for the country. The next eight sections (pages 14 to 30) detail the expected conditions in each affected livelihood zone. The last section (pages 31 and 32) is an appendix with some tables that detail the missing food entitlements and income requirements for each zone.

The Malawi VAC produced the 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).

Methodology[4]

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 hazards[5] 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 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

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[4] See the VAC Document "*Baseline Profiles for Malawi*" for a more detailed description of the methodology and for conducting baseline assessments. 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)

[5] 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 8 to 10. The change may occur very rapidly or its onset may be slow and less immediately noticeable.

shock or hazard in a bad year. The 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.

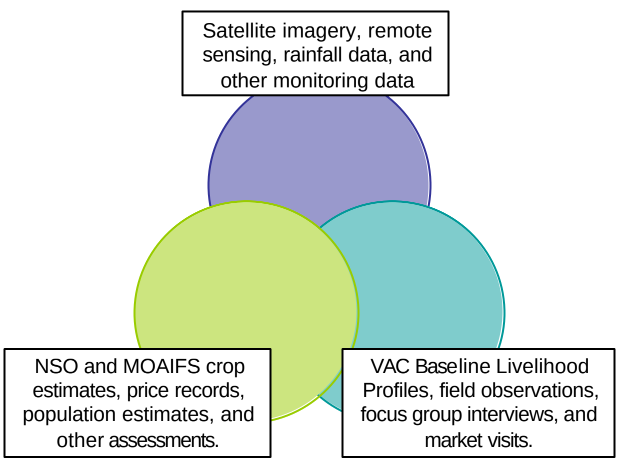
The objective is to investigate and to derive an **outcome** that describes the effects of a hazard on *future* access to food and income, so decisions can be taken about the most appropriate interventions. The rationale behind the approach is that a good understanding of how people have survived in 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:

> ***Outcome*** *is a function of the* ***Baseline,*** *the* ***Hazard*** *and the* ***Response***
>
> ***Or***
>
> ***Outcome = f (Baseline, Hazard, Response)***

Many factors contribute to vulnerability, including the HIV/AIDS, chronic and deep poverty and gender issues. The focus was kept on a 'problem specification' defined by the cropping season[6] because the chief interest was in deciding how this season's output affects short-term food security. Nevertheless, longer-term issues are to be investigated later. Integrating the above factors into this kind of assessment, while interesting, would require care in making the different sources of information compatible[7].

Activities and Areas Covered in this Assessment

Figure 2 - VAC Assessment Process - 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 FAO[8] then spent ten days in the field with the objective of quantifying the various changes over the last season and those expected in the coming year. To do this, they had to verify the first-round crop production figures[9] and decide how the crop figure for the district should be broken down into livelihood units so that a comparison can be made between different years. 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-structured focus group interviews with farmers from different wealth groups. These interviews were short and the 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 way that

[6] This is what calling the activity a 'monitoring assessment' means.

[7] For example, it would be necessary to convert data from different units into *livelihood units (zones)*, if accurate comparisons are to be made or included in this analysis. Agencies that are willing to help in converting data across units are welcome to work with the VAC in including this in the analysis.

[8] 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.

[9] 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).

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.[10]

Field observations were then compared with second-round crop estimates at EPA level, as most EPAs fit wholly within 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 change[11]. The percentage change in food and income sources from the baseline represents "*problem specifications*" that are used to calculate deficits and lack of food entitlements.

Box 1 – Areas not covered but for which there is concern

The VAC has recognised areas of concern based on NSO/MOAIFS 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's assessment will also be able to incorporate third round crop estimates.

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 Rumphi 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 areas[12].

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[13]. 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[14]. Some common hazard definitions or problem specifications are given in **Table V** in the **Appendix**. 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 below:

Partial crop production failure. Although overall rainfall in Malawi was only a little under 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 part of the country. Some EPAs in Central and Northern Regions also suffered local failures; these are highlighted in the individual livelihood zones.

Maize and other cereals: Nyachilenda, Mpatsa 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[15]. 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 staples available to Malawians and this has included projects that distribute of cassava cuttings to farmers. Consequently, there has been a dramatic increase in cultivation of the crop, although from the perspective of risk of 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.

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[10] 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 standard sampling procedure.

[11] 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%.

[12] Quick 'desk analyses' were done for other parts of Rumphi and Mzimba but no deficits were found.

[13] See page 6, footnote 5.

[14] See page 7, footnote 9.

[15] See Chikwawa and Nsanje Districts, Lower Shire LZ on pages 29 and 30.

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 influence 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 and forecasts for the main 2003-04 season, purchase 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 April 2003 to March 2004) and for most households, this is the period from October to March, although the most vulnerable 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 places the maize purchase price at a level concomitant with inflation and scenario 2 places it somewhat higher, at 30 percent above the inflation rate. The assumptions used for the two chosen scenarios are explained in **Box 2, point 3**, right.

Box 2 – 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 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. This is 19% 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 2.5 times the baseline) and the VAC decided to reduce this to 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 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 year that is in line with inflation (i.e. around MK 18-25 per kg) and **Scenario 2** has the staple (maize) price rising to 30% above inflation (i.e. around MK 25-35 per kg).

4. 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 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, wide-scale income transfer projects or food aid. 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. The MoAIFS' EPA population tables are also used. These may or may not reflect the actual numbers of people on the ground in 2004-2005.

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* and on time (see **Box 1**, item 6).

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 rural 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 a rise in prices.

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 concentrated livelihood and cropping patterns, especially their high dependence on 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 II - 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 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 an option that can always be pursued by many of the 'poor' or 'middle'. 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 coming opportunities. This could be a mitigating factor in Lupembe EPA in Karonga district because of *ganyu* 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 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 (MK 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.

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 1[16] while the some of the 'middle' households from Middle Shire Valley will be facing a deficit in scenario 2[17].

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 33%, the household is missing one-third of its total minimum annual food needs – a very serious situation. **Table III** below shows the 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 these deficits by much[18]. This is explained by the fact that households with large deficits have low incomes; these households are unable to purchase grain at any price and so are not as affected by staple purchase-price changes as others are.

Box 3 – 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, 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.

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.

Since the calculations on deficits include incomes and expenditure in determining food entitlements, it should be possible to calculate the amount of money a household from a particular wealth group will need to overcome their deficits. This can be called the 'income requirement'. In general, the larger the food deficit, the larger the income requirement will be. **Table VI** in the **Appendix** shows the income deficits for each scenario in each of the affected parts of livelihood zones presented in **Table III**. Notice that the income requirement increases by a large amount from scenario1 to scenario 2. 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.

[16] Scenario 1 refers to an assumption where the maize price increases from previous yearly high points (during the 'hunger season') at the inflation rate. This equates to an actual price of MK 18-25 per kg. See **Box 2** on page 9.

[17] Scenario 2 refers to an assumption where the maize price increases 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 25-35 per kg. See **Box 2** on page 9.

[18] With a price hike, deficits will rise a little but not as much as one might intuitively expect.

Table III – Food Energy Deficits by Districts, EPAs and Livelihood Zones for Each Scenario

Affected Area			Deficits (Percentage of 2100 kcal)			
			Scenario 1		Scenario 2	
District	EPAs	Livelihood Zone	'Poor'	'Middle'	'Poor'	'Middle'
Balaka	Phalula, Bazale, Utale	Middle Shire Valley	25-35%		30-40%	0-5%
Blantyre	Lirangwe, Chipande	Middle Shire Valley	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	Lake Chilwa & Phalombe Plain	45-55%	10-25%	45-60%	20-30
	Thumbwe, Mombezi	Shire highlands	20-30%		25-40%	
Dedza	Linthipe, Kapuka	Kasungu Lilongwe Plain	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%	35-50%	5-15%
Mangochi	Maiwa	Shire highlands	20-30%		25-40%	
	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%	
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%	

The deficits can be combined with population figures to obtain a 'missing food entitlement'[19] for particular administrative areas. This has been done and the summary for the whole country is presented in **Table IV**, while detailed breakdowns are available in the **Appendix** on pages 31 and 32 in **Table VII** and **Table VIII**.

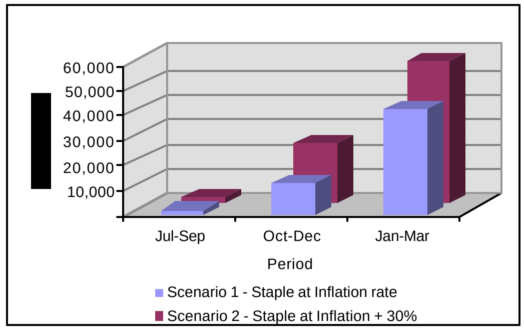
Table IV - Table of Main Food Security Outcomes: Missing FoodEntitlements and Cash Requirements

		Scenario 1	Scenario 2	Remarks
Total Population affected	**TOTAL**	**1,343,600**	**1,682,200**	
Missing Food Entitlements (MT)	July-September	1,720	2,610	Scenario 1: Only the 'poor' in Lake Chilwa – Phalombe Plain Scenario 2: Addition of some 'poor' from Middle Shire
	October-December	12,530	24,020	Scenario 1: Only the 'poor' Scenario 2: Addition of some 'middle' from Lake Chilwa – Phalombe Plain
	January-March	41,780	56,920	'Middle' and 'poor' wealth groups
	TOTAL	**56,030**	**83,550**	
Change in Food Entitlement from Scenario 1 to Scenario 2		+49%		
Cash needed to Overcome Missing Food Entitlements	Malawi Kwacha (K)	1,257,000,000	2,310,000,000	
	US Dollar ($)	11,700,000	21,600,000	Assumes an exchange rate of MK 107 to $1
	Euro (€)	9,900,000	18,200,000	Assumes an exchange rate of MK 127 to $1
Change in Money Requirement from Scenario 1 to Scenario 2		+84%		

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

[19] 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, micro-nutrients) into the calculations, the added complexities (and the time and resources required for them) are not easily justified.

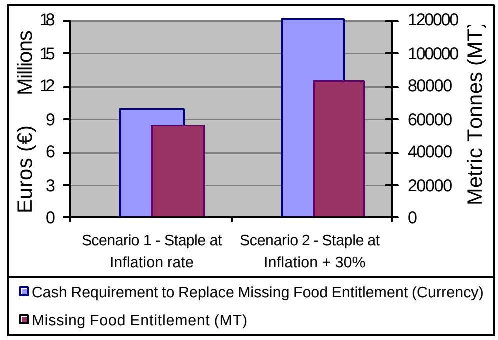
Figure 3 - Missing Food Entitlements



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 pages 14 to 30 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 quarterly periods where it is assumed that in the last three months the deficit will be at its maximum (but no higher than 75%[20]). If a deficit of 75% does not account for all the missing food in January to March of 2005, then a deficit is also projected for the period October to December, again to a maximum of 75%. In the 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**.

Figure 4 – Graph of Total Missing Food Entitlement and the Cash Requirement for Sceanrio 1 and Scenario 2



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 49% higher in scenario 2 than it is in scenario 1 but the cash needed to overcome that lack of entitlement is 84% higher (almost twice as much) in scenario 2 than it is 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 to be assured with a cash or income intervention, prices **must** be kept reasonably stable.

Conclusion and Implications

The outcomes presented above do not necessarily portray a worst-case situation, rather they seek to show what will happen if most variables that determine food entitlements develop in a manner that is consistent with previous years. More extreme variations than what are presented here will trigger a deeper and more widespread crises, dragging more households from the 'middle' wealth groups into food deficit.

Household incomes for the 'poor' are very low in Malawi. Baseline data suggests that the 'poor' earn between MK 8,000 and MK 25,000 per household per annum (depending on their livelihood zone). Those in zones with incomes close to the lower figure, are only able to purchase around 45% of their needs in a normal year, assuming that they put *all* their income into staple food purchase. This means that they have virtually no cash to fall back on in the event of a production failure. It also means that, since they need to purchase items other than staples, they will seek cash whenever they can and are forced to sell some of their crop at harvest-time, when prices are low. Later on, when prices have risen, they will be forced to buy back again. This becomes a vicious circle, reinforcing their poverty. The missing food entitlements can be alleviated through food aid (or 'direct food-entitlement support') or they can be replaced with cash. The figures given in this document for cash requirements can be used to design cash transfer programmes; for example, given a certain statutory wage rate, the number of days a cash-for-work programme should go on for in a particular area can be calculated.

The analysis in this report is not the last word on food security in Malawi for 2004-2005. The scenarios chosen and the values in each of the variables that have been predicted need to be *tested*; if events turn out differently from what has been presented in this document, revisions can and must be made. Several of the variables, including prices, availability of *ganyu* and collection or self-employment activities by household members need to be monitored and reported on. This document, therefore, serves as a blueprint for designing indicators for monitoring food security throughout the year. Details of crisis indicators are available in each of the forthcoming livelihood zone sections.

[20] 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.

Food Security Monitoring Report – May 2004

Karonga District — *Central Karonga LZ*

Main Conclusions and Implications

Affected EPAs & Populations		
District	EPAs	Population
Karonga	Lupembe	**Approx. 5,000**
Scenarios 1 & 2	**% 'Poor'**	**30-40%**

Lupembe EPA in Karonga district is the worst affected area in the Northern Region. This is mainly due to its receiving erratic rainfall, coupled with prolonged dry spells during the 2003-04 growing season. The low soil moisture content impairs winter crop-production prospects, which would have helped increase availability and reduce prices in local markets. This year's poor production will result in a food deficit for 'poor' households this year. An emergency intervention is required to cover this missing food entitlement; this can be form of food for work or cash for work. However, if the cash option is taken, measures should be taken to ensure reasonable price stability; this may mean ensuring that there are adequate supplies of maize and other foods like rice and cassava in local markets.

Zone Description

Lupembe EPA is a drier than the rest of Karonga district and has been relatively more concentrated on maize and cassava. Cash incomes are very low but they may improve as more farmers have started planting cotton. Tobacco is not grown in the zone and the zone is remote from the country's larger urban markets. Most 'middle' and 'better-off' households earn income from the sale of food crops and livestock (including cattle). The 'poor', who own only a few small livestock, depend on *ganyu* and self-employment (firewood, mat-making etc.) for income.

Assumptions for this Projection		**% Of Baseline**
Crop production (based upon district-level information)	Maize*	50%
	Cassava*	100%
	S. Potatoes*	0%
	Groundnuts*	80%
Ganyu	Availability	50%
	Payment	100%
Other sources of food and income		100%
Scenario 1: Market purchase price for maize		18 MK/kg
Scenario 2: Market purchase price for maize		22 MK/kg
Cost of basic non-food items†		120%
Other prices		119%

*Baseline = average production 1998-2002

†Baseline = average price, 2002-03 marketing year

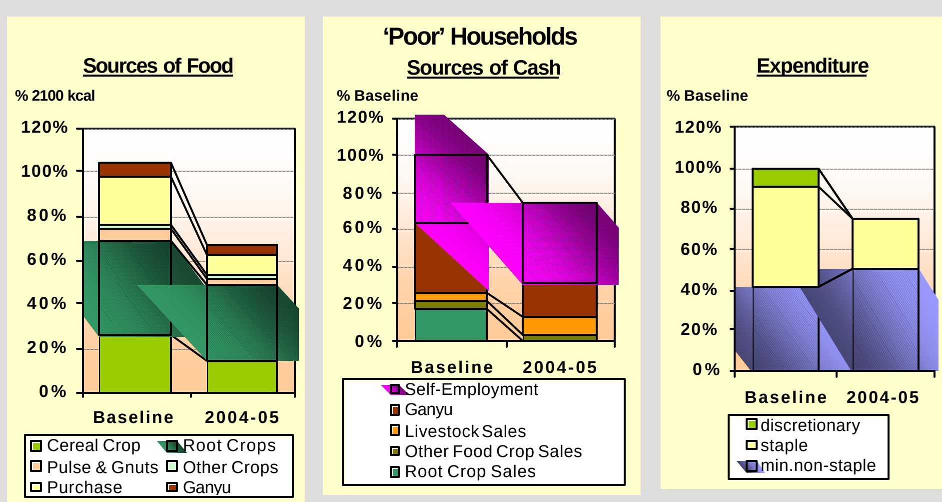
Current Hazards

EPA-level crop production data indicate a partial failure of main season maize production this year, which may be compensated for by an increase in the production of cassava. This may be available later in the year. Scenario 1 is based on an average purchase price of MK 18/kg for maize and scenario 2 is based on an average purchase price of MK 22/kg. The zone borders a rice growing area in the northern part, which also plays a role in improving the zone's food security situation. However, prices for rice are also expected to go up due to higher demand because of low maize production.

Outcome

Total food access for 'poor' households is expected to drop to the range of 60-75% of minimum food requirements, giving a deficit of 25-40%. This is because maize production plays a major role in household food supplies. Maize purchases will also be affected due to reduced earnings from *ganyu* and other crops. The 'Middle' and

Scenario 1 (Staple price approximately MK18/kg) Graphs



‘better-off’ households will also be affected by the production shock, but will be able to maintain their food intake above minimum levels due to their capacity for increasing livestock sales, which give them the necessary income for food purchases. This deficit results in a total missing food entitlement of 140 MT. In the event of an increase in prices (scenario 2), the deficit for the ‘poor’ will rise slightly to 30-40% and the missing food entitlement will increase to 150 MT.

In the zone, all wealth groups also rely on winter crops like sweet potatoes and maize to reduce food insecurity. However, the winter production prospects are not good due to very low water table, which has resulted in the reduction of cultivatable wetland (*dimba* land). Winter crops like maize help in reducing maize prices thereby improving food security situation in the season. However, that opportunity will not be there during this season.

Crisis Warning Indicators

Local markets have experienced increased demand for maize due to local purchases and higher prices in neighbouring Tanzania. This may push up maize prices and consequently prices for rice and other food crops grown in the northern and southern areas bordering the zone will rise. Hence, high prices (>25 MK/kg) need to be watched.

‘Poor’ households are expected to seek additional *ganyu* both locally and in the more distant parts of Karonga, which are more diversified in crop production. This will affect their ability to grow their own crops in the coming season. Large numbers of people migrating to neighbouring areas would be a sign of increasing crisis response.

They may also attempt to increase their incomes through an increase in firewood sales; marked increases need to be looked out for.

There may also be some increase in livestock sales among ‘middle’ and ‘better-off’ households, but distress sales are not expected.

Food Security Monitoring Report – May 2004

Kasungu, Ntchisi, Dowa, Mchinji, Lilongwe and Dedza Districts *Kasungu Lilongwe Plain LZ*

Main Conclusions and Implications

Affected EPAs & Populations			
Group	District	EPAs	Population
A	Dowa	Bowe	59,414
		Mponela	78,209
	Kasungu	Kaluluma	145,393
	Mchinji	Mkanda	89,513
	Ntchisi	Chipuka	20,877
	Total		**393,406**
	Scenario 1 & 2	**% 'Poor'**	**20-30%**
B	Lilongwe	Mpingu	68,935
		Malingude/ Sinyala	64,142
	Dedza	Linthipe	103,190
		Kapuka	61,159
	Total		**297,426**
	Scenario 1 & 2	**% 'Poor'**	**20-30%**

Although most EPAs in this large zone had reasonable maize harvests, there are concerns that food shortages will affect 'poor' households in certain EPAs that had far worse grain production in the 2004 season than the district average. The concern is that this will affect the availability of agricultural labour or *ganyu* –an important source of food for the 'poor'. Tobacco production is thought to be affected, and this will reduce income for 'middle' and 'better-off' households, which is linked to a potential shortage of local cash *ganyu* –hitting incomes for poorer households in the months ahead as well.

Rains during the 2003/04 growing season were unevenly distributed and in the affected EPAs, they were erratic and insufficient. These EPAs can be combined into two broadly similar groups, those in Dowa, Kasungu, Mchinji and Ntchisi (Group A) and those in Lilongwe and Dedza districts (Group B). Although Group A's maize production was slightly lower than that of Group B, the latter did or is expected to do slightly worse in everything else. 'Poor' households from Group B will thus face a larger deficit than Group A. Both groups will require targeted assistance, especially if grain purchase prices rise significantly. The assistance could be in cash or in food.

Zone Description

The Kasungu-Lilongwe Plain is a relatively productive but undiversified maize and tobacco zone. In an average year, the zone produces a surplus of food, so maize, groundnuts, sweet potatoes and Soya beans are sold out, mainly to Lilongwe. This surplus is almost entirely generated by the 20% of 'better-off' households in the zone. Tobacco is the single most important cash crop, providing 65%-85% of income for all wealth groups, and explaining why incomes in the zone are relatively high compared to elsewhere in the country.

Current Hazards

EPA-level data suggest substantial losses in maize production in the affected EPAs this season, Group A is slightly worse (60%) than Group B (70%). There is also an expected decline in tobacco production. Tobacco sales had not finished at the time of the assessment and the current scenario incorporates the assumption of a change in tobacco prices (in MK) compared to baseline that maintains pace with inflation. This will be revised when actual figures are reported.

Assumptions for this Projection		**% Of Baseline – Group A**	**% Of Baseline – Group B**
Crop production (based upon district-level information)	Maize*	60%	70%
	Groundnuts*	100%	60%
	Tobacco*	80%	75%
	Other crops*	70%	60%
Tobacco sales price		119%	119%
Ganyu	Availability	75%	70%
	Payment	100%	100%
Other sources of food and income		100%	100%
Scenario 1: Market purchase price for maize		23 MK/kg	23 MK/kg
Scenario 2: Market purchase price for maize		29 MK/kg	29 MK/kg
Cost of basic non-food items†		120%	120%
Other prices		119%	119%

*Baseline = average production 1998-2002

†Baseline = average price 2002-03 marketing year

Other crops include sweet potatoes and pulses. Both of these lost production due to inadequate soil moisture.

Local *ganyu*, especially that which is done for food, will be affected by crop losses among the 'better-off' and 'middle' wealth groups. Poorer households will then have to either accept payment in cash (at a payment rate below that of inflation) or seek work in other, less-affected EPAs.

Outcome

Own crops are expected to cover just over half of the minimum consumption requirement for 'poor' households this year, with the balance coming from *ganyu* (paid in food) and purchases. Incomes are also expected to fall this year because of the reduction in tobacco income and other crop sales. The balance of discretionary income will probably not be adequate to cover minimum food purchases, especially if prices rise. This is because the 'poor' rely heavily on own crops and on *ganyu* for their food and these two sources will be hard hit, making it difficult to make them up.

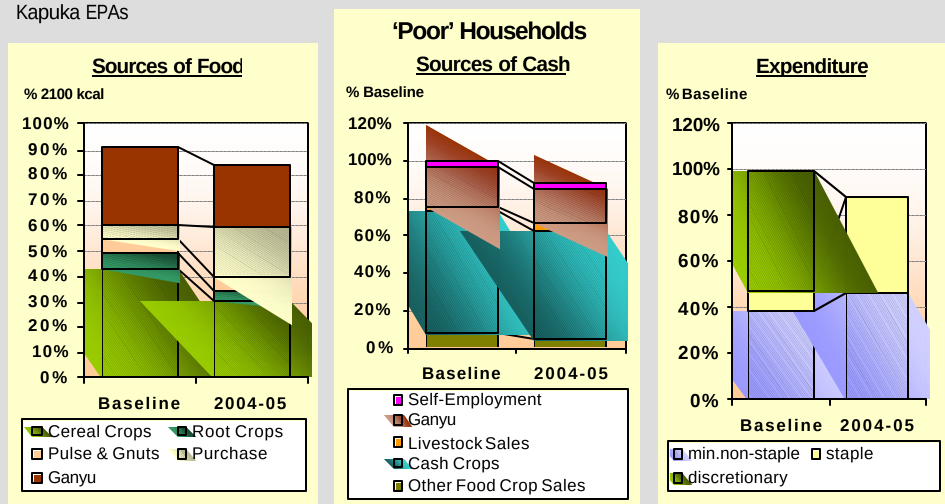
Deficit for the 'poor'	Scenario 1	Scenario 2
Group A	10-15%	10-20%
Group B	10-20%	20-35%

If the staple price remains at inflation-adjusted levels (i.e. 23 MK per kg), the 'poor' in group B are expected to face a deficit of around 10-20%, while those in Group A will face a deficit of around 10-15%. This equates to a missing food entitlement of around 2,570 MT for group A and 2,380 MT for Group B. The cash needed to overcome the deficit is US$ 414,000 for Group A and US$ 382,900 for Group B. The missing food entitlements will rise to 3,560 MT for Group A and 4,550 MT for Group B if the staple price rises to 30% above the inflation rate (i.e. 29 MK per kg). The cash needed to overcome the deficits will rise to US$ 716,500 for Group A and US$ 613,100 for Group B respectively if staple prices rise.

The 'middle' and 'better-off' wealth groups will not face a deficit in either scenario. Overall, the 'poor' in Group B will be the hardest hit in terms of deficit and they will suffer more in the event of a price rise.

. Crisis Warning Indicators

Scenario 1 (Staple price approximately MK23/kg) Graphs for Mpingu, Malingude, Sinyala, Linthipe and Kapuka EPAs



Since households in this zone have relatively high incomes, a sharp rise in grain prices beyond the inflation-adjusted level will have an immediate impact on household food security.

Migration to neighbouring EPAs (or even as far as Zambia) needs to be watched. However, it must be borne in mind that these movements may actually reflect better opportunities in the host areas, rather than just a decline in the affected areas.

Livestock distress sales. Although livestock selling is only really an option for the 'middle' and 'better-off' households, the fact that they are doing it would indicate their lack of resources for employing the 'poor'.

Food Security Monitoring Report – May 2004

Salima & Mangochi Districts — *Southern Lakeshore LZ*

Main Conclusions and Implications

In December 2003 the Malawi VAC and in February 2004 the Joint Food Security Assessment Mission identified this zone as a potential food deficit area. The onset of last season's planting rains was late and it was followed by an erratic rainfall pattern with prolonged dry spells. Coupled with the probability of lost income through reduced *ganyu* from both fishing and agricultural activities, 'poor' households will face a 21% food intake deficit this year. As this will need to be targeted, it could be covered by either cash-for-work or food-for-work activities. With price increases beyond inflation (by an extra 30%), the 'poor' will only meet about 70% of their minimum food requirement. The 'Middle' and the 'better-off' groups should, on the other hand, have several sources of income to meet the minimum caloric intake requirements.

Affected EPAs & Populations		
District	EPAs	Population
Salima	Chipoka	40,559
	Thembwe	25,880
Mangochi	Mbwadzulu	26,688
	Nasenga	53,718
Total		**146,846**
Scenarios 1 & 2	**% 'Poor'**	**35-40%**

Zone Description

The Southern Lakeshore zone stretches from the central district of Nkhotakota to the north-eastern part of Mangochi District. The zone is a thin strip of land extending approximately five kilometres inland from Lake Malawi. The Southern Lakeshore zone is the principal fishing area of Malawi, as the relatively shallow depths of the adjacent lake enable even small-scale fishermen to participate in fishing activities. 'Poor' households earn income from providing casual fishing labour for others, while the 'middle' and 'better-off' earn income from fish sales. The zone is a grain deficit area. Maize, rice, sweet potatoes, groundnuts and sorghum are the main crops grown.

Assumptions for this Projection		**% Of Baseline**
Crop production (based upon district-level information)	Maize*	57%
	Groundnuts*	20%
	Rice*	30%
	Other crops*	20-50%
Fishing *Ganyu*	Availability	50%
	Payment	100%
Agricultural *Ganyu*	Availability	50%
	Payment	100%
Other sources of food and income		100%
Scenario 1: market purchase price for maize		23 MK/kg
Scenario 2: market purchase price for maize:		29 MK/kg
Cost of basic non-food items†		120%
Other prices†		119%

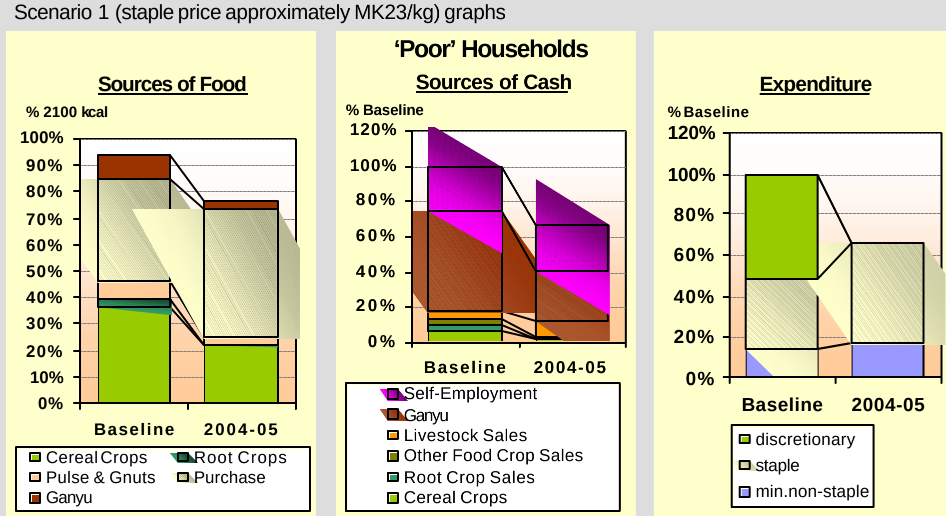
*Baseline = average production 1998-2002
†Baseline = average price 2002-03 marketing year

Current Hazards

The planting rains started very late, were erratic, with prolonged dry spells and stopped earlier than expected. Both rice and maize productions were affected, especially in Salima and Mangochi parts in zone. Overgrown rice seedlings were not transplanted in the main field in most areas due to inadequate water. Maize production was affected from the vegetative stage to the tasselling stage and farmers had to re-plant 2 to 3 times due to continuous crop wilting.

In addition to low rice and maize production, there are reduced fish catches, the main reason for which is the erratic rainfall pattern experienced during the 2003/04 season that affected the availability of fish food in shallow waters. This reduced income from either direct fish sales (usually by 'middle' and

Scenario 1 (staple price approximately MK23/kg) graphs



'better-off' households) or *ganyu* income in fishing (by the 'poor'). As a result of reduced incomes from fishing activities, the 'poor' will find it difficult to purchase maize and rice.

Winter crop production is expected to be very low due to low moisture content in the soil because of the erratic rainfall pattern coupled with prolonged dry spells. Like in other zones, winter production helps in improving the food security situation in the zone, which is not the case this consumption year.

Outcome

If staple prices remain at an inflation-adjusted rate compared with baseline (i.e. MK 23 per kg), then lower incomes realised from fishing-*ganyu* coupled with poor rice and maize production is expected to create a significant food intake deficit of around 20-30% for the 'poor'. The 'poor' will need to be targeted with either food-based activities (the missing food entitlement is estimated at around 3,500 MT) or cash-based activities (estimated at around US$752,200).

This will rise to around 35-35% if staple prices go up an additional 30% above the inflation-adjusted rate (i.e. MK 29 per kg). With the staple-price increase in scenario 2, the missing food entitlement will go up to 5,090 MT, while that of cash would rise to US$ 1,368,300). The 'Middle' and the 'better-off' groups should, on the other hand, have sufficient sources of both food and income to meet the minimum requirement.

Crisis Warning Indicators

Staple prices do impact significantly on households in this livelihood zone, due to their earnings from fish and rice sales. Hence, a sharp rise in staple price will lead to rapidly deteriorating food security.

Fish yields are important; if these do not recover, this valuable source of income will be lost. Signs of this happening will be increased reliance on other sources of income such as charcoal burning and firewood collecting (with corresponding low prices associated with over-production of these commodities).

Households from all wealth groups may try selling livestock (distress sales); increases in this activity (and correspondingly large drops in local prices) would indicate a growing crisis.

The timing and performance of the coming agricultural season will be key to providing opportunities for cash and food through agricultural *ganyu*; this should be monitored at the end of the year.

Food Security Monitoring Report – May 2004

Mangochi, Zomba, Chiradzulu, Blantyre and Thyolo Districts

Shire Highlands LZ

Main Conclusions and Implications

This zone has experienced a significant reduction in crop production, particularly maize, cassava and pulses. The 'poor' in the zone will have a 25% food entitlement deficit, representing 8,610 MT of maize for 154,200 people. If maize prices will rise from the projected high of MK22/kg between November 2004 and March 2005 to MK28/kg, the total maize-equivalent deficit could rise to 10,970 MT.

Affected EPAs & Populations		
District	EPAs	Population
Mangochi	Maiwa	42,890
Zomba	Chingale	35,390
	Ntubwi	17,665
Chiradzulu	Thumbwe	65,384
	Mombezi	104,256
Blantyre	Ntonda & Kunthembwe	182,663
Thyolo	Matapwata	19,149
Total		**467,393**
Scenarios 1 & 2	**% 'Poor'**	**25-35%**

Zone Description

This is a large zone covering one of the most densely populated portions of the country. This zone averages about 1,200 – 1,400 metres in elevation and mean annual precipitation ranges from 1,000 – 1,400 mm. Land holding size is a significant constraint to agricultural production and livestock holdings are relatively low. For the 'better-off' and 'middle', the primary source of food is own production. Among the 'better-off' it accounts for 86% of annual food needs while for the 'middle' it is just under 40%. The 'poor', however, garner just over 20% of their annual food needs from their own crops. Purchase is the largest source of food for the 'poor'. Their main source of income is agricultural employment (*Ganyu*), whereas for the 'better-off' it is crop sales.

Table 2: Assumptions for this Projection		**% Of Baseline**
Crop production (based upon RDP-level information)*	Maize	50%
	Groundnuts	100%
	S. Potatoes	100%
	Cassava	60%
	Pulses	60%
Ganyu	Availability	80%
	Payment	100%
Other sources of food and income		100%
Scenario 1: market purchase price for maize†		MK 22/kg
Scenario 2: market purchase price for maize†		MK /kg
Cost of basic non-food items†		100%
Other prices†		100%

*Baseline = average production 1998-2002

†Baseline = average price 2002-03 marketing year

Current Hazards

RDP-level data as well as field data indicate substantial reductions in crop production compared with the average. The main cause of this loss of production has been the low rainfall that was received during the growing season, coupled with delayed planting that resulted from the late onset of the rains. Recurring dry spells during the season also had a deleterious effect on crop development. Reductions in maize yield were as high as 50% in some parts of the zone, affecting mainly the 'poor'. The resulting maize shortages will reduce *ganyu* payment rates and as a result, 'poor' households will not have access to enough food due to declining incomes. With regard to staple price, scenario 1 assumes that it will increase by the inflation rate of 19% from the baseline price of MK 18/kg during the lean period (between November 2004 and March 2005) when most people purchase maize. Scenario 2 assumes that the staple price will increase at 30% above the inflation rate.

Outcome

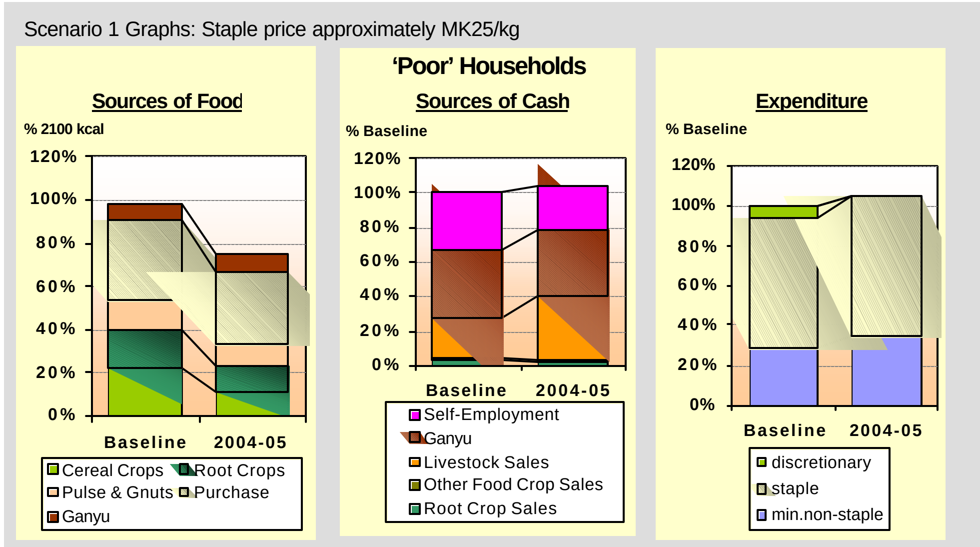
Reduced maize production, reduced *ganyu* payments and reductions in purchasing power are expected to result in a 25% food intake deficit for 'poor' households in the affected EPAs. As a result, the 'poor' households will not be able to offset the reduction in production by increasing purchases due to low income. For scenario 1, purchases are expected to drop from 37% to 34% of minimum energy needs. For scenario 2, the 'poor' are expected to decrease their purchases further to only 27% of intake, which will increase their deficit from 25% to 32%.

Based on population projections, the total affected population in the zone is estimated to be 154,200, representing a missing food entitlement of 8,610 MT in scenario 1 and 10,970 MT in scenario 2.

Crisis Warning Indicators

The late onset of rains as well as recurring dry spells will be the first signs that the coming season will not be a normal one and will be important to watch.

'Poor' households are expected to run out of own produced food soon and start depending on the markets. Therefore, to pay for their food, these households are expected to start seeking *ganyu* quite early.



An early rise in the prices for main staple is also an indication of impending shortages. Extraordinarily high prices will also drag the 'middle' into the same predicament as the 'poor', undermining their advantages in income.

Another indicator wll be distress livestock sales, with accompanying drops in livestock prices.

Food Security Monitoring Report – May 2004

Balaka, Zomba, Mwanza and Blantyre Districts

Middle Shire Valley LZ

Main Conclusions and Implications

Most EPAs in this zone experienced a drop in crop production, particularly maize, which fell to approximately 60% of the baseline and around 40% of baseline in Lisungwi and Mwanza EPAs. These two groups of EPAs have been labelled Group A and Group B respectively. Incomes for the 'poor' have also declined by 20%. The 'better-off' and 'middle' incomes have also experienced some decline. As a result, the 'poor' are expected to have a 25-35% food entitlement deficit in the Group A EPAs and a 30-40% deficit in Group B, assuming the maize price increases at the inflation rate (scenario 1). These deficits will rise to 30-40% for Group A and 40-45% for Group B if the price of maize goes up by an additional 30% above inflation (scenario 2). If maize prices are above MK 28/kg as in scenario 2, a food intake deficit is not only expected for the 'poor' in Group A but will extend to the 'middle', who will face a 1-5% deficit. Discretionary expenditure for the 'poor' and 'middle' will be switched to cereal purchases in both scenarios.

Affected EPAs & Populations			
Group	District	EPAs	Population
A	Balaka	Bazale	79,507
		Phalula & Utale	33,771
	Zomba	Chingale	35,390
	Blantyre	Lirangwe & Chipande	166,764
	Total		**315,433**
	Scenario 1 & 2	**% 'Poor'**	**45-60%**
	Scenario 2	**% 'Middle'**	**25-40%**
B	Mwanza	Mwanza	13,219
	Neno	Lisungwi	27,393
	Total		**40,612**
	Scenario 1 & 2	**% 'Poor'**	**45-60%**

Zone Description

The Middle Shire zone includes parts of Mwanza, Balaka, Blantyre, Machinga, and Zomba districts and extends from the Mpatamanga gorge in the south to the southern end of Lake Malombe in the north. The zone has a relatively dry climate with mean annual precipitation ranging from 200-1000 millimetres. The zone is characterised by near-subsistence farming, with fishing on a small scale amongst those living close to the Shire River. This being a dry area, crop production is relatively low and those along the river rely on winter cropping. People in the area have no trouble accessing markets for their produce, although farmers in remote parts of the zone sometimes have to walk long distances. Prices of the main cash crop in the zone (cotton) tend to fluctuate and many farmers have, over the years, stopped growing the crop. However, there is renewed interest in the crop because of price incentives and subsidies on inputs offered by the Cotton Development Association.

Table 2:Assumptions for this Projection		**% Of Baseline (Group A)**	**% Of Baseline (Group B)**
Crop production*	Maize	57%	34%
	Groundnuts	0%	25%
	Pulses	60%	40%
	Sorghum	60%	12%
	Millet	60%	5%
	Cotton	60%	175%
Cotton sales price†		200%	200%
Ganyu	Availability	70%	30%
	Payment	100%	100%
Other sources of food and income		100%	100%
Scenario 1: market purchase price for maize†		22 MK/kg	22 MK/kg
Scenario 2: market purchase price for maize†		28 MK/kg	28 MK/kg
Cost of basic non-food items†		100% [2]	100% [2]
Other prices†		100%	100%

*Baseline = average production 1998-2002

†Baseline = average price 2002-03 marketing year

Current Hazards

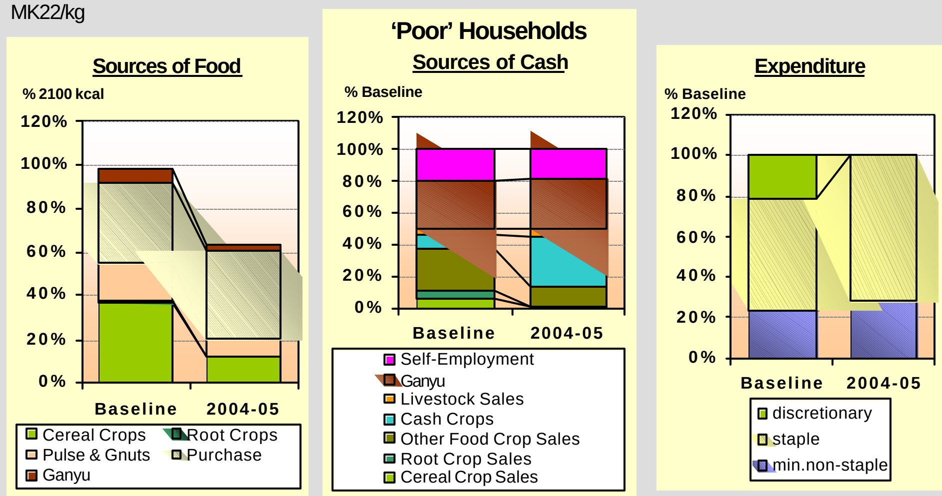
Following poor performance of the rainfall season because of delayed start and frequent dry spells, there has been a significant reduction in production this last season compared with baseline for all crops except cotton, which has experienced an increase. Maize production is only 34% of the average in Lisungwi and Mwanza EPAs (Group B) whereas in the other affected EPAS (Group A) in the zone it is at 57%. Other crops did equally badly, including sweet potatoes, cassava and pulses.

The resulting maize shortages are expected to reduce *ganyu* payments, while income from self-employment activities is also expected to reduce. As a result, 'poor' households may have access problems due to the higher prices and declining incomes. Cotton was a popular crop this year and, encouraged by good price offers and subsidised inputs, farmer in this area increased their areas under cultivation of the crop. However, production will be affected by dry spells that occurred during bud development. The prices offered to growers were 2.5 times those in the baseline (250% of baseline) but farmers will have to repay loans for inputs out of their harvest, so the VAC opted for decreasing the price 'problem' to 200%. This will also compensate for any loss in grading, which could occur due to the poor rainfall conditions.

Scenario 1 assumes that the price of maize will increase by the inflation rate of 19% from the baseline price of MK18/kg to MK 22/kg during the lean period during the months of November 2004 to March 2005, when most people are purchasing maize. Scenario 2 assumes that the price will increase by 30% more than the inflation rate, to around MK 28/kg, during the lean period.

Outcome

Scenario 1 Graphs in Lisungwi and Mwanza EPAs (Group B) in the zone: Staple price approximately MK22/kg



Households are expected to seek extra labour, produce more charcoal (or collect more firewood), and, if they have them, sell more livestock. However, the sheer reduction in their maize and other crops' production, coupled with expected reduced *ganyu* payments will mean they have reduced purchasing power and the 'poor' in the EPAs in Group A are expected to face a 25-35% deficit in their food energy entitlements, for the conditions in scenario 1. Those in Group B are expected to face a 35-45% food intake. This will be equivalent to a missing food entitlement of 13,120 MT of maize, affecting 188,700 people in the 'poor' category of households in the zone.

For conditions in Scenario 2, the 'poor' in both EPA Groups will face somewhat higher deficits (30-40% for Group A and 40-50% for Group B), while the 'middle' will also face a small deficit of 0-5% of their food needs. This is equivalent to a missing food entitlement of 16,350 MT for 291,660 'poor' households and 1,140 'middle' households.

Increased cotton sales should help considerably in by providing much-needed cash to offset other losses, but it will not be enough to counter the need for considerable food purchases in both scenarios.

Crisis Warning Indicators

The timing and performance of the coming season will affect crucial sources of food and income in the coming year, especially *ganyu* (for both food and cash).

'Poor' households are expected to seek additional *ganyu* locally and wages are expected to drop during the 'hunger period' of starting from the next planting season.

Increased charcoal or firewood sales and reduced charcoal and firewood prices are important to watch and may be the indicator of an impending crisis.

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Machinga, Phalombe and Chiradzulu Districts

Lake Chilwa and Phalombe Plain LZ

Main Conclusions and Implications

The prolonged dry spells experienced in this zone have significantly affected crop production. Throughout the zone, there will be drops in production this season for almost all crops except sweet potatoes and a few minor crops. However, some areas are more severely affected than others and to analyse this, the zone was divided into two groups, each group comprising EPAs that are affected to roughly the same degree. Group A comprises Kosongo, Mpinda and Tamani EPAs in Phalombe district and Thumbwe in Chiradzulu district. Group B comprises Nampeya and Chikweo EPAs in Machinga district. Both groups are expected to face serious food deficits this season. One other EPA, Mbonechera, has had conditions similar to those in Group B but their situation has been improved by increased cotton and chilli production coupled with an expected increase cotton prices.

Affected EPAs & Populations			
Group	District	EPAs	Population
A	Phalombe	Kosongo	18,427
		Mpinda	31,545
		Tamani	20,220
	Chiradzulu	Thumbwe	104,254
	Total		**174,448**
	Scenario 1 & 2	**% 'Poor'**	**25-35%**
	Scenario 1 & 2	**% 'Middle'**	**45-55%**
B	Machinga	Chikweo	68,133
		Nampeya	55,402
	Total		**123,535**
	Scenario 1 & 2	**% 'Poor'**	**25-35%**
	Scenario 1 & 2	**% 'Middle'**	**45-55%**

It is expected that winter maize production in the zone will be affected by inadequate moisture due to the low levels of rainfall received this season. Where some households around Lake Chilwa depend on fishing as an additional source of income, fish catches are expected to drop due to low water levels. Lake Chilwa also has no outlet so in dry years like this one, water bone diseases increase and this limits fishing.

These shocks will result in food deficits for the 'poor' and 'middle' households in both parts of the zone. The details of the analysis outcome are outlined below.

Zone Description

As its name suggests, this zone includes areas surrounding Lakes Chilwa and Chiuta in Machinga and Zomba districts, extending south to the highlands known as the Phalombe plain in Phalombe district and parts of Mulanje, Thyolo and Chiradzulu districts in the southern region. It generally receives an annual rainfall of 700-1000mm, which is adequate for production of various crops. The main crops grown for food are maize, cassava, sorghum and rice. Tobacco and sunflower are cash crops but a minority of households grow them. Most of the households depend on their food crops for cash as well; rice being the most important cash crop for the households around the Lake Chilwa basin. Some of the cash obtained from selling rice is used to purchase maize, the main staple. Both the 'poor' and 'middle' households supplement their food access by doing *ganyu* in exchange of food in normal years. Livestock (mainly goats and chickens) production is very insignificant as a source of food but it serves as a reliable source of cash during the hard times, mainly for 'middle' and 'better-off' households. Small-scale businesses and fishing are other economic activities from which households in the zone may derive their livelihoods. In summary,

Assumptions for this Projection		**% Of Baseline (Group A)**	**% Of Baseline (Group B)**
Crop production (based upon RDP-level information)*	Maize	40%	59%
	Rice	15%	15%
	Groundnuts	35%	40%
	S. Potatoes	40%	40%
	Tobacco	0%	0%
	Pulses	40%	40%
	Cassava	60%	46%
	Sorghum	45%	25%
	Pulses	40%	92%
	Other crops	100%	100%
Tobacco sales price†		100%	100%
Ganyu	Availability	80%	80%
	Payment	100%	100%
Other sources of food and income		100%	100%
Scenario 1 market purchase price for maize†		20 MK/kg	20 MK/kg
Scenario 2 market purchase price for maize†		25 MK/kg	35 MK/kg
Cost of basic non-food items†		120%[2]	120%[2]
Other prices†		100%	100%

*Baseline = average production 1998-2002

†Baseline = average price 2002-03 marketing year

most of the households in the zone are subsistence farmers who sell part of their produce in order to access other basic needs including food.

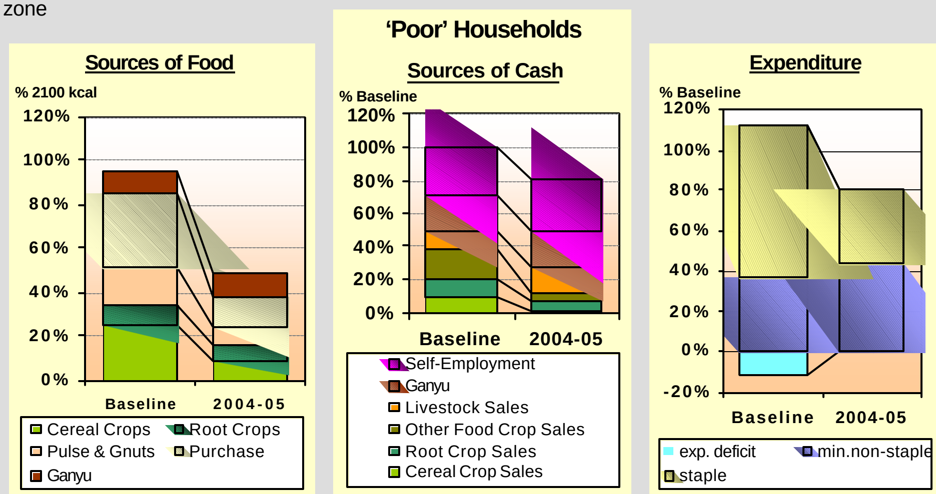
In 'normal' years, neither the 'poor' nor the 'middle' households are able to meet their food intake requirements. Over half of their food (50-60% and 60-75% for 'poor' and 'middle' respectively) comes from own crop production, while purchases (30-40% for the 'poor' and 20-30% for the 'middle') and food from *ganyu* (5-15% for the 'poor' and 1-10% for the 'middle') accounts for the rest. *In a 'normal' year, a 'poor' household's income can purchase less than half of its food needs –greatly restricting their capacity to cope with production shocks.* Only 'better-off' households are able to meet their food intake requirement of which own crop production contributes 70-80% of their food intake while purchase make up the rest.

Current Hazards

The impact of the dry spells during this past planting season is more serious in Group A than in Group B. There are, nevertheless, severe reductions in the production of most crops in both groups. For example, the 'poor' in part A of the zone are expected to produce only 40% of their baseline maize production while in part B, they are expected to produce 59%. Rice production, which is an important cash earner for households around Lake Chilwa basin (under Group B), has also failed. The same applies to tobacco, which is another important cash crop for some households in both parts of the zone.

Ganyu is assumed to drop by 20% compared with the baseline. This is because fewer 'better-off' households will have enough food to spare for payment in the coming agricultural season; they will instead switch to cash, and pay rates may well decline due to excessive supply of hired labour.

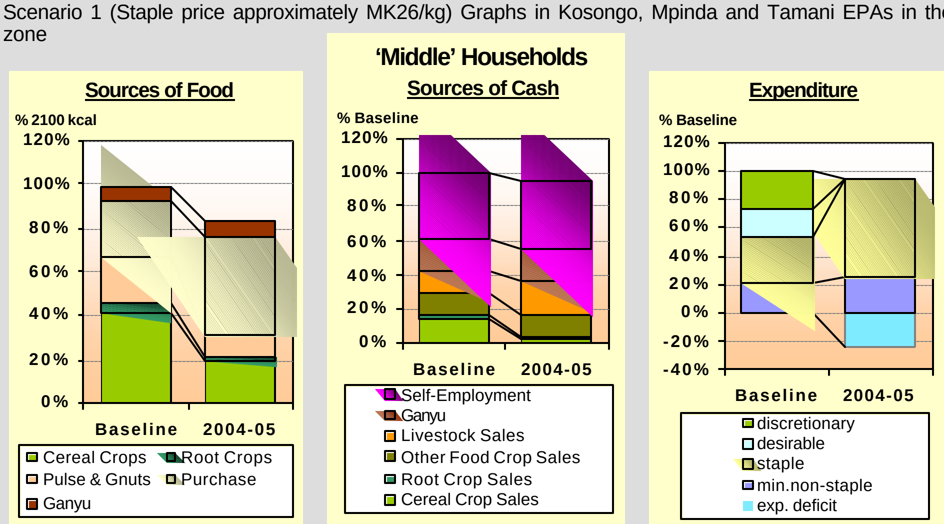
Scenario 1 (staple price approximately MK20/kg) Graphs in Kosongo, Mpinda and Tamani EPAs in the zone



Outcome

The above hazards will reduce household food accessibility for all categories of households.

Scenario 1 (Staple price approximately MK26/kg) Graphs in Kosongo, Mpinda and Tamani EPAs in the zone



In Scenario 1, the 'poor' households are expected to experience food intake deficits of 45-55% for Group A of the affected EPAs and 35-45% for Group B. The deficits have two main causes: first, there is the drop in the contribution made by crops to food intake from approximately 50% to around 25% of their energy requirements. Second, there is a drop in the contribution of purchased food (mainly maize) from around 35% to around 15% of the total energy requirements. This is due partly to losses in crop sales (from approximately 37% of baseline income to approximately 10%). It is mostly due, however, to the fact that incomes for this group are so low, and despite switching discretionary expenditure to staple food and making every attempt at expanding their sources of income, they will still not be able to purchase the food they need. This income is so low that grain prices would have to come down to below MK 4 per kg for them to be able to afford enough. In Scenario 2, the deficits for the 'poor' will increase slightly, due to higher purchase prices. 'Poor' households in the EPAs in Group A will then face a 45-60% deficit and those in Group B a 35-50%. Small incomes and the lack of expandability are the reason behind the relatively small increase in deficit for the large increase in prices.

For scenario 1, the 'middle' households will experience smaller deficits of 10-25% in Group A and 0-5% in Group B. In scenario 2, the deficits will increase significantly to 20-30% and 5-15% respectively. 'Middle' households are able to purchase more than the 'poor' because their incomes are substantially higher, although this makes them more sensitive to staple price changes. Unlike the 'poor', they are able to engage in petty trading (requires capital), which the above-mentioned problems are not expected to affect significantly. The 'better-off', with their greater income and asset bases, will still be able to meet their minimum food intake in both scenarios.

Based on these estimated deficits and the above mentioned figures of populations affected, the missing food entitlements in scenario 1 are 9,180 MT for the EPAs in Group A and 3,400 MT for those in Group B. This gives 12,580 MT of missing food entitlement for the affected EPAs in the zone as a whole. For scenario 2, the missing food entitlements are 11,290 MT for Group A and 4,920 MT for Group B, or 16,210 MT for the whole zone.

Crisis Warning Indicators

It is anticipated that many households will run out of food much earlier this season (July/August) than they normally do (November/December).

Food prices, especially of maize, will therefore rise to their high value much earlier than is normally the case, which may trigger an increased inflow of maize from Mozambique. The level of the maize purchasing prices will be an important indicator, especially as it affects the vulnerability of the 'middle'.

There will be an increase in the number of people, especially in Phalombe district, crossing the border into Mozambique in search of food. The number of people seeking *ganyu* will be an important indicator.

Another indicator is livestock distress sales (high numbers sold at low prices).

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Thyolo and Mulanje Districts *Thyolo-Mulanje Tea Estates LZ*

Main Conclusions and Implications

Unlike in the neighbouring Lake Chilwa/Phalombe plain, the areas in the Thyolo and Mulanje Tea estates livelihood zone were still receiving some showers when the former were experiencing dry spells. Although the rainfall received was generally lower than normally expected, the crops survived. The areas that experienced low levels of rainfall included Khonjeni, Thyolo Boma, Thekerani and Masambanjati EPAs in Thyolo district, Msikawanjala and Mulanje Boma EPAs in Mulanje district. This resulted in production drops for various crops and some households, especially the 'poor', may face food deficits in the 2004-05 agricultural marketing period. This deficit is dependent on food purchases; hence, the maize price has a significant impact on household food security. If prices of the main staple (maize) increase at the average rate of inflation (or from about 17 MK/kg in the baseline to about 20 MK/kg between November 2004 and March 2005), the food energy deficit can be up to 10% for the 'poor'. This is scenario 1. Scenario 2 assumes a maize price increase equivalent to inflation plus 30%, or from 17 MK/kg to 26 MK/kg. This results in an increase in the food deficit of the 'poor' households from 0-10% to 10-20%. The 'middle' households, who had no deficit in scenario 1, will have a small deficit of 1-10% in scenario 2.

Affected EPAs & Populations		
District	EPAs	Population
Thyolo	Khonjeni & Thyolo Boma	255,176
	Thekerani & Masambanjati	265,285
Mulanje	Msikawanjala & Mulanje Boma	149,355
Total		**669,816**
Scenarios 1 & 2	**% 'Poor'**	**35-45%**
Scenario 2	**% 'Middle'**	**30-40%**

Assumptions for this Projection		**% Of Baseline**
Crop production (based upon RDP-level information)*	Maize	50%
	Rice	70%
	S. Potatoes	45%
	Cassava	50%
	Pulses	20%
	Bananas	70%
	Fruits/Veg.	90%
	Other crops	100%
Tobacco sales price†		100%
Ganyu	Availability	75%
	Payment	100%
Self Employment†		50%
Other sources of food and income		100%
Scenario 1 market purchase price for Maize†		20 MK/kg
Scenario 2 market purchase price for Maize†		26 MK/kg
Cost of basic non-food items†		120%[2]
Other prices†		100%

*Baseline = average production 1998-2002

†Baseline = average price 2002-03 marketing year

Zone Description

The zone covers parts of Mulanje and Thyolo districts in the southeastern part of Malawi. It is characterised by large tea estates that leave very little remaining land for cultivation by smallholder farmers. Consequently, landholdings are small, averaging less than 1 acre and landholdings are the main determining factor for crop production. Landholding size increases with wealth group category. This means many households do not produce enough food to last them the whole season and there is a high dependence on the market for food, much of the income for which comes from working on the tea estates. The zone also borders Mozambique; hence some of the food on the market, especially maize, comes from across the border in Mozambique. Close to 40% of the total food intake by the 'poor' and 'middle' households comes from food purchases. The 'better-off' households are less dependent on purchases (around 15% of their food) as they are able to produce more from relatively large pieces of land.

The zone generally experiences cool temperatures and high rainfall (900-2000mm), both of which are extended over long period. It receives light rains or showers long after the main rainfall season is over in the rest of the country making weather conditions favourable for the production of tea and fruits such as bananas, pineapples, avocado pears and citrus. Many households obtain their income from working in the tea estates and selling fruits making them able to withstand maize production shocks, yet dependent on maize purchase prices. Livestock holdings are insignificant, since grazing land is limited because most of the land is under tea cultivation.

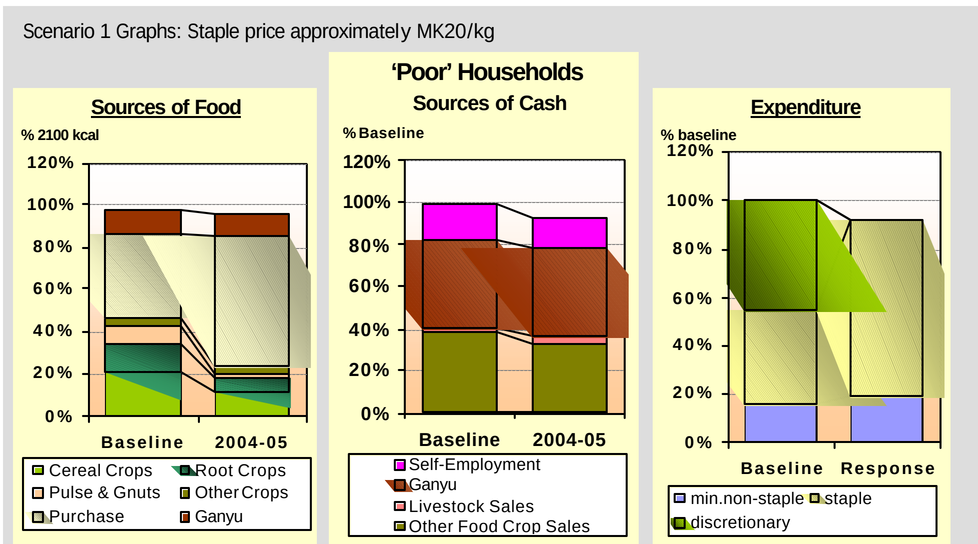
Current Hazards

Production of most crops is down due to lower rainfall that was experienced in the zone this season. The first problem this season is that crop production has dropped: maize production is expected to be 50% of what is normally produced, affecting income, and other crops that provide either food or cash have also been affected. This will force households to increase the use of the alternative sources, such as purchases or *ganyu* in exchange for food. Self-employment will also go down as people lack the resources to do personal businesses, markets diminish and resources are diverted to purchasing food. Production of fruits and vegetables is also expected to drop slightly due to the dry spells. The availability of work in the estates and wage rate, currently at 60 MK/day, are assumed to remain the same.

With regard to maize purchasing prices, two possible scenarios describe this problem. Scenario 1 assumes that the maize price will increase by the average inflation rate or go from 17 MK/kg in the baseline to 20 MK/kg in the 2004-05 consumption period, while Scenario 2 describes the maize price rising by 30% more than the inflation rate, increasing instead to 26 MK/kg.

Outcome

Using scenario 1, the above hazards are expected to result in a food intake deficit of up to 10% for 'poor' households in the affected EPAs as shown in the graphs. Households would have experienced a higher deficit were it not for their ability to increase maize purchases, which will account for just over 60% of the food intake, up from just under 40% in the baseline. Incomes will drop slightly as households lose crop sales but try to make up for this by working in the tea estates and by selling bananas and other fruits. The later sources of income have not significantly been affected by the dry spells as the former. All the discretionary expenditure will be switched to the staple food and minimum non-staple food. Based on the population figures and this estimated food intake deficit, the affected population will be about 267,900 and the missing food entitlement will be about 2,350 MT.



Assuming scenario 2, the food intake deficit faced by 'poor' households will increase from 0-10% to 10-20%. The 'middle' households, who had no deficit in scenario 1, will now face a small deficit of 1-10%. Since the 'poor' and 'middle' households in this zone are highly dependent on food purchases, they are also sensitive to price changes in the staple food. Based on these deficits and the total population of the affected EPAs, the total affected population in scenario 2 comes to about 502,400 and translates into missing food entitlements of about 12,800 MT. As can be seen, scenario 2 reduces the purchasing power of the both the 'poor' and 'middle' households and greatly increases the number of food insecure households.

Crisis Warning Indicators

Hikes in staple food prices will increase food insecurity; these need to be monitored carefully.

'Middle' and 'better-off' households are able to sell livestock; in a situation such as that in scenario 2, there will be extra sales and reduced prices.

There will be many people looking for work in the estates in order to obtain cash to buy food. However, this is unlikely to affect the wage rate as it is normally fixed. Monitoring the increasing supply of labour will provide an indication of food security.

The timing and performance of the coming season will be an important determinant for factors such as *ganyu* availability.

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Chikwawa & Nsanje Districts — *Lower Shire LZ*

Main Conclusions and Implications

Affected EPAs & Populations			
Group	District	EPAs	Population
A	Nsanje	Nyachilenda	70,630
		Mpatsa	23,080
		Mogoti	33,022
	Total		**126,731**
	Scenario 1 & 2	**% 'Poor'**	**30-45%**
B	Nsanje	Makhanga	53,724
		Zunde	42,823
	Chikwawa	[All]	425,080
	Total		**521,627**
	Scenario 1 & 2	**% 'Poor'**	**30-45%**

In Lower Shire, a variety of food crops are grown; this helps households that are far from the country's main markets cope with threats that seem all-to-prone in their livelihood zone. The two most common threats are drought and floods and these two calamities have been present either individually or in combination every one the last five years. This year was no exception; the zone was subject to poor and intermittent rainfall that destroyed some crops and drastically reduced others.

The VAC found that some EPAs had done worse than the others and the three that had the most severe problem were grouped separately for analysis. These three EPAs are Nyachilenda, Mpatsa and Mogoti and are all in Nsanje district, they have been labelled Group A in this analysis. For a scenario where maize purchase prices are level with inflation (scenario 1), households from the 'poor' wealth group are all expected to face a deficit of 20-35% this year, which will manifest itself from October onwards. In the rest of the zone, called Group B, and comprising Makhanga and Zunde EPAs in Nsanje district as well as the whole of Chikwawa district, households will face a smaller deficit of 10-25%. These deficits will rise to 25-40% and 15-30% in each of the two respective groups if prices rise 30% above inflation (scenario 2).

Zone Description

This hot dry lowland zone is nonetheless relatively productive by the standards of southern Malawi. A variety of crops are grown during both the main and winter seasons, with winter crops cultivated in wetlands beside the Shire River. Cotton is the zone's major cash crop, which has been growing in popularity recently with better markets and support for inputs from the buying companies. Cattle holdings are significant, although concentrated in the hands of the 'better-off'. Overall, very roughly one third of zonal income comes from the sale of food crops, one third from the sale of cotton and one third from the sale of livestock (mainly cattle and goats). The zone benefits from good access to neighbouring Mozambique, a source of relatively cheap maize in both good and bad years.

There are significant variations in the importance of winter production between different parts of the zone. For the roughly 20% of the population living in the west of the zone, away from the river, there is no winter production at all. For the remainder, winter crops account for about 20% of total production. There are, of course, other local variations, with winter production more important in some villages than others.

Assumptions for this Projection		% Of Baseline (Group A)	% Of Baseline (Group B)
Main season crop production (based upon district-level information)*	Maize	19%	57%
	Rice	40%	50%
	Sorghum	80%	90%
	Millet	80%	90%
	Groundnuts	40%	40%
	Pulses	50%	50%
	Cotton	60%	60%
Winter crop production*	S. Potatoes	40%	60%
	Maize	50%	50%
Cotton sales price†		200%	200%
Ganyu	Availability	100%	100%
	Payment†	100%	100%
Cattle	No. sold	60%	75%
	Price†	100%	100%
Other sources of food and income		100%	100%
Scenario 1 market purchase price for maize†		MK 22/kg	MK 22/kg
Scenario 2 market purchase price for maize†		MK 27/kg	MK 27/kg
Cost of basic non-food items†		119%	119%
Other prices†		119%	119%

*Baseline = average production 1998-2002

†Baseline = average price 2002-03 marketing year

Current Hazards

Maize was hit badly this season, particularly in the EPAs in Group A. Rice, which is an important income earner, did badly in both groups. The only crops that performed anything like normal were sorghum and millet; while these crops survived, they nevertheless had reduced yields.

Encouraged by good offers for their crops and subsidised inputs, farmers in this zone expanded the areas they put under cotton. However, the worst dry spell occurred as the buds were forming and this is expected to reduce output considerably –to around 60% of the baseline. Prices for the crop will depend on grading of the crop but they are nevertheless considerably higher than two years ago, before marketing was revived. Farmers were told they could get around MK 26/kg, up from MK 11/kg or an increase of 250%. In this analysis, the price gain has been reduced to 200% (representing a final price of MK 22/kg), to account for poorer-than-expected quality and farmers having to repay debts on inputs to the cotton buyers. As far as income is concerned, the higher price has offset against the poor production, resulting in somewhat increased income for households.

The prospects for winter cropping may change but so far this year water levels in the Shire River have been low and *dimba* flooding insufficient to sustain all but a modest crop.

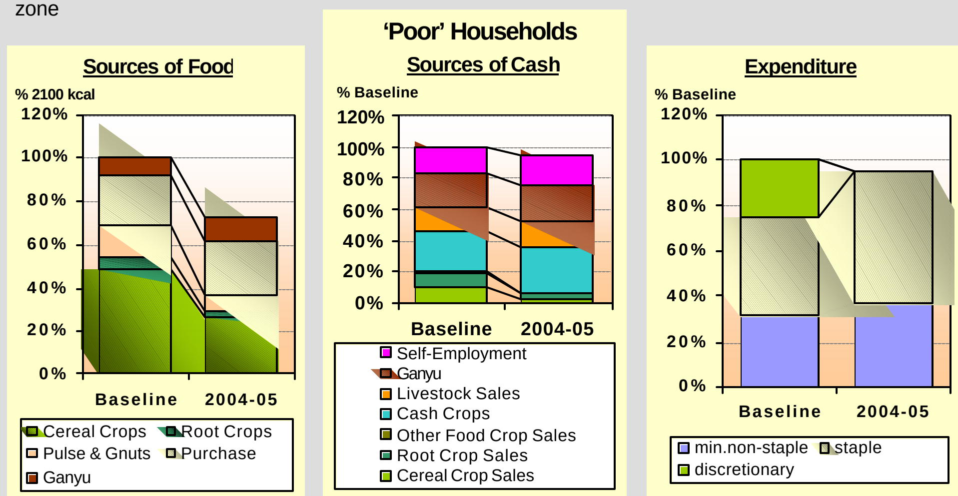
Selling livestock has been an effective way of coping with crop failure, even for the ‘poor’. However, successive failures over the last few years have depleted herds, so that this year only ‘middle’ and ‘better-off’ households can exploit this option. Herd sizes have reduced to 60% of the baseline in the Group A EPAs and 75% in Group B.

Purchase prices for maize may well rise this year; to allow for this eventuality two scenarios have been drafted. Scenario 1, where the price keeps pace with inflation, will put maize at MK 22/kg, while scenario 2, which has it at 30% higher than inflation, will put it at MK 27/kg.

It has been assumed that all other prices will follow inflation.

Outcome

Scenario 1 (staple price approximately MK 22/kg) graphs in Nyachilenda, Mogoti and Mpatsa EPAs in the zone



Despite an above-average income from cotton and using all options to make up losses, the ‘poor’ in all EPAs will face deficits in both scenarios.

In scenario 1, the ‘poor’ in Group A are expected to face a deficit of 20-35%, which means that there will be a missing food entitlement of approximately 2,980 MT. The ‘poor’ in Group B will face a deficit of 10-25%, which means a missing food entitlement of 7,800 MT. The latter is higher because it covers a much higher population than the former.

In scenario 2, the deficit goes up to 25-40%, causing a missing food entitlement of 3,530 MT for Group A; while Group B has a deficit of 15-30% or a missing food entitlement of 10,340 MT.

Crisis Warning Indicators

The actual prices received by farmers for their cotton will be important for overall incomes; these should be monitored, as should final cotton production.

The performance of the winter season will be all-important this year as it cam make up some of the losses for food crops during the summer season. This includes sweet potatoes, a more drought resistant crop than maize.

The timing and performance of the coming summer season will also be important. If it is delayed, low food reserves will be stretched further. If performance is poor, then *ganyu* availability for the ‘poor’ will be more constrained.

Finally, maize prices will be instrumental in food security later on in the year. These should be monitored as they will cause further and wider food insecurity if they rise beyond inflation-adjusted levels.

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Appendix

Tables Detailing Some Hazards and Missing Food Entitlements and Cash Requirements By Livelihood Zone

Table V – Some Common Hazard Definitions Throughout the Country (Other Hazard Definitions Vary from One LZ to Another and are Detailed in each LZ Section)

Item	Problem Specification
Kwacha Prices of Most Commodities (Inflation over two years – at current rates)	119%
Kwacha Labour (for Cash) Pay Rates	100%
Kwacha Cotton Prices	200%
Tobacco Production	80%
Fishing Availability	50%
Self-Employment Opportunities	100%

Table VI - 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	1,000		5,300	1,800
Kasungu Lilongwe Plain – Dedza & Lilongwe	2,800		4,400	
Kasungu Lilongwe Plain – Dowa, Kasungu, Ntchisi & Mchinji	2,300		3,900	
Lower Shire Valley – Nyachilenda, Mpatsa & Mogoti EPAs	7,100		10,500	
Lower Shire Valley – Chikwawa district and Makhanga & Zunde EPAs	4,500		7,500	
Middle Shire Valley – Lisungwi & Mwanza EPAs	9,400		14,300	
Middle Shire Valley – Blantyre, Balaka & Zomba districts	7,800		11,600	1,000
Lake Chilwa & Phalombe Plain – Phalombe district	13,000	4,200	17,200	8,300
Lake Chilwa & Phalombe Plain – Machinga district (R2)	10,200	200	13,600	3,300
Shire highlands	6,400		10,200	
Southern Lakeshore	5,500		10,000	
Central Karonga	7,600		14,300	

Table VII - 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)*					
		Jul-Sep	Oct-Dec	Jan-Mar			Whole Year
		'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 & Thumbwe EPA	139,600	1,550	2,200	2,200	3,230	5,430	9,180
Lake Chilwa & Phalombe Plain – Machinga district	98,800	170	1,560	1,560	110	1,670	3,400
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	**1,343,600**	**1,720**	**12,530**	**38,440**	**3,340**	**41,780**	**56,030**

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

Affected Parts of Livelihood Zone	Total Affected	*Missing Food Entitlements (MT)*							
		Jul-Sep	Oct-Dec			Jan-Mar			Whole
	Pop.	'Poor'	'Poor'	'Middle'	TOTAL	'Poor'	'Middle'	TOTAL	Year
Thyolo Mulanje Tea Estates	502,400					9,840	2,960	12,800	12,800
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	710	7,730	14,210
Lake Chilwa & Phalombe Plain – Phalombe district & Thumbwe EPA	139,600	1,870	2,200	1,360	3,560	2,200	3,660	5,860	11,290
Lake Chilwa & Phalombe Plain – Machinga district	98,800	400	1,560		1,560	1,560	1,400	2,960	4,920
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	**1,682,200**	**2,610**	**22,660**	**1,360**	**24,020**	**48,190**	**8.730**	**56,920**	**83,550**

Table IX – 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 $ million)**		*Cash Requirement (€ million)**	
	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2
Thyolo Mulanje Tea Estates	2,350	12,800	53.9	367.5	0.503	3.435	0.424	2.894
Kasungu-Lilongwe Plain – Dedza & Lilongwe	2,380	4,550	41.0	65.6	0.383	0.613	0.323	0.517
Kasungu-Lilongwe Plain – Dowa, Kas, Ntchisi & Mchinji	2,570	3,560	44.3	76.7	0.414	0.717	0.349	0.604
Lower Shire Valley – Nyachilenda, Mpatsa & Mogoti	2,980	3,530	68.3	101.6	0.639	0.949	0.538	0.800
Lower Shire Valley – Chikwawa, Makhanga & Zunde	7,800	10,340	179.0	296.9	1.672	2.774	1.409	2.337
Middle Shire Valley – Lisungwi & Mwanza EPAs	1,750	2,140	40.3	61.7	0.376	0.576	0.317	0.486
Middle Shire Valley – Blantyre, Balaka & Zomba	11,370	14,210	260.9	408.2	2.439	3.815	2.055	3.214
Lake Chilwa & Phalombe Plain – Phalombe district & Thumbwe EPA	9,180	11,290	210.4	324.2	1.966	3.030	1.657	2.553
Lake Chilwa & Phalombe Plain – Machinga district	3,400	4,920	77.8	141.4	0.727	1.321	0.613	1.113
Shire highlands	8,610	10,970	197.6	315.0	1.847	2.944	1.556	2.480
Southern Lakeshore	3,500	5,090	80.5	146.4	0.752	1.368	0.634	1.153
Central Karonga	140	150	2.7	5.2	0.026	0.048	0.022	0.041
TOTAL	**56,030**	**83,550**	**1,256.6**	**2,310.2**	**11.744**	**21.590**	**9.894**	**18.190**
Change in Value from Scenario 1 to Scenario 2	**+49%**		**+84%**					

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