



MALAWI
Vulnerability
Assessment Committee

Malawi National Vulnerability Assessment Committee

in collaboration with the

SADC FANR Vulnerability Assessment Committee

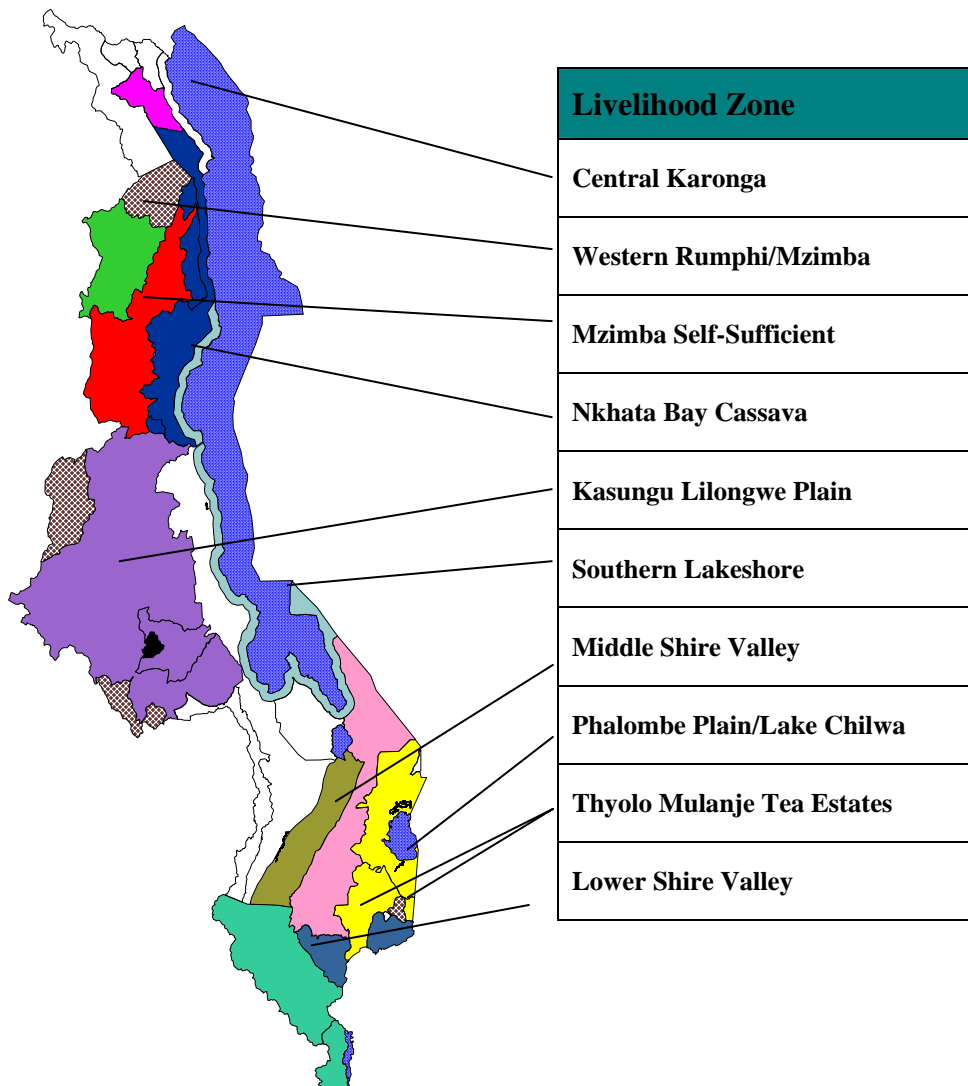


SADC FANR
Vulnerability
Assessment Committee

Malawi Baseline Livelihood Profiles

Version 1 *

September 2005



* The Malawi Baseline Livelihood Profiles (Version 1) will be finalized in late 2005 with the incorporation of Livelihood Profiles for seven remaining livelihood zones.

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Preface

The Malawi Vulnerability Assessment Committee (VAC) is a consortium committee of government, NGO and UN agencies that is chaired by the Ministry of Economic Planning and Development (formerly the National Economic Council). MVAC members contributing to the livelihood rezoning and baseline assessments included: the Ministry of Economic Planning and Development, the Ministry of Agriculture, Irrigation and Food Security, the Department of Local Government, the National Statistics Office, the Ministry of Health and Population, Save the Children (UK), World Vision International, FEWS NET, and WFP.

The Southern Africa Development Community (SADC) Food, Agriculture and Natural Resources (FANR) Vulnerability Assessment Committee (VAC), in collaboration with international partners, provided regional support for this assessment.

Acknowledgements

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Glossary of Abbreviations and Terms Used in this Document

AAH	Action Against Hunger
ADD	Agriculture Development Division, an administrative unit used by the MOAIFS. ADDs are smaller than regions but larger than districts. There are eight ADDs in Malawi.
ADMARC	Agricultural Development and Marketing Corporation
CFSAM	Crop and Food Supply Assessment Mission (FAO/WFP missions to assess national food availability)
HEA	Household Economy Approach
EPA	Extension Planning Area, an administrative unit used by the MOAIFS. EPAs are one step down from RDPs or districts. EPAs were originally drafted on agro-ecological criteria, making them a useful unit for cross-linking administrative units such as districts with livelihood units, such as livelihood zones.
FAO	Food and Agricultural Organization (of the United Nations)
FEG	Food Economy Group
GAM	Global Acute Malnutrition
<i>Ganyu</i>	Casual labour, usually agricultural (Chichewa)
GCM	Global Chronic Malnutrition
GFD	General Food Distribution
FEWS NET	Famine Early Warning System Network
ME	Maize Equivalent
MEP&D	Ministry of Economic Planning and Development
MK	Malawi Kwacha (local currency). At the time of writing, US\$ 1 = MK 107 and €1 = MK 127
MOAIFS	Ministry of Agriculture, Irrigation and Food Security
MOHP	Ministry of Health and Population
MVAC	Malawi Vulnerability Assessment Committee
MT	Metric Tonnes
NFRA	National Food Reserve Agency
NGO	Non-Governmental Organisation
NSO	National Statistics Office
PRA	Participatory Rural Appraisal –techniques of gathering data or information where the beneficiaries partake in the appraisal as equal partners, sharing the use of the data or information. PRA tools and methods are often the same as those used in RRA, the difference being that PRA emphasises the sharing aspect.
RDP	Rural Development Programme, an administrative unit used by the MOAIFS. RDPs are the next unit down from ADDs. Since 2002, RDPs have been delineated to equivalent areas as districts.
RRA	Rapid Rural Appraisal –techniques consisting of methods and tools for quickly acquiring data, without the use of statistical samples. RRA techniques use crosschecking to ensure data integrity. RRA differs from PRA in that the latter takes longer but is more robust because the use and relevance of the data is shared with the interviewee.
RVAC	Regional Vulnerability Assessment Committee
SAM	Severe Acute Malnutrition
SCM	Severe Chronic Malnutrition
SC (UK)	Save the Children (United Kingdom)
VAC	Vulnerability Assessment Committee (see also RVAC and MVAC)
WFP	World Food Programme
WVI	World Vision International

1 Introduction

The food crisis of 2001 and 2002 highlights the fragile livelihoods and extreme vulnerability of the Malawi's rural population to food insecurity and crisis, while indications are that this vulnerability is increasing alongside deepening poverty¹. Despite the focus on poverty and poverty reduction in recent years, surprisingly little is currently known about the economic lives and livelihoods of the poor. The emergence of livelihood analysis as a major theme in development has begun to redress this knowledge gap and the Malawi Vulnerability Assessment Committee (MVAC) has adopted it as an approach to analyse vulnerability. The MVAC's purpose is to undertake assessments and analysis with the objective of improving the understanding of vulnerability, as well as informing programming and policy to reduce vulnerability. One of the methods the MVAC has adopted to achieve this is a Livelihoods-Based Vulnerability Approach (LBVA) known as the Household Economy Approach (HEA)². This livelihoods-based vulnerability approach generates information and analysis that provides a foundation for better understanding the dynamics of change and vulnerability within households.

Between May and July 2003, the MVAC conducted a livelihood rezoning exercise and an HEA baseline survey in 11 out of 17 livelihood zones in Malawi, 10 of which are discussed in this report³. These activities form the first stage in the establishment of a livelihood information and monitoring system within the MVAC that is designed to generate a deeper understanding of rural livelihoods, food access issues, and the ability of households from different wealth groups to cope with shocks and vulnerability. This report summarizes or 'profiles' some of the key descriptive information captured in the MVAC HEA livelihood baseline studies for each livelihood zone and wealth group. It provides a basic understanding of rural livelihood patterns in Malawi⁴. This baseline information is employed as an analytical modelling tool by the MVAC for monitoring household food and livelihood security; it will also be used to generate analysis for understanding the impact of different programming and policy on vulnerability, and food and livelihood security. The LBVA approach adopted by the MVAC is aimed at providing relevant information and analysis on food access and livelihoods to different Government Ministries, as well as international organizations and civil society to inform early warning, rural development strategies, poverty reduction, safety nets programming and food security policy formulation.

This report is organized into three main sections: a brief discussion of key concepts and methodology, a section on the field data collection and analysis, followed by a series of 'profiles' for each of the 10 livelihood zones. Each of the 10 livelihood zone profiles contains a zone description, seasonal calendar, wealth breakdown, sources of food and cash by wealth group, a discussion of the main chronic and periodic hazards within the zone, household coping and response strategies to shocks, crisis warning indicators for the zone, and main conclusions and implications of for programming. This report is not a vulnerability assessment and nor is it a comparative analysis across zones; rather, it provides a general description of the baseline livelihood information that the MVAC has collected. In the fall of 2005, the MVAC plans to finalize the remaining seven livelihood zone profiles that are not included in this document. The MVAC has already begun to use the baseline information from the 11 first-phase zones to assess the current year situation with respect to food and livelihood security and to predict the effects of changes in the external environment (e.g., impact of different maize price increases during the coming hunger season)⁵.

1.1. Key Concepts and Methodology

This section explains a number of key concepts and methods, which are essential for understanding how data has been gathered, analysed, organized and presented in this report.

1.1.1. The Household Economy Approach (HEA)

¹ National Economic Council (Now Ministry of Economic Planning and Development), "Profile of Poverty in Malawi, 1998: Poverty Analysis of the Malawi Integrated Household Survey, 1997-98", (November 2000) and "Detailed Tables For A Poverty Profile of Malawi, 1998 (December 2000).

² The household economy approach is also often referred to as the 'Food Economy Approach'.

³ The results for the Shire Highlands are included in the composite graphics, but the full Profile for the Shire Highlands will be released in the next version of this document.

⁴ The MVAC rezoning exercise is not discussed in this report. For a full description of the livelihood rezoning exercise see, "Report on Malawi VAC Livelihood Zones Revision Exercise in May 2003", Malawi VAC October, 2003.

⁵ See MVAC, "The Malawi Food Security Assessment Report: 2003-2004 Agricultural Marketing Year", August 2003.

The ***Household Economy Approach*** (HEA) is based in Amartya Sen's theory of exchange entitlements and economic theories of risk.⁶ HEA was first developed and used by major international agencies during the 1990s to assess the impact of shocks, such as natural disasters, on food security and livelihoods; it is now accepted as a standard methodology and is widely used by WFP, USAID, FAO and others. The HEA first describes and quantifies household economy or the way in which typical households, with defined wealth characteristics, survive in normal times. This understanding and quantification is then combined within an analytical framework to assess the current situation with respect to food and livelihood security and to predict the effects of changes in the external environment (for example, crop failure, increases in production costs or market prices, loss of markets, etc.). Various national governments, donors, UN agencies and NGOs have also used the approach in a wide range of development contexts. More recently, applications linking macro and micro level policy analysis have been explored, particularly in relation to Poverty Reduction Strategy Papers (PRSPs)⁷. This is an area that the MVAC would like to explore further, once it has fully established the baseline and monitoring system.

Since this report presents only HEA baseline information, not analysis or predictions, a full explanation of the analytical methodology is not presented here (see footnote for references to a full description of the HEA approach and methodology)⁸. A short overview of the main elements of the basic analytical framework is presented in Appendix I.

1.1.2. Four Steps in HEA and Key Concepts⁹

There are four steps in a household economy analysis. The first two are concerned with dividing the population into groups of households that share similar characteristics in terms of their access to food and income. The assumption underlying these two steps is that access to food and income is determined by two main factors: *geography* and *economic status* (that is, relative *wealth*). While geography (where a household lives) determines the *options* for obtaining food and income, wealth generally determines a household's *ability to exploit those options*. The third step involves developing a baseline picture of food access, income and expenditure for each wealth group. The fourth and final step is to combine information on baseline access with that on hazard and response in order to generate projections of future food and income access.

Step 1: Livelihood Zoning. This is about deciding on the main *geographical groups* that households belong to. It involves mapping out ***Livelihood Zones*** or areas where households share similar options for obtaining food and income. The approach is to identify those factors (such as climate, soil, proximity to rivers, access to markets etc.) that determine the basic food and income options (the crops that will grow, the livestock that can be raised, the wild plants that can be collected, the fish that can be caught, and so on) and then to group similar areas together. In the case of Malawi, the exercise was one of updating an earlier food economy zone map prepared by Save the Children dating from 1996. This was done through a review of available secondary source material, a workshop at national level involving all VAC members and a series of key informants interviews at district level with relevant technical personnel¹⁰.

All aspects of a household food and livelihood economy are influenced by seasonality and are therefore not constant over time. Understanding seasonal variations is therefore essential in HEA analysis in order to:

- Understand the seasonality of different crops produced in the livelihood zone by different wealth groups, i.e. when they are planted, eaten green, harvested, sold and stored,
- Understand food, income, and labour access for different groups in different seasons of the year,
- Identify and monitor trends and changes over time (e.g. monitoring the impact of interventions),
- Determine which indicators are useful for monitoring seasonal food and income access,
- Discover correlations and connections between different seasonal patterns (such as precipitation, income and expenditure) which might help to understand causes and effects,

⁶ See Sen, A. Poverty and Famines: An essay in entitlement and deprivation. Clarendon Press, (1981)

⁷ See papers produced by Lopez, J, SC (UK) Tanzania Programme.

⁸ For a full description of the approach and methodology, see Boudreau, T. The Food Economy Approach: A Framework for Understanding Rural Livelihoods, Relief and Rehabilitation Network Paper, Overseas Development Institute, London (1998). Also, see Seaman, J. *et al*, The Household Economy Approach: A Resource Manual for Practitioners, Save the Children –UK, London, (2000).

⁹ This sections draws heavily upon different HEA training manuals, including Food Economy Training: The Field Method, Food Economy Group (FEG) draft May 2003; The Household Economy Approach (HEA): Training Pack for Trainees (Level 1), Save the Children – UK, Food Security Livelihood Unit, 2000.

¹⁰ For a full report on this exercise see the document: Report on Malawi VAC Livelihood Zones Revision Exercise in May 2004, Malawi VAC October 2003.

- Know which periods have unequal production and consumption (for example, when income-expenditure = debt)
- Identify periods of rainfall and water levels

The basic tool for seasonal analysis in HEA is the *Seasonal Calendar*, which is a visual representation of the timing of access to main food and income sources during a normal or typical year. The MVAC assessment team developed seasonal calendars through district and community key informants for each of the Livelihood Zones.

Step 2: Wealth Breakdown. The second step is to break down the population within a particular Livelihood Zone into groups of households according to their ability to exploit the local food and income options of the zone. Within any community, even one where everybody may be considered poor in absolute terms (i.e. compared to other better-off parts of the country or compared to those living in other countries), there will be differences between households. The different types of household live in different ways and are able to respond to external shocks (e.g. crop failures, price increase, loss of labour markets, etc) in different ways (with differing levels of success).

This is also true in rural Malawi where 65% of the population is considered 'poor' - the rural poor are not homogenous. The major factor that differentiates one 'type' of household from another is 'wealth'. In HEA, '*wealth groups*' or socio-economic groups within a Livelihood Zone are sets of households who have similar levels of assets, and employ similar strategies to gain access to food and cash income. In HEA, wealth is always in relative (and local) terms not in absolute terms. Statistical data may indicate that 80% or even 90% of the rural population in the district lives below the national poverty line, but this is a measure of poverty on a national, absolute scale. In a livelihoods analysis we are interested in understanding some of the differences in livelihood patterns between different groups of households within the community – in which case it is not particularly useful to lump 80% or 90% of the population together in one group. In an analysis of relative wealth, the '*middle*' are in the majority. '*Poor*' means poorer than most households, while '*better-off*' means better off than most households.

Community-based key informants derive the wealth groups, with guidance from the HEA practitioner using different rapid rural appraisal techniques (proportional piling, etc). A wealth breakdown has two elements: (1) a division of the population (that is, an estimate of the percentage of the population falling into each group) and (2) a description of the key defining resources and characteristics of the wealth group. In each Livelihood Zone the different wealth groups are identified and described and it is these groups that form the basis for the focus group interviews from which baseline access information is obtained. The population can be divided into three, four, five or even more wealth groups, depending on how the community view their society as well as the purpose and level of analysis required in the HEA. The most frequently used number of groups, and which the MVAC chose for the current baseline, is three: the 'poor', the 'middle' and the 'better-off'. The extreme ends of the wealth spectrum: the very poorest (destitute) households that are largely dependent on charity, or the richest households (the 'richest of the rich'), are normally not of interest in HEA analysis. These two groups tend to constitute only a small minority of households, and in the case of the former are often not economically active.

The criteria used to divide households into wealth groups depend on the defining characteristics for the options of accessing food and income. Relative wealth is determined by a number of factors including landholding, cultivation size, capital, skills and/or household labour, and livestock holdings. In a pastoral society, wealth may be primarily determined by the size of one's herd, while in an agricultural society wealth is more likely to be associated with land ownership, as well as livestock ownership. In the case of Malawi, the rural economy is predominately subsistence agricultural with limited livestock holdings and cultivation size and production levels are less dependent on access to land than the ability to access agricultural inputs (i.e. fertilizer, seeds, farm implements and labour). Wealth groups were therefore largely determined by the size of land cultivation and production levels of the household, as well as access to capital and agricultural inputs.

Wealth groups are different from a vulnerable group. It is important to highlight that in HEA, defining 'wealth' is not defining '*vulnerability*'. It is not possible to talk about 'vulnerable' groups without giving a context (i.e. cattle disease, drought, closure of markets), as different households are vulnerable to different things. A poor household that does not purchase staple food, is not very vulnerable to increases in staple food prices, but is vulnerable to crop failure through drought. A rich household, who purchases all its food and buys this food through the sale of tobacco, is vulnerable to tobacco crop failures and export market closures. Poverty and richness are relatively constant states —a household is poor all the time— but vulnerability depends on the context. The same household is vulnerable to food failure in some circumstances, but not in others. ***This is a critical distinction in understanding what is meant by the term "vulnerability".***

Step 3: Analysis of Baseline Access. An analysis of baseline access involves the analysis of sources of food, income and expenditure in a *reference year* for typical households within each wealth group. The reference year is generally defined as a 'typical' or 'normal' year. The process is one of:

- Identifying sources of food and income and their relative importance to the household's total food and income access,
- Quantifying access to food and income and expenditure over a 12-month baseline period.

Sources of food are foods the household consumes and include food gained through own crop and livestock production, food exchanged with labour or other commodities, food purchased, food collected (e.g. wild foods, hunting, fishing, etc.), or food received from gifts and relief. The importance of differentiating between methods by which food is achieved is that the way a household gets food defines its vulnerability; for example, a household is vulnerable to crop failure if the household grows crops¹¹. The analysis provides an understanding of the how and how much food and income are obtained from different sources within a reference year and provides the starting point for analysing the impact of a hazard.

Due to the problems of 'adding up' different foods, HEA focuses on adequacy of household access to food energy, measured in kilocalories (kcal)¹². All 'food' consumed by a household is first converted into kilocalorie equivalents of energy using food composition tables¹³ and then each total kcal for the different sources of food is expressed as a percentage of total kilocalories of food consumed. To assess whether a household has adequate access to food total energy value is compared against a *minimum calorie requirement* for the household based upon household size¹⁴.

Sources of income in HEA are sources of cash income derived from the sale of goods or services, including crop sales, paid employment (casual labour or ganyu), livestock and livestock product sales, natural resource exploitation (for example, charcoal, firewood, honey, grass, etc), self-employment (for example, petty trade, small business, handicraft sales, etc.), and land or asset rental. **Cash income** is net income rather than gross income, meaning that production costs are deducted from the gross value.

Step 4: Outcome Analysis. Outcome analysis refers to the effects of a *hazard*¹⁵ such as price increases or crop failure (or a combination of both) on *future* access to food and income, so that decisions can be taken about the most appropriate types of intervention to implement. The rationale behind this 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 possible *hazards* (that is, factors that may affect access to food/income in the future) and information on *response strategies* (that is, the sources of additional food and income that people will turn to when exposed to a hazard). The term 'response strategies' is preferred to the term 'coping strategies', for two reasons. Firstly, people often use coping strategies to refer to regular components of everyday livelihoods (such as selling firewood), which strictly speaking are only coping strategies when intensified in response to a hazard. Secondly, 'coping' can imply that the strategy in question is cost-free, which is not always the case.

In the following descriptions of the Livelihood Zones, a further distinction in response strategies is made: households respond in two ways to a hazard; first, they *expand existing strategies* and when the situation becomes severe, they then turn to a number of *distress strategies*. Response strategies change as the period of stress increases. Expansions of existing strategies are reversible (e.g. short-term dietary change) and require a low commitment of domestic resources. Distress strategies, on the other hand, are employed when the household is nearer to collapse and are employed when other coping mechanisms fail. Recovery after the adoption of distress strategies will come a considerably long time after the event (if at all). Hence, if an intervention takes place at an earlier stage before the use of distress strategies, recovery is quicker.

A distinction is also made between *chronic hazards* (ones that affect households in the zone every year) and *periodic hazards* or *hazards that only occur intermittently* (one that affects households in some but not all years in the zone).

¹¹ This is a simplification to highlight the point. It might be more complicated in that the household is still affected by crop failure since they are reliant on exchange of labour (e.g. weeding) for food. Crop failure could lead to reduced labour demand and increased vulnerability for the households dependent on supplying labour to access food.

¹² For a full discussion of individual and household energy requirements and application within HEA, see John Seaman, *et al.* The Household Economy Approach: A Resource Manual for Practitioners, SC UK 2000.

¹³ Food composition tables are conversion tables of kilocalories per 100 grams of food. For kilocalorie conversion tables and the weights and measures conversion tables used in the MVAC Baseline Assessment, see The MVAC Food And Livelihood Economy Field Handbook, May-June 2003.

¹⁴ A standard minimum energy requirement for a population with a developing country demographic profile is estimated at 2,070 per person kcal per day see WFP/UNHCR, Guidelines for Estimating food and nutritional needs in emergencies, 1997. MVAC uses an estimate of 2100 kcal/person/day in calculating minimum energy requirements.

¹⁵ The word 'shock' is sometimes used instead of 'hazard'. 'Shock' implies a *sudden* change, whereas the change may have a more gradual onset. Although 'hazard' is probably a more accurate term, both words are used inter-changeably.

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)

This report presents baseline, hazard and some household response strategies as a background description of the different livelihood zones in Malawi and does not present any outcome analysis. Since this is not an outcome analysis report, the analytical methodology is not presented here (see Appendix II for more information). The MVAC will conduct regular outcome analysis as a vulnerability-monitoring tool. The MVAC conducted its first outcome analysis in July-August 2003 to assess the food security situation in Malawi for the 2003-2004 agricultural marketing year¹⁶. This has been followed up with outcome analyses in November-December 2003 (again, for the 2003-2004 agricultural marketing year) and just recently, in April-May 2004, for the 2004-2005 agricultural marketing year.

1.2. Malawi Baseline Livelihood Assessment

1.2.1. Sources of Information and Method of Collection

There are six types of information needed in a household economy analysis and the data required to complete these is collected at several different levels, as shown in **Table I**. This report contains a description of the first five categories of information that the MVAC collected during the May-July 2003 Assessment (livelihood rezoning, wealth breakdowns, baseline access, hazard quantification and Response).

The basic method for data collection in HEA focuses on the use of rapid rural appraisal (RRA) and participatory rural appraisal (PRA) tools and interview techniques. Two features of this approach are that the field enquiry is semi-structured and that at least the preliminary analysis is carried out on the spot. This means that it is sufficiently flexible to allow the enquiry to take an unexpected direction, should this be necessary, and it allows information to be cross-checked or important leads to be followed up before the team leaves the field. In the field, information is gathered primarily through key informant and focus group interviews undertaken at various levels. The process is summarised in **Table II**, below.

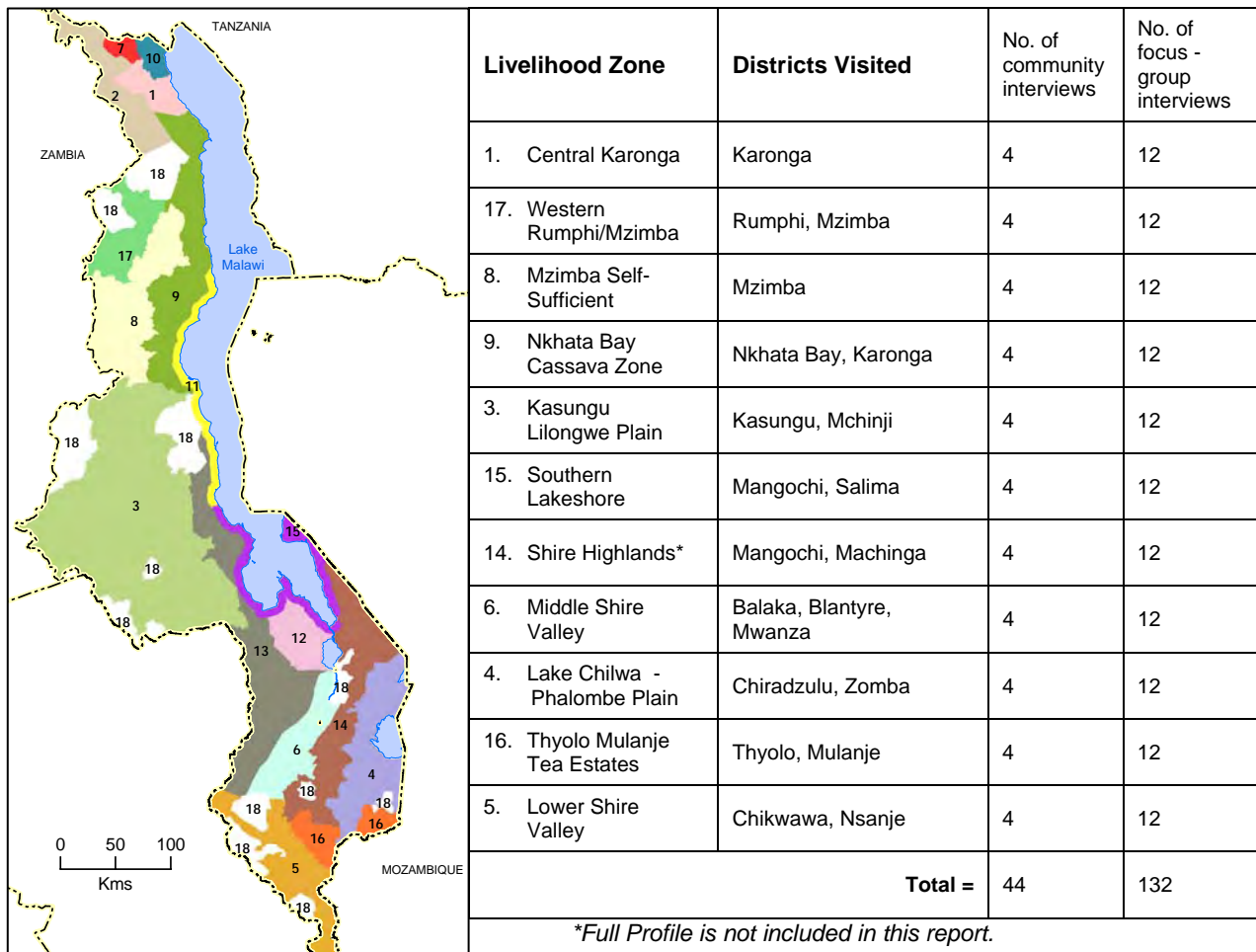
Table I - Sources of Information

	Six Categories of information in Household Economy Analysis					
	LZ Zoning	Wealth Breakdown	Baseline Access	Hazard	Response	Outcome
Secondary Data	X			X		
National/District Workshop	X					
District Key Informants	X	X		X		
Market visit or Trader interview				X		
Community key informants		X		X		
Wealth group focus group			X		X	
Assessment team						X

¹⁶ See MVAC. "The Malawi Food Security Assessment Report: 2003-04 Agricultural Marketing Year", August 2003.

Table II - MVAC Baseline Assessment Interviews, Participants and Outputs

Level at which interview undertaken	Participants in the interview	Outputs
<i>National</i>		-
<i>District</i>	Technical staff from local government (e.g. MOAIFS), NGOs and other relevant organisations.	- Verification of Livelihood Zones within the district - Information on recent hazards affecting food security (including recent crop production data)
<i>Community/Village</i>	Community key informants	- Seasonal Calendar of crop production and other food and income acquisition strategies - Wealth Breakdown - Information on recent hazards and responses to these
<i>Individual wealth group</i>	Focus groups consisting of members of a specific wealth group	- Quantified data on food and income access for a 12-month baseline period. - Information on current hazard and response strategies.

Figure 1 - Livelihood Zones Visited & Number of Interviews Completed

1.2.2. Defining the Baseline Year

One objective of the assessment in Malawi was to generate information that can be fed into decision-making concerning longer-term policy and programming. For this reason it was considered desirable to develop an analysis for a 'normal' year, i.e. one that could be considered reasonably typical of conditions prevailing in Malawi in most years. It was not easy to select a *specific* recent year that met this criterion, since 2001 and 2002 had been crisis years, while the two years before that were years of unusually good production. For this reason questions were asked at village level about a more general 'normal' year. Provided it was carefully explained, 'normal' was a concept that seemed well understood by village informants in the field. In practice, it often meant a year of production rather similar to the harvest in 2003. Of course, a normal year in one region may not be a normal year in another, as was the case for Central Karonga livelihood zone and Western Rumphu and Mzimba livelihood zone this year. The current year was not used to define the normal year in these zones.

The problem of defining 'normal' applies equally to market prices. This is especially the case for maize, the price of which has fluctuated considerably in the last two years, making it difficult to know what can now be considered 'normal'. There is also the complication of inflation, which means that prices from three or more years ago (which were much lower than now) have little relevance today. The team therefore opted to construct the baseline using prices from the last 12 months. In practice, this meant using an average purchase price for maize of roughly 17 MK/kg, which is high by historical standards, and may be high in relation to the next 12 months.

1.2.3. Scope of the Baseline Survey

Seventeen zones were defined during the re-zoning exercise. Due to a limitation on resources, only eleven of these could be included in the livelihoods baseline assessment survey (see **Figure 1**). Selection of the eleven was based on a number of factors, including: (a) population, to include as large a proportion of the national population as possible; (b) known vulnerability to external hazards and (c) expected levels of crop production in 2003 and 2004.

From within each zone, two districts and four villages were selected for fieldwork¹⁷. Villages were selected according to information provided by the district-level key informants. The aim was to visit villages considered reasonably typical of the zone as a whole. In each village one community level and three focus group interviews were completed. *In total 11 livelihood zones, 21 districts, 44 community interviews and 132 focus group interviews were conducted in the initial baseline survey.* A complete list of the sample of villages surveyed is presented in **Appendix III**.

1.2.4. Implementation of Baseline Survey

The assessment involved four modules of activities over a continuous period of two months from May 2003. The assessment team consisted of MVAC members and training was an important component of the work and was fully incorporated within all four activities. Revision and updating of livelihood zones was the first activity, followed by a 10-day HEA instruction for MVAC field teams. Four MVAC field teams composed of 4 to 5 people completed the baseline fieldwork from June 4 – 26 2003, and a further week was spent on analysis. Approximately one week was spent in each of the zones covered.

The assessment was a joint exercise involving staff from the following MVAC members:

<ul style="list-style-type: none"> ▪ Ministry of Economic Planning and Development ▪ Ministry of Agriculture, Irrigation & Food Security ▪ Ministry of Health and Population ▪ Department of Local Government ▪ National Statistics Office 	<ul style="list-style-type: none"> ▪ FEWS NET ▪ World Food Programme ▪ Save the Children (UK) ▪ World Vision International
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Fifteen MVAC members participated in the four modules of which nine were from government (MOAIFS, MEP&D, MOHP, NSO, & Department of Local Government) and six from international organizations (FEWS NET, SC (UK), WFP, WVI). Five consultants assisted in different components of the assessment in training and leading the MVAC team (2 FEWS NET/FEG consultants, 2 SC (UK) consultants, 1 local Malawian consultant).

¹⁷ Livelihood Zone boundaries generally follow EPA boundaries, not district boundaries, so that a single district may include parts of more than one Livelihood Zone. Where a district is listed as included in the exercise, fieldwork was undertaken in that part of the district falling within the boundaries of the required zone.

NATIONAL LIVELIHOOD ZONE MAP

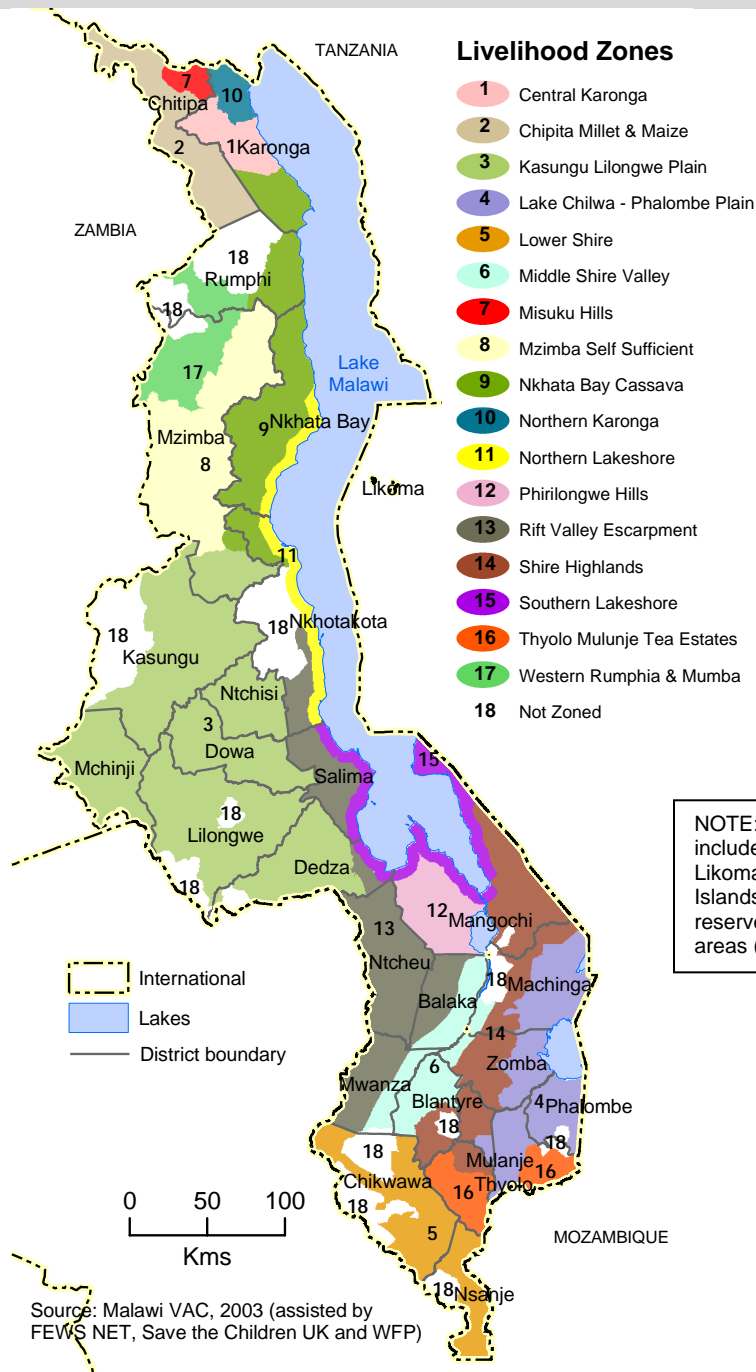


Table III - POPULATION BY LIVELIHOOD ZONE¹⁸

Livelihood Zone	Population	% Of total	Livelihood Zone	Population	% Of total
Chipita Millet and Maize	116,402	0.98%	Southern Lakeshore	505,979	4.24%
Misuku Hills	36,289	0.30%	Rift Valley Escarpment	1,167,578	9.78%
Northern Karonga	111,720	0.94%	Phirilongwe Hills	211,697	1.77%
Central Karonga	44,516	0.37%	Shire Highlands	1,095,667	9.18%
Northern Lakeshore	111,070	0.93%	Middle Shire Valley	416,254	3.49%
Western Rumphia & Mzimba	139,250	1.17%	Lake Chilwa – Phalombe Plain	1,161,418	9.73%
Mzimba Self-Sufficient	430,506	3.61%	Thyolo-Mulanje Tea Estates	669,816	5.61%
Nkhata Bay Cassava	291,135	2.44%	Lower Shire Valley	648,358	5.43%
Kasungu-Lilongwe Plain	3,236,493	27.11%	Not Zoned	1,543,786	12.93%
TOTAL			11,937,934		

¹⁸ Source: NSO Population Projections and MoAIFS, Populations by EPA.

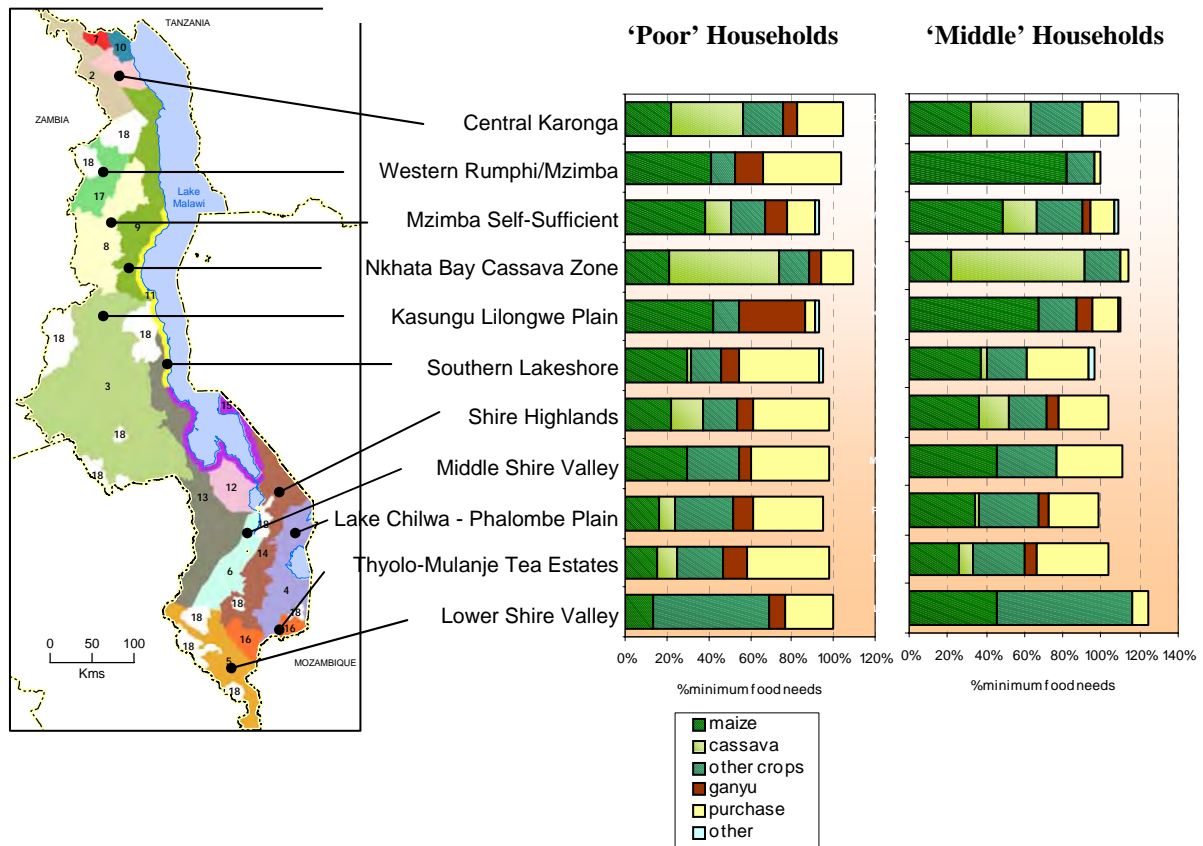
NATIONAL OVERVIEW

In Malawi, as in other Rift Valley countries, higher altitude tends to mean higher rainfall and better cropping potential¹⁹. However, two big factors may negatively affect food security: one is the quality of the soils, and the other is the density of the population. In a very general way, the highland areas of the Northern Region tend to be more sparsely populated than those of the Southern Region, and where soil conditions are favourable a greater proportion of the population is more or less food self-sufficient (and owns notably more livestock than elsewhere in the country). On the other hand, the Southern Region holds the country's biggest urban population as well as its largest commercial sector; this positively affects the livelihoods of rural people, both in the prices they can obtain for their surplus food crops, and in the opportunities for casual employment as well as the sale of products such as firewood and charcoal. By contrast, very generally, the Northern Region is little urbanised and is commercially isolated.

The Central Region's great Kasungu-Lilongwe Plain ought to possess a happy medium in terms of ecology, population density, a major urban centre in Lilongwe, and major maize and tobacco production. However, insofar as it does, it also exhibits factors that bode ill for future food security and economic advance. Firstly, the area has been prone to drought and other rainfall irregularities. Secondly, increasing population pressure on the land combined with low pay rates or crop earnings and rising prices of inputs for maize and tobacco production mean that one in four households normally produce only half of their grain requirement annually and must spend their tobacco profits, such as they are after repaying debts on inputs, on basic food.

Relative wealth is a key factor influencing both food and livelihood security. Almost everywhere, the bulk of production is concentrated in the hands of a minority of 'better-off' households; these households cultivate the largest land areas and own the largest numbers of livestock. Nevertheless, this group can afford or can obtain credit for agricultural inputs, and can employ the additional labour required for timely and proper completion of the various agricultural activities. It is this – the timely use of inputs and labour – that is typically the key to securing better yields in Malawi. In contrast, very roughly one third of the population in almost all zones is perpetually in food production deficit and has to rely on local agricultural labour or *ganyu* for between 2 and 6 months each year. It is the labour of this group that secures the higher yields obtained by the 'better-off'.

Figure 2 - Sources of Food in a 'Normal' Year



Sources of Food: Throughout Malawi, there are only two major sources of food: that of own crop production and purchases or exchanges (where exchange means direct payment in food, usually for casual labour). Access to other food sources, such as milk and meat from own livestock, wild plants or wild game tends to be very limited. The significance of this is that there are few options in the event of crop failure other than to increase market purchases, so that a combination of crop failure and market failure is potentially catastrophic, as was the case in 2001-2002.

The main differences between the zones are in terms of the types of food crops grown and the overall level of production. Zonal differences in production are most clearly seen in the case of 'middle' households (the right-hand graph in **Figure 2**). This is because crop production by 'poor' households is relatively low in almost all zones. Per capita crop production is generally lower and dependence on purchase/exchange greater in the south than in the centre or north. The one relatively productive southern zone is the Lower Shire Valley.

One advantage of the south over some central and northern zones is the wider range of crops grown and the lower dependence upon maize as the principal food crop. The Kasungu Lilongwe Plain and Western Rumphu/Mzimba zones are especially noteworthy for their dependence upon maize. Another difference is in the level of cassava production, which is relatively high in two of the northern zones (Nkhata Bay Cassava zone and Central Karonga). This helps ensure local food security in the event of maize crop failure and maize price increases. The 'poor' in these zones also achieve a higher degree of own food crop self-sufficiency than elsewhere in the country. This is linked to cassava's relatively low requirement for both labour and inputs.

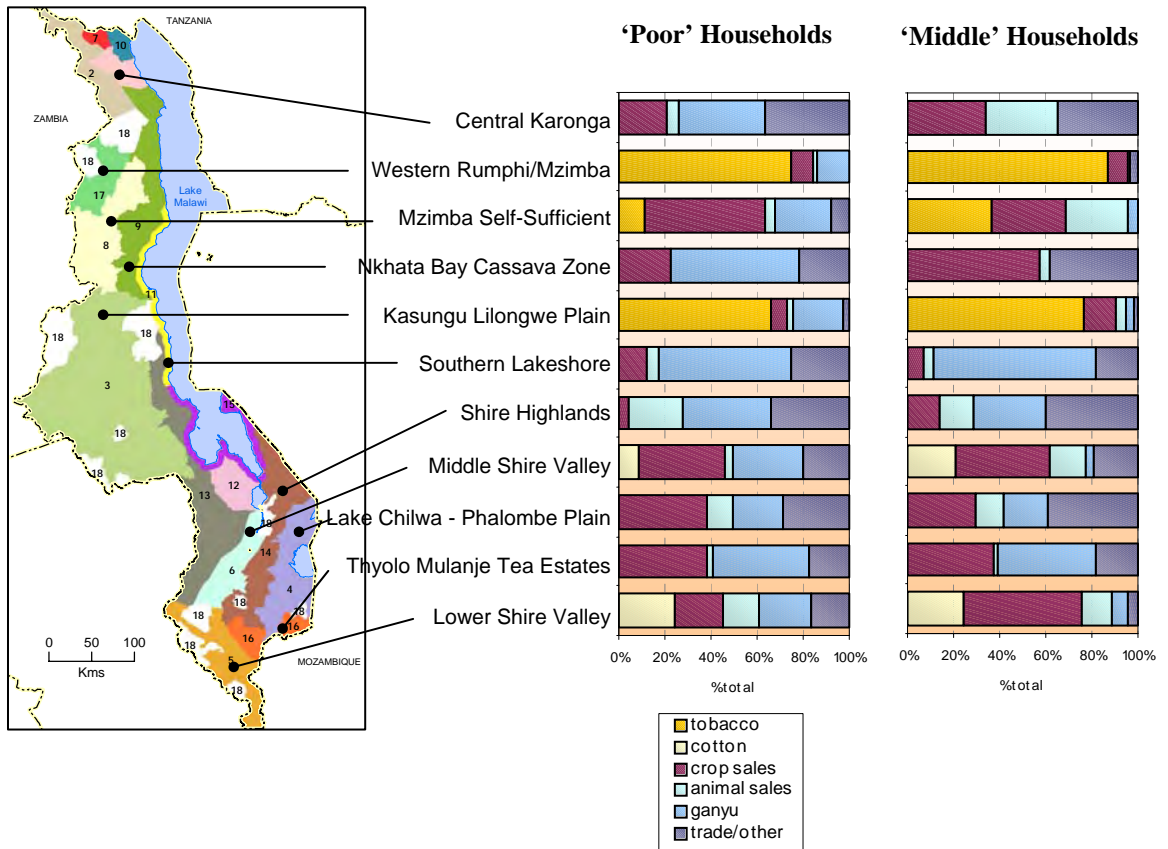
Sources of Cash: The basic income sources for all zones are sale of crops (tobacco, cotton and food crops), casual labour and trade/other (other being sale of firewood, charcoal, grass, mats, etc.). Tobacco is grown in the higher altitude zones in north and centre of the country, while cotton is grown in lower altitude Shire Valley zones. Since the market for casual labour tends to be internal (with little migration between zones and little remittance of income from elsewhere) it follows that all zones are highly dependent upon the sale of crop production, supplemented by local urban demand for off-farm products (e.g. firewood and charcoal) and other traded goods. In the case of the two major cash crops - tobacco and cotton - the market is unpredictable and is affected by international factors beyond the country's control. The local urban market is perhaps more predictable, is stronger in the south and centre than in the north, but supply tends to exceed demand everywhere and producer prices are therefore generally very low.

Consequently, household incomes are very low and for the poorest households in all areas, they are insufficient to purchase even the minimum food energy requirements; let alone a more nutritionally balanced diet. In areas that are more self-sufficient in food crop production, incomes tend to be especially low, not even enough to purchase half the food energy needs for a household. This leaves very little spare cash for expanding food purchases when even a mild crop failure occurs. Conversely, households in areas of higher general income have less food crop diversity and are heavily dependent on a single source of income.

Two areas with special characteristics are noteworthy. One of these is the Southern Lakeshore Zone, where most income is generated from fishing, including fishing 'ganyu' and fish trading. The other is the Thyolo Mulanje Tea Estate Zone, where most households are both smallholders and tea estate workers.

¹⁹ The higher rainfall areas are the Mzimba Self-Sufficient, Nkhata Bay Cassava and Western Rumphu/Mzimba zones (>1000 mm per year). Other zones receive 800-1000 mm, apart from the Middle and Lower Shire Valley zones (650 – 750 mm per year).

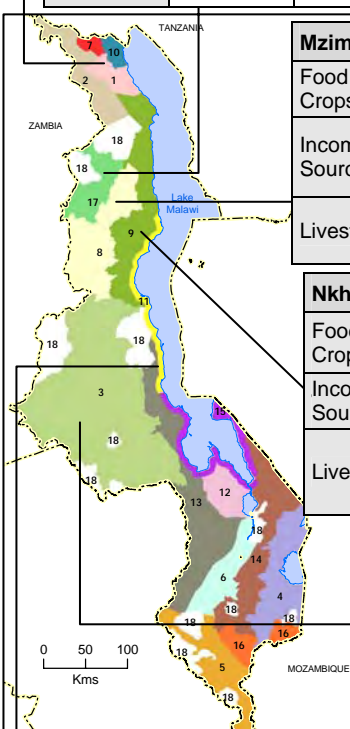
Figure 3 - Sources of Income in a 'Normal' Year



Central Karonga		
Food Crops	Maize Cassava S. Potato	A relatively productive maize and cassava zone that attracts migrant labour from other parts of the country in most years. Less dependent on maize than other northern zones. Livestock holdings, especially of cattle, are high by national standards. Cash incomes are low, however, since tobacco is not grown and the zone is remote from the country's larger urban markets. Most 'middle' and 'better-off' income is earned from the sale of food crops and livestock (cattle and pigs), while the poor depend upon ganyu and self-employment (firewood, mat-making etc.).
Income Sources	Food crops Livestock	
Livestock	Cattle, Pigs	

Western Rumph/Mzimba

Food Crops	Maize	Cropping patterns are relatively undiversified, with all wealth groups remaining heavily reliant on just two crops, maize and tobacco. The zone produces just about enough to feed itself in an average year, so that crops sold out of the zone post-harvest have to be replaced by imports later in the year. Incomes tend to be higher than in non-tobacco-growing zones, but there is little to fall back on should the tobacco crop fail. There are above average opportunities for collecting wild foods, given the proximity of the Nyika National Park and Vwaza Game Reserve. The zone also benefits from its proximity to the neighbouring Nkhata Bay Cassava zone, a potential source of employment in bad years.
Income Sources	Tobacco	
Livestock	Pigs	



Mzimba Self-Sufficient

Food Crops	Maize Cassava	This is a relatively diversified zone, with food and income generated from a variety of sources. Good yields are obtained for a range of crops, of which maize and cassava are the most important. There are three main sources of income for the zone; sale of food crops, sale of livestock and sale of tobacco. Cattle holdings are significant, with most households (excluding the 'poor') owning from 1-15 animals. All wealth groups grow tobacco, although in smaller quantities than elsewhere, with the result that the zone is less dependent upon this one crop than other tobacco growing areas.
Income Sources	Tobacco Food crops Livestock	
Livestock	Cattle Goats	

Nkhata Bay Cassava Zone

Food Crops	Cassava Maize	With high rainfall but poor soils, cassava is the dominant crop in this zone. The zone can be characterised as 'food-rich' but 'cash-poor', since there are few sources of income available besides the sale of crops, and there is only a limited market for the bitter variety of cassava grown in the zone. Maize, rice and bananas are grown in addition to cassava, and the sale of these contributes significantly to local incomes. Given its drought resistance, cassava plays a key role in ensuring zonal food security, with the zone attracting migrant labour from other zones when these are affected by food shortages.
Income Sources	Food crops Other	
Livestock	Cattle (few)	

Kasungu Lilongwe Plain

Food Crops	Maize	This is a relatively productive but undiversified maize and tobacco zone. In an average year, the zone produces a surplus of food and maize, groundnuts, sweet potatoes and Soya beans are sold out of the zone, mainly to Lilongwe. However, almost the entire surplus is 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 three wealth groups, and explaining why incomes in the zone are relatively high compared to elsewhere in the country.
Income Sources	Tobacco	
Livestock	Cattle Goats	

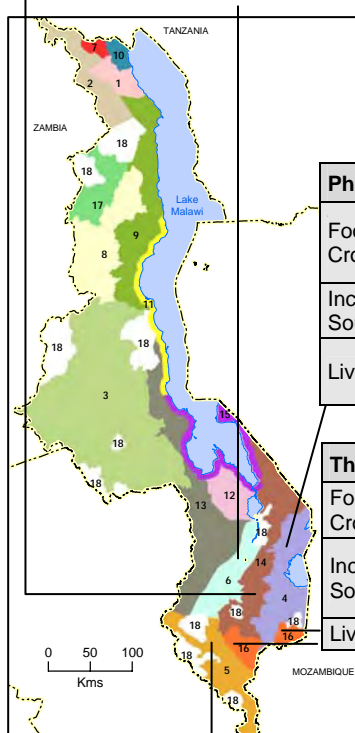
Southern Lakeshore

Food Crops	Maize Rice	This is the principal fishing area of Malawi, with the shallow waters in the southern end of the lake favouring participation by many small-scale fishermen. Fishing dominates the economy, in fish sales for the 'better-off' as well as in ganyu and fish trading for the 'poor' and 'middle'. Crop production is also important but is insufficient to cover local food requirements in most years, a situation that is worsened by the post-harvest sale of crops by both 'poor' and 'middle' groups.
Income Sources	Fishing Fishing ganyu Fish trading	
Livestock	Goats	

Shire Highlands		
Food Crops	Maize Cassava	Landholdings are small in this most densely populated zone in the country. The zone produces roughly enough to feed itself in most years. However, income-generating opportunities are limited and both 'poor' and 'middle' sell quite a high proportion of their production just after their harvest to obtain cash, becoming heavily dependent on the market later in the year. Crop production is relatively undiversified, with a dependence upon maize supplemented to a limited extent by cassava. Other sources of cash besides sale of crops are ganyu (for both 'poor' and 'middle'), petty trade and grass sales.
Income	Food crops Other	
Livestock	Goats	

Middle Shire Valley

Food Crops	Maize Pulses Rice	This is a relatively dry mid-lowland area with winter cropping and fishing along the Shire River. It is similar to a number of other southern zones in that normally, total production for the zone is enough to achieve rough self-sufficiency in staple food. Quite a high proportion of production is sold post-harvest by most households; however, and this has to be replaced by purchases later in the year. The latter are financed by charcoal burning and other collection-activities, which are helped by the low population density and more abundant woodland, feeding the market in the Southern Region's urban centres. A range of crops are grown, including cotton, but low prices mean that cotton sales provide 20% or less of total income for a majority of households. Other sources of income for 'poor and 'middle' households are ganyu, petty trade, firewood and charcoal.
Income	Food crops Other Cotton	
Livestock	Cattle (few) Goats	



Phalombe Plain/Lake Chilwa

Food Crops	Maize Pulses Rice	Like the neighbouring Shire Highlands zone, this quite densely populated zone produces roughly enough to feed itself in most years. Income generating opportunities are limited, so that food crops are again sold post-harvest to obtain cash and have to be replaced by purchases later in the year. Crop production is more diversified than in the Shire Highlands, with maize, rice and pulses the main staple food crops grown. Other sources of cash besides sale of crops are ganyu (for both 'poor' and 'middle'), petty trade, firewood and grass sales.
Income Sources	Other Food crops	
Livestock	Goats Pigs	

Thyolo Mulanje Tea Estates

Food Crops	Maize Bananas	This zone is dominated by large tea estates, which generate both formal employment and casual labour for a majority of households. Landholdings are very small and the zone is a food-production deficit area with a high dependence on food purchase. The zone benefits from good access to neighbouring Mozambique, a source of relatively cheap maize in both good and bad years.
Income Sources	Estate work Banana sales Fruit and vegetables	
Livestock	Insignificant	

Lower Shire Valley

Food Crops	Maize Rice Sorghum Millet	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. Cattle holdings are significant in the zone, although concentrated in the hands of the 'better-off'. Overall, very roughly one third of the zone's income comes from 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 both <i>ganyu</i> and relatively cheap maize in both good and bad years.
Income	Food crops Cotton Livestock	
Livestock	Cattle Goats	

INDIVIDUAL LIVELIHOOD ZONE PROFILES

The forthcoming section presents a summary of the basic livelihood information contained within the MVAC livelihood baselines that were collected between May and July 2003. Information presented is detailed by livelihood zone for each of the 11 livelihood zones surveyed to date. The MVAC baseline information is used by the MVAC to monitor household food security and to forecast vulnerability, as well as serving as a basis for further analysis designed to inform programming and policy on issues related to poverty alleviation and improved livelihood and food security. The information covers: livelihood zone descriptions, seasonal calendars, wealth groups, household's sources of food and income by wealth group, information on the hazards to food and livelihood security that households are likely to face, household coping and response strategies, critical warning indicators for wealth groups and zones and some recommendations on implications for programming derived from these profiles.

The MVAC is attempting to set up a relational database that will store this baseline data as well as that generated by monitoring activities. The MVAC also intends to conduct additional fieldwork to complete the baseline information for the remaining six zones not covered in the May-July 2003 baseline survey.

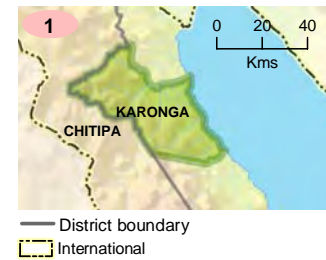
Malawi Livelihood Profile

Central Karonga

Zone Description

The Central Karonga zone includes part of Karonga District in the Northern Region. The zone extends from the northern lakeshore area to the east, to the Chitipa Millet and Maize zone to the west. The Nkhata Bay Cassava zone lies to the south, and to the north is the Northern Karonga zone. Central Karonga is a relatively fertile, productive maize-producing area, with average annual precipitation of 1000 mm. The majority of households are able to produce in excess of three quarters of their household food requirements in normal years. Poor labourers from other parts of the country typically migrate to the zone to do *ganyu* on local farms. Livestock sales – principally cattle, pigs and poultry – provide between a third and a half of annual income for both ‘middle’ and ‘better-off’ households, a significant contribution relative to other zones.

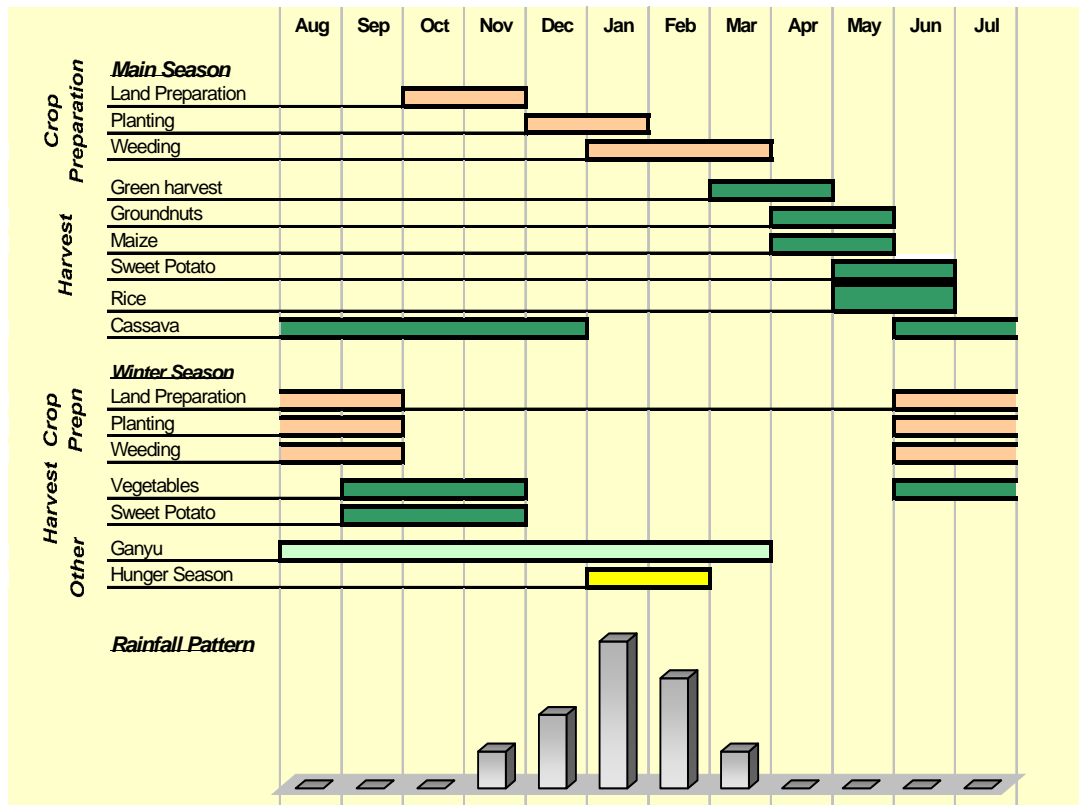
Central Karonga



Total Population (2004)	44,516
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Seasonal Calendar

Main season crops (maize, groundnuts, sweet potatoes, pulses, rice and sorghum) are harvested from April until June. Many households also cultivate winter or *dimba* crops (sweet potatoes, rice and vegetables) for sale and consumption from June to December. Though maize is the dominant crop grown by all wealth groups, cassava and sweet potatoes are important sources of food and cash in this zone. Sweet potatoes are harvested in both the main and winter seasons. Cassava harvesting peaks between June and mid-December. Agricultural *ganyu* is available for 10 months of the year, peaking from mid-November to mid-March. This is an important activity for ‘poor’ households, many of whose food stocks are depleted by January. Food access declines as the main agricultural season progresses, culminating in the annual ‘hunger’ season in January and February. March signals the beginning of the green maize harvest, followed by the start of main season’s maize and groundnuts in April.

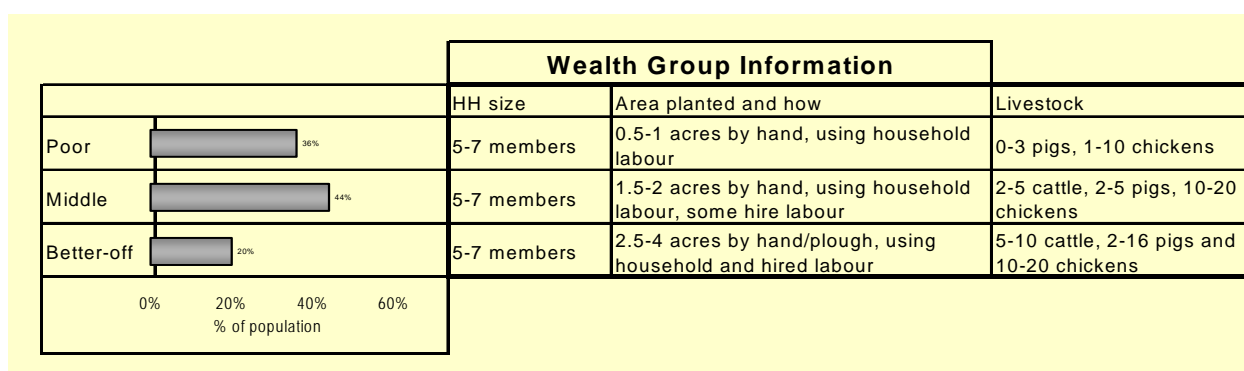


Markets

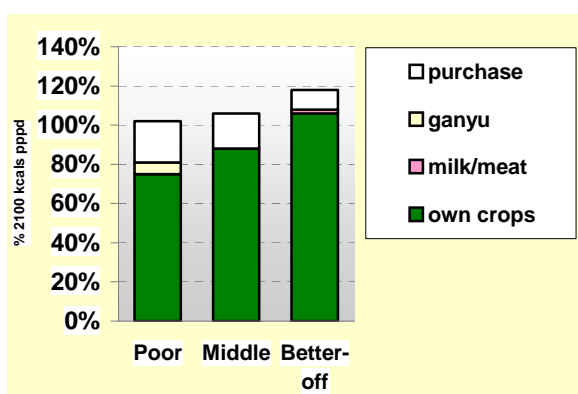
As a food surplus zone, Central Karonga attracts traders to its markets to purchase crops such as maize, sweet potatoes, groundnuts and cassava. ADMARC markets throughout the zone trade in food crops at controlled prices; private traders generally buy and sell in accordance with ADMARC prices. Farmers sell their animals directly to livestock traders or in the livestock markets established in large towns. Local agricultural markets are characterized by demand for labour exceeding of local supply, resulting in in-migration of labour from outside of the zone.

Wealth Breakdown

Access to food (with which to pay for labour) and access to cash or credit (to purchase inputs and to pay for labour) are key factors determining wealth within the zone. The 'better-off' use agricultural inputs, hire labour using both cash and food, and own productive assets (ploughs, ox-carts and oxen) that they hire out. Consequently, they have a greater area of land cultivated than other groups. Relative to the rest of the country, both the 'better-off' and the 'middle' have large livestock holdings in the form of cattle and pigs. 'Poor' households use chickens for sale in normal years. 'Middle' and 'better-off' households sell chickens and pigs, and may sell cattle or increase the sale of pigs and poultry in crisis years.



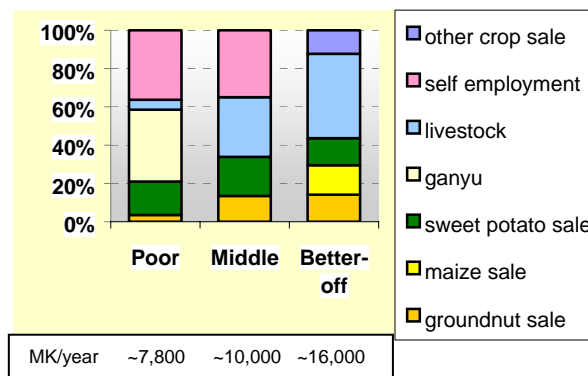
Sources of Food



Household crop production (chiefly cassava, maize, sweet potatoes and rice) is the main source of food for all households. Cassava consumption is significant, accounting for 45%, 34% and 28% of consumption for the 'poor,' 'middle' and 'better-off' respectively. 'Poor' and 'middle' households purchase staple (for example, maize) and non-staple (for example, sugar) foods to supplement domestic production. The 'better-off' purchase a more diverse basket of food items (e.g., oil, rice, meat). Food in exchange for labour (*ganyu*) accounts for only a small contribution. Despite larger livestock holdings in the zone, milk and meat consumption is insignificant for most households because animals are used as a source of income rather than for direct consumption.

Sources of Cash

Over two-thirds of income for the 'middle' and 'better-off' is earned through the sale of crops and livestock. 'Poor' households' incomes are very low, purchasing just under half of their minimum food energy needs. They earn three-quarters of it from *ganyu* (particularly land preparation and ridging) and self-employment, the remainder coming from crops and poultry sale. Sweet potatoes are an important source of cash for all three groups and, to a lesser extent, groundnuts. Only the 'better-off' produce and sell surplus maize. The 'better-off' rely solely on crop and livestock sales for income, while the 'middle' engage in petty trade and small businesses for cash (e.g., firewood, handicrafts).



Hazards

Chronic/frequent hazards: Dry spells are ranked as the most damaging chronic problem. When dry spells occur during maize tasselling in the months of February and March, they do the most damage to crop production. Flooding is the second most damaging hazard. When flooding occurs during January and February, it washes away crops, fertile soils and sometimes causes water logging which causes tubers (like cassava and sweet potatoes) to rot. Armyworms are identified as the third most destructive hazard, affecting primarily maize production.

Periodic hazards: Droughts occur roughly twice every ten years, causing severe crop failure. Diseases affecting livestock are cause for concern.

Response Strategies

Households respond to shocks in two ways; they expand existing strategies and when the situation is severe, they turn to a number of distress strategies.

Expansion of existing strategies

Increased livestock sales. 'Poor' and 'middle' households increase their poultry sales, while the 'middle' and 'better-off' increase the sale of pigs or cattle.

Local ganyu. The poor and the middle seek agricultural ganyu. Work is sought locally, as well as in neighbouring areas. Poor individuals migrate to Southern Karonga to do ganyu on cassava plots in exchange for cassava. In a normal year, the middle group do not do any ganyu, but in a bad year they will do it.

Increased non-farm sales. The poor will increase the sale of firewood, hoe handles and mats, while the middle will increase barter/trade activities (e.g. trading rice paddy for vegetables).

Consumption of other crops generally sold. In a normal year, all three wealth groups sell some portion of their food crops. A common expansion strategy in a bad year is to reduce or eliminate the sale of food crops and keep them for own consumption. The poor and middle would reduce the amount of sweet potatoes and groundnuts sold, while the well off have the option of reducing the sale of these crops as well as maize and cassava.

Expenditure Switching. For the 'middle' and 'better-off', switching expenditure on certain non-food items (e.g. clothes) to staple foods is possible.

Hiring out of farm implements. The 'better-off' are able to hire out farm implements more frequently and for longer periods (e.g. plough, ox-carts, oxen), given sufficient demand.

Distress strategies

Excessive sales of livestock at low prices. Livestock selling is an expansion coping strategy that can turn into a distress strategy when households sell breeding stock or their last animals at very low prices.

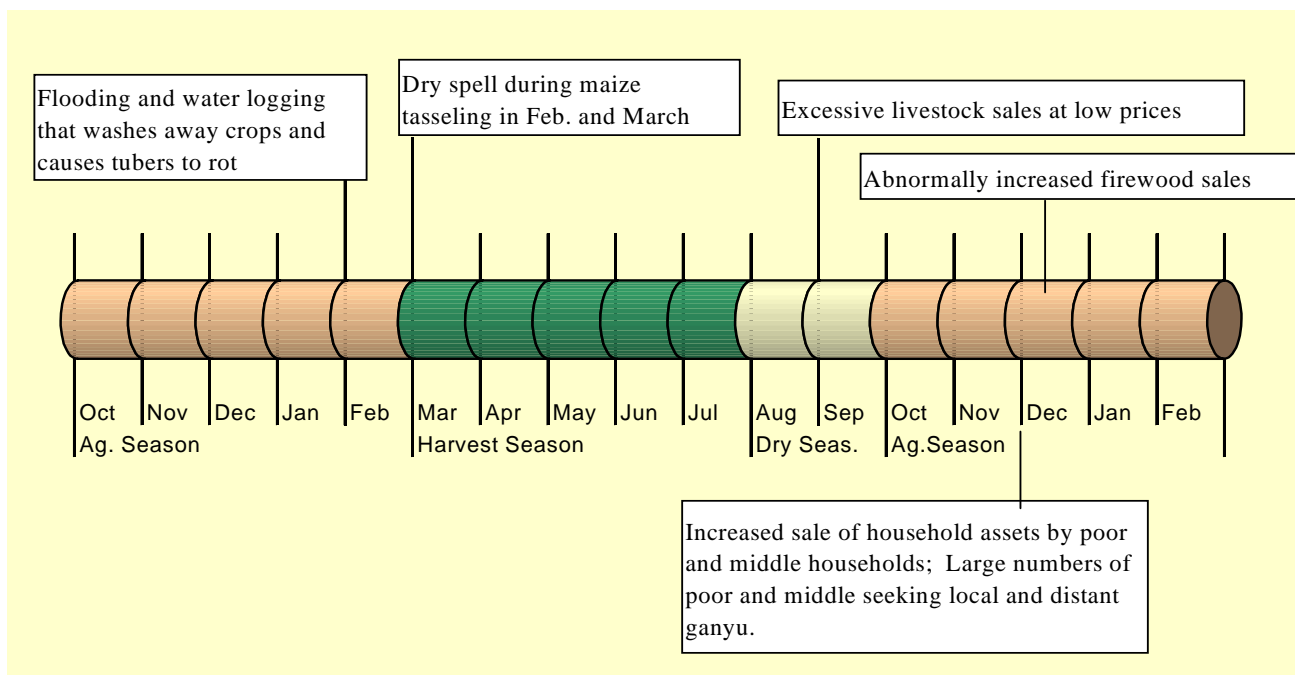
Household asset sales: An option for all three wealth groups, but of little value for 'poor' households, given their limited asset holdings. The 'poor' will sell clothes, while the 'middle' sell blankets, clothes, bicycles, and radios.

Reduced number of meals. Reducing the number of meals taken is a common strategy, but can reach life-threatening levels during a severe crisis.

Eating of maize husks. Maize husks are mixed with a few grains of maize.

Crisis Warning Indicators

The figure below illustrates the main crisis warning indicators for the zone and their timing as the season progresses. During February and March, dry spells that occur at the maize tasselling stage are an acute and recurrent problem for this area. A maize crop failure on its own, however, does not indicate a crisis for this zone, as maize accounts for less than 25% of food consumption for all three wealth groups. Sweet potatoes and cassava, both drought resistant crops, account for 44% of 39% of food consumption for the poor and middle respectively. Flooding during January and February is a greater threat to food security when it washes away crops, soils and causes water logging that rots tubers such as cassava and sweet potatoes. Early and excessive sales of livestock at low prices from August onwards are an indicator of stress and potential crisis. Another crisis indicator, especially for the poor, is abnormally increased firewood sales. Similarly, an increase in the number of people seeking local and distant *ganyu*, and a decline in payment rates progressively from September through March, are crisis-warning indicators for the zone.



Main Conclusions and Implications

All households benefit from diversified crop production, which includes drought resistant crops. The three main food crops are maize, cassava, and sweet potatoes. Most households are able to meet 80% - 100% of food consumption needs from their own production and sell some portion of production for cash. However, although this zone is characterised by diversified access to food, it suffers from very low incomes, especially for the 'poor'. If the 'poor' concentrate all their income into staple, they will meet less than half of their energy needs. This means that when production fails, the poor have little recourse to cash. Cash incomes are diversified for the 'middle' and 'better-off'; therefore, their incomes are more resilient to shocks. Livestock holdings (chickens, pigs, cattle) are large when compared to the rest of the country, which provides the means of coping in bad years for the 'middle' and 'better-off'. The poor have limited livestock holdings.

Programming Implications:

- ❑ *Re-establish livestock markets and broader market links to central and southern Malawi.*
- ❑ *Road construction and improvements on feeder road. Consideration needs to be given to making this labour-intensive and supportive of improving incomes for the 'poor' (poorest 35% of the population).*
- ❑ *Expansion of irrigation schemes and inclusion of poor and middle wealth groups. Current irrigation schemes provide noticeable benefits in cash and food options for participants through the production of vegetables, rice and other crops, but a limited number of households benefit.*
- ❑ *Accessible and affordable credit for input purchase for poor and middle households. Extend credit to women's groups.*
- ❑ *Livestock restocking for the poor and middle wealth groups. The poor especially have very small livestock holdings (and primarily chickens) and would benefit from increased holdings (e.g. pigs).*
- ❑ *Programmes to minimize flooding and 'wash-aways'.*

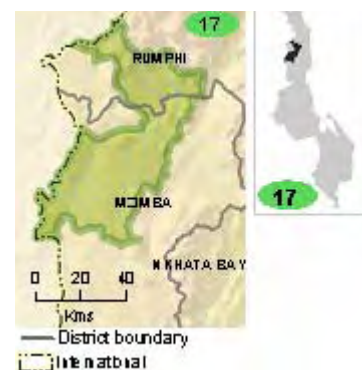
Malawi Livelihood Profile

Western Rumphu and Mzimba

Zone Description

Western Rumphu and Mzimba zone includes parts of Rumphu and Mzimba districts. It lies to the southwest of Nyika National Park, to the northwest of the Mzimba Self-Sufficient zone, and to the east of Zambia. The zone encompasses three EPAs: Bolero EPA in Rumphu District and Mpherembe and Euthini EPAs in Mzimba district. A predominantly maize-producing zone with a rainfall level of 900 mm/year, the zone also benefits from high levels of tobacco cultivation and opportunities for wild food collection (in Nyika National Park and Vwaza Game Reserve). Almost all households cultivate tobacco, which gives them a high dependence on tobacco prices for income, while the 'poor' have a relatively high dependence on markets for their food.

Western Rumphu & Mzimba



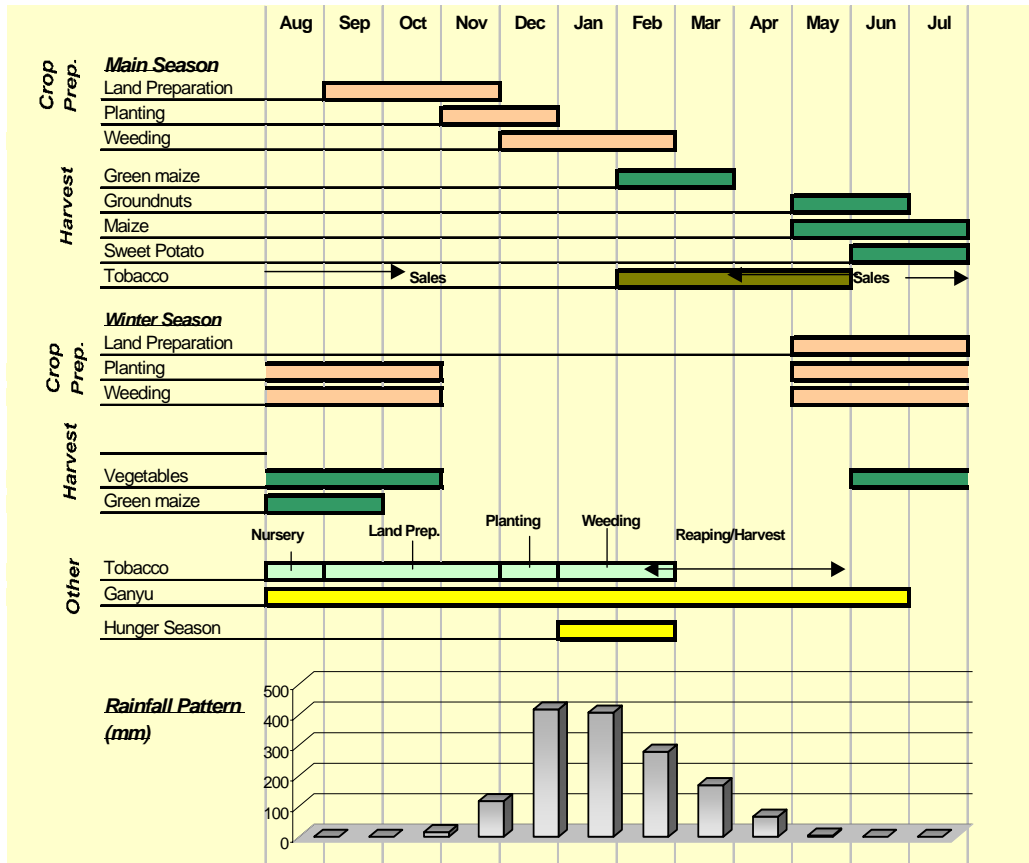
Total Population (2004)	139.250
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Seasonal Calendar

The main season crops (maize, groundnuts, sweet potatoes and pulses) are planted between November and January and harvested from March until July. 'Better-off' households also cultivate winter or *dimba* crops on small plots of low-lying land from June to October. The main *dimba* crops are vegetables (for sale and consumption) and maize, most of which is eaten green. Tobacco, a major source of income for most households for the zone, is harvested from February to May, and sold from April to July. The rainy season for the main agricultural activities starts in mid-November and ends in mid-April; land preparation, that is cleaning and ridging, starts in August and the peak period is from September to mid-November. During harvest time, prices of food crops tend to be low but from December to the end of March, the prices are higher. With the resumption of agricultural activities in September, many poorer households turn to casual agricultural labour or *ganyu* for both food and cash. Food access declines as the season progresses, reaching a low point in January and February, the annual 'hunger' season. This ends in March, with the harvesting of new season green maize, and households begin to have access to different sources of food and income from crop production.

Markets

The Western Rumphu and Mzimba zone is barely self-sufficient in maize in normal years; consequently, households rely on purchases from ADMARC markets and from private traders. Livestock are sold directly to traders who purchase from rural areas, as well as in livestock markets in the Region. Intermediaries, who purchase from farmers, transport tobacco to Lilongwe auction floors.



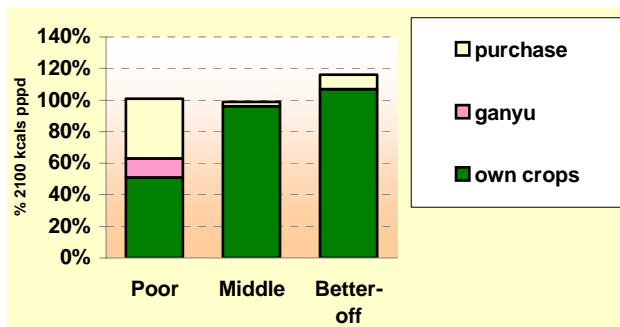
Wealth Breakdown

Wealth is largely determined by the area of land under cultivation and access to agricultural inputs. The ‘poor’ cultivate roughly around one-quarter of an acre of tobacco, the ‘middle’ three-quarters of an acre and the ‘better-off’, 1 acre or more. The ‘poor’ eat from their own production for only six months, the ‘middle’ for about 12 months and the ‘better-off’ for more than one year. The main constraint faced by ‘poor’ households is the lack of agricultural inputs and enough time to concentrate on their own farms, especially during the hunger period. The ‘poor’ and ‘middle’ sell and eat chickens in a normal year, which they expand in crisis periods. The ‘better-off’ sell and eat chickens, pigs and goats in normal years and expand the sale of pigs and goats in crisis periods. Income from tobacco is vital for purchasing food and other necessities for the ‘poor’, because food production is lower than in other zones.

Wealth Group Information			
	HH size	Area planted and how	Livestock
Poor	5-7 members	1-1.5 acres by hand, using household labour	0-4 pigs, 7-10 chickens
Middle	5-7 members	2-3 acres by hand, using household labour and some hire labour	0-5 pigs, 10-15 chickens
Better-off	5-7 members	4-5 acres by hand, using household and hired labour	0-4 cattle, 3-7 goats, 2-6 pigs, 15-20 chickens

0%	20%	40%	60%
% of population			

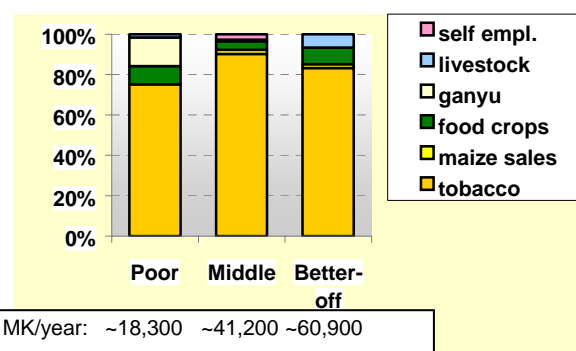
Sources of Food



The 'middle' and 'better-off' can cover all of their consumption requirements from their own crops. Both are heavily dependent on maize production, which accounts for over three-quarters of their total annual food needs. It also provides income from the sale of surplus. Minor crops include groundnuts, sweet potatoes and pulses. For the 'poor', crop production covers only about half of annual food needs. They are heavily dependent on food purchases, which they fund primarily through tobacco sales, which they fund primarily through tobacco sales. They also rely on food payments from *ganyu* in the hunger season of January to March.

Sources of Cash

Most income for all three groups comes from the sale of tobacco, which provides between one-half and two-thirds of income. Incomes are higher than elsewhere; the 'poor' can purchase almost all of their food energy needs. There are, nevertheless, differences in income between the groups, reflecting their different levels of production. Not only do the 'better-off' produce more tobacco, they also produce a better quality leaf with more intensive management and are paid a higher price for it. This reflects their greater access to credit for the purchase of fertilizer. The sale of groundnuts, sweet potatoes, and pulses is important to the cash flow within the year, as tobacco payments are received in individual instalments. *Ganyu* provides the second most important source of income for the poor, but the sale of other crops (sweet potatoes, groundnuts, and beans) is also significant.



Hazards

Chronic/frequent hazards: The main chronic hazard in this zone is that of dry spells during the time maize is tasselling, which can cause considerable damage to production. Households cite Newcastle Disease in chickens as the second major chronic hazard. This curbs the number of chickens that a household can keep. When an outbreak occurs all chickens are wiped out completely forcing households to start again from nothing. Households have also pointed to low maize prices and high input costs as a major chronic hazard. Households are dependent on middlemen for tobacco sales; they have limited control and information on tobacco costs incurred once tobacco leaves the farm. Hence, low tobacco prices are seen as an important chronic hazard.

Periodic hazards: Serious drought strikes about twice in ten years; flood like 'wash-aways' occur periodically in some areas emanating from the Nyika Plateau and surrounding hills.

Response Strategies

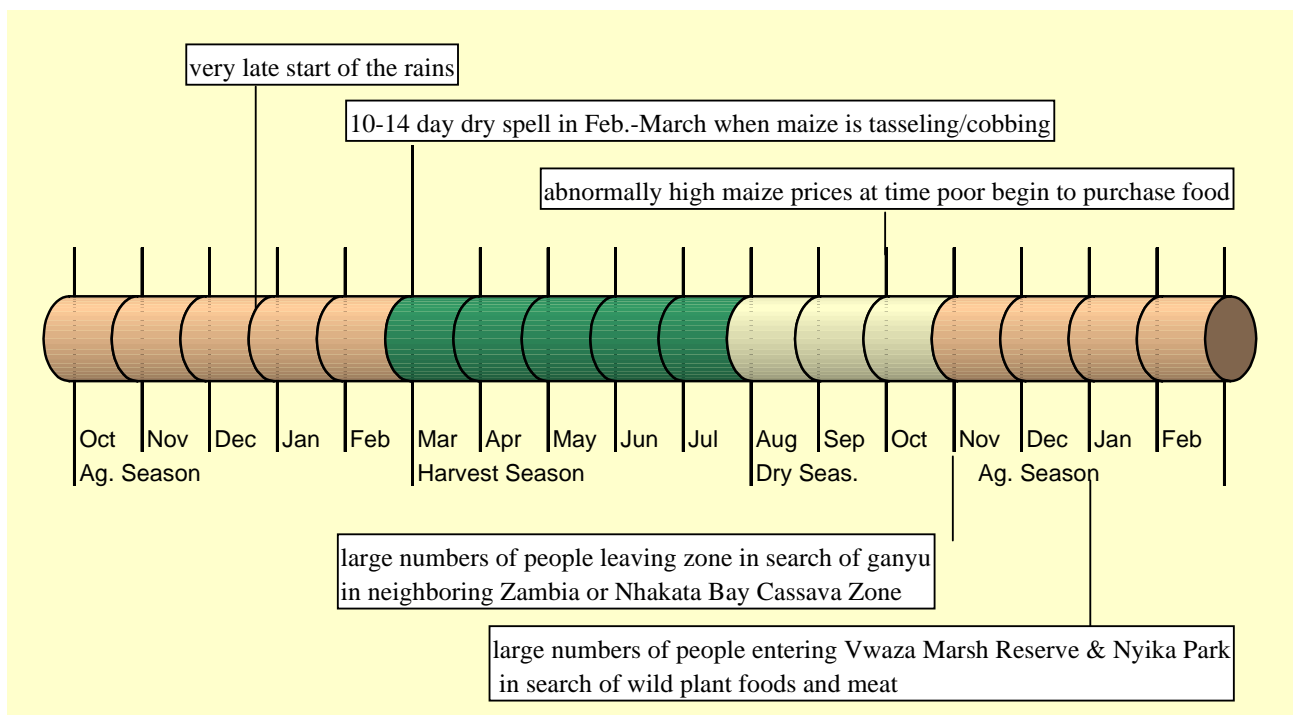
Households respond in two ways to shock such as crop production failures; they expand existing strategies and when the situation is severe, they turn to a number of distress strategies.

<p>Expansion of existing strategies</p> <p><u>Food purchase.</u> Food purchases can be expanded using income generated from tobacco sales for all three wealth groups. However, if the retail price of maize increases dramatically, then the ‘poor’ have limited ability to expand this option.</p> <p><u>Expenditure switching.</u> For the ‘middle’ and ‘better-off’, switching expenditure on non-food items (e.g. clothes) to staple foods is possible.</p> <p><u>Local ganyu.</u> Both the ‘poor’ and ‘middle’ attempt to expand local <i>ganyu</i> in a crisis, but only limited additional work tends to be available. Labour rates can also decline, so net <i>ganyu</i> income may actually fall.</p> <p><u>Distant ganyu.</u> Additional <i>ganyu</i> can be found in the nearby Nkhata Bay Cassava livelihood zone or across the border in Zambia. Labour pay rates are generally low, while <i>ganyu</i> in the cassava-producing areas is generally paid for in kind with cassava flour or tubers.</p> <p><u>Consumption of other crops generally sold.</u> All three wealth groups sell a portion of their food crops (maize, sweet potatoes, beans, groundnuts) in a normal year. A common expansion strategy in a bad year is to limit or eliminate the sale of these food crops. Poorer households have limited capacity to expand this strategy, as production is small.</p> <p><u>Livestock sales:</u> An option for all three wealth groups, but of limited value for the ‘poor’ and ‘middle’ since chickens are their only livestock holding.</p>	<p>Distress strategies</p> <p><u>Asset sales:</u> An option for all three wealth groups, but of limited value for ‘poor’ households given their limited asset holdings. The ‘poor’ will sell clothes, while the ‘middle’ are more likely to sell bicycles or radios.</p> <p><u>Extreme reduction in number of meals.</u> Reducing the number of meals taken is a common strategy, but it can reach extreme life-threatening levels during a severe crisis.</p> <p><u>Work in Tobacco Estates.</u> During severe crises, the ‘poor’ will seek employment in the large tobacco estates. Pay is below subsistence and only those with no other options engage in this strategy.</p> <p><u>Increased consumption of wild foods and roots.</u> In times of severe food shortage, ‘poor’ and ‘middle’ households increase their collection and consumption of wild foods and meat from Vwaza Marsh Reserve and Nyika Plateau Game Park.</p>
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Crisis Warning Indicators

The figure below illustrates the main crisis warning indicators for the zone and their timing as the season progresses. A very late start to the rains is the first indicator of possible failed crop production, while dry spells during the critical tasselling and cobbing stages for maize is the most significant indicator of crop failure. Crop failures, combined with an abnormally high market price for maize at the time when the poor begin to purchase food (September and October) are a key indicator for a pending crisis in food access for the most vulnerable. A later indicator of a crisis is the occurrence of large numbers of labourers leaving the zone beginning in October in search of *ganyu* in neighbouring Zambia and Nkhata Bay Cassava Zone. Unusually large numbers of people entering the Vwaza Marsh Reserve and Nyika Park in search of wild plant foods and meat is also an indicator of a crisis.

The zone is heavily dependent on tobacco; therefore, any shocks to the production and marketing of tobacco would immediately translate into increased vulnerability, especially for the ‘poor’ and ‘middle’ wealth groups. Indicators to watch for tobacco-related shocks include abnormally high input prices, unavailability of credit or tobacco loans, reduced market uptake of small-scale farmer tobacco, unusually low tobacco prices, and excessively high price hikes in transportation and middle-men costs.



Main Conclusions and Implications for Programming

This zone is characterized as a subsistence maize and tobacco-dependent economy. All wealth groups are involved in tobacco production through member associations. The 'middle' and 'better-off' can cover all of their consumption requirements from their own crops, but both are heavily dependent on maize production for own consumption and sales. The 'poor' can cover only half of their consumption requirements from own crops and are heavily dependent on food purchases to meet most of their remaining food needs, which they fund through tobacco sales. This limited economy makes the 'poor' and 'middle' highly vulnerable to shocks. The combined shocks of crop failures and market failure (such as abnormally high food purchase prices) will create a food crisis for the vulnerable.

The zone benefits from the close proximity of the largest cassava production area in the country and a common coping or response strategy during times of crop failures and crisis is to obtain food from doing *ganyu* in the cassava fields. The presence of the Vwaza Marsh Game Reserve and Nyika National Park provide limited options for increased wild food and meat during crises.

Implications for Programming:

- ❑ *More control over marketing tobacco by farmers and improved information on tobacco marketing costs and tobacco auction floor pricing. Small-scale farmers incur marketing costs that are too large relative to the value of their crops. Limited number of middlemen reduces options of fair pricing in tobacco marketing for small farmers.*
- ❑ *Cash income diversification programmes to lessen dependence on tobacco sales as major source of income.*
- ❑ *Improved accessibility to loans and credit to purchase inputs for middle and poor. More and better quality inputs would assist these groups to produce a better quality tobacco leaf and receive higher prices for their tobacco.*
- ❑ *Promotion of diversification in food crops, including cassava sweet potatoes, and pulses. Cassava production has recently been introduced and is well accepted, but scale and spread of introduction is small.*
- ❑ *Programmes to assist vulnerable groups acquire livestock, such as pigs and chickens. Regular and affordable vaccinations against Newcastle Diseases are needed for the poor and middle.*

Malawi Livelihood Profile

Mzimba Self-Sufficient Zone

Zone Description

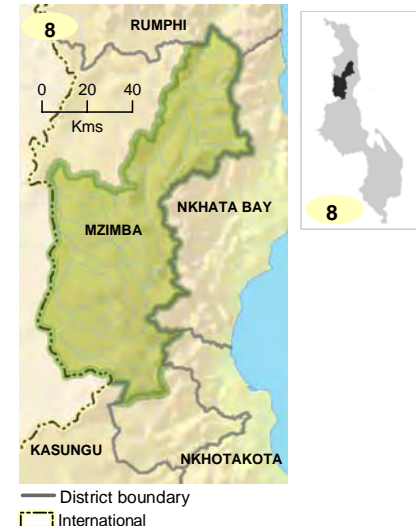
Crops and livestock are the basis of the economy in the Mzimba self-sufficient livelihood zone. Tobacco provides the single most important source of cash income, with both burley and oriental varieties being grown. Maize, cassava, sweet potato and groundnuts are the main food crops, supplemented by smaller quantities of pulses and millet. The zone produces a small food surplus in a 'normal' year and maize, cassava, groundnuts and Soya beans are exported in most years.

Cattle holdings are relatively high in this zone compared to elsewhere in the country. This is important in three ways; oxen provide a source of draft power for ploughing and for transport (ox-carts), sale of livestock provides a significant source of income, and cattle provide milk for consumption.

As elsewhere, most of the zone's production is concentrated in the hands of the 'better-off' and – to a lesser extent – the 'middle'. The poorest 30% of households do not own cattle, and their crop production covers no more than two-thirds of their minimum annual energy requirement. This is more than in other zones – the explanation being the widespread cultivation of cassava as a secondary crop after maize. The balance of 'Poor' households' food intake comes from purchases and in-kind payments for *ganyu*. Cash incomes for the 'poor' are relatively low in the zone, mainly because there are few alternatives for generating cash other than sale of crops and sale of labour.

Quite a large number of households – mainly from the 'middle' and 'better-off' – have one or more household members or close relatives living and working away from home, either in Southern Africa or elsewhere in Malawi. There does not appear to be a regular pattern of remittance, however, with receipts being irregular and unreliable.

Mzimba Self Sufficient



Total Population (2004)	411,021
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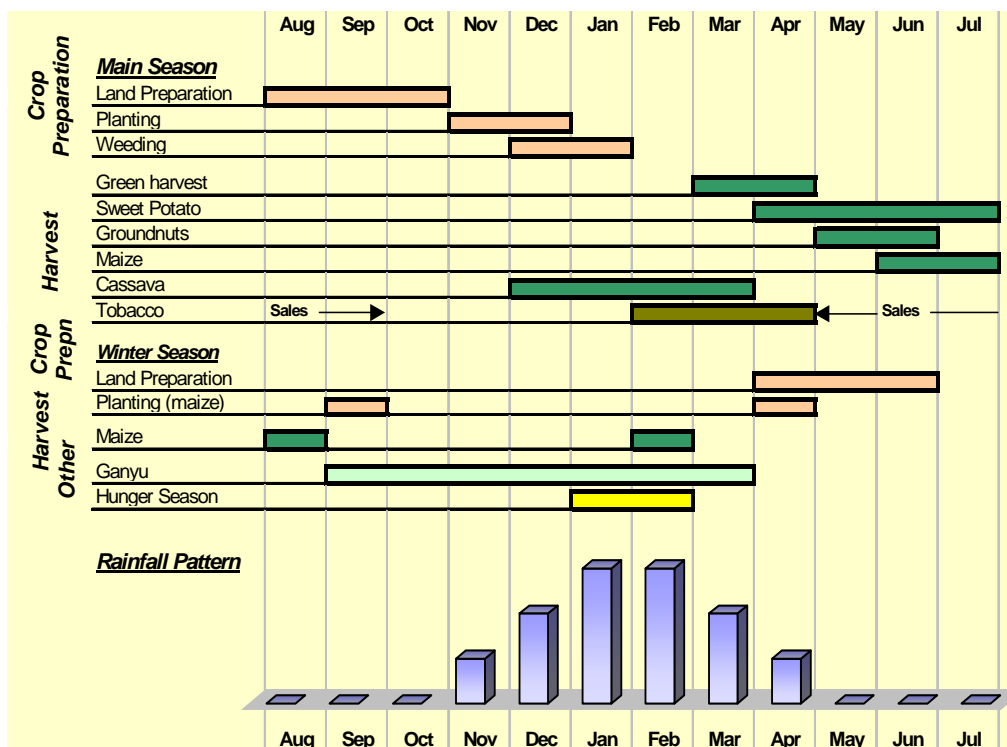
Seasonal Calendar

Harvesting of the main season crops (maize, groundnuts, pulses and sweet potatoes) takes place from April to July. For a typical or 'middle' household, these crops last until roughly the end of November (i.e. 8 months). From then until March, 'middle' households rely on a combination of cassava, staple food purchase and in-kind payment for casual labour (*ganyu*). Small quantities of maize and vegetables are also grown in *dimba* gardens in low-lying wetter areas. Two harvests of maize can be obtained from these gardens, the most important of which is in February, a key pre-harvest month. Although there is an annual hungry season as elsewhere in the country, the severity of this is cushioned by two factors: the availability of cassava and the availability of *dimba* maize in February.

Markets

Burley tobacco is sold to the Mzuzu auction floors, while oriental tobacco is sold locally to the Limbe Leaf Company. Of the food crops sold, maize is sent northwards, to Mzuzu and neighbouring Tanzania, while cassava is sent south, to Kasungu and Lilongwe. Sweet potatoes are produced in reasonable quantities, but there is little external market for these, and prices can be very low (as they were in 2003, at the time of the current baseline assessment). Both summer and winter vegetables are grown and are sold locally and along the M1 (Mzuzu-Kasungu-Lilongwe) highway.

Cattle are exported from the zone to slaughterhouses in Lilongwe, Mzuzu, Nkhata Bay and Rumphi. Small stock are also sold, but mainly to local markets within the zone.



Wealth Breakdown

As elsewhere, there are large differences in this zone between wealth groups in terms of area cultivated, yields obtained and the numbers and types of livestock kept. The ‘better-off’ cultivate between 2-3 times the area of the ‘poor’, and therefore harvest 2-3 times more of all crops, including groundnuts, cassava and sweet potato. The production difference is even greater for maize and tobacco, mainly because these crops benefit significantly from inputs that the poor cannot afford (including fertiliser and labour), and for which they are unable to obtain credit.

Cattle ownership is widespread in this zone, with most households owning from 1-5 cattle, while the ‘better-off’ own 5-15 head, of which at least two are likely to be oxen. Ox ploughing is therefore more common in this zone than elsewhere, but is apparently on the decline, since spare parts for ploughs and other equipment have been in short supply since the demise of the system of ‘farmers clubs’ some years ago.

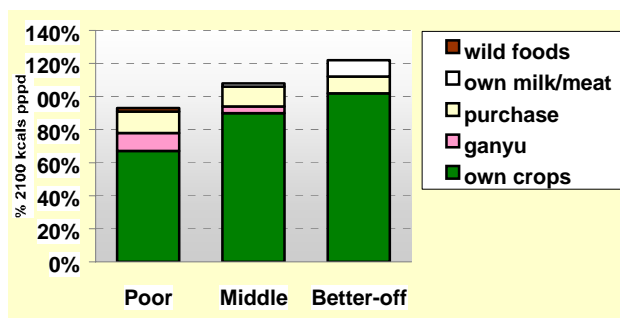
Wealth Group Information			
	HH size	Area planted and how	Livestock
Poor	5-6 members	1-2.5 acres by hand, using household labour	0-3 goats, chickens
Middle	5-6 members	2.5-3.5 acres by hand, using mainly household labour	1-5 cattle, 3-6 goats, chickens
Better-off	5-6 members	3-6 acres, using oxen and household and hired labour	5-15 cattle, 6-10 goats and chickens

0% 20% 40% 60%
% of population

Sources of Food

Total food access increases from 'poor' to 'middle' to 'better-off', in line with wealth group differences in crop production and livestock holding.

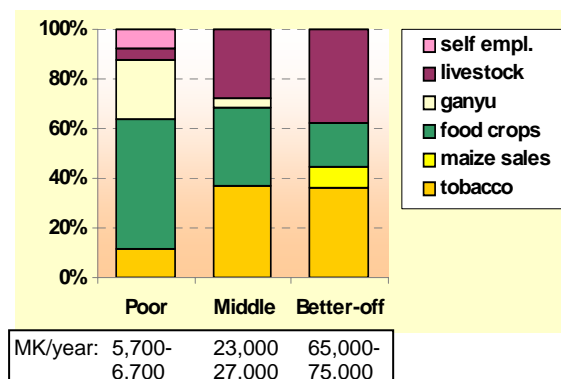
For all three groups most food comes from own crop production (mainly maize and cassava). Purchase and in-kind payment for *ganyu* are the other major food sources for the 'poor' and the 'middle'. 'Better-off' households also purchase food, but mainly to add variety to their diet (sugar, oil, rice, fish, beans etc.). Consumption of milk is significant for the 'better-off', linked to the number of cattle owned by this group.



Sources of Cash

The 'poor' in this zone have very low cash incomes, which can purchase only one-third of cereals required for their minimum food energy requirements. They produce very little tobacco and depend largely upon the sale of crops and *ganyu*. There is little demand locally for firewood, grass or handicrafts, which in other areas contribute significantly to 'poor' incomes. This is due to the remoteness of the zone from any urban centre.

Very roughly, the 'middle' and 'better-off' groups earn a third their income from each of three sources: sale of tobacco, sale of food crops and sale of livestock. They sell the same crops as the 'poor', but in larger quantities. Sale of cattle provides most of the income from livestock sales.



Hazards

Chronic/Frequent hazards: As in many other areas of the country, dry spells or excessive rainfall and waterlogging are the most common causes of reduced crop production in the zone. One or a combination of these affects the zone in most years. The dry spells have a huge impact on crop production when they occur at the critical stage of crop development such as tasselling in maize. Crop diseases and pests also affect the zone from time to time, and district officers mentioned Grey Leaf Spot and Bean Beetle as the most significant recent problems in this respect.

Periodic Hazard: Severe crop failure occurs when there is a prolonged dry spell (drought). Diseases affecting cattle, such as foot-and-mouth, are a cause for concern in the area, as cattle play an important role in the food economy of this zone; they are used for ploughing, they provide milk and they are sold to generate cash income.

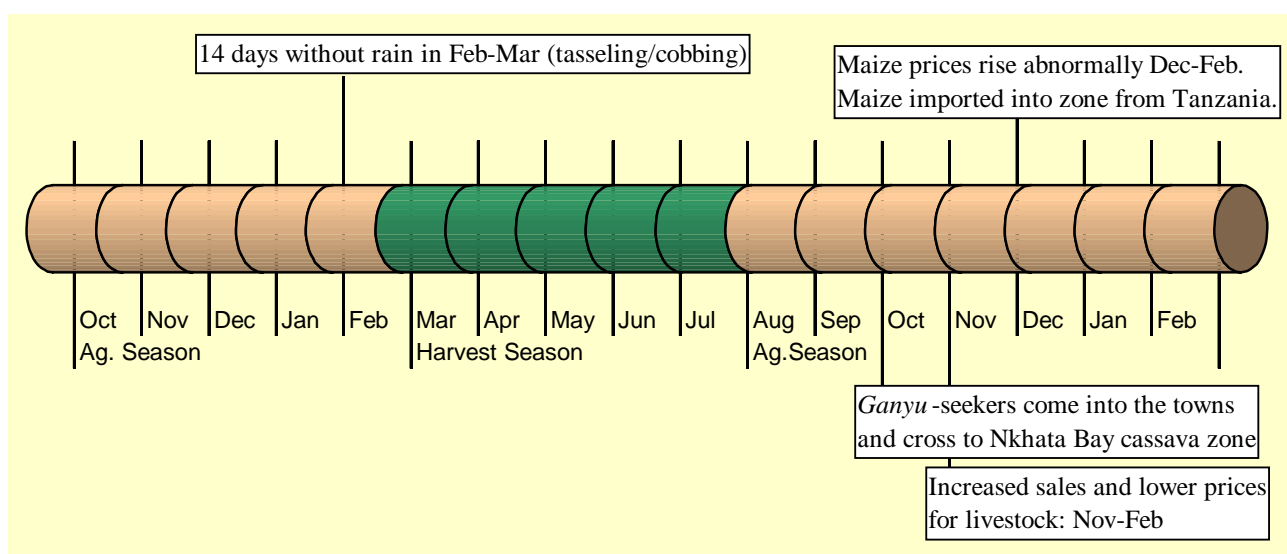
Response Strategies

Households respond to shocks in two ways; they expand existing strategies and when the situation is severe, they turn to a number of distress strategies. The table below lists some of the strategies household were found to employ.

Expansion of Existing Strategies	Distress Strategies
<p><u>Increased consumption of cassava</u>: Cassava is an important reserve crop grown by all three wealth groups in the zone, and consumption of cassava is increased when other crops fail.</p> <p><u>Livestock sales</u>: An important strategy for the 'middle' and 'better-off', given the level of cattle holdings in the zone.</p> <p><u>Local Ganyu</u>. Expansion of <i>ganyu</i> within the locality is a strategy pursued by both 'poor' and 'middle' households in the zone. Although efforts may be made to find more <i>ganyu</i>, the overall effectiveness of the strategy is limited since little additional work may be available and labour rates tend to decline in a crisis.</p> <p><u>Food purchase</u>. Food purchases can be expanded using income generated from livestock sales or <i>ganyu</i>, or by switching expenditure on non-food items (e.g. clothes) to staple foods. This is limited for the 'poor' by low incomes.</p> <p><u>Wild foods</u>: This is not an effective response to food shortage in this zone, since few of the available wild foods provide significant amounts of food energy. Wild fruits are available, but these tend to have relatively low energy content.</p>	<p><u>Distant Ganyu</u>: Migrating to urban centres and neighbouring Nkhata Bay cassava zone in search of <i>ganyu</i>. The <i>ganyu</i> in Nkhata Bay is usually in exchange of cassava.</p> <p><u>Asset sales</u>: An option for all three wealth groups, but of limited value to 'poor' households given their small asset holdings. The 'poor' will sell clothes and furniture, while the 'middle' are more likely to sell bicycles or radios.</p>

Crisis Warning Indicators

The figure below illustrates the main crisis warning indicators for the zone and their timing as the season progresses. A dry spell at a critical stage of the maize growing season (February/March) provides the most significant early indication of crop failure. There may then be few further indications of crisis until the following October, when significant movements from the rural areas in search of *ganyu* are likely to be observed. Market-based indicators (prices, importation of maize, etc.) may not show significant change until as late as November.



Main Conclusions and Implications for Programming

The zone is highly productive. A lot crops such as maize, cassava, sweet potatoes, millet etc. are grown in the zone and have relatively high yields. The zone also has many livestock, with cattle playing a crucial role as a source food and income. The area exports cassava to Mzuzu, Kasungu and Lilongwe. The lack of markets for commodities such as sweet potatoes results in very low prices for farmers.

Income is very low for 'poor' households; this inhibits their ability to get adequate food, both in quantity (energy) and quality terms. It also restricts their coping options, as they cannot switch expenditure to purchase food when there is a crop failure.

Implications for Programming

- ❑ *Improved market infrastructure for both crops and animals are essential to ensure that farmers have access to markets and good prices for their commodity which will act as an incentive to production.*
- ❑ *Alternative income-generating options need to be explored; products need to be made more marketable.*
- ❑ *All wealth groups mentioned access to fertilizer as the most important factor that would ensure increased agricultural production. The area has high potential for increased production if access to inputs is improved.*
- ❑ *The households suggested development of farmers clubs as one way of improving access to input credit.*

Malawi Livelihood Profile

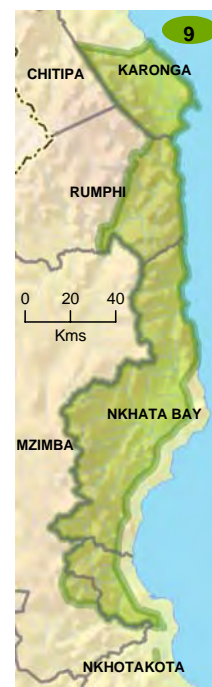
Nkhata Bay Cassava

Zone Description

The Nkhata Bay Cassava zone encompasses parts of Nkhata Bay, Karonga, Rumphi Mzimba and Nkhotakota districts in the Northern Region. The zone is bordered by Lake Malawi to the east, Mzimba Self-Sufficient zone to the west, and Central Karonga zone to the north. The zone is characterised by rocky soils and comprises an escarpment leading down from the Viphya Mountains to the lakeshore. It has a fairly moist climate with annual precipitation averaging 1400mm and rainfall being spread out over a longer period than in other parts of the country. Poor soils, instead of rainfall, are the limiting factor on agricultural production. Animal traction and livestock production is also limited. This zone is unique in the predominance of cassava as its principal food crop, which engenders resilience in drought years relative to neighbouring maize-dependent zones. In a normal year, most households obtain over three-quarters of their food needs from their own production and earn cash from the sale of food crops.



Nkhata Bay Cassava

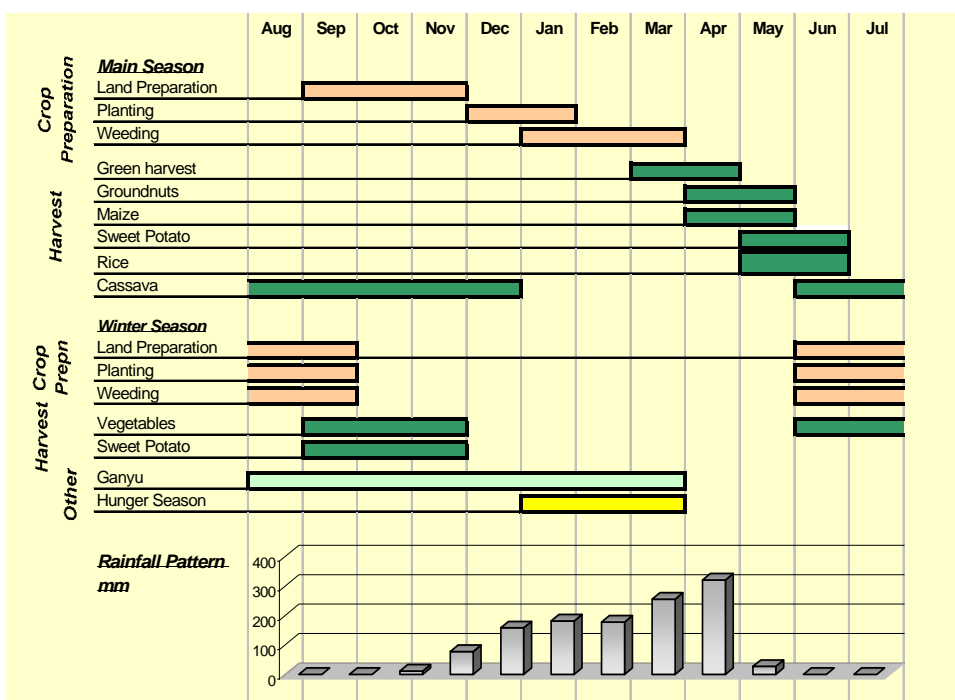


Total Population (2004) 310.621

Seasonal Calendar

The main agricultural season extends from September through June, with planting reaching a peak by December and harvesting from March to June. The principal crops of the main season include maize, cassava, groundnuts, sweet potatoes, rice, beans, and bananas. Winter crops from *dimba* (low-lying field) cultivation begin with planting in June and harvesting in September to November. The principal winter crops include maize, sweet potatoes, rice and vegetables. Mat and pot making are other important economic activities that peak between June and October. Fishing is undertaken throughout the year, but peaks from mid-November to March following the rains.

Agricultural employment (*ganyu*) opportunities are available throughout the year due to both main and *dimba* season cropping activities and year-round cassava cultivation. The peak *ganyu* period is from mid-November to mid-March, associated with the main agricultural season. In a normal (non-crisis) year, most households obtain the bulk of their food requirements from their own production: cassava, maize, and sweet potato crops. 'Poor' households purchase maize in January and February when rainfall peaks and curing cassava is difficult. January, February and March are the months of relatively low access to food for 'poor' households, who tend to produce sufficient crops for ten months' worth of consumption. The market price of maize is lowest after the main season harvest between April and June, and peaks during the months of January to March.



Markets

In terms of food crops, cassava is procured and traded locally. Maize is supplied to local markets from outside the zone, including through ADMARC markets. While poultry are bought and sold locally, traders who sell at larger markets in the region buy livestock in the zone.

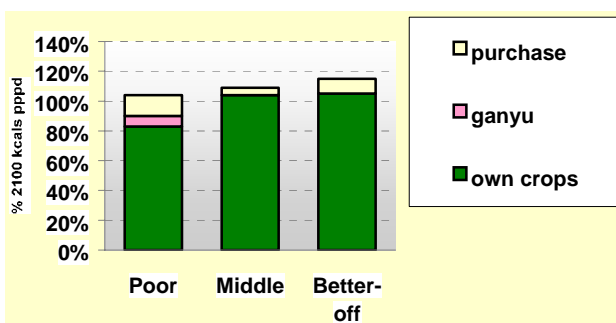
Wealth Breakdown

Relative to other livelihood zones in Malawi, the Nkhata Bay Cassava zone is characterized by less variability in income and productive assets among the 'poor', 'middle' and 'better-off' groups. The most significant difference between 'poor', 'middle' and 'better-off' households is the amount of land cultivated, with implications for total crop production and sale, and thus dependence on *ganyu*. Livestock and poultry holdings are limited. 'Poor' households consume their own chickens on special occasions, but use poultry principally as a reserve for sale in crisis years. 'Middle' households consume and sell chickens in normal years, and sell goats during difficult periods to supplement income. 'Better-off' households consume chickens in normal years, while goats and cattle are reserved for sale during difficult years. 'Poor' households work for the 'better-off' as well as some 'middle' households in normal years, with both food and cash commonly used as payment.

Wealth Group Information			
	HH size	Area planted and how	Livestock
Poor	5-7 members	0.5-1 acres by hand, using household labour	2-5 chickens
Middle	5-7 members	1.5-2.5 acres by hand, using household labour, some hire labour	0-5 goats, 5-7 chickens
Better-off	5-7 members	3-4 acres by hand/plough, using household and hired labour	0-7 cattle, 3-6 goats and 10-15 chickens

0% 20% 40% 60%
% of population

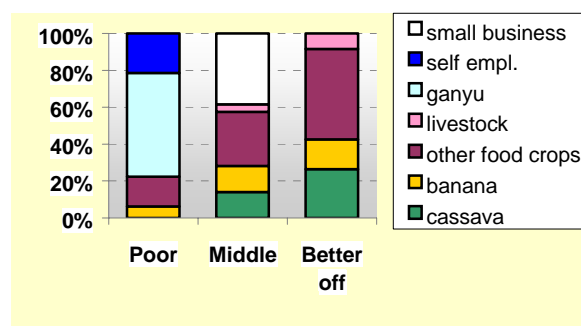
Sources of Food



Most households obtain over three quarters of their food needs from their own crops. Cassava production accounts for over half of annual food needs for all three groups, with maize, sweet potatoes, rice and bananas comprising the bulk of the rest of the diet. 'Poor' households obtain 10 months of consumption from their own farms, whereas 'middle' and 'better-off' households obtain 12 to 14 months from their own production, including surplus cassava to be left in the field for cuttings and carryover. For the 'poor', the other sources of food are purchase and *ganyu*.

Sources of Cash

Food crop sales are an important source of cash income for all households. The 'poor' sell cassava, groundnuts, bananas and sweet potatoes, while the 'middle' and 'better-off' also sell other crops including rice and maize. The poor earn just over 20% of their cash from crop sales, whereas this provides over half and almost all of the cash income for the 'middle' and the 'better-off' respectively. Livestock sales are minor for both groups in terms of earnings. *Ganyu* provides over half of cash income for the 'poor,' and the remaining 20% from self-employment (grass collection, firewood). Small business is important for the 'middle', providing more than 40% of total cash income. The 'poor' have low overall incomes that can purchase just over half of their energy requirements if it is all used to buy cereal; however, this is compensated for by the variety and quantity of food crops grown.



MK/year:	9,300-12,200	13,500-15,500	16,700-27,000
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Hazards

Chronic/frequent hazards: Flooding in the southern part of the zone is cited as the main recurrent hazard that destroys maize in the plain areas during February and March, though it typically does not affect the main food crop of cassava. Floods that occur earlier in the season delay the planting and harvesting of maize. In the northern part of the zone (Karonga District), the main chronic hazards are dry spells, which pose the greatest risk to maize production during the months of January and February. Other chronic problems cited include wild animals (more specifically, monkeys), which raid crops and sometimes cause extensive damage. Theft from within and outside the villages is another chronic problem cited by households.

Periodic hazards: Crop pests are a periodic hazard that affects this zone. Mealy Bug destruction of cassava production is a problem in the zone; however, it is occurring with less frequency now and is scattered throughout the zone. Armyworms are a periodic hazard that affects maize production.

Response Strategies

In years characterized by crop production failure for local households, several response strategies are commonly practiced. Households expand existing strategies and when the situation is severe and they turn to a number of distress strategies.

Expansion of existing strategies

Local ganyu. The 'poor' increase local ganyu, often at a lower wage rate or for food rather than cash.

Consumption of other crops generally sold. In a normal year, all three wealth groups sell a portion of their food crops. A common expansion strategy in a bad year is to reduce or eliminate the sale of food crops. For the 'poor' these crops include maize, sweet potatoes, groundnuts, and banana, while the middle and 'better-off' include rice and cassava crops.

Increased sales of non-farm production. The poor increase firewood and grass sales. Both the poor and middle may increase fishing activities that could include fishing *ganyu* or fish mongering (small scale sale of fish).

Expenditure Switching. For the 'middle' and 'better-off', switching expenditure from non-essential non-food items (for example, clothes) to staple foods is possible.

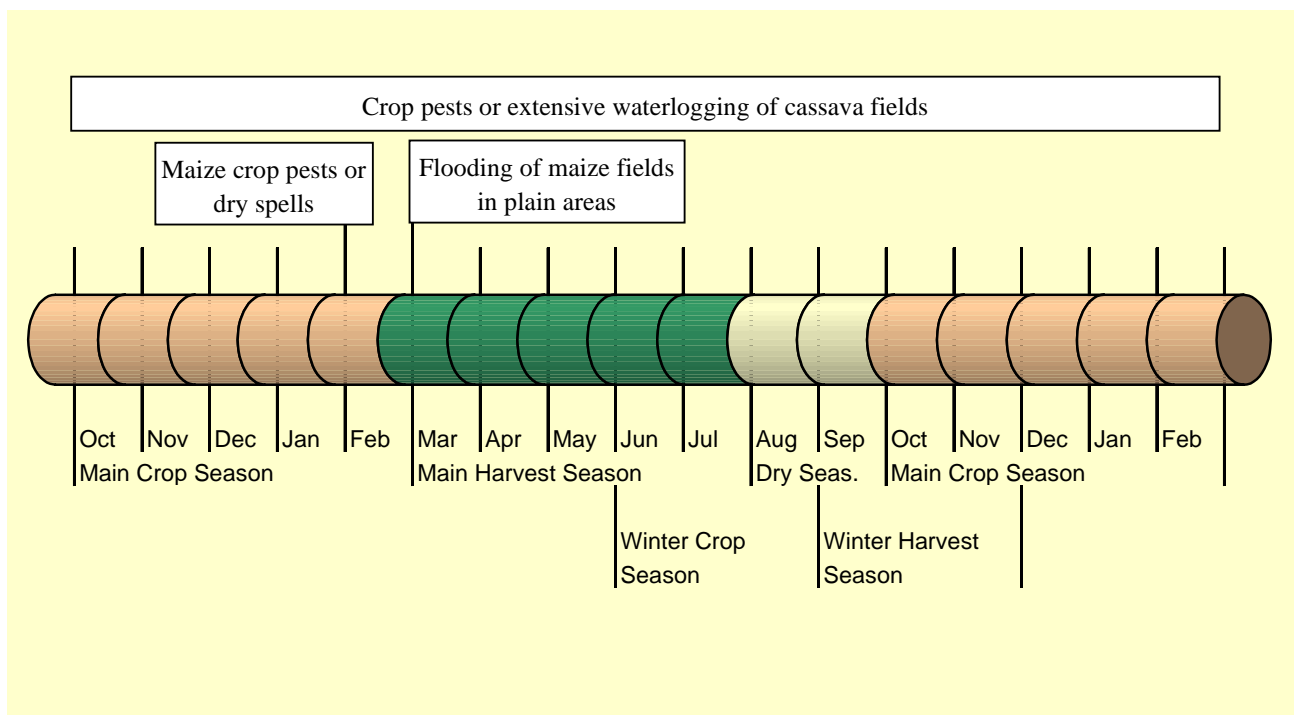
Consumption of carry-over cassava production. 'Middle' and 'better-off' households consume cassava intended for use as carry-over stock or *ganyu* payment.

Distress strategies

Asset sales: An option for all three wealth groups, but of limited value for 'poor' households given their limited asset holdings. The 'poor' will sell clothes, while the 'middle' are more likely to sell bicycles or radios.

Crisis Warning Indicators

Crisis warning in the Nkhata Bay Cassava zone should focus principally on indicators of cassava production. Indicators of cassava production failure may include evidence of crop pests such as the Mealy Bug that affects cassava, as well as extensive flooding and water logging of fields that would result in the rotting of the cassava crop. Flooding in the plains areas during February and March may signal the destruction of maize, but would be unlikely to significantly affect cassava production. In the northern part of the Zone (southern Karonga), crop pests or dry spells during January and February may reduce maize production.



Main Conclusions and Implications for Programming

Households in this zone are able to withstand larger degrees of rain and maize production failure due to the drought resistance of cassava cultivation. Similarly, households typically do not purchase maize where cassava production is sufficient; allowing the zone to be less affected by unstable maize market prices than in other livelihood zones in Malawi. As a result of this unique agricultural pattern, in years of maize production failure such as the production year of 2001/2002, local households may benefit from elevated cassava market prices and demand from surrounding areas. Additionally, households may capitalize on an influx of labour at depressed wage rates from surrounding zones (e.g., Mzimba).

An aspect of importance, though, is the low incomes obtained by most 'poor' households. This means that households would not be able to purchase food commodities easily, should both cassava and maize fail. It also limits opportunities for investment and expansion of cultivation.

Implications for Programming:

- ❑ *Weak markets and low prices for commodities limit incomes and investment.*
- ❑ *Increased livestock and small stock for poor and middle households (for income from sale, and to give manure)*
- ❑ *Farmer's organizations for accessing credit for inputs: poor and middle households have expressed the intention of expanding their land cultivated if they can get credit.*

Malawi Livelihood Profile

Kasungu Lilongwe Plain

Zone Description

The food economy relies almost exclusively on local crop production and – to a very limited extent – local livestock production. A single cash crop, tobacco, is dominant and is grown by the majority of households in the zone. In a ‘normal’ year the zone produces a surplus of food and maize, groundnuts, sweet potatoes, Soya beans and paprika are sold out of the zone, mainly to Lilongwe. Almost this entire surplus is generated by the 20% of ‘better-off’ households within the zone. The poorest 25% of households are in a food production deficit and rely on local agricultural labour (*ganyu*) for roughly 6 months of the year. Most of this work is found on the farms of the ‘better-off’ and on the tobacco estates within the zone.

In a year of poor production, food has to be imported into the zone and price becomes *the* critical factor determining food access; this was demonstrated during the 2001-2002 food crisis. When this happens, the poor are especially vulnerable. Income from *ganyu* can fall sharply in a ‘bad’ year and there are few alternative options for accessing food (the poor have few livestock, and there is little access to wild foods and few opportunities for labour migration).

Income from tobacco (a relatively drought resistant crop) should in theory reduce the vulnerability of even poor households, helping to maintain food purchasing power in a ‘bad’ year. However, it seems that this income – received in a single lump sum – may be spent on non-food items almost as soon as it is received, rather than being used to build up food stocks or being saved for future food purchases.

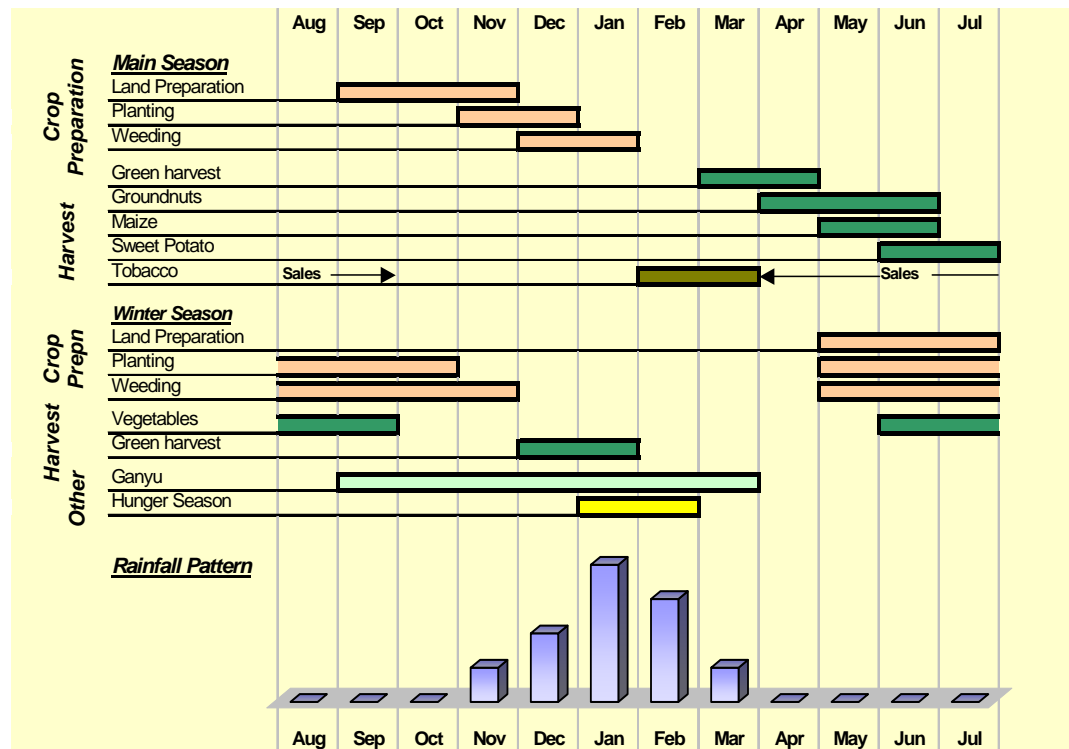
Relatively little cassava – an important drought resistant crop – is grown in the zone, although the cultivation of this crop has increased in the wake of the 2001/2002 crisis.



Kasungu Lilongwe Plain



Total Population (2004) 3,236,493



Seasonal Calendar

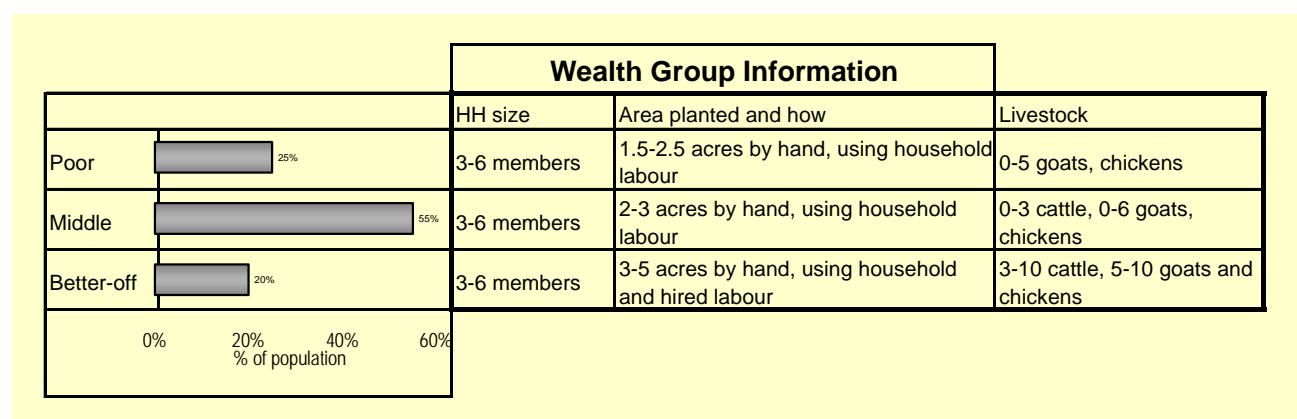
Main season crops (maize, groundnuts, sweet potatoes and pulses) are harvested between March and July. The farmers in this zone depend very much on oxcarts for transportation of their agricultural commodities. Winter or *dimba* crops are also cultivated on small plots of low-lying land from May to January. The main *dimba* crops are vegetables (for sale and consumption) and maize, most of which is eaten green in December and January. Tobacco, a major source of income for the zone, is harvested in February and March and sold from April to September. With the resumption of agricultural activities in September, many poorer households turn to casual agricultural labour or *ganyu* for both food and cash. Food access declines as the season progresses, reaching a low point in January/February, the annual 'hunger' season. The situation begins to ease in March, with the harvesting of new season green maize.

Markets

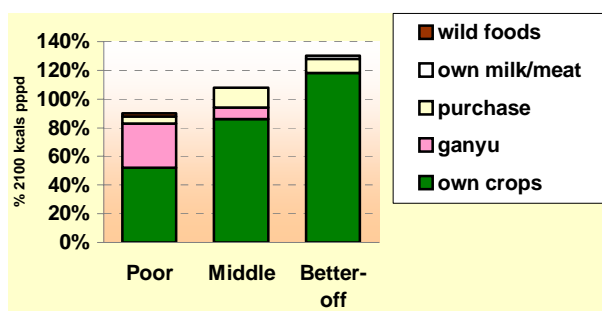
Most smallholder tobacco from the zone is sold on the Lilongwe auction floors. Groundnuts, sweet potatoes, Soya beans and paprika are sold out of the zone to Lilongwe and sometimes Blantyre. The market for minor crops (Soya bean and paprika) is volatile because demand and prices are inconsistent. Most livestock sold are destined for the local market and, to a lesser extent, other districts in Central Region, including Lilongwe.

Wealth Breakdown

A typical better-off household in this zone produces roughly five times more than a typical poor household. This applies both for maize (the main food crop) and for tobacco (the main cash crop). Part of the explanation lies in the greater area of land cultivated, but most of the difference results from the 2-3 times higher yields obtained by the 'better-off' compared to the poor. These higher yields are achieved by (a) greater use of inputs (fertiliser) and (b) more timely input of labour, especially for weeding. Fertilisers are bought either with cash or on credit (mainly obtained from local credit institutions), while labour (supplied by the poor and to some extent middle households within the zone) is paid for in cash or in kind (with maize, maize flour or, on occasions, maize bran). Access to food (with which to pay for labour) and access to cash or credit are therefore the key factors determining wealth within the zone.



Sources of Food

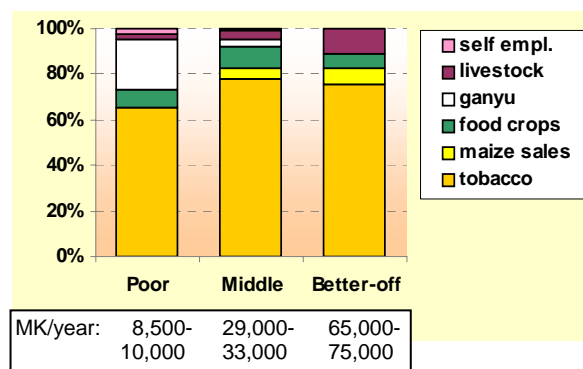


Wealth group differences in crop production translate directly into differences in consumption and total food intake. Own crops cover only about 50% of annual needs for the 'poor', compared to 85% for the 'middle' and more than 100% for the 'better-off'. For all three groups, maize makes up over three quarters of own crop consumed, followed by groundnuts, sweet potatoes, and other minor crops. The 'poor' are heavily dependent on food payments from *ganyu* between September-March. They consume less than the minimum 2100 kcal per person per day requirement. The 'middle' mainly depend on their own production, turning to

ganyu and food purchase for 2-3 months of the year (especially January and February).

Sources of Cash

Most income, for all three wealth groups, comes from the sale of crops, with total income reflecting the different levels of production. Tobacco is the single most important crop, providing between 65%-85% of income for all three wealth groups. Not only do the better-off produce more tobacco, they also produce a better quality leaf and are paid a higher price for it. This reflects their greater access to credit for the purchase of fertiliser. The sale of food crops and livestock are secondary income sources for the middle and the 'better-off', while *ganyu* provides the second most important source of cash income for the poor. Despite the important contribution of tobacco to household incomes, the 'poor' nevertheless earn very little. Their income, if used only to purchase cereals, would provide them with just over half of their energy requirements.



Hazards

Chronic/frequent hazards: A dry spell of two weeks (sometimes three) in the growing season can cause considerable damage if it comes at a critical time, e.g. maize tasselling. Waterlogging is also experienced in some areas, causing crop-loss. Wash-aways after intense rain are also a localised phenomenon. Livestock theft emerged as a chronic problem from the mid-1990s and has much reduced people's willingness to invest in livestock.

Periodic hazards: serious drought strikes about one year in ten; major infestations of army-worm on maize also appear about one year in ten; extensive wild-fires, affecting tobacco in particular, occur two to four years in ten.

Response Strategies

When crop production fails, households respond in two ways; they expand existing strategies and, when the situation is exceptionally severe, they turn to a limited number of distress strategies. The table below lists some of the strategies adopted by households in this zone. One other response since the 2001-2002 food crisis also deserves mention: many households have since increased the cultivation of cassava, sweet potatoes and *dimba* crops, primarily as an insurance measure in the event of future droughts and cereal crop failures.

Expansion of existing strategies

Livestock sales: An option for all three wealth groups, but yielding limited returns for the 'poor' since holdings are low.

Local ganyu. Both 'poor' and 'middle' groups attempt to expand local ganyu in a crisis, but only limited additional work tends to be available. Labour rates may also decline, and ganyu income may actually fall.

Distant ganyu. Limited amounts of additional work are found in urban areas, in neighbouring districts and – for border areas – in Zambia.

Food purchase. Food purchases can be expanded using income generated from livestock sales or ganyu, or by switching expenditure on non-food items (e.g. clothes) to staple foods.

Consumption of maize bran. This common 'hunger' season strategy is intensified in crisis years, when even ganyu may be paid in maize bran rather than grain.

Distress strategies

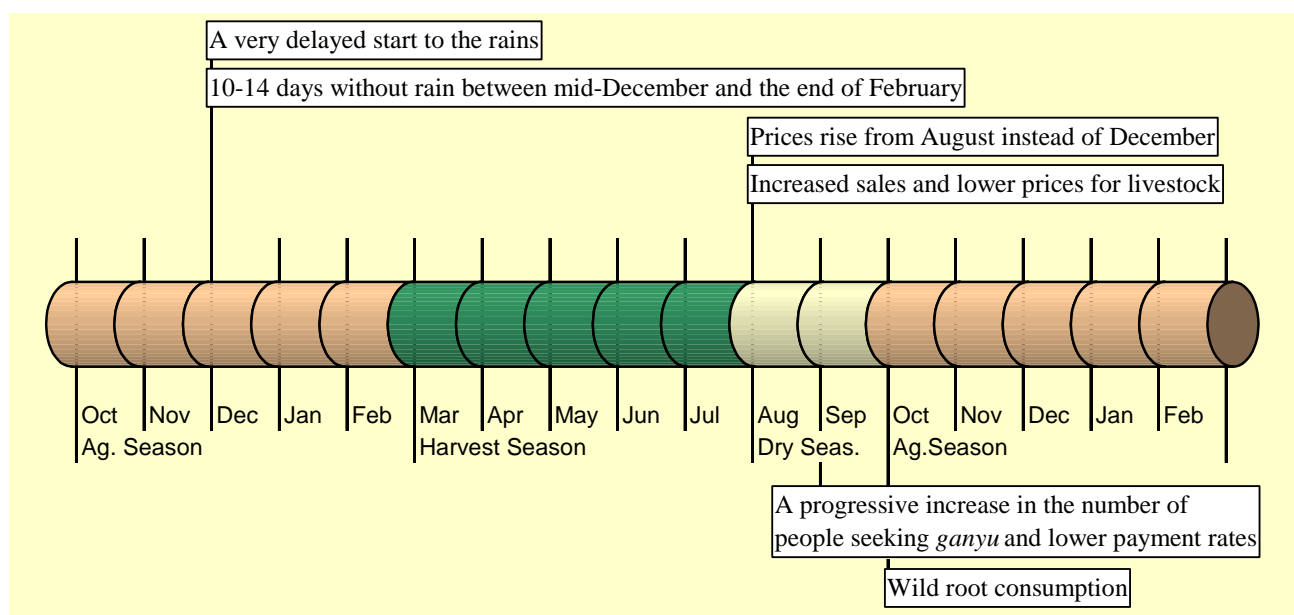
Consumption of wild roots: In general, the availability of wild foods is limited. However, at times of severe food shortage 'poor' and 'middle' households will collect wild roots, such as *mpama*.

Consumption of cooked mangoes: Mangoes are consumed every year, but the replacement of more traditional staples by cooked mangoes is a sign of distress.

Asset sales: An option for all three wealth groups, but of limited value for 'poor' households given their limited asset holdings. The 'poor' will sell clothes and furniture, while the 'middle' are more likely to sell bicycles or radios.

Crisis Warning Indicators

The figure overleaf illustrates the main crisis warning indicators for the zone and their timing as the season progresses. Abnormal rainfall patterns provide the earliest indication of crop failure from December onwards. Depending upon the extent of crop failure, there may be few further indications of crisis until the available crop production begins to run out, typically from August onwards. At this point, maize prices can be expected to increase and various strategies



intensified, including sale of livestock and the search for additional ganyu.

Main Conclusions and Implications for Programming

The zone is highly dependent on own crop production for food and cash. Tobacco is the dominant cash crop and source of income for people in this zone. Despite the importance of cash crops on the local economy, 'poor' households have low incomes. Dry spells and droughts have serious implications on the livelihoods of people in this season because of their heavy dependence on crop production. However, livestock holdings in this zone are relatively small.

Implications for Programming

- The area is highly dependent on tobacco and changes in the world tobacco market threaten the livelihoods of nearly all farmers in this zone. In this regard, it is imperative to promote other high value cash crops.
- There is need to improve farmers' access to inputs especially fertilizer in order to increase the production of tobacco, maize and other crops.

Malawi Livelihood Profile

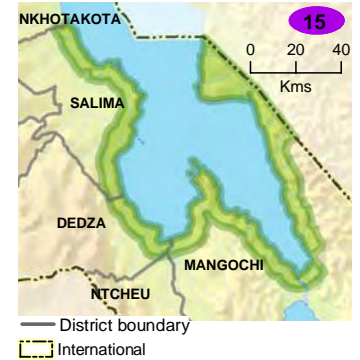
Southern Lakeshore

Zone Description

The Southern Lakeshore zone stretches from Salima District to the north-eastern (eastern lakeshore) 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 country's principal fishing area, as the relatively shallow depths of the adjacent waters 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 receives annual rainfall levels of 700-1000 mm but is a grain deficit area. Maize, rice, sweet potatoes, groundnuts and sorghum are the main crops grown.



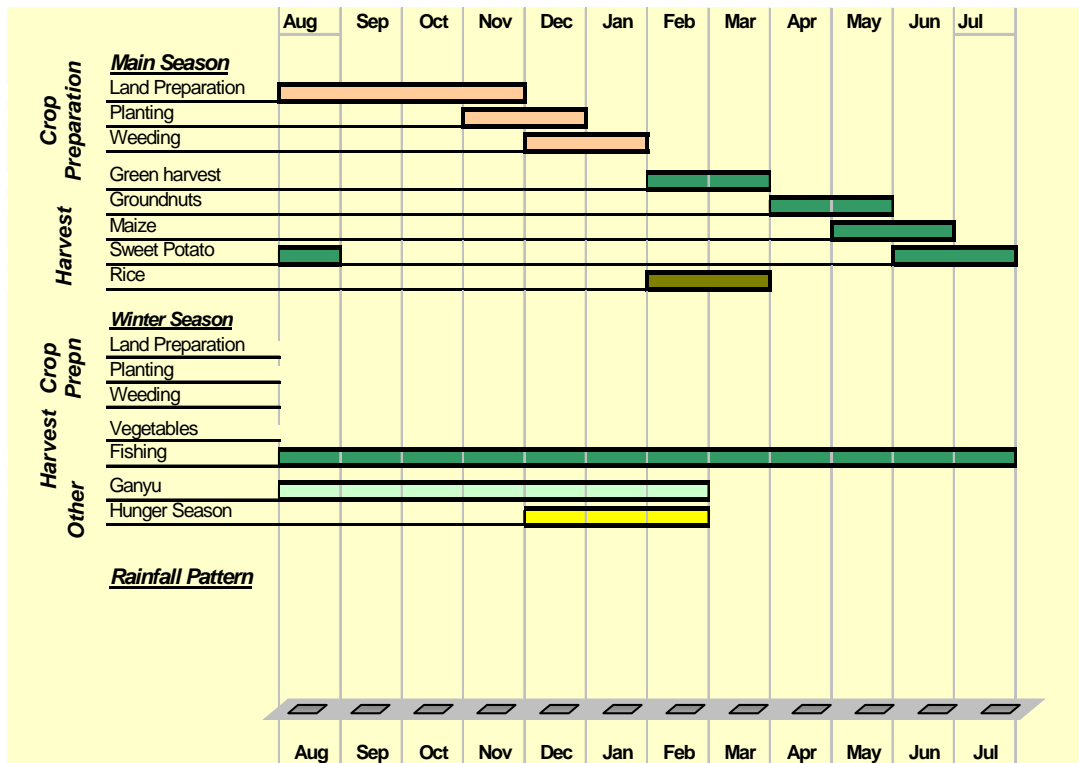
Southern Lakeshore



Total Population (2004) 406,320

Seasonal Calendar

Most agricultural activities reach a peak between the months of November and April. Food insecurity increases during the months of December, January and February for 'poor' households. Flooding tends to occur at a time when food insecurity is elevated, and when involvement in casual agricultural employment is highest. As a result, poor households tend to reduce their time spent on their own agricultural plots at the most critical time in the agricultural calendar, due to short-term survival needs. Although fishing is undertaken throughout the year, it reaches its peak in June, July and August; consequently, these months have the best fishing employment opportunities for the 'poor'.

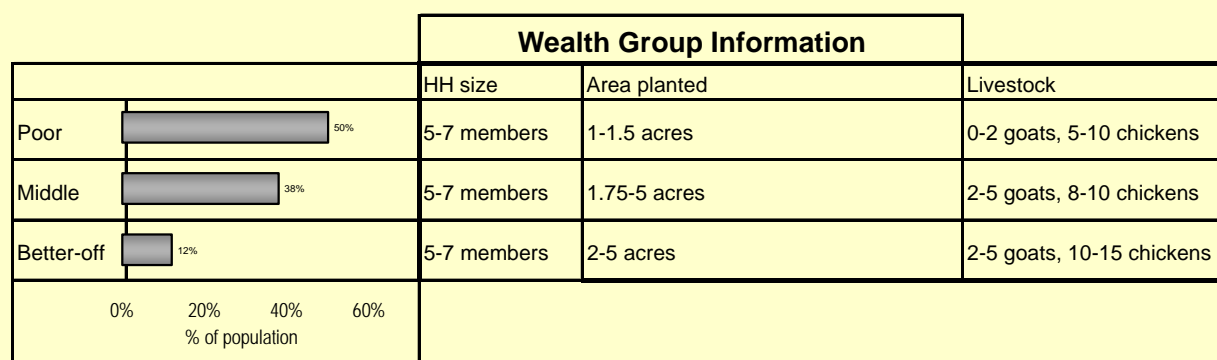


Markets

As the Southern Lakeshore zone is a grain deficit area, it has an active trade in staples through both ADMARC and private traders. The main commodity exported from the zone is fish. The principal destinations for this commodity are Lilongwe, Blantyre and Zomba. The main problem associated with produce markets is poor road networks, a problem exacerbated during the rainy season. Price differentials for commodities are experienced during the 'hunger period' of January and February, when grain prices tend to increase while livestock prices are depressed because of high demand for staple grain. *Ganyu* (on-farm and off-farm) becomes scarce because of excess demand. Fishing *ganyu* also becomes scarce, as it is banned during this period.

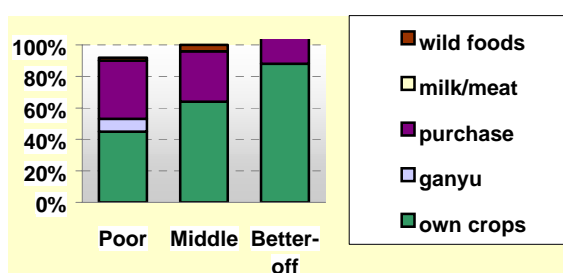
Wealth Breakdown

The main determinants of wealth in this zone include the types of assets (including livestock) owned by the household, the size of land cultivated and access to agricultural inputs. Poor households cultivate small parcels of land due to limitations on labour. Because they are not able to hire labour and much of their time is utilized providing *ganyu* to 'better-off' households, they are unable to produce sufficient food to meet household food requirements. In contrast to the 'poor', 'middle' and 'better-off' households generate income through the sustainable sale of livestock.



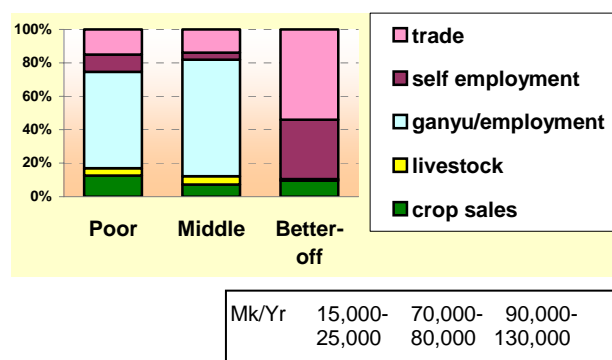
Sources of Food

For all three groups most food comes from own crop production, of which about 60-70% of this is maize. Rice accounts for 10-17% of own crop production consumed for all three groups, followed by other minor crops (e.g. groundnuts, sweet potatoes, cassava). Purchases are significant for the 'poor' and 'middle' (e.g. maize, rice, fish). The 'better off' also purchase, but mainly to add variety to their diet (e.g. sugar, oil, fish, beans, etc.) The 'poor' suffer a food deficit of 0-10% of food requirements in normal years, due to inadequate purchasing power.



Sources of Cash

The largest source of income for the 'poor' and 'middle' is employment in fishing *ganyu* or formal employment at the numerous holiday resorts along the lake. They supplement this cash income with crop sales (e.g. sweet potatoes, maize, groundnuts, cassava), self-employment (grass and firewood sales) and petty trade. The 'better off' earn most of their income from trade and self-employment, which consists mainly of fishing and fish trading. The 'better-off' also earn some cash income from the sale of crops and mainly consists of earnings from maize and rice sales.



Hazards

Chronic Hazards: Floods are the main recurrent hazard in this zone, attributable to the numerous streams and rivers that flow through this low-lying zone into Lake Malawi. Flooding results in food insecurity through loss of crops and population displacement. Road infrastructure may also be destroyed, hampering transport of merchandise and accessing of markets.

Dry spells at the onset of the rainy season, during the week after planting and during crop maturation are potential hazards for the zone. Dry spells at the beginning of the cropping season means that farmers have to delay planting, or that those who dry planted may lose their seeds, thereby forcing them to plant twice. Dry spells at the crop maturation stage may curtail production by affecting flowering or cob/pod formation.

Wild animals such as elephants, hippos, monkeys and baboons are reported to pose a significant threat to agricultural production for local households. The threat of destruction discourages agricultural production and necessitates that household members provide continual surveillance to fields.

Periodic Hazards: Drought is a periodic hazard in the area and usually occurs once or twice in every 10 years.

Response Strategies

When there is a food deficit, people expand their response strategies to cope with the situation. However, when it is a food crisis, more stressful strategies are employed for survival.

Existing Strategies that can be expanded

Increased ganyu. The poor intensify their sale of labour during the hard times.

Winter Cropping. Some households plant winter crops especially maize to supplement their main harvest.

Purchase of maize grain. This is a grain deficit area so most households heavily depend on the market to supplement their food requirements.

Petty Trading. The 'better-off' may also engage in trade by travelling to other zones to purchase commodities for sale within or outside of the Southern Lakeshore zone.

Renting out Gardens. In some cases, the poor rent out their winter gardens to the 'middle' and the 'better-off' to get extra income to buy food.

Increased fishing. This is mostly an option for middle and well off households and is done to obtain more income to purchase food.

Sending children to work as household labourers. Children are sent to urban areas or other households to work as casual household help, which in most cases means they do not attend school.

Distress Strategies

Migration: In times of a crisis, the poor compete with the lower middle households in search for *ganyu* and they sometimes migrate to other areas in order to find employment.

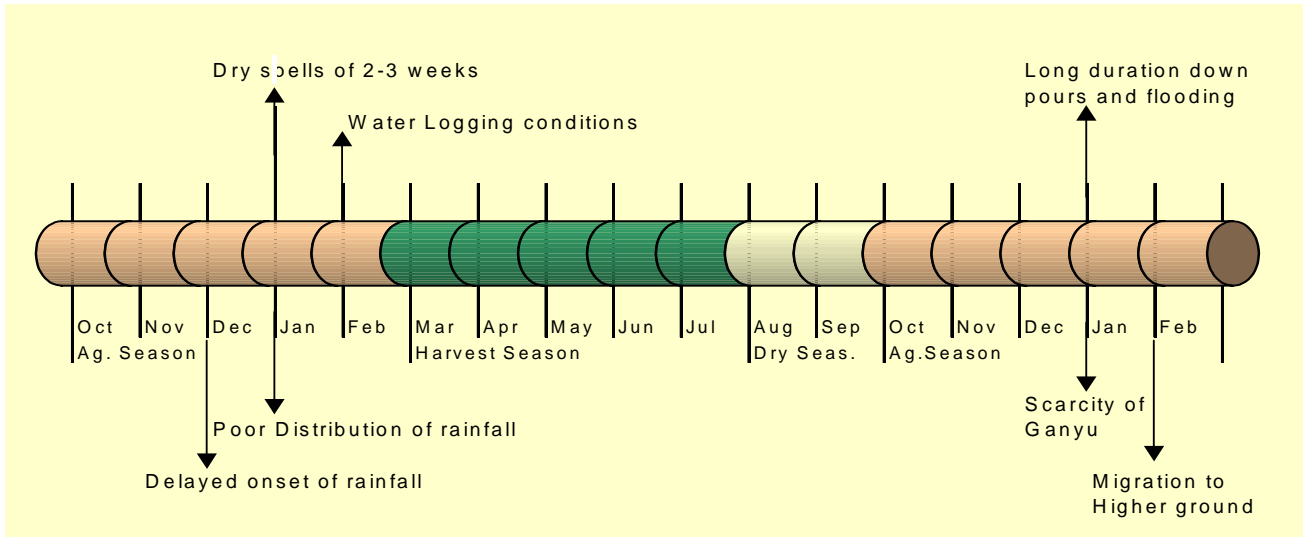
Reducing meal quantity and frequency: This is mostly by the poor and/or some of the middle households when they are not able to get enough food.

Selling of household assets: This is done to obtain more income to purchase food. In crisis times, some households may sell all their productive assets to be able to survive.

Eating less preferred foods: In extreme cases, people eat foods, which they do not normally consume, e.g. maize bran, wild foods and sometimes they eat only vegetables (*chisinkho*) as a main meal.

Crisis Warning Indicators

Flooding is mainly experienced during or around the months of January, February and early March. The progression of impending crisis would typically include: long duration downpours; water-logging in crop fields; overflowing of streams and rivers; collapsing of houses; washing away of crops, livestock and homes; and finally, migration to high ground.



Main Conclusions and Implications for Programming

People in this zone are heavily dependent on fishing either by being fishermen, or employed by fishermen, or by trading in fish. They also do some farming and for the well off, they employ other people to do the agricultural activities for them. Many are dependent on the market to buy staple food and are thus vulnerable to price fluctuations that arise due to forces of supply and demand. Dwindling fish populations pose a big potential hazard to this zone, as those solely dependent on fishing would find it difficult to cope.

Implications for Programming:

- ❑ *The government and need to introduce/promote sustainable fishing methods in order to save the major source of people's livelihoods in the zone.*
- ❑ *There is need to promote irrigation farming in the area for the households to be able to supplement their main harvest with winter crops.*

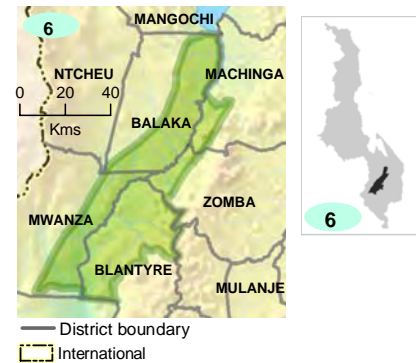
Malawi Livelihood Profile

Middle Shire Valley

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 river Shire. 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 problems accessing markets for their produce, although farmers in remote parts of the zone sometimes have to walk long distances to market. Prices of the main cash crop in the zone (cotton) tend to fluctuate and many farmers have over the years stopped growing the crop.

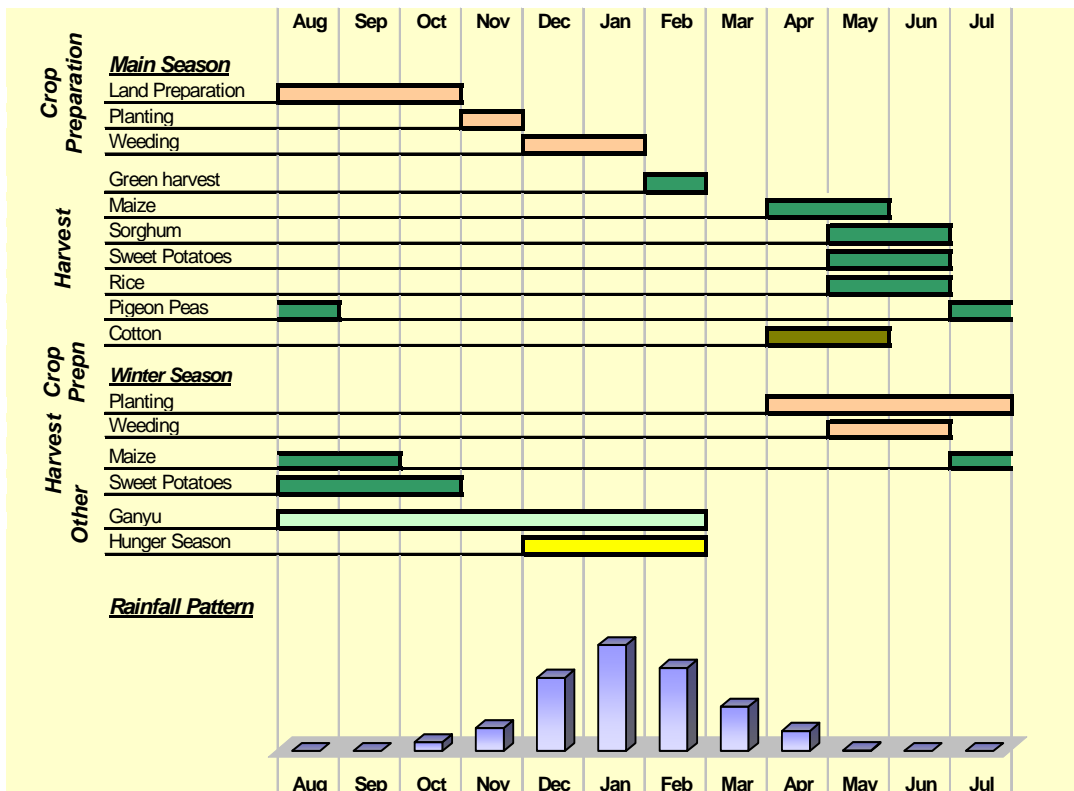
Middle Shire Valley



Total Population (2003) 404,970

Seasonal Calendar

The main agricultural activities in the zone start in early August with land preparation followed by planting and weeding. Access to different sources of food and income is seasonal. The 'poor' and some 'middle' households earn income through *ganyu* during the main agricultural period. All wealth groups access food and income from own crop production and crop sales, with the amount varying according to wealth group. Market prices of staple food vary seasonally. Prices are lowest during the harvesting period and highest during the 'hunger' season, which is between December and February.

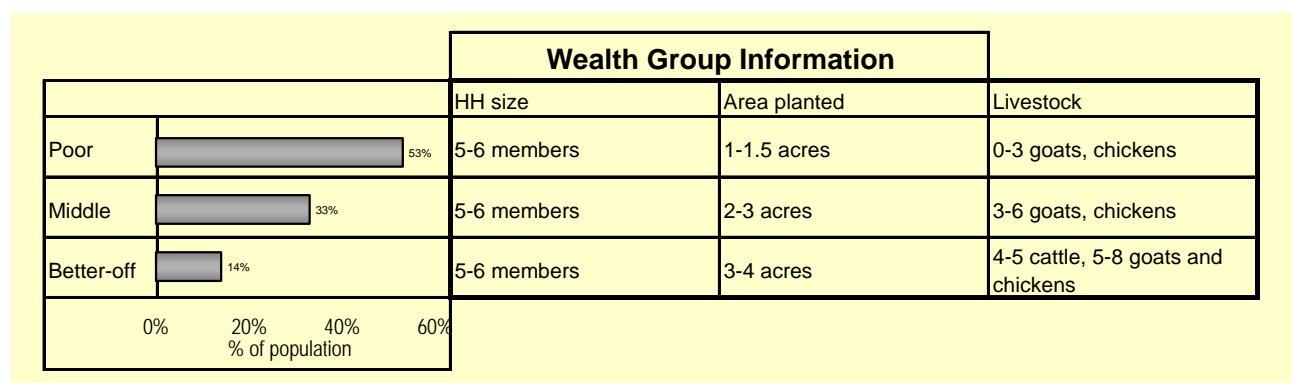


Markets

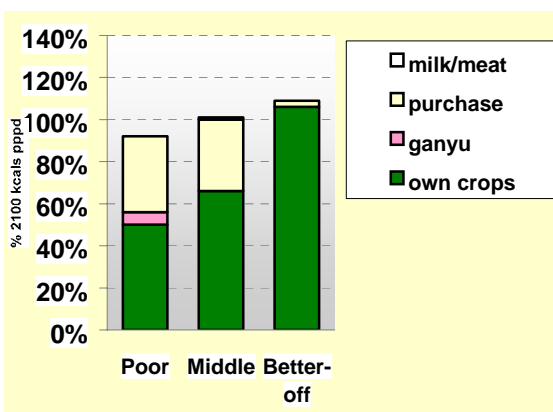
Most local markets are managed by private traders (i.e. following liberalisation) while others are ADMARC markets. In general, ADMARC takes the lead in setting the average price at which buyers can buy crops from farmers and the selling price of most food crops. The main crops sold are cotton, maize, rice, and sweet potatoes. The main marketing problems in the zone are: fluctuations in food crop prices, lack of farmers associations to stabilise selling prices, no formal established livestock markets (which results in farmers sell livestock at very low prices), poor road/rail infrastructure, and long distances to markets. In most areas in this zone, there is what is called “shift” markets, which are held on specific market days each week.

Wealth Breakdown

The ‘poor’ own and cultivate less land than the ‘better-off’, and therefore produce less food crops. They therefore have to rely on purchases or *ganyu* to make up the difference. The ‘middle’ and ‘better-off’ grow cotton as a cash crop. The ‘poor’ and ‘middle’ own a few goats and chickens while the ‘better-off’ own cattle as well. The ‘poor’ have small land holdings but are unable to cultivate all they own because they spend a disproportionate amount of time doing *ganyu* for others in order to buy food instead of working on their own land. They also lack the money with which to buy fertiliser and other inputs and as a result, their yields are lower than those of the ‘better-off’ group.



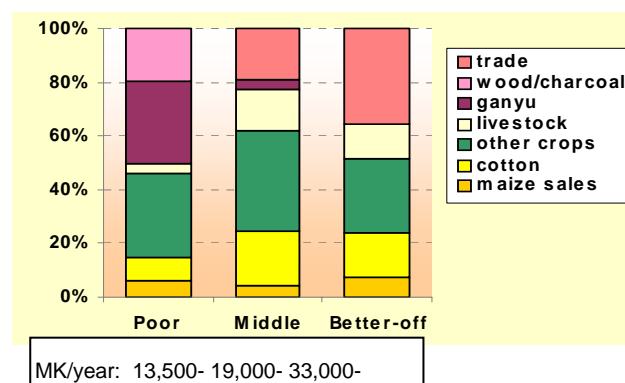
Sources of Food



The ‘better-off’ can cover their entire minimum food requirements from own crop production, whereas the ‘poor’ can only cover about half and the ‘middle’ two-thirds. Maize accounts from 50-60% of own crop consumption for all three groups, while rice is important only for the middle and rich at 12-24%. All three groups round out own crop consumption with a combination of sweet potatoes, groundnuts and cassava, and pulses. Both the ‘poor’ and ‘middle’ rely on purchases to meet much of their food needs. The ‘poor’ often purchase food using money earned from cash paid *ganyu*, as well as supplement purchases with *ganyu* traded for food. This high reliance on *ganyu* increases the vulnerability of the ‘poor’ since in a ‘bad’ year they may not be able to get enough work to meet their food needs.

Sources of Cash

Crop sales are the largest single source of cash income for all three groups. Almost half the cash income of the 'poor' (46%) is from crop sales, of which 37 is from vegetables, 19% cotton, 13% each of maize and velvet beans, plus cassava and sweet potatoes. The 'poor' are also rely heavily on agricultural *ganyu* for cash, as well as firewood and charcoal sales. The 'middle' and 'better-off' on the other hand, supplement their crop sales with livestock sales (e.g. goats) and petty trade (e.g. livestock trading, small goods). Of the crop sales, cotton generates the most cash for the 'middle' and 'better-off' (33%), followed by vegetables (23-27%), rice (15-18%), and maize (7-14%).



Hazards

Chronic/frequent hazards- Dry spells, particularly when maize is at cobbing and tasselling stages, cause a lot of damage to the crop. Crop pests and flooding along the river Shire and its tributaries also pose a threat to crops in the zone almost every year.

Periodic hazards- Livestock diseases are a threat to the production of meat and milk as well as income flow into the households in some years.

Response Strategies

The 'poor' and 'middle' groups are the ones most affected during a crisis. The response strategies undertaken by the 'poor' include; consumption of vegetables as a main meal; consumption of maize bran; consumption of wild roots known as *nyika*; preparation of flour from wild okra; consumption of premature food crops such as bananas and sugarcane; sale of household items; increased *ganyu* activities at a reduced wage rate and selling of livestock at reduced prices. The 'middle' mainly increase the sale of livestock (at reduced prices) and do more *ganyu* than usual. The 'better-off' are in most cases able to cope with crop failure given their relatively high levels of production.

Expansion of existing strategies

Consumption of maize bran. People in the zone, particularly the poor, eat maize bran even in a normal year, but during the food crisis, its consumption is increased.

Increased livestock sales. The 'middle' and the 'better off' increase the sale of their livestock during this period and at very low prices

Increase ganyu. Ganyu during the hungry period is increased by both the poor and the middle but at reduced wage rate.

Distress strategies

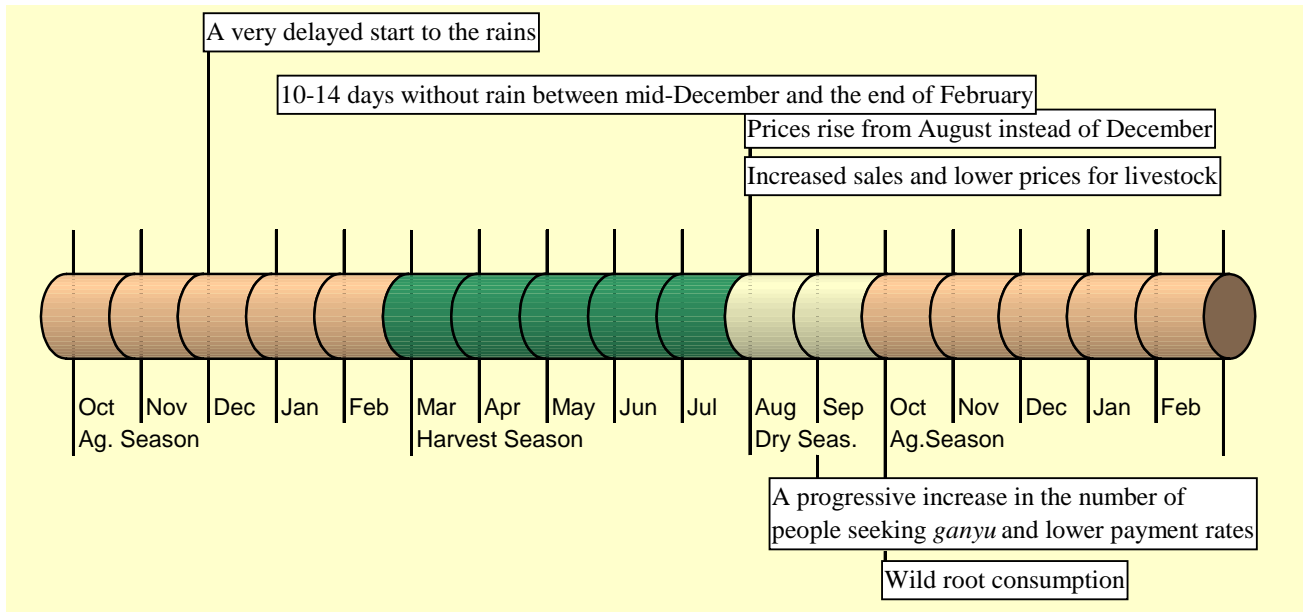
Consumption of wild roots and vegetables with not staple. In the worst-case scenarios, the poor mainly rely on consumption of wild vegetables and roots with no staple. They also make flour out of vegetables and roots.

Consumption of premature foods. The 'poor' also consume foods like bananas and sugarcanes before they mature.

Sale of assets. The two groups also part with their household assets just to buy themselves some food.

Crisis Warning Indicators

The most important indicators of impending crisis include prolonged dry spells, an early end to the rains - which reduces the availability of residual moisture for winter cropping, and too much water flowing into the Shire River which can cause flooding and/or water-logging. The occurrence of crop pests may also indicate an impending food crisis in the zone.



Main Conclusions and Implications for Programming

This is generally a dry area. Crop production is relatively low and those along the river rely on winter cropping. People in the area have no problems accessing markets for their produce, although farmers in remote parts of the zone sometimes have to walk long distances to market. Prices of the main cash crop in the zone (cotton) tend to fluctuate and many farmers have over the years stopped growing the crop.

The dependence of the 'poor' on *ganyu* is important because this is not a reliable source of income, especially in a 'bad' year. The 'poor' do not have enough capital to engage in small scale trading activities as the other two groups do.

Implications for programming

- Since this is a dry area and very prone to droughts, the people in the area are of the view that small-scale irrigation schemes could boost the agricultural activity due to the low productions from year to year.

Malawi Livelihood Profile

Phalombe Plain and Lake Chilwa Basin

Zone Description

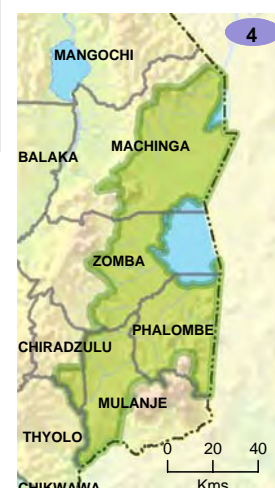
This zone includes the two previously distinct zones entitled Lake Chilwa Basin and Phalombe Plain. The zone stretches along the area surrounding Lake Chilwa and extends into the highland plain of Phalombe. It covers part of Machinga, Zomba, part of Thyolo, part of Mulanje, Phalombe and part of Chiradzulu districts. The zone stretches from north of Lake Chiuta down to northeast of Thyolo and Mulanje west and northeast. The main features of the zone are Lake Chilwa and the surrounding flat wetlands. Fishing and wetland cropping feature in the zone areas surrounding the lake basin. Fish populations are said to be dwindling due to over-fishing and environmental degradation. It receives an annual rainfall of about 700-1000mm, and crop production is relatively poor, especially on the Lake Chilwa basin because of poor quality sandy soils. The main crops that are grown for food are maize, cassava, sorghum and rice.

Generally, most of the households in the zone are subsistence farmers who sell part of their produce in order to access other basic needs. Tobacco and sunflower (newly introduced) are some of the main cash crops in the zone but they are grown by a minority of households. Small-scale businesses and fishing are the other economic activities from which people in the zone derive their livelihoods. 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 the 'middle' and 'better-off'.

Total Population (2003)	1,155,384
By District:	
Machinga	260,029
Zomba	177,445
Phalombe	270,467
Mulanje	346,187
Chiradzulu	101,255



Lake Chilwa - Phalombe Plain



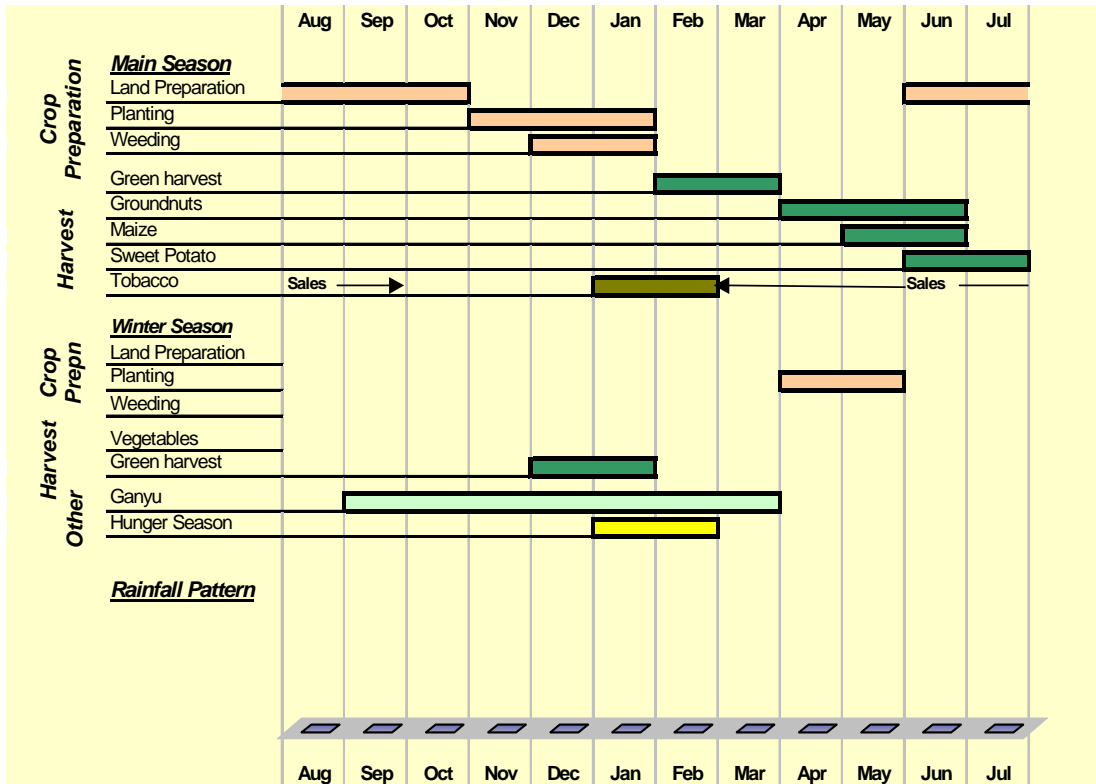
— District boundary
 - - - International

Seasonal Calendar

The peak period for agricultural activities is between November and April. This involves planting, weeding, green harvest and harvest of major crops. Weeding is the most critical activity and it comes at a time when food is scarce in most households. This means that 'poor' households have to make a choice between tending to and weeding their gardens or to sell their labour for food. The price of grain is normally very high during the food deficit months, making it difficult for the 'poor' to access it with the low wages that they are paid for *ganyu*.

Markets

Main markets in this zone include ADMARC, and the main grain markets at Phalombe, Kalinde, Namulenga, Lunchenza, Kamwendo, Ntaja, Mpsupsu, Zomba Songani, and Govala. Price fluctuations caused by seasonal market forces of supply and demand and poor road networks (especially during the rainy season) are some of the problems that make markets inaccessible. Because the zone is a grain deficit area, some grain is also imported from other zones as well as neighbouring Mozambique.



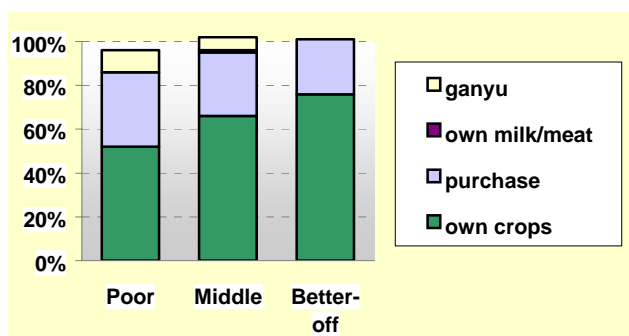
Wealth Breakdown

Wealth differences arise because of differences in size of land cultivated and productive assets. ‘Better-off’ households own three times more land than the ‘poor’. ‘Poor’ households sell chickens and goats in normal years, and expand sale of chickens in crisis years to generate income. ‘Middle’ households sell goats and chickens in normal years, expanding both activities to earn income in crisis years. The ‘better-off’ sell chickens, goats and pigs in normal years, and expand sale of goats and pigs in crisis years. For all groups, the contribution of consumption of their own animals to the diet is insignificant.

Wealth Group Information			
	HH size	Area planted and how	Livestock
Poor	5-7 members	1-2.5 acres by hand, using household labour	4-6 chickens
Middle	5-7 members	2-4 acres by hand, using household labour	1-4 goats, 6-8 chickens
Better-off	5-7 members	3-6 acres by hand, using household and hired labour	8-15 goats, 15+ chickens

0% 20% 40% 60%
% of population

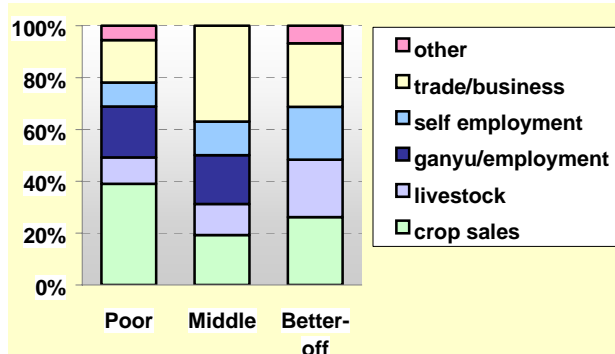
Sources of Food



Maize constitutes one third to one half of all crop consumption for local households, which provides a relatively small percentage of total household food needs in this zone (about half to three quarters). Therefore, the 'poor' must purchase one third of food needs after supplementing their own production with *ganyu* for food. The majority of food purchased is maize, though a considerable increase in dietary diversity is achieved by the 'better-off' through purchase.

Sources of Cash

'Better-off' households earn three times more than the 'poor' in this zone. Crop sale is the largest source of income for all groups. The principal crops sold include maize, rice, pigeon peas, groundnuts, cassava, sweet potatoes, sorghum, cowpeas and sugar cane. Other income sources for the 'poor' include skilled work (e.g., brick making), thatching, firewood sale, and income from fishing in areas adjacent to Lake Chilwa.



Hazards

Chronic Hazards: Infertile poor sandy soils constitute the main factor limiting agricultural production in the zone. This is particularly serious for the poor households who have difficulty purchasing fertilizer or improved seed.

Periodic Hazards: Dry spells are a periodic hazard in this zone because the area lies in the rain shadow area. Dry spells affect production of main crops like maize and rice, which are very vulnerable to weather changes. Low food production entails that people have to migrate to other zones and even Mozambique in search of food.

Floods are a potential hazard in the area due to the poor sticky soils and flatness of the area. Flooding makes the roads impassable, making it difficult to bring in staple foods from other areas, resulting in high grain prices.

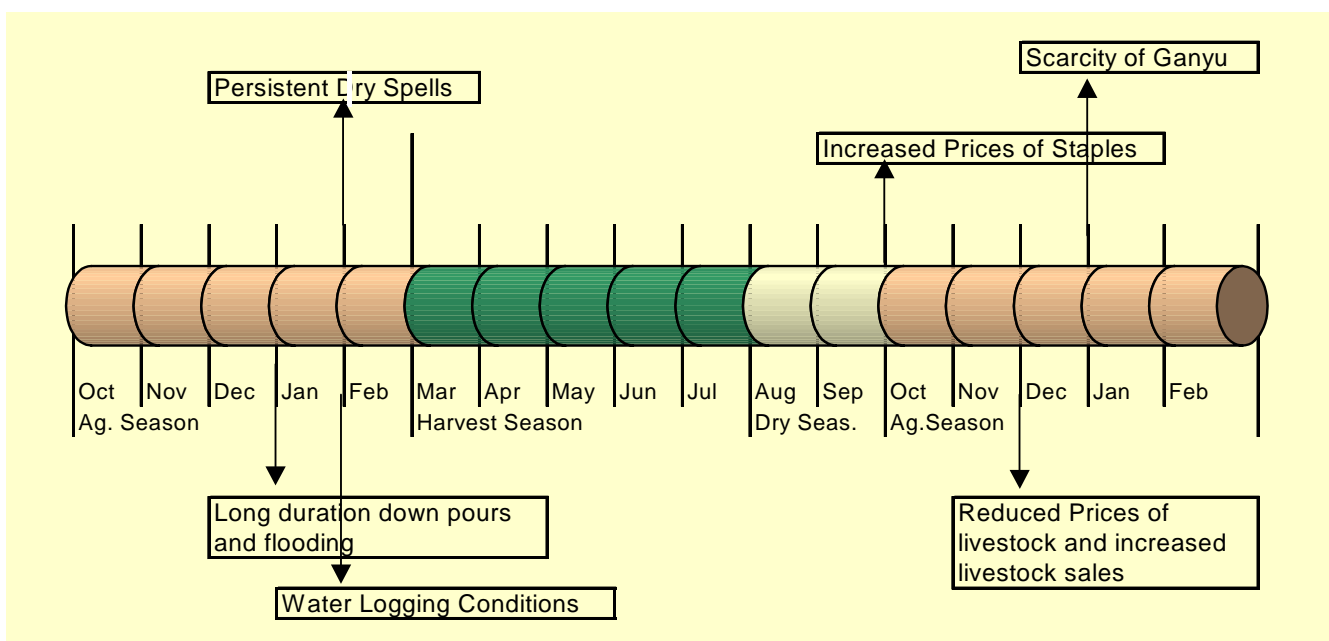
Response Strategies

Since production of the main staples is usually relatively poor for the greater part of the zone, (especially the lake Chirwa basin), most households have developed a number of coping mechanisms to deal with the situation. When the food security situation is a bit out of the normal, the existing response strategies are expanded to fill up the gap. However, if the situation gets out of hand, more stressful strategies are employed.

Existing Strategies that can be expanded	Distress Strategies
<p><u>Winter Cropping</u>: This is done by all the wealth groups and is expanded when there are indications of crop failure in the main season.</p>	<p><u>Migration</u>: Most poor and middle households migrate to Mozambique to do ganyu when faced with a food crisis.</p>
<p><u>Crop Diversification</u>: Since most of the soils in the zone are poor, over the years the households have been expanding area under root, tubers and sorghum to cope up with the situation.</p>	<p><u>Unusual Sale of Livestock and other Household Assets</u>: This is done by all wealth groups but is usually a big blow for the poor households who sometimes sell their only productive asset at very low prices just to survive.</p>
<p><u>Ganyu</u>: This is mostly done by the poor and they expand time spent on ganyu when there is a deficit.</p>	

Crisis Warning Indicators

Crisis early warning indicators for the zone include persistent dry spells, long duration down pours, water logging conditions in crop fields, increased prices of staples such as maize, a fall in price the paid for *ganyu*, scarcity of *ganyu*, and reduced prices of livestock and elevated animal sales.



Main Conclusions and Implications for Programming

Dry spells are the main hazard for all the wealth groups in this zone. The poor are particularly vulnerable as compared to the middle and well off who may sell their assets. People in the zone heavily depend on the market for staple grain and trading in other commodities. The poor roads become impassable during the rain season causing prices to soar.

Due to the erratic nature of the rains in the zone, the following things need to be done:

- *Government needs to consider promoting small scale irrigation in the area;*
- *Consider developing the informal sector so that it is able to generate enough income for people to access food;*
- *Need to promote drought resistant crops;*
- *Need to promote mixed cropping to maximise use of land since people in the area have small land holdings.*

Malawi Livelihood Profile

Thyolo Mulanje Tea Estates

Zone Description

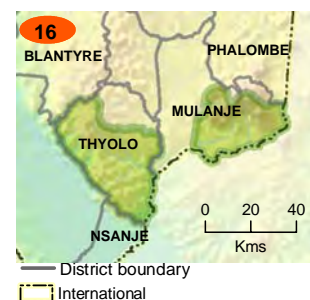
The zone is characterised by small landholding sizes (<1 acre on average), high rainfall (900-2000mm) and poor soils. Due to the small landholdings, the 'poor' and 'middle' wealth groups are not able to produce enough to feed themselves throughout the year. They depend mainly on labour/employment on the tea estates, casual agricultural labour and other income generating activities to earn money to buy food.

Almost all households have one or more members working on the tea estates. The 'middle' and 'better-off' groups typically have someone employed on the estates throughout the year, while the 'poor' mainly find casual work picking tea from November to January.

Total Population (2003)	649,330
By District:	
Thyolo	504,597
Mulanje	144,733



Thyolo Mulanje Tea Estates



Livestock rearing is difficult in this zone because most of the land is under tea cultivation and grazing land is therefore very restricted.

Seasonal Calendar

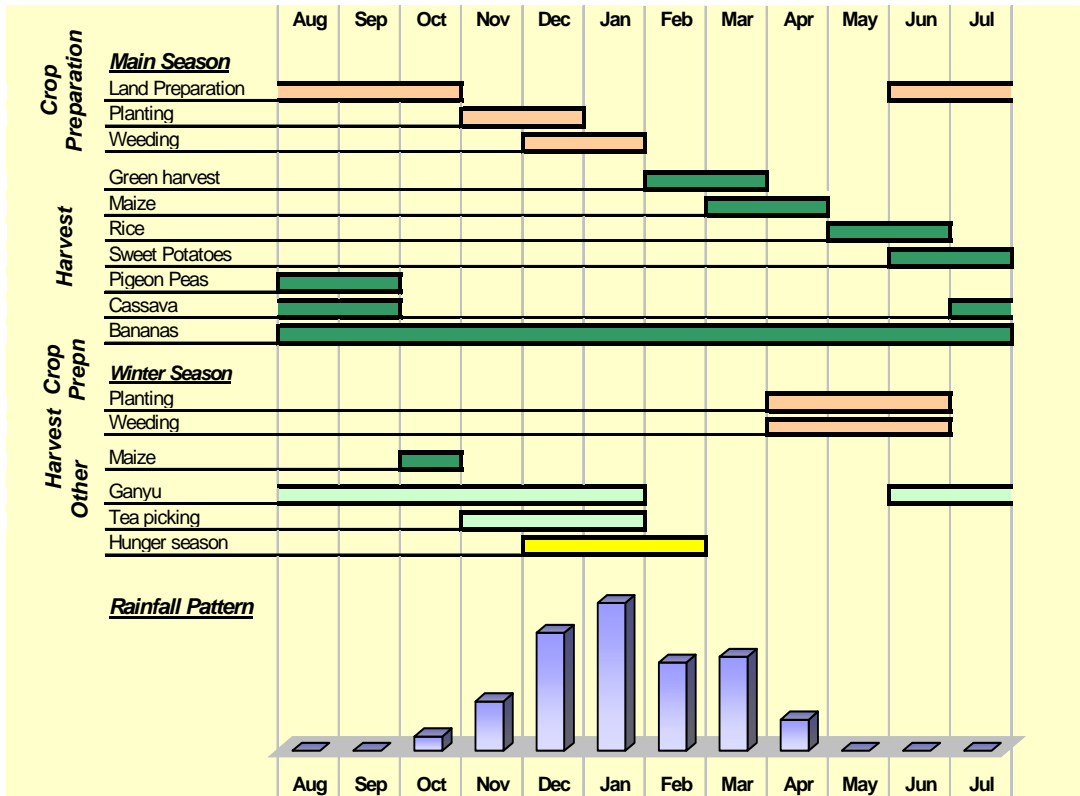
The rainy season lasts from November to March and the main agricultural activities start in June with land preparation followed by weeding. The zone has both summer and winter cultivation seasons, with summer the more important of the two.

Availability of casual labour or *ganyu* in the zone is highly seasonal. The peak period for picking tea (the main form of casual labour on the tea estates) is from November to January. This does not fully match with the months of the 'hunger' season, and many people are laid off as the hunger period reaches its peak in January-February.

Market prices for staple food varies from one period to another and prices are generally lowest during the harvesting period and highest during the 'hunger' season, from December to February.

Markets

There is an active cross-border trade and much of the zone's maize supply comes from Mozambique. In certain parts of the zone, however, such as Masambanjati and Thekerani, availability of maize is a problem because they are far from the Mozambican border. The main marketing problems faced by farmers in the zone are; the lack of organised markets, the very low prices of food crops and the difficulty of accessing markets in major cities particularly for bananas. The main cash crops in the zone are bananas, sugarcane, tea, and avocado pears.



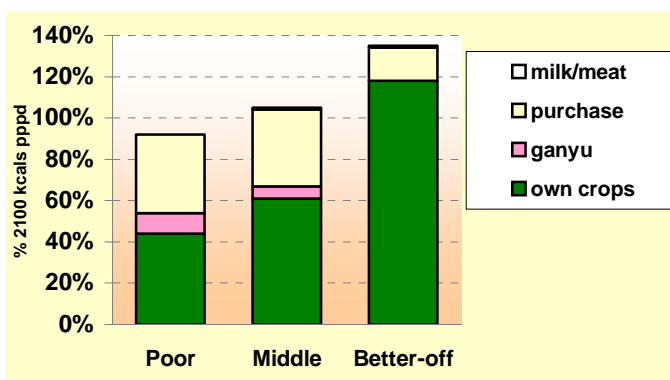
Wealth Breakdown

Landholdings in the zone are very small. The poor have on average 1 to 1.5 acres, the middle 1.5 to 2 acres, and the well-off 2 to 3 acres. All groups grow the same crops, with total production increasing from 'poor' to 'middle' to 'better-off'. Very few livestock are kept in the zone, due to scarcity of grazing land. All wealth groups keep some poultry, however.

Wealth Group Information			
	HH size	Area planted and how	Livestock
Poor	6-7 members	0.5-1 acre	4-5 chickens
Middle	6-7 members	1-1.5 acres	6-10 chickens
Better-off	6-7 members	2-3 acres	10-15 chickens

0% 20% 40% 60%
% of population

Sources of Food

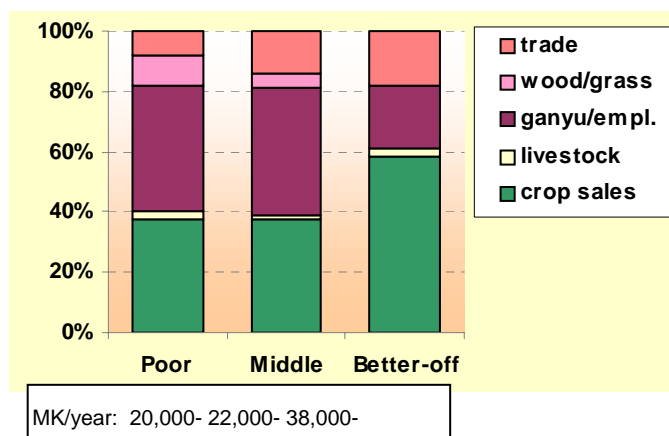


All wealth groups grow the same types of food crops but the quantities vary from one wealth group to another in line with differences in landholding size. The 'poor' produce barely enough to cover 4-5 months worth of consumption, the 'middle' can cover roughly 6 months, while the 'better-off' produce more than enough to cover their minimum requirements. Both 'poor' and 'middle' groups rely on purchases and in-kind payment for agricultural labour (*ganyu*) to supplement their own crop production. The consumption of livestock products is insignificant in the zone.

Sources of Cash

The 'poor' rely on crop sales and casual labour/*ganyu* for income while the 'middle' and 'better-off' rely on crop sales, small scale trading and employment on the tea estates. The established wage rate for *ganyu* on the tea estates is MK55 per day (in 2003), although remuneration for certain tasks is paid on a piece-rate basis.

Differences in cash income between the different wealth groups are relatively small in this zone. This reflects the generally small landholdings in the zone, the low levels of livestock ownership and the fact that all groups obtain a high proportion of their income from casual labour/employment on the tea estates.



Hazards

The main periodic hazards in the zone are crop pests (particularly elegant grass hoppers), crop diseases (such as cassava mosaic disease) and dry spells. These hazards contribute significantly to the low levels of crop production in the zone.

Response Strategies

During a crisis the response strategies of the 'poor' and the 'middle' are more or less the same. Some of the strategies undertaken include: consumption of vegetables only, consumption of cooked premature bananas, skipping some days without eating, sale of household items at low prices, increased *ganyu* for food and increased land encroachment. The 'better-off' reduce the number of meals taken per day and increase food purchases.

Expansion of existing strategies

Ganyu- Both the poor and the middle groups increase on Ganyu during a food crisis to find food or money to buy themselves some food.

Land Encroachment- The two groups also increase land encroachment to increase on own production.

Meal frequency- the better off cope by reducing the number of meals in day

Food purchase- The better off again purchase more food

Distress strategies

Consumption of "abnormal" foods- The poor and the middle groups consume cooked premature bananas or sometimes just eat vegetables only.

No food- In some days, both the middle and the poor groups go without food

Assets- In hard times, the two groups resort to selling their household assets

Crisis Warning Indicators

The main indicators of an impending crisis include low rainfall for both summer and winter production and overselling of food crops soon after the harvest.

Main Conclusions and Implications for Programming

People in this zone do not rely so much on farming due to land shortage. Most of the land in this zone is under tea cultivation and most farmers have very little land i.e. <1 acre. People here rely on employment in the tea estates and other income generating activities. Livestock rearing is difficult due to limited grazing land.

Implications for Programming

- *All the three groups expressed a need to access more land, as the present one is not enough across the wealth groups.*
- *They are also appealing to credit organisations to go into their area to provide input loans so that they can intensify their agricultural activities.*
- *Small-scale irrigation schemes would also be necessary in order to maximise production from the little land that they have.*

Malawi Livelihood Profile

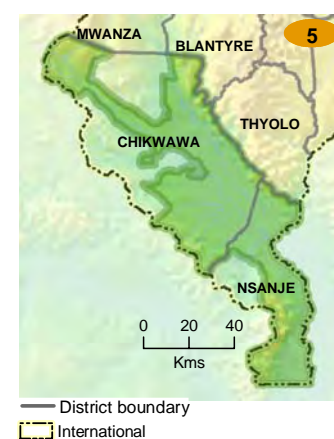
Lower Shire Valley

Zone Description

The zone is comprised of Chikwawa and Nsanje districts. It is located at the southern-most end of Malawi and borders Mozambique. The most important components of the food economy are food crops, *ganyu* labour, cash crops and livestock. Cross-border trade between the two countries is quite common and the zone relies on maize imports from Mozambique. The average rainfall ranges from 900mm to 1,200mm and rain falls mainly from November to March. The zone has two types of cultivatable land; upland and wetland (*dimba* land) mainly along the Shire River. There is substantial winter production in the *dimba* lands bordering the Shire River. The main food crops grown in upland fields are maize, sorghum, and millet, while in *dimba* lands maize, rice, tomatoes, vegetables, cowpeas and pigeon peas are grown. Crops sold include maize, cotton, rice, sugarcane and sweet potatoes. Livestock sales are the largest source of income for the 'better-off'. In this livelihood zone *ganyu* is the most significant source of income among the 'poor'.



Lower Shire



Total Population (2003)	630,879
By District:	
Chikwawa	412,800
Nsanje	218,079

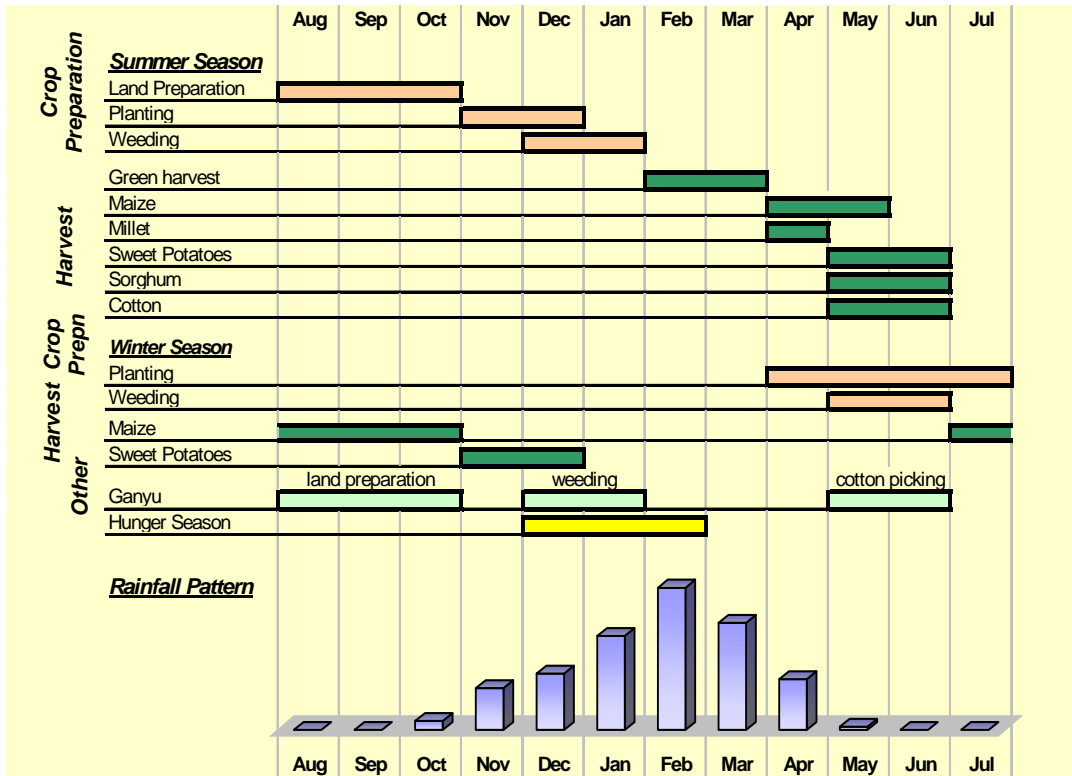
Seasonal Calendar

The rains last from November to March. The zone has two cultivation seasons; summer (which coincides with the main rainy season) and winter. Along the Shire River, winter production is more important than summer production, and households with access to arable land in this part of the zone grow different types of crops and have more income from crop sales compared to those who rely only on upland crop production.

The market price of staple food varies seasonally and within the zone. In general, prices are lowest during the post-harvest period and highest during the hunger season (from December to February). During the winter harvest, prices of food crops are also low for areas along the Shire River.



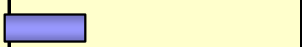
Markets

The marketing system in this zone is affected by its relative isolation. Maize, which has in recent years taken over from cotton as the main sold crop, tends to glut the market for some time after the main harvest; but later in the year maize becomes scarce on the market. From the producer's point of view, cotton sales suffer not only from low farm gate prices, but late opening of the marketing season and late payment from buyers. For livestock, the market is poorly organised especially for small stock. Prices for all stock are lowered by the transportation cost to the trader taking animals to the main consumption centred further north.

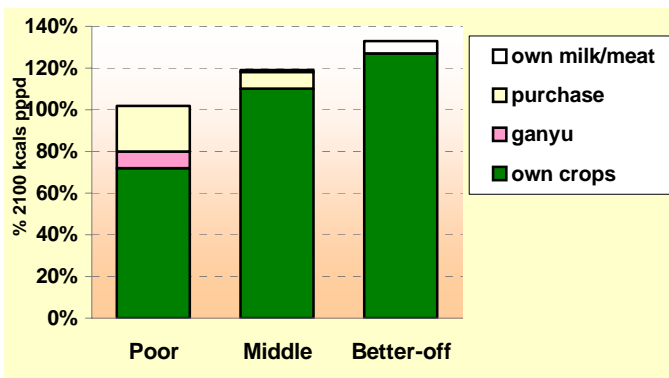


Wealth Breakdown

The 'poor' and 'middle' groups own similar areas of land (3-4 acres), but the 'poor' cultivate only 1 to 1.5 acres due to a shortage of labour and a lack of income to buy the necessary agricultural inputs. The 'better-off' cultivate the whole area of land which they own (4-5 acres). All three wealth groups grow the same crops with the 'poor' growing them in smaller quantities as compared to the other groups. The 'poor' do not own cattle while the 'middle' and the 'better-off' have 3-4 and 4-8 cattle respectively.

		Wealth Group Information		
		HH size	Area planted	Livestock
Poor		5-6 members	1-1.5 acres	0-4 goats, chickens
Middle		5-6 members	2-3 acres	3-4 cattle, 5-8 goats, chickens
Better-off		5-6 members	4-5 acres	4-8 cattle, 10-15 goats and chickens
0% 20% 40% 60%		% of population		

Sources of Food

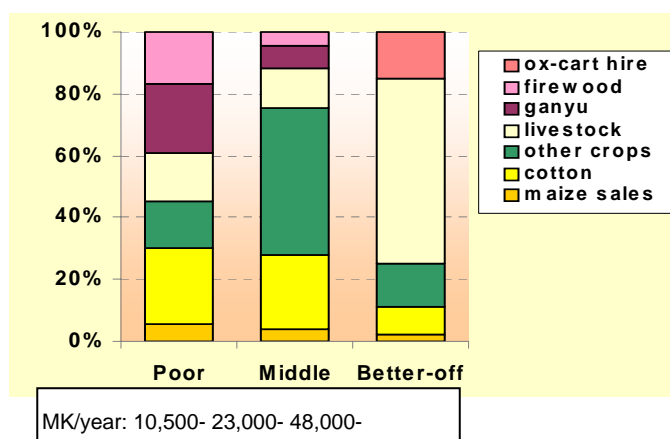


The 'middle' and the 'better-off' can cover all of their minimum food requirements from own crop production whereas the poor only obtain 70-75% of their needs from this source. The 'poor' therefore purchase more food and rely more on in-kind payments for *ganyu* than other groups. The 'better-off' have access to own livestock production (mainly milk), which is insignificant in the case of the other wealth groups.

All groups meet their food requirements despite variations in the sources of food.

Sources of Cash

The 'poor' earn most of their income from crop sales followed by labour (*ganyu*). The 'better-off' earn most of their income from livestock sales followed by crop sales and ox-cart hire. The 'better-off' employ the 'poor' and a few of the 'middle' to do *ganyu* and do not sell firewood as they have the resources to engage themselves in small business (ox-cart hire). The 'poor' and some 'middle' do not earn enough cash through other activities and therefore rely on *ganyu*. Total income per annum varies significantly between the different wealth groups.



Hazards

Chronic/frequent hazards: The main periodic hazards in the zone are dry spells mid-way through the season, floods along the shire banks, and crop pests. Dry spells are common when crops are at cobbing and tasselling stages during the summer/main season. Floods are very common along the Shire River during the main growing season although they increase crop production during the winter season - which is the main crop production period for those living along the Shire River.

Periodic hazards: major infestation of armyworm occurring once in every ten years and serious drought.

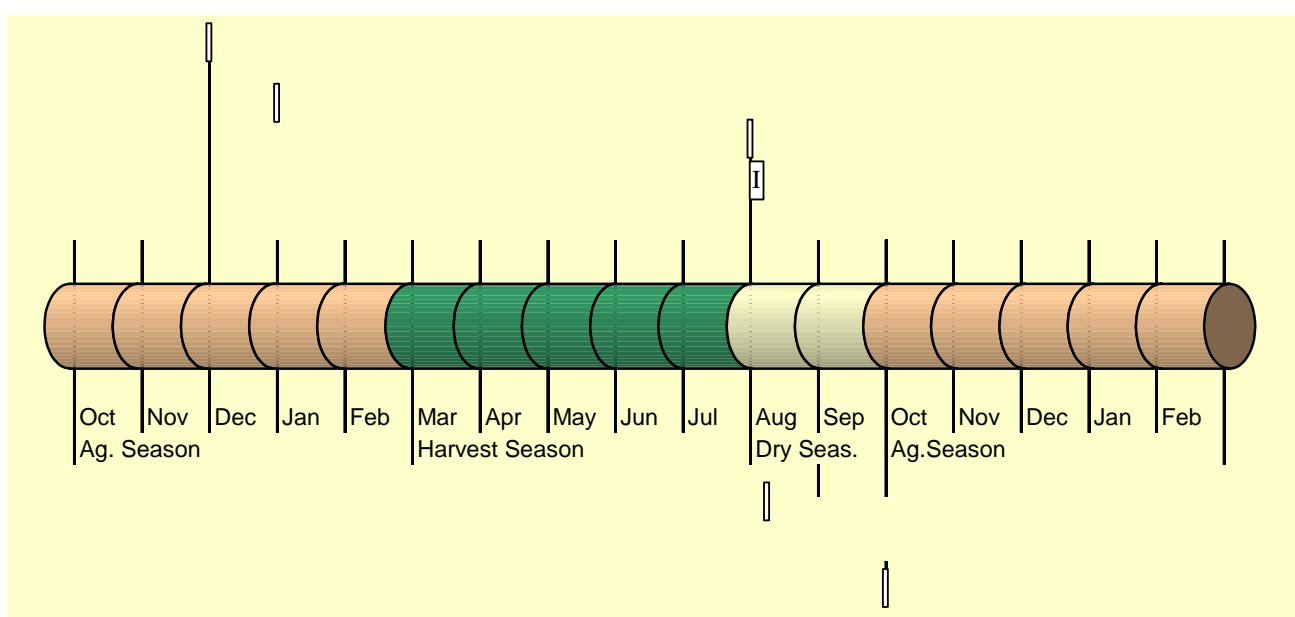
Response Strategies

During a food crisis, the 'poor' and the 'middle' make use of similar response strategies. The main strategies undertaken include: reduced meal quantity and frequency, consumption of vegetables only, consumption of water lily tubers, sale of livestock at low prices, sale of household assets at low prices, increased sales of firewood and consumption of wild grass grains known as *kapepe/mtegerogo*. The 'better-off', on the other hand, are able to purchase grain, mainly rice, from Mozambique.

<u>Expansion of existing strategies</u>	<u>Distress strategies</u>
<p><u>Eating habits.</u> In a normal situation, many poor and middle households eat three meals a day and these are: breakfast, lunch and supper but during a food crisis, the same households will only have one meal a day in order to stretch the little food the household has.</p> <p><u>Livestock sales.</u> Both the poor and the middle groups sale their livestock at low prices during food crises, reducing their ability to access adequate food for the household</p> <p><u>Firewood sales.</u> Firewood sales tend to increase during a crisis and it is mainly done by the poor and the middle households</p> <p><u>Food Imports.</u> The better off respond differently from the other two groups and rely on food purchases from Mozambique, mainly rice</p>	<p><u>Consumption of wild tubers and grass.</u> In distress situations, most of the poor and the middle eat foods that they do not eat in a normal situation and these are things like water lily tubers and wild grass grains known as <i>kapepe/mtegerego</i>. These groups also tend to rely on vegetables only without any staple to go with it.</p> <p><u>Sale of Household assets.</u> During food crises, poor and middle households go to the extreme of selling the little assets that they have just to buy some little food.</p>

Crisis Warning Indicators

The indicators include: prolonged dry spells, excess rainfall, prolonged water-logging conditions for winter production along the Shire River, increase in food prices and increased numbers of people looking for *ganyu*.



Main Conclusions and Implications for Programming

People in the zone who are very close to the Shire River rely so much on winter cropping than they do the summer crop. The extent of flooding determines how much land is available for winter cropping. However prolonged flooding reduces the cultivable land.

Most farmers own livestock, especially goats, which they sell to earn cash.

Implications for Programming

- *The railway network, which was the easiest means of transport in the area, has been non-functional for so long due to a wash away. This stopped many farmers from selling their produce in further places like Blantyre because it was not only easier for them but also cheaper. To them, rehabilitation of the railway network would be a good starting point to improve their livelihoods.*
- *The road network is another problem, especially further down Nsanje, where there is no tarmac road and accessibility during some times of the year becomes very difficult.*

APPENDICES

Appendix I: HEA Analytical Framework

<i>Outcome Analysis: Baseline + Hazard + Response = Outcome</i>		
<p>The baseline picture provides a starting point or context for understanding the likely impact of a shock or hazard on food access at household level. If, for example, 'poor' households are heavily dependent upon crop production, then they may be vulnerable to hazards affecting crops, such as drought or pest attack. Households that rely upon other sources of food and income are, on the other hand, less vulnerable to these hazards.</p>	<p>The first step is to superimpose the hazard on the baseline to assess its effects on food access at household level. This requires that the hazard be expressed in quantitative terms, e.g. a 50% reduction in crop production, a 20% reduction in milk output, etc. In the example below, a 50% reduction in crop production results in a 25% deficit in food access for the 'poor', since crops provide half of baseline food needs for this group.</p>	<p>The second step is to consider the response strategies that can be pursued by households exposed to a hazard, and the amount of food and/or income that can be generated from these. In the example, the 'poor' engage in additional 'ganyu' in a crisis and can exchange labour for 1-2 sacks of grain – enough to cover roughly 10% of annual food needs. This has the effect of reducing the deficit from 25% to roughly 15%.</p>
<p>Baseline</p>	<p>+</p> <p>Hazard For example, 50% crop failure</p>	<p>+</p> <p>Response For example, increase ganyu</p>
<p>= Outcome</p>	<p>The outcome represents the final result, expressed in terms of the food intake deficit likely to result from a particular hazard, once household-level responses have been taken into account. In the example, the conclusion is that a 50% crop failure is likely to result in a food intake deficit of 15% for 'poor' households. Similar analyses undertaken for other types of household (e.g. the 'middle' and the 'better-off') will indicate their vulnerability to this particular hazard.</p>	

A brief summary of the HEA analytical framework is presented here. For a more detailed discussion see (The analytical framework of HEA is firmly based within a Livelihoods-Based Vulnerability Approach (LBVA). In the context of food security the conceptual model is formulated as:

$$\text{Risk} = f(\text{Hazard, Vulnerability})$$

Where:

- **Risk** = Risk of food insecurity (in the context of food security enquiry)
- **Hazard** or Shock = Drought, loss of market, sharp increase/decrease in prices, etc.
- **Vulnerability** = To understand whether people are vulnerable we have to understand how they survive, i.e. their pattern of livelihood.
- **Risk** is a function of the interaction and combination of both a Hazard and Vulnerability (e.g. when drought occurs a household is vulnerable to food insecurity only if they are heavily reliant on crop production that is sensitive to drought and for which they have limited options for acquiring food from other sources). Note: risk to food insecurity is only one formulation of the conceptual model; other formulations are possible depending on the objective. For example, the model could be formulated as risk to livelihood failure or destitution.

Appendix II: Population by District and Livelihood Zone

DISTRICT			DISTRICT		
Livelihood Zone	Population	% Of total	Livelihood Zone	Population	% Of total
BALAKA	286,723		MULANJE	490,920	
Middle Shire Valley	104,805	37%	Lake Chilwa/Phalombe Plain	346,187	71%
Rift Valley Escarpment	181,918	63%	Thyolo Mulanje Tea Estates	144,733	29%
BLANTYRE	340,371		MWANZA	157,740	
Middle Shire Valley	162,442	48%	Middle Shire Valley	39,365	25%
Shire Highlands	177,929	52%	Rift Valley Escarpment	118,375	75%
CHIKWAWA	412,800		MZIMBA	635,536	
Lower Shire	412,800	100%	Kasungu Lilongwe Plain	75,042	12%
CHIRADZULU	266,011		Mzimba Self Sufficient	454,876	72%
Lake Chilwa/Phalombe Plain	101,255	38%	Nkhata Bay Cassava	21,134	3%
Shire Highlands	164,756	62%	Western Rumpi & Mzimba	84,484	13%
CHITIPA	147,730		NKHATA BAY	183,885	
Chitipa Millet and Maize	112,620	76%	Nkhata Bay Cassava	107,461	58%
Misuku Hills	35,110	24%	Northern Lakeshore	76,424	42%
DEDZA	562,823		NKHOTAKOTA	266,909	
Kasungu Lilongwe Plain	513,566	91%	Nkhata Bay Cassava	35,221	13%
Rift Valley Escarpment	24,629	4%	Northern Lakeshore	97,201	36%
Southern Lakeshore	24,629	4%	Rift Valley Escarpment	134,487	50%
DOWA	457,426		NSANJE	218,079	
Kasungu Lilongwe Plain	457,426	100%	Lower Shire	218,079	100%
KARONGA	223,507		NTCHEU	428,387	
Central Karonga	43,254	19%	Rift Valley Escarpment	411,861	96%
Nkhata Bay Cassava	71,699	32%	Southern Lakeshore	16,526	4%
Northern Karonga	108,554	49%	NTCHISI	200,712	
KASUNGU	569,581		Kasungu Lilongwe Plain	200,712	100%
Kasungu Lilongwe Plain	569,581	100%	PHALOMBE	270,467	
LIKOMA	9,482		Lake Chilwa/Phalombe Plain	270,467	100%
Northern Lakeshore	9,482	100%	RUMPHI	69,742	
LILONGWE	1,051,430		Nkhata Bay Cassava	38,915	56%
Kasungu Lilongwe Plain	1,051,430	100%	Western Rumpi & Mzimba	30,827	44%
MACHINGA	409,298		SALIMA	298,099	
Lake Chilwa/Phalombe Plain	260,029	64%	Rift Valley Escarpment	169,321	57%
Middle Shire Valley	46,312	11%	Southern Lakeshore	128,778	43%
Shire Highlands	102,956	25%	THYOLO	523,162	
MANGOCHI	690,644		Shire Highlands	18,565	4%
Phirilongwe Hills	205,584	30%	Thyolo Mulanje Tea Estates	504,597	96%
Shire Highlands	261,415	38%	ZOMBA	542,270	
Southern Lakeshore	223,645	32%	Lake Chilwa/Phalombe Plain	177,445	33%
MCHINJI	381,335		Middle Shire Valley	52,046	10%
Kasungu Lilongwe Plain	381,335	100%	Shire Highlands	312,779	58%

Appendix III: Relationship between Livelihood Zone and Administrative Boundaries

District	Livelihood Zone	EPAs (<i>EPAs that are split between livelihood zones are shown in italics</i>)
Balaka	Middle Shire Valley	<i>Mpilisi, Phalula, Ulongwe</i>
	Rift Valley Escarpment	Bazale, <i>Mpilisi, Phalula, Ulongwe</i>
Blantyre	Middle Shire Valley	Lirangwe
	Shire Highlands	Ntonda
Chikwawa	Lower Shire	Dolo, Kalambo, Livunzu, Mbewe, Mikalango, Mitole
Chiradzulu	Lake Chilwa/Phalombe Plain	<i>Thumbwe</i>
	Shire Highlands	<i>Thumbwe, Mombezi</i>
Chitipa	Chitipa Millet and Maize	Chisenga, Kavukuku, Lufita, Mwamkumbwa
	Misuku Hills	Misuku
Dedza	Kasungu Lilongwe Plain	Chafumba, Kabwazi, Kanyama, Kaphuka, Linthipe, Mayani, Bembeke, Lobi
	Rift Valley Escarpment	<i>Mtakataka</i>
	Southern Lakeshore	<i>Mtakataka</i>
Dowa	Kasungu Lilongwe Plain	Bowe, Chisepo, Chivala, Madisi, Mndolera, Mponela, Mvera, Nachisaka
Karonga	Central Karonga	Karonga Central
	Nkhata Bay Cassava	Karonga South
	Northern Karonga	Kaporo North, Kaporo South
Kasungu	Kasungu Lilongwe Plain	Chamama, Chulu, Kaluluma, Kasungu Chipala, Lisasadzi, Santhe
Likoma	Northern Lakeshore	Likoma Chizumulu
Lilongwe	Kasungu Lilongwe Plain	Chilaza, Demela, Kambanizithe, Ming'ongo, Mlomba, M'ngwangwa, Mpingu, Nakachoka, Nthondo, Sinyala, Ukwe, Mpenu, Chigonthi, Chitekwele, Chitsime, Chiwamba
Machinga	Lake Chilwa/Phalombe Plain	Chikweo, Nampeya, Nanyumbu, Nsanama
	Middle Shire Valley	<i>Mbonechera</i>
	Shire Highlands	<i>Mbonechera, Nyambi</i>
Mangochi	Phirilongwe Hills	Chilipa, <i>Mbwadzulu</i> , Mtiramanja, <i>Namkumba, Nasenga</i>
	Shire Highlands	Katuli, <i>Lungwena, Maiwa</i> , Masuku, Ntiya
	Southern Lakeshore	<i>Lungwena, Maiwa, Mbwadzulu</i> , Mpilipili, <i>Namkumba, Nasenga</i>
Mchinji	Kasungu Lilongwe Plain	Chioshya, Kalulu, Mikundi, Mkanda, Mlonyeni, Msitu
Mulanje	Lake Chilwa/Phalombe Plain	<i>Mulanje South</i> , <i>Mulanje West</i>
	Thyolo Mulanje Tea Estates	<i>Mulanje South</i>
Mwanza	Middle Shire Valley	<i>Lisungwi, Mwanza</i>
	Rift Valley Escarpment	<i>Lisungwi, Mwanza, Neno</i>
Mzimba	Kasungu Lilongwe Plain	Emfeni
	Mzimba Self-Sufficient	Bulala, Champhira, Eswazini, Manyamula, Mbawa, Mjinge, Bwengu, Zombwe
	Nkhata Bay Cassava	Khosolo
	Western Rumphu & Mzimba	Euthini, Mpherembe
Nkhata Bay	Nkhata Bay Cassava	Chikwina, <i>Chintheche</i> , Chitheka, Mpamba, <i>Nkhata Bay</i>
	Northern Lakeshore	<i>Chintheche, Nkhata Bay</i>
Nkhotakota	Nkhata Bay Cassava	<i>Nkhunga, Zidyana</i>
	Northern Lakeshore	<i>Nkhunga, Linga, Zidyana</i>
	Rift Valley Escarpment	<i>Linga, Mwansambo, Nkhunga, Zidyana</i>
Nsanje	Lower Shire	Magoti, Makhanga, Mpatsa, Nsanje, Nyachilenda
Ntcheu	Rift Valley Escarpment	Bilira, <i>Golomoti</i> , Kandeu, Manjawira, Nsipe, Sharpevale, Njolomole,

		Tsangano
	Southern Lakeshore	<i>Golomoti</i>
Ntchisi	Kasungu Lilongwe Plain	Chipuka, Kalira, Malomo, Ntchisi Boma
Phalombe	Lake Chilwa/Phalombe Plain	Kasongo, Mpinda, Naminjiwa, Tamani, Kasongo, Naminjiwa, Nkhulambe, Tamani, Waruma
Rumphi	Nkhata Bay Cassava	Mphompha, Ntchenachena, Muhuju
	Western Rumphi & Mzimba	Bolero
Salima	Rift Valley Escarpment	Chinguluwe, <i>Chipoka</i> , <i>Khombedza</i> , <i>Tembwe</i>
	Southern Lakeshore	<i>Chipoka</i> , <i>Khombedza</i> , <i>Tembwe</i>
Thyolo	Shire Highlands	Matapwata
	Thyolo Mulanje Tea Estates	Masambanjati, Thyolo Boma
Zomba	Lake Chilwa/Phalombe Plain	Mpokwe, Msondole, <i>Ntubwi</i> , Mayaka Ngwerero
	Middle Shire Valley	<i>Ntubwi</i> , <i>Chingale</i>
	Shire Highlands	Dzaone, <i>Ntubwi</i> , <i>Chingale</i> , Malosa, Thondwe

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