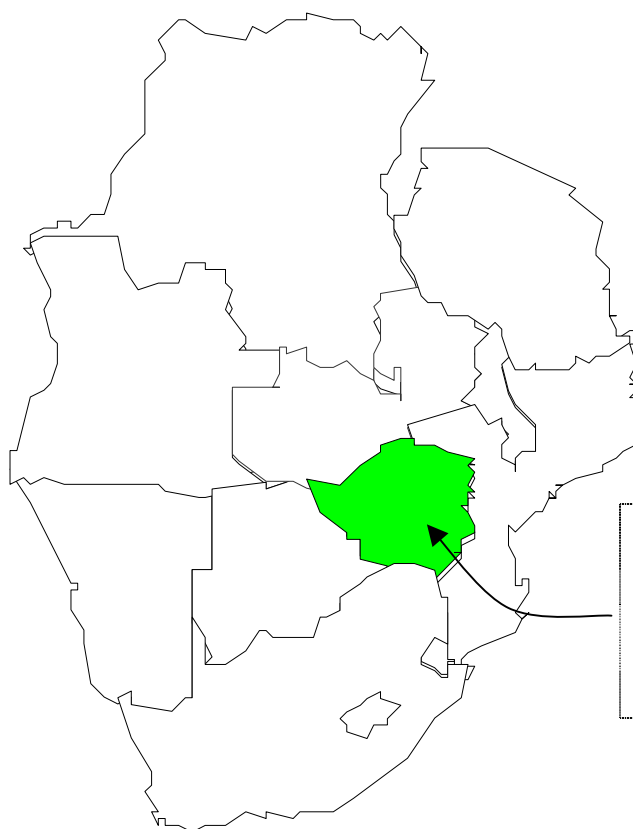


Zimbabwe

Emergency Food Security and Vulnerability Assessment - April 2003

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



ZIMBABWE

Some 4,4 million rural people
(56% of the population) will
require an estimated 389 000
MT of cereal food assistance
through Jan 2004.

Report No. 3
April 2003
Harare

Prepared in collaboration with SIRDC – Food and Nutrition Programme, Ministry of Agriculture- National Early Warning Unit, Civil Protection Unit, CSO, MOHCW, Ministry of Public Service Labour and Social Welfare, WFP, Unicef, WHO, UNAIDS, FEWS NET, SC(UK)

With financial support from Government of Zimbabwe, DFID and SADC FANR VAC

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Preface

This emergency food security assessment is regionally coordinated by the Southern Africa Development Community (SADC) Food, Agriculture, and Natural resources (FANR) Vulnerability Assessment Committee (VAC), in collaboration with international partners (WFP, FEWS NET, SC (UK), FAO, UNICEF and IFRC).

The Zimbabwe Vulnerability Assessment Committee (ZimVAC) – a subcommittee of the Social Services Cabinet Action Committee (SSCAC) composed of a consortium of government, NGO and UN Agencies, coordinated the assessments at national level. This is the third and last round of a series of rolling food security assessments which first started in August 2002 and were subsequently conducted in December 2002 in six SADC countries affected by the food crisis in the region.

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

Acknowledgements

This report follows an assessment, which was made possible through the generous financial contributions made by the Government of Zimbabwe and DFID. The SADC VAC initiated the whole assessment process including the mobilization of resources from donors. WFP, GOAL, UNDP, UNICEF, FCTZ, FEWSNET, and GOZ provided vehicles and in-kind support. The Government, NGOs and UN organizations participated in the field research. Their names and organizations are listed in Appendix F.

The ZimVAC warmly acknowledges this invaluable support from these multiple organizations.

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Acronyms

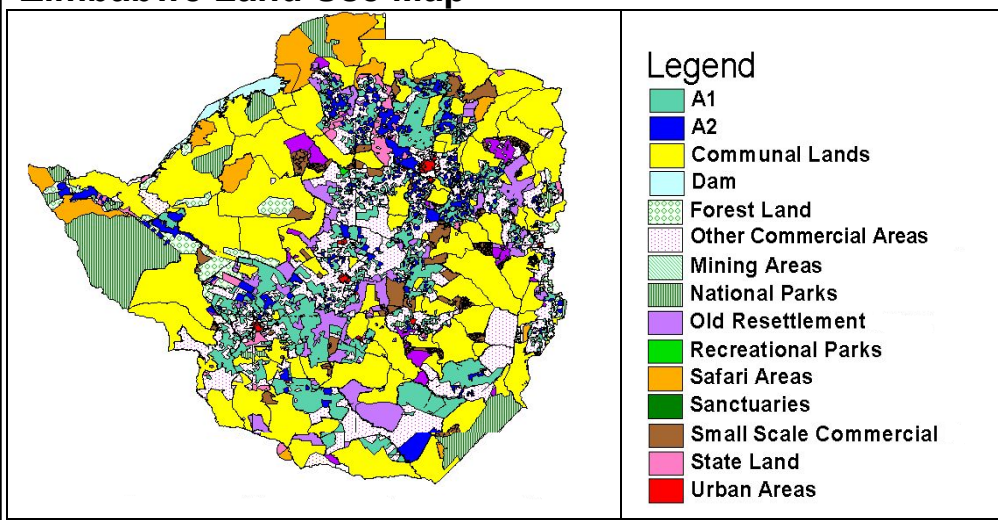
BEAM	Basic Education Assistance Module
CFSAM	Crop and Food Supply Assessment Mission
CSO	Central Statistical Office
EA	Enumeration Area
EHHS	Elderly Headed Household
FCTZ	Farm Community Trust of Zimbabwe
FEZ	Food Economy Zone
FHHs	Female Headed Household
GDP	Gross Domestic Product
GMB	Grain Marketing Board
GOZ	Government of Zimbabwe
HHs	Households
LBVA	Livelihoods Based Vulnerability Analysis
MHHS	Male Headed Households
NERP	National Economic Recovery Programme
PDAs	Personal Digital Assistants
SADC	Southern Africa Development Community
SEG	Social Economic Group
UNDP	United Nations Development Programme
VAC	Vulnerability Assessment Committee
WFP	World Food Programme
ZDHS	Zimbabwe Demographic Health Survey
ZimVAC	Zimbabwe Vulnerability Assessment Committee

Zimbabwe Emergency Food Security Highlights for 2003/04

1. The VAC assessment confirms the need for continued food aid for 4.4 million rural population lower than the 5.2 million people who benefited from food aid programs last year.

2. There is need for Government and the NGOs to import about 754,800 MT of cereals in 2003/04 marketing year to fill in the food gap, which excludes the Strategic Grain Reserve. This is much lower than about 1.323 million MT imported last year.

Zimbabwe Land Use Map



3. During the peak period of need, a total of 4.4 million people in rural areas (56% of the rural population) will require 388,600 MT of food aid between April 2003 and March 2004. The areas requiring initial food aid are those in the southwestern and western districts of the country, spreading to almost the whole country.

4. From April to June a total of 792,000 people would require food aid mainly in the southwestern and western districts of the country and a total of 28,000 MT of maize has to be distributed. The number in need would increase to 2.2 million between July and September, covering almost the whole country except the prime grain producing areas of Mashonaland provinces, a total of 80,000 MT of maize is required for the period. From October through December 3.4 million people will require emergency food assistance, rising to 4.4 million people during the most critical months from January through March 2004.

5. At the peak of the anticipated food shortages (from January 2004), 62% of the communal population (3,568,000 people), 37% of the old resettlement population (174,400 people) and the remainder of 618,800 people) from the A1 resettlement and commercial farm workers of which, 30 % of the A1 resettled farmers and 21% of the commercial farm workers population will be in need of food aid.

6. Limited availability of maize in the market was a major problem in the year from April 2002 to March 2003. However, although still inadequate, provinces were able to meet over 60% of their cereal requirements.

7. Food security in Zimbabwe will continue to be heavily affected by the high prevalence of HIV/AIDS (34% of population), high inflation rates (228% in March 2003), limited maize availability, high parallel market prices for maize, and unemployment which will undermine access to income.

8. The most food insecure communal households are the poor who are characterized by female headed households (of which 70% of these households require food aid compared to 58 % of the male headed households), households who lost the head through chronic illness, households under stress, including households headed by elderly females and large households with more than 7 people.

9. The HIV/AIDS pandemic will continue to undermine food security as an estimated 2 million adults were living with HIV/AIDS at the end of 2001. The HIV/AIDS prevalence increases food insecurity and on the other hand food insecurity increases the likelihood of HIV infection and accelerates the transition from HIV to AIDS.

1. EXECUTIVE SUMMARY

1.1. Zimbabwe Country Context

Zimbabwe has an estimated population of 11.6 million people (Central Statistical Office August 2002 census). Of this, 33% is in urban areas, 4% in the old resettlement areas, 1% in the small-scale commercial sector, 49% communal sector and 13% in the A1 and A2 resettlement (including former commercial farming areas).

Zimbabwe's economy has performed poorly in this past year. The land reform exercise, coupled with three years of poor harvests and the decline in the general macroeconomic environment has led to a 24% decline in the Gross Domestic Product (GDP) over the last three years. Unemployment levels continued to increase, inflation rate for the 12 months ending in March reached 228% and nominal interest rates were estimated at 60%. The year experienced shortages of foreign currency with the parallel exchange rate in November 2002 dropping to Z\$2,000 per US\$1, basic commodities such as sugar, cooking oil and maize meal, fuel and electricity. These factors contributed immensely to the hardships of both Government and the general public. In an attempt to address these problems the Government instituted a number of measures, such as;

- Devaluing the exchange rate from Z\$55 to the US\$1 to over Z\$824 per US\$1 in March 2003 for exporters as part of the Government's National Economic Recovery Programme (NERP),
- The Tripartite Forum brought captains of industry, labour unions and government to work out methods of reviving the economy and halt inflation.
- Price controls on basic commodities and agricultural inputs
- Public works programmes were instituted mostly in the rural areas and the Basic Education Assistance Module (BEAM) program continued to support disadvantaged children in education.
- The World Food Programme (WFP) and other NGOS distributed food to over 5.2 million people at the peak of aid distributions in March 2003, and most of the people obtained their food through purchases from the Grain Marketing Board and the parallel markets.

However, despite the positive measures undertaken, the economy did not respond positively as the Government expects a further decline of 7.3 % in GDP this year and the budget deficit is estimated to be at 11% of GDP and the key export sectors continue to struggle.

1.2. Purpose of the Assessment

The objectives of the April 2003 Zimbabwe Vulnerability Assessment were to;

- Review the food security situation and response in the 2002/03 marketing year.
- Understand the impact of coping strategies and food shortages on different socio – economic groups.
- Understand what is likely to happen during 2003/04 in terms of cereal production and cereal access.
- Assess rural food security situation by geographical area, time-period, and social groups for 2003/04 marketing year.
- Examine the linkages between food security and HIV/AIDS, education, child protection, and health.
- Identify possible food and non-food interventions and policy implications.

1.3. Overview of Methods used in the Assessment

1.3.1. Technique

A “livelihoods-based vulnerability analysis” (LBVA) framework, based on household surveys and focus group discussions was used for the ZimVAC April 2003 assessment. The approach used is adapted from the LBVA adopted by the SADC Regional VAC in March 2003. LBVA covers a wide range of issues, including availability and access to food, water, shelter, health (including HIV/AIDS), education, protection etc.

1.3.2. Data Collection

The sampling frame for the April 2003 survey was determined by the Central Statistical Office (CSO), using a random sampling technique based on “enumeration areas” (EAs). The August 2002 population census data was used for drawing out a sample proportional to population size by province and by rural sector. Urban areas were not part of the survey and will therefore be discussed in this report.

A total of 150 sites (villages) were randomly sampled across the country, covering 116 communal sites, 17 commercial farming sector sites, including fast track resettlement areas, 14 old resettlement areas and 3 small-scale commercial farming areas. A total of 2,400 households were randomly surveyed and 2,257 questionnaires were analyzed. In addition 152 community questionnaires were administered and analyzed.

Secondary data on maize prices, stocks and production from Government was not available to support the analysis in this report; hence the results are likely to change if new information on stocks and production are made available.

1.3.3. Survey Logistics

The survey was conducted from 5 to 21 April 2003. The survey was conducted with the help of resources from the SADC FANR VAC, NGOs, UN and Government. A total of 65 researchers organized into teams of 4 people (2 from Government, one from an NGO and one from the UN) carried out the research. To facilitate data capture, researchers used 40 Personal Digital Assistants (PDAs, or hand computers) supplied by the World Food Programme.

1.3.4. Data Analysis

Data analysis was undertaken using SPSS software. To determine food security conditions for 2002/03 and 2003/04 consumption years, data was analyzed by province, agricultural sector and livelihood zone¹. Linkages between food security and health, education and HIV/AIDS were also explored, with technical support from UNAIDS, UNICEF, WHO and the SADC FANR VAC. Extrapolation of the results to district and national level was then done by linking Livelihood Zone data with CSO August 2002 ward-level census data.

1.4. Summary of Key Findings

1.4.1. Review on National and Sub-national Food Security Situation for last year (2002/03)

1.4.1.1. National Food Security Situation Last Year

A number of factors affected food security in 2002/03, including;

- Very poor cereal production in 2001/02, which was among the worst in the 1990s, hence resulting in a cereal gap of 1.374 million MT.

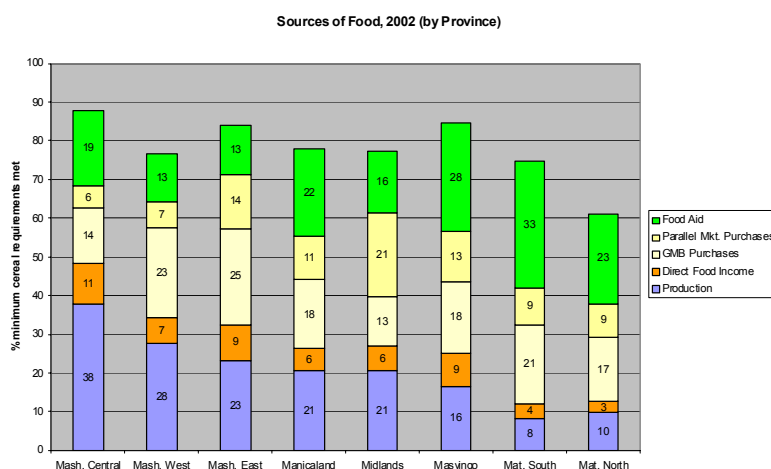
¹ A livelihood can be defined as the sum of ways in which people make a living

- Limited maize availability in the market increased the parallel market prices from 270% to 916%, thereby reducing access to maize.
- High inflation during the year (rising to 228% as in March 2003), substantially affected purchasing power.
- Rising unemployment undermined access to income
- High prevalence of HIV/AIDS estimated at 34% affected households ability to cope and enhanced the negative impact of food shortages

To fill in the cereal gap, at least 1.323 million MT of maize of which 1.253 million MT was for human consumption was imported between April 2002 and March 2003. Of the maize imports meant for human consumption, at least 72% was through the Government's Grain Marketing Board, 25% through World Food Programme and 3% through other parallel pipelines. Due to logistical problems all imports purchased in 2002/03 were not delivered into the country. There are still outstanding stocks of about 276,500 MT of cereals of which 241,500 MT are maize that were yet to be delivered, by the time of writing this report. The Government, WFP and NGOs distributed a total of 1.165 million MT over the period. Of the amount distributed at least 75% was by Government, 22% by WFP and 3% by NGOs parallel pipeline. The number which, benefited from food aid distributions increased from 1 million in September 2002, to 2 million by December 2002, to 3.9 million by January 2003 and was at its peak of 5.2 million in February/March 2003. A total of about 290,400 MT of cereal food aid was distributed by WFP and NGOs during the period. However, the quantity distributed was not adequate hence consumption was generally below requirements during the year.

1.4.1.2. Sub-National Food Security Situation Last Year

The analysis indicates that all provinces met more than 60% of their cereal requirements, except for Matabeleland North. The household source of the cereals varied across provinces as shown by the graph. For example, in Mashonaland Central province, 38% came from production, 11% from direct income sources², 14% from GMB purchases, 6% from parallel market purchases and 19% was food aid.



1.4.1.3. Impact of HIV/AIDS on Food Security

An estimated 2 million adults lived with HIV/AIDS at the end of 2001, accounting for 34% of the adult population. About 780,000 children have been orphaned due to AIDS and 200,000 AIDS related deaths were reported in 2001. The HIV/AIDS prevalence increases food insecurity and on the other hand food insecurity increases the likelihood of HIV infection and accelerates the transition from HIV to AIDS. The assessment indicates that;

- Income among households with chronically ill adults was 31% lower than among households with no chronically ill members.
- Last August 2002, 54% of the sampled households without active adults were planning to plant less area during this season (versus 33% among households with active adults).
- Households with a high dependency ratio were twice as likely to remove a child from school than households with a low dependency ratio.

² Food obtained through labouring or gifts

1.4.2. Food Security Prospects for 2003/04 Marketing Year (1 April 2003 to 31 March 2004)

1.4.2.1. National Food Security Prospects

Food security conditions in 2003/04 has been affected by a general poor rainfall season, which saw a poor start to the season in November 2002, followed by heavy rainfall during the later part of the season resulting in doubling of cereal production compared to last year. However, the anticipated production of around 800,000 MT for maize is far below average resulting in a food gap of over 1 million MT of cereals (see table below) To fill in the cereal gap, a total of 753,400 MT of maize need to be imported in 2003/04 marketing year. If carry over imports from last year of 276,500 MT are moved into the country of which 241,500 MT are maize then additional 754,800 MT of cereals are required of which 607,700 MT is maize. Availability of cereals at affordable prices and continued high inflation rates would affect food security in 2003/04 marketing year.

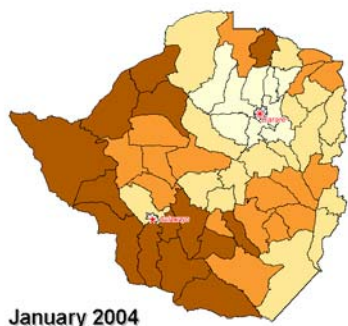
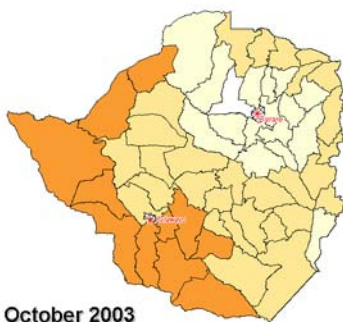
	Maize	Millets	Wheat	Rice	All Grain
A. Potential Domestic Availability	920,775	65,760	178,400	7,566	1,172,501
B. Annual Requirements	1,674,265	176,562	341,353	11,653	2,203,833
C. Domestic Balance (DB) (A minus B)	(753,490)	(110,802)	(162,953)	(4,087)	(1,031,332)
Carryover Food Aid Imports outstanding (Estimate)	80,037	15,000	-	-	95,037
Carryover Commercial Imports outstanding (Estimate)	161,500	-	20,000	-	181,500
D. Total Imports outstanding	241,537	15,000	20,000	-	276,537
E. Cross substitution maize for millet	(95,802)	95,802	-	-	-
F. Forecasted Deficit (Closing Stocks) after Imports (March 2004)	(607,755)	-	(142,953)	(4,087)	(754,795)
Assumptions					
Est. mid-year population	11,770,789	11,770,789	11,770,789	11,770,789	11,770,789
Est. Human Annual Consumption Requirement. (Kgs/Person)	121	15	29	1	166
Implications for Imports					
Estimated Additional Commercial Imports Required (MT)	219,155	-	142,953	4,087	366,195
Estimated Additional Food Aid Imports Required (MT)	388,600	0	0	0	388,600
Total Estimated Additional Imports (MT)	607,755	0	142,953	4,087	754,795

1.4.2.2. Rural Population Food Insecure in 2003/04

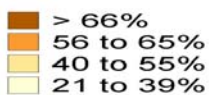
The assessment defined food insecure populations as those household that will not meet their minimum 166 kgs per person annual cereal requirements through production, purchase, direct and indirect sources. In the analysis it is assumed that about 25% of the livestock could be sold, leaving a minimum size of 5 cattle and 3 goats and a maximum of 80% of total household income will be spent on cereal purchases. The assessment indicates that a total of 4.4 million people would require food aid, or 56% of the rural population (see table below).

Total Population	Rural Population	Total Human Domestic Cereal Yearly Req in MT	Rural Human Domestic Cereal Yearly Req in MT	Cumulative Population with Cereal Deficit 2003/04					Max % of Rural Pop with cereal deficit	Total MT of Cereal Deficit Apr/03-Mar/04	% Cereal Deficit over domestic human req
				Population Food Secure	Apr/03 (100% req.)	Jul/03 (75% req.)	Oct/03 (50% of req.)	Jan/04 (25% of req.)			
11,770,789	7,851,832	1,953,951	1,303,404	3,482,000	792,000	2,223,000	3,419,000	4,362,000	56%	388,600	30%

Rural Population Food Insecure by District: April/03 – Mar/02

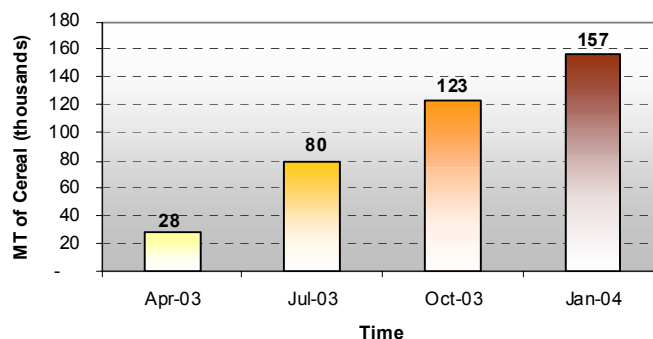


% Rural Pop with
cereal deficit



National Park

Phasing up of the total Cereal Deficit (388,600MT)



At least 28,000 MT would be required between 1 April and June 2003 and is likely to be supplied from the ongoing WFP EMOP programme. The amount distributed would need to be phased up to 157,000 MT between January and March 2004 (see graph below).

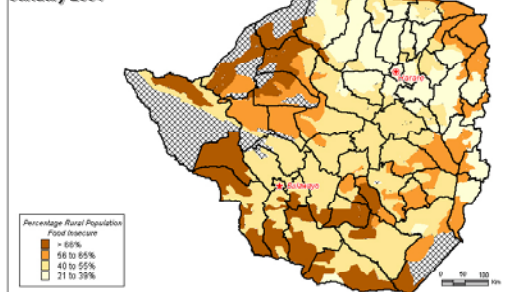
1.4.2.3. Geographical Targeting in Rural Areas

From April through June 2003, the 792,000 people requiring food aid is generally concentrated in the southwest and western districts of the country (see April 2003 map).

The food security situation will worsen in July 2003, when almost the entire country requires some form of food aid except for the major maize growing belt in the Mashonaland provinces (see July 2003 map).

The spatial distribution of the food insecure rural population through time will worsen, notably by October 2003 in most southern, southeastern, southwestern and northern parts of the country. The numbers in need continue to rise (see October 2003 map).

Maximum Percentage Rural Population Food Insecure by Food Economy Zones January 2004



From January 2004, the peak of the hungry period, the southwestern and northwestern parts of the country will be the worst affected. Even the grain producing areas of Mashonaland provinces will have at least 21 to 39 % of the population in need of assistance (see January 2004 map).

Needs were also studied by food economy zones and results indicate that parts of Guruve and Centenary districts which are found in the Zambezi Valley are far worse off than those areas in the prime highveld agricultural zone. Also, in much of the southern half of the country the population in communal zones is markedly less food secure than the population in commercial agricultural zones (see map above).

1.4.2.4. Characteristics of Most Food Insecure Households

The assessment indicated that poor households are the most vulnerable to food insecurity. The following are characteristics of the food insecure;

- About 70% of the female-headed households require food aid (versus 58% of male-headed households).
- In poor households, where the head of the household died of chronic illness 10% are more likely to be in need of food aid.
- Households caring for orphans are 10% more likely to require food aid.
- The already stressed households have a higher chance of having orphans, 34% of households headed by elderly female are looking after orphans from other households either than their immediate families (versus 17% of non-elderly headed households).
- Most of the households with large families (73% of the large households with more than 7 family members) are in need of food aid. This is almost 20% more than small households.

1.5. Implications for Response

Government and the NGOs have a number of options suggested below to respond to the food insecurity conditions in the country;

1.5.1. Short Term Emergency Interventions

- Plans need to be put in place urgently for the procurement of 754,795 MT of cereals to fill in this cereal gap and to avoid logistical problems, such as those experienced last year.
- Maize availability was a major constraint on food security last year. Government needs to ensure that enough maize is available this year.
- The GMB needs to closely monitor the marketing of cereals in order to avoid profiteering and eventual shortages.
- Government should provide a conducive environment for the private sector in importing food and even consider the option of monetization of assistance.
- Government could increase the retail price of maize to about Z\$150 o without severely compromising people's access to maize and this move will reducing pressure on Government finances.

- At least 388,600 MT must be distributed as food aid, targeted to an estimated 4.4 million rural food insecure people.
- Support in the provision of inputs and infrastructure to A1 resettlement farmers should be strengthened to allow them to realize their full potential for the coming seasons.
- Emphasis should be put on appropriate targeting of food aid beneficiaries, such as HIV/AIDS affected households, poor households, female-headed households, through community-based approaches.
- Food for work should be encouraged for poor able-bodied individuals through NGOs.
- Public Works Programme should continue but an improved remuneration package commensurate with the price of maize should be considered.
- Provision of nutritious food to the chronically ill, through the community home - based care programme should be encouraged.

1.5.2. Recovery and Longer Term Intervention

- Land should be identified for redistribution to landless families, in particular in cases where the head of the household is unemployed.
- The Government's current efforts to curb the economic decline should be enhanced with particular emphasis on reducing inflation and budget deficit.
- Interventions with longer-term impact, such as school and child supplementary feeding and agricultural recovery should be enhanced.
- Livestock destocking and/or restocking, depending on the situation, should be considered in the southern parts of the country, while measures are put in place to control diseases.
- Timely provision of seeds and other agricultural inputs should be planned for 2003/04 production season to enhance future food security.
- Response to households' non-food needs, in particular those affected by HIV/AIDS, should be put in place as they are an essential part of food security and community safety nets.
- Targeting under safety nets programmes, such as BEAM, should be extended to increase coverage of all targeted children.
- Basic services such as healthcare and HIV/AIDS testing should be made accessible to all communities at no or minimal cost.
- Monitoring studies coordinated by ZimVAC should be planned and carried out during the next few months to ensure that changes in livelihoods are captured.
- Urban vulnerability assessments coordinated by ZimVAC should be carried out urgently. There is a lack of current information on urban needs.

2. INTRODUCTION

The August 2002 census, estimated the Zimbabwe's population to be 11.6 million people (Central Statistical Office). Zimbabwe population has been declining in recent years. The growth rate for the last census in 1992 was 3.1% compared to 1.2% in the 2002 census. Population growth in rural areas is the least, estimated at 0.8 % compared to the urban growth rate of 2.1%. The household size has slightly decreased from 4.76 in 1992 to 4.4 in 2002. The general slow down in the growth rate of the Zimbabwe population could be attributed to increased deaths from HIV/AIDS (with prevalence estimated at 34%) , increased permanent and temporary migration of Zimbabweans as it was estimated that over 2 million people could be living outside the country, and, the success of family planning programs

Zimbabwe is 39,079,000 hectares in extent, of which 28.2 % of the land or 11,02,000 ha was commercial farming land before the 2000 land reform, and communal areas occupy 41.8 % of the land. Zimbabwe's economy is generally agro based. In an effort to reduce poverty, promote food security and correct the pre-colonial period inequitable distribution of land, the Government in 2000 embarked on an accelerated land redistribution program under the fast track resettlement program.

This assessment covered the rural areas (the communal, old resettlement, small scale commercial, newly resettlement A1 and farm workers) and was intended to review the national and sub-national cereal production levels, impact on food security for the 2002/03 marketing year as well as how people coped during this same period. The study also made estimations of the food supply situation for the 2003/04 using a combination of secondary data at national level and primary data gathered at household level adjusted for communities recent experience with food aid.

3. METHODOLOGY

3.1. Analytical Framework¹

In March 2003, the SADC Regional VAC adopted a "livelihoods-based vulnerability analysis" (LBVA) framework, based on household surveys and focus group discussions. A livelihood can be defined as the sum of ways in which people make a living. Vulnerability refers to the level of exposure of a household or community to particular shocks (external vulnerability) and their capacity to cope with that shock (internal vulnerability). A comprehensive analysis of livelihoods must cover a wide range of issues, including food, water, shelter, health (including HIV/AIDS), education, protection etc. The main characteristics of the approach are:

- Analysis disaggregated by livelihood zone (LZ) and by socio-economic or wealth group. Livelihood zones are the geographical units of analysis, while the use of wealth groups acknowledges that different people have differing levels of access to assets and income and that these do not necessarily balance each other out within any given area. For Zimbabwe, the livelihood zones used were those identified in a re-zoning exercise conducted in March 2003 by the ZimVAC, and described further in section 4 below. Further disaggregation is carried out where applicable by

¹ This section draws heavily on "A Comparison of Emergency and Baseline Vulnerability Assessments", Mark Lawrence, 2003.

demographic characteristics, for example to examine the ability of households affected by HIV/AIDS to access food and income, compared to unaffected households.

- The focus is on how households access food, earn income and their expenditure patterns. The approach acknowledges that access to food is not exclusively related to food production or availability. By assessing access to income in addition to food, the approach also enables us to understand access to services such as healthcare and education.
- Quantitative analysis. This is necessary to cross-check information and ensure that the results that emerge from the data are internally consistent. It also enables us to assess the relative contributions of various sources to the total amount of food and income, and therefore to estimate the overall effects of various shocks.
- Analysis of baseline access as a means of assessing vulnerability. A benchmark is needed with which to compare the likely changes in access to food and income as a result of actual or predicted problems. Often, LBVA uses a “normal year” analysis. For Zimbabwe, it was decided to use the last marketing year (April 2002 – March 2003) as the baseline, while acknowledging that this was a far from a normal year. Subsequently, changes in each source of food and income in the next 12 months are estimated or actual figures are used (e.g. for the current harvest) where those are available. Further details of how these estimates were derived for each source of food and income are presented in Appendix C. The use of 2002/03 as a baseline year also enables us to gain a better understanding of how households actually coped over the last year, and how food insecurity was related to HIV/AIDS and access to healthcare and education.

3.2. Data Collection and Analysis

3.2.1. Data Collection Methodology

The sampling frame for the April 2003 survey was determined by the Central Statistical Office (CSO), using a random sampling technique based on “enumeration areas”² (EAs). The August 2002 population census data was used for drawing out a sample proportional to population size by province and by rural sector (i.e. communal, old and new resettlement, large-scale commercial farms and small-scale commercial farms). To ensure coverage of all Livelihood Zones, a minimum of 2 sites per zone were selected. A total of 150 sites were sampled. The distribution of sites by sector and by province is indicated in Table 1 and Figure 1 below.

² An enumeration area is a geographical unit within a ward covering one or more villages, which are comprised of 80 to 120 households

Table 1: Proportional Sampling of EAs by Province by Sector: Number of sites

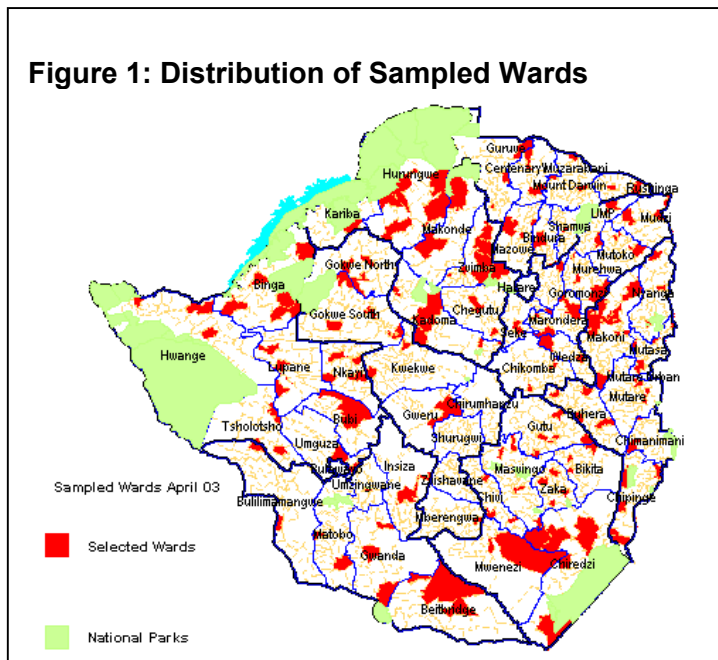
Province	Rural Population August 2002	Communal land	Commercial Farms & Fast Track Resettlement	Small Scale Commercial Area	Old Resettlement	Total No of Sites	No. of Livelihood Zones
Manicaland	1,325,046	21	2	0	3	26	8
Mash Central	904,760	12	3	0	1	17	4
Mash East	1,004,146	15	2	1	1	19	4
Mash West	902,190	11	6	1	3	20	6
Mat North	601,987	19	1	0	1	22	8
Mat South	586,733	10	1	0	1	12	4
Midlands	1,121,539	10	1	0	0	11	5
Masvingo	1,194,926	19	1	1	3	24	4
Zimbabwe	7.641.327	116	17	3	14	150	

Within each EA (Figure 1), one village was randomly selected for inclusion in the survey. Households within each village were randomly sampled using the transect walk technique³. It was intended to sample a minimum of 16 households from each of the 150 sites, giving a total sample size of 2,400 households. However, time constraints prevented some ZimVAC teams from completing the target number of interviews. In addition some large-scale, small-scale and A2 farmers were excluded from the analysis, as the sample for these groups was too small to draw conclusions. As a result, a total of 2,257 interviews were used for the final analysis.

3.2.2. Survey Instruments and Logistics

The assessment's instruments⁴ consisted of (i) a household questionnaire covering household demographics, asset ownership, food availability and access for 2002/03 and 2003/04, agricultural inputs, consumption patterns, coping mechanisms, health and education; and (ii) a community questionnaire looking at food availability, market prices and coping strategies.

The questionnaires were administered by 15 teams of 4 researchers each representing Government, NGOs and the UN⁵ agencies. Each team used Personal Digital Assistants (PDAs) to record data from household interviews, which reduced the time required for data entry.



³ See Appendix D for details of the sampling methodology.

⁴ Copies of the Household- and Community-level survey instruments are reproduced in Appendix A and B.

⁵ See Appendix F for the list of participants.

3.2.3. Data Analysis⁶

Data analysis was undertaken using SPSS software. To determine food security conditions for 2002/03 and 2003/04 consumption years, data was analyzed by province, agricultural sector and livelihood zone. Linkages between food security and health, education and HIV/AIDS were also explored, with technical support from UNAIDS, UNICEF, WHO and the SADC RVAC. Extrapolation of the results to district and national level was then done by linking Livelihood Zone data with CSO August 2002 ward-level census data. The community interviews were analyzed separately, and then linked to household data to provide a complete picture.

⁶ See Appendix C for the details of how analysis was done.

4. LIVELIHOOD ZONE MAP AND DESCRIPTION

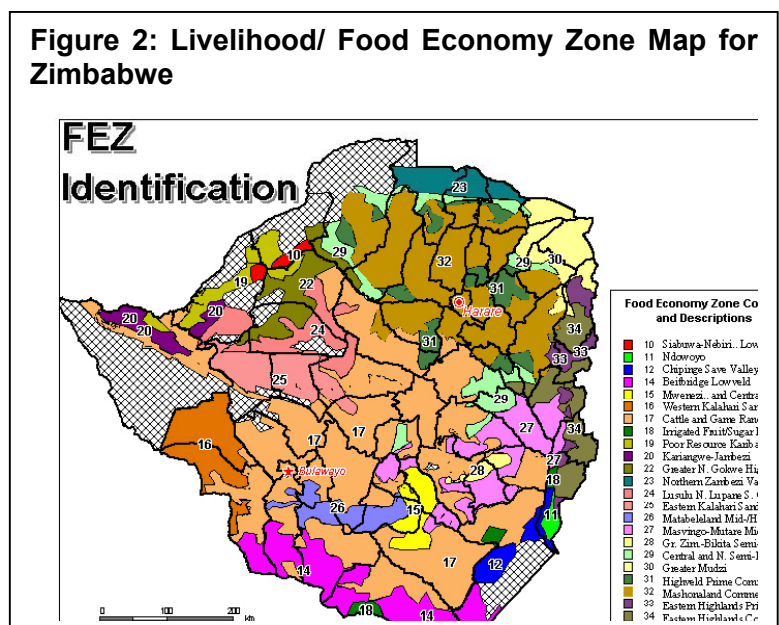
Zimbabwe's Livelihood Zones were first delineated and described by Save the Children as part of the "Risk Map" project in 1996. The 1995/96 report divided the country into 26 livelihood zones. The delineation of the zones was updated in March 2003 by the ZimVAC to take into account socio-economic changes, in particular the "Fast Track" Land Reform Programme undertaken by the Government from 2000 to 2002. In the delineation, livelihood zones which were formerly grouped together as large-scale commercial farming areas are now much more complex, comprising varying sizes of commercial farms inter-mixed with small family subsistence farms. The commercial farm area affected by the Fast-track Resettlement Programme was substantially large, i.e. roughly 11 million hectares (or 33% of the total agricultural land in Zimbabwe).

Broadly speaking, the zones are based on land classification (communal or subsistence farming, old commercial farming, newly resettled farms, i.e. A1 (communal resettlement) or A2 (self contained farms) Model, small-scale commercial farming, irrigated estates or old resettlement area). In commercial farming areas, livelihoods are based on farming employment. In communal and resettlement areas, livelihoods are more varied and based on different combinations of food and cash crop production, and livestock holdings. In the new resettlement areas, most of the A2 or self-contained farms have been rezoned as commercial farming areas where livelihoods are based on wages; the Fast Track resettlement model A1 has been generally classified with the neighbouring communal areas, as livelihoods are assumed to be similar. Agro-ecological zones are also factored in when determining the livelihood zones. Zimbabwe's agro-ecological zones are numbered from I to V, with zones I and II being prime arable land, zones IV and V having low rainfall and being more suited to extensive farming and livestock, and zone III being an intermediate area. Livestock holdings, however, are also related to wealth and therefore are not strongly correlated with agro-ecological conditions.

Combining these factors and considering livestock, cereal crops and cash crops sales, sources of income and others, Zimbabwe was re-delineated into 24 livelihood zones (Figure 2 below).

The poorest zones are found in peripheral parts of the country in the north-east (Greater Mudzi), extreme north and west (Zambezi/ Kariba Valley), and south of the country. Elsewhere, agricultural production and income are normally highest in the highveld parts of the Mashonaland Provinces, and parts of northern Manicaland. These areas are also home to the highest concentration of commercial farms and Fast Track resettlement communities. In the Matabeleland Provinces and in southern parts of Midlands and Masvingo provinces, levels of crop production decline, and livestock become more important.

Figure 2: Livelihood/ Food Economy Zone Map for Zimbabwe



5. REVIEW OF NATIONAL AND SUB-NATIONAL LIVELIHOOD PATTERNS AND FOOD SECURITY SITUATION FOR 2002/03

5.1. Review of 2002/03 Crop Production and Food Security

Cereal production in 2001/02 for the 2002/03 marketing year was comparable to some of the lowest production levels in the 1990s. A total of 711,000 MT of cereals was produced of which 498,540 MT was summer maize, 175,000 MT wheat, 37,300 MT sorghum and millet; and about 10,000 MT was early summer and winter maize. Considering low carryover stocks of 184,000 MT from an equally poor 2000/01 production season, the total gap for the 2002/03 marketing year to be covered by imports was about 1.4 million MT.

To fill that gap, at least 1.323 million MT of cereal was imported between 1 April 2002 and 31 March 2003. The Government moved in the bulk of the maize. Of these imports, 72 percent were brought in through the Grain Marketing Board (GMB), 25% by the World Food Programme (WFP); and NGOs and private sector parallel pipelines imported the remainder. This gave an end of year marketing surplus of 14,204 MT of cereals. However, not all of the imported grain was consumed by the end of the marketing year. As a result, the country ended up with estimated carry-over stocks of 127,940 MT. Of this amount, about 61,966 MT were GMB stocks and the remaining 62,000 MT was food aid (Table 2).

Table 2: Zimbabwe Cereal Balance as at the end of April 2003

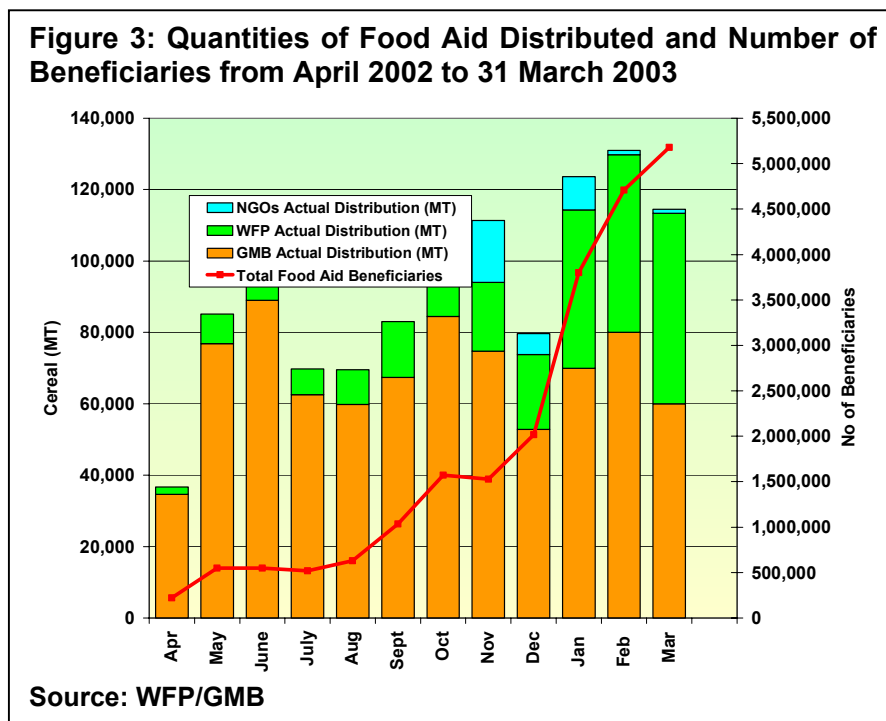
	Maize	Millets	Wheat	Rice	All Grain
A. Potential Domestic Availability	515,581	38,300	342,232	7,566	903,679
B. Annual Requirements (human and livestock consumption)	1,753,600	174,000	336,400	13,697	2,277,697
C. Cross Substitution	(135,700)	135,700	0	0	0
D. Domestic Balance (DB) (A minus B)	(1,238,019)	(135,700)	5,832	(6,131)	(1,374,018)
E. Total Imports	1,323,494	0	49,728	0	1,373,222
F. Stocks available as at end of March 2003	91,775	200	28,400	7,566	127,941
G. Closing Balance after Imports (March 2003)	(50,225)	15,000	55,560	(6,131)	14,204
Assumptions	Est. mid-year population	11,600,000	11,600,000	11,600,000	11,600,000
	Est. Human Annual Consumption Requirement. (Kgs/Person)	121	15	29	166

The total amount of maize reported to have been available during the marketing year was in excess of human consumption requirements. However, as indicated in the December 2002 ZimVAC assessment report, there is still a discrepancy between the reported availability of grain at the national level and reported and observed availability at community level. Possible explanations for this discrepancy could be that there was an error in the reported quantities imported, or that the surplus maize may have been used in the livestock and brewing industries, or that it may have been exported.

5.2. Food Aid Distributions in 2002/03

Data provided by WFP indicates that, at the peak of food aid distributions, i.e. in March 2003, a total of about 5.2 million people – all in rural areas and almost all in communal areas - benefited from WFP and NGO food assistance (general rations). This accounts for about 88% of the 5.9 million rural people identified as being in need of food aid in the ZimVAC assessment conducted in August 2002. However, as indicated in Figure 3 below, the food aid caseload was far below the above-mentioned figure for most of the year, with 1 million beneficiaries being reached by September 2002, 2 million by December and 3.8 million by January 2003. Under general food rations programmes, a total of 290,412 MT of cereals was distributed between April 2002 and March 2003 - of which 261,049 MT was from the WFP pipeline, and the remainder from complementary NGO pipelines. Distributions covered 18 districts in April 2002, and had expanded to all 57 districts by March 2003.

The number of people estimated to be in need of food aid as per the August and December ZimVAC assessments was based on a total population estimate of 13.6 million people – a figure which was commonly used prior to the August 2002 Census. The results of the 2002 Census, however, indicated an official population estimate of 11.7 million. Had the ZimVAC based its analysis on this population figure, the number of people in need of food aid - at the end of the marketing year - would have been 4.65 million in communal areas and 0.43 million in commercial farming areas. The number of potential beneficiaries would suggest that food aid was over-supplied to communal areas by the end of the marketing year. However, it should be highlighted that grain availability on the market was very limited. Thus, even households who had sufficient income to purchase their own food found themselves with no other means of accessing grain than through food aid programmes.



5.3. Commercial GMB Maize Distributions in 2002/03

The Government, through the GMB, distributed the bulk of the maize grain to meet the 2002/03 marketing year food deficits. The GMB distributed 75% of the 1.2 million total cereals in the country, while WFP and NGOs distributed about 25% of the grain. Most of the GMB grain was allocated to Harare (29%) and Matabeleland North Province, including Bulawayo (27% of total quantities allocated). The least allocations went to Matabeleland South (3%) as the province benefited most from food aid.

When all pipelines are considered (GMB, NGOs and WFP pipeline), most of the grain was allocated to Matabeleland North province, including Bulawayo (23% or 196 kgs/person) followed by Harare (22% or 134 kgs/person) and Masvingo province (i.e. 1.5% or 101 kgs per person). The smallest amount of maize was allocated to Mashonaland Central and West provinces, which coincidentally had better harvests in 2002 (Table 3 below).

Table 3: Cereal Distribution by Province by Source in 2002/03 Marketing Year

Province	Cereals Distribution in MT				% Distributed by Source			% Allocation by Province	Population Number	Allocation Kgs/Capita
	GMB	NGOs	WFP	Total	GMB	NGOs	WFP			
Harare	254,639	981		255,620	99.6	0.4	0.0	21.9	1,903,510	134.3
Manicaland	65,146	4,674	40,803	110,623	58.9	4.2	36.9	9.5	1,566,889	70.6
Mash Central	30,442	1,757	29,016	61,215	49.7	2.9	47.4	5.3	998,265	61.3
Mash East	58,792	893	31,770	91,455	64.3	1.0	34.7	7.9	1,125,355	81.3
Mash West	59,270	2,211	13,470	74,951	79.1	3.0	18.0	6.4	1,222,583	61.3
Masvingo	60,246	6,598	66,677	133,521	45.1	4.9	49.9	11.5	1,318,705	101.3
Mat North	239,773	6,390	24,570	270,733	88.6	2.4	9.1	23.2	1,378,146	196.4
Mat South	30,067	3,444	23,045	56,556	53.2	6.1	40.7	4.9	654,879	86.4
Midlands	75,932	2,415	31,698	110,045	69.0	2.2	28.8	9.4	1,466,331	75.0
Grand Total	874,307	29,363	261,049	1,164,719	75.1	2.5	22.4	100.0	11,634,663	100.1

Source: GMB, WFP, NGOs

5.4. Macroeconomic Situation, 2002-03

Over the last 12 months, the economic decline in Zimbabwe that began in 1997 continued and gathered pace. The cumulative decline in GDP over the last three years reached 24%⁶, and the level of human development in the country has fallen back to the level of the mid-1970s⁷. The macroeconomic situation has a bearing on livelihoods in four broad respects, influencing as it does:

- (a) the levels of employment and formal income
- (b) the prices of goods and services, and therefore real income
- (c) the ability of the government to pay for essential imports such as grain, fuel and electricity
- (d) the availability and quality of public service provision, especially healthcare, education and water.

⁶ Sources: Economist Intelligence Unit, Zimbabwe Country Profile 2002; Minister of Finance, Budget. Presentation, November 2003.

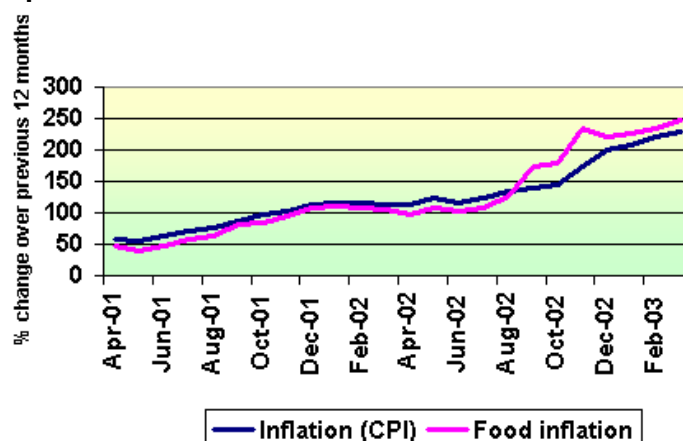
⁷ Source: UNDP, Human Development Report 2002.

5.4.1. Inflation and Unemployment

Inflation for the 12 months ending in March 2003 reached 228%, with inflation for food items alone reaching 247.9%⁸. These rates have increased substantially since the last VAC assessment (December 2002).

The inflation rate has the effect of substantially eroding households' purchasing power, particularly in sectors where wage rates are rigid and re-negotiated infrequently. As a result of the squeeze on income, particularly in a year when less food could be sourced from harvests, many households purchased a less diverse basket of food and non-food items, and accessed fewer services.

Figure 4: Inflation (CPI and Food Only), Zimbabwe, Apr01 - Mar03



The Government put in measures to control the impact of the inflation on consumers by instituting price controls on basic goods and services. However, some of these commodities were in short supply and were found on the parallel markets at much higher prices than they were before the price controls.

With nominal interest rates of around 60%, there was a negative real interest rate by the end of March of -168%. This has discouraged savings, and encouraged those with cash instead to invest in high value luxury goods, property, and the stock market, and to engage in speculative borrowing.

Formal sector employment levels continued to drop over the last year, with company closures and the resettlement of most large-scale commercial farms being responsible for most job losses.

5.4.2. Foreign Exchange and Food Imports

Until 1 st March 2003, the Government maintained the fixed exchange rate of Z\$55:US\$1 which had been in place since October 2000. However, declining foreign exchange revenues from key sectors such as tobacco and other commercial agriculture, mining, manufacturing and tourism, combined with sustained or increased demand for imports such as food, fuel, electricity and inputs for manufacturing and mining have resulted in shortages of foreign exchange. At its weakest point in November 2002, the parallel exchange rate dropped to over US\$1:Z\$2,000, but since rose to around US\$1:Z\$1,350 in April 2003. The government attempted to capture foreign exchange revenues by requiring exporters to hand over 50% of all foreign exchange revenues to the Reserve Bank of Zimbabwe at the official exchange rate. However the need for exporters to source the foreign currency for imported inputs at 20 to 35 times that cost on the parallel market created some serious viability problems.

⁸ Source: Central Statistical Office.

As part of its National Economic Recovery Programme (NERP), the government effectively devalued the currency in March 2003 to a rate of US\$1:Z\$824. So far this does not appear to have significantly increased foreign exchange receipts. There are still shortages of essential imported goods such as food and fuel, and increasingly of electricity.

5.4.3. Government Finances and the Budget Deficit

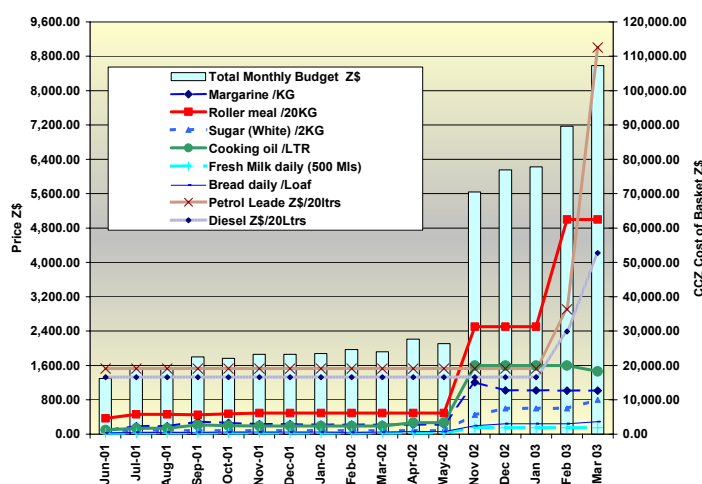
The Government's budget deficit was equivalent to 14.1% of GDP in 2002,⁹ as additional spending on heavily subsidized cereal imports and agricultural inputs to support the land reform programme added to existing high levels of government expenditure. In addition to the shortages of cereals on the market, the government's difficulty in adequately funding the provision of basic services such as education and healthcare became increasingly apparent during the year. Problems with infrastructure, supplies (including essential drugs and outreach services), and staffing levels in the public sector have had knock-on effects on household livelihoods and quality of life.

Government has largely financed its spending through a combination of domestic borrowing and increased money supply. Domestic and foreign debt and arrears now stand at US\$5.9 billion, or 227% of GDP. The long-term cost of that borrowing is a shadow that will hang over the economy for a long time.

5.5. Market Price Performance

In a bid to protect consumers in October 2001, the Government gazetted price controls for basic consumer goods such as cooking oil, sugar, bread and wheat flour, maize and maize meal, washing soap and toothpaste, as well as agricultural inputs such as maize seed and fertilizers. The Government froze wage increases in late 2002, but later in April 2003, gazetted a threefold increase in the minimum wage for agricultural workers and for commerce and industry following 90% and 350% increase in the price of fuel.

Figure 5: Comparison of Retail Prices of Basic Commodities



Source: Consumer Council of Zimbabwe

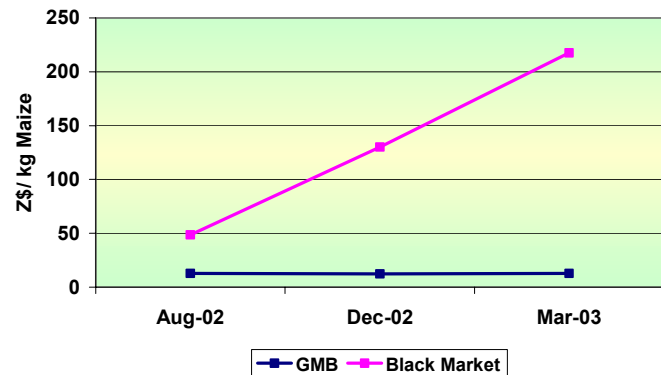
Price controls have led to a general shortage of commodities on the market and increased prices for most commodities (Figure 5).

⁹ Source: Minister of Finance, Budget Presentation, November 2002.

There have been wide variations between the official controlled price and the parallel market price for the main staple food - maize. The parallel market maize price has risen from being 4 times higher than the controlled price in August, to 10 times higher in December, and 20 times higher in March (Figure 6 below).

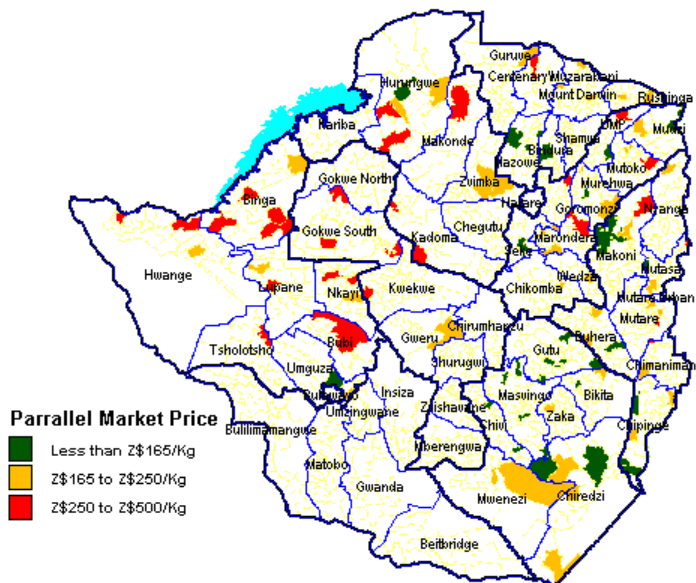
In the April 2003 ZimVAC survey, the average price for a 50kg bag of maize from the GMB was found to be Z\$634, or Z\$12.68 per kg. The price for maize from the parallel market was on average Z\$217.50/kg. There were also wide variations among parallel market prices across the country, with the lowest price being Z\$148/kg and the highest being Z\$450/kg. Figure 7 below indicates differences in parallel market maize prices across the country as of April 2003.

Figure 6: National Average Price of Maize (Z\$/kg), August 2002 - March 2003 (source: ZimVAC)



Source: ZimVac

Figure 7: Parallel Market Maize Prices by Ward for April 2003



Source: ZimVac

5.6. IMPACT OF HIV/AIDS ON FOOD SECURITY

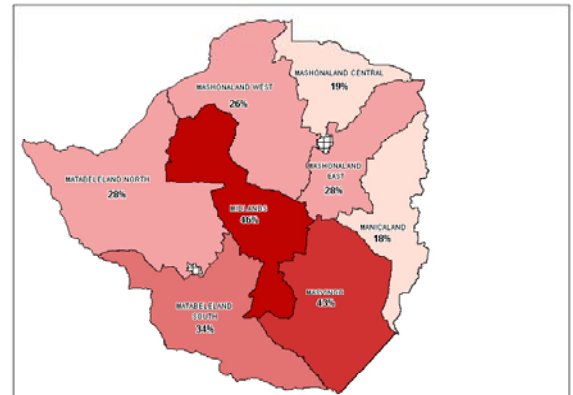
Zimbabwe has the third highest HIV/AIDS rates in the whole world. According to UNAIDS (2001), Zimbabwe has roughly 2,000,000 adults living with AIDS. This accounts for almost 34% of the adult population. There are reported to be 780,000 orphaned children in the country as a result of AIDS. During 2001, almost 200,000 deaths were thought to have occurred due to AIDS (UNAIDS 2002). The bare statistics on HIV/AIDS do not reflect the wider impact it has on societies, i.e. the disastrous consequences for those left living, keeping in mind that there are many more affected than infected people.

IFAD has suggested that the HIV epidemic is disproportionately affecting agriculture compared to other sectors (2001). De Waal and Tumushabe argue that this is not only because HIV rates are higher among workers in the agricultural sector, but also because the structure of the agricultural sector, especially the smallholder sub-sector, is such that it is much less able to absorb the impacts of the human resource losses associated with the epidemic (2003).

De Waal and Tumushabe have also argued that, combined with drought and the food crisis, HIV/AIDS is creating a 'new variant famine' in southern Africa. The 'new variant famine' hypothesis posits that southern Africa is facing a new kind of acute food crisis in which there is no expectation of a return to either sustainable livelihoods or a demographic equilibrium.

The results of the most recent antenatal surveillance survey conducted in Zimbabwe during 2001 indicate that 30% percent of all pregnant Zimbabwean women are HIV-positive. HIV infection levels among pregnant women attending antenatal clinics differ among provinces, ranging from an estimated 19 % in Mashonaland Central to 46 % in the Midlands province (Figure 8). In addition, prevalence levels differ according to sector of residence. Indeed, HIV prevalence rates were generally higher in farming and resettlement areas (approximately 40 %) compared to communal areas (31 %) (Ministry of Health, 2001).

Figure 8: HIV/AIDS Prevalence in Zimbabwe by Province



Source: Ministry of Health and Child Welfare. Antenatal Clinic Surveillance Survey, 2001

6. HOUSEHOLD FOOD SECURITY: REVIEW OF 2002/03 MARKETING YEAR

6.1. Household Food Security: Review of 2002/03 Marketing Year

The VAC Assessment revealed that the 2002/03 marketing year was without doubt a difficult one for much of the population across the country. The main problems faced by the communities included:

a) Drought: This resulted in lower overall agricultural production, reducing food availability from households' own cereal production, decreasing access to food due to reduced income from cash crops, livestock and casual labouring opportunities; and thereby negatively affecting households' food security.

b) Limited maize availability: Despite efforts (by Government, the UN and the NGO community) to import large quantities, maize was generally unavailable. As a result, households resorted to harmful coping strategies, such as spending days without eating and engaging in prostitution.

c) Increased Commodity prices: In a bid to protect consumers, the Government gazetted controlled retail prices for basic food items. However, prices continued to increase on the parallel markets while some households depended on expensive substitutes such as bread and rice, which reduced the real value of livestock and labour, particularly in remote parts of the country.

d) Unemployment: The closure and reduced capacity of industries in urban areas resulted in decreased remittances flow to rural areas. In rural areas, unemployment mainly took the form of retrenchment of commercial farm workers as a result of the Land Reform Programme.

e) HIV/AIDS: HIV/AIDS negatively impacted on household labour and ability to engage in productive activities. In addition, households were faced with the additional burden of care and healthcare costs for people living with HIV/AIDS, funeral costs and the necessity to care for orphans. All of this resulted in increased household vulnerability to the other factors mentioned above.

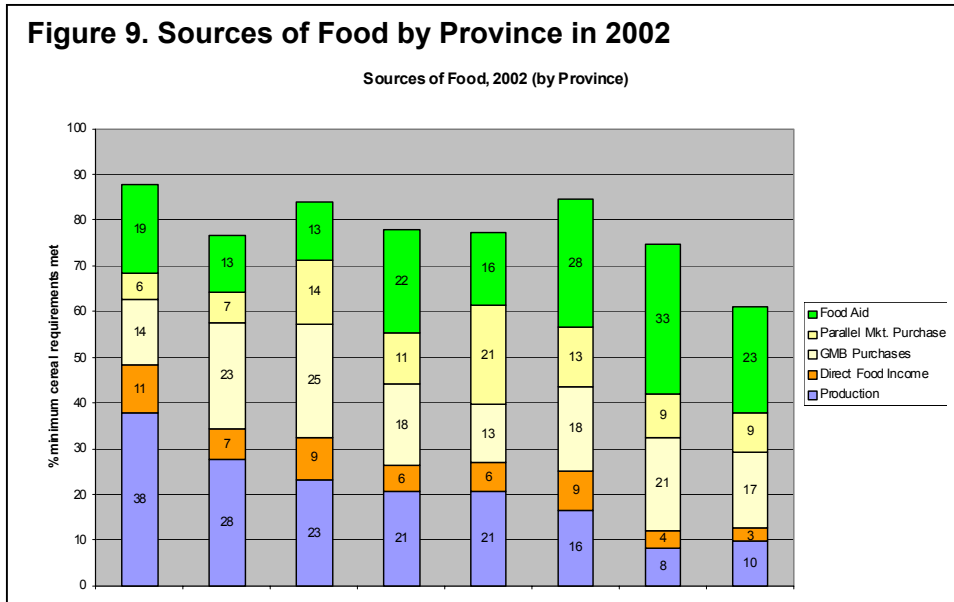
6.2. Access to Food

6.2.1. Overall Food Access in 2002/03

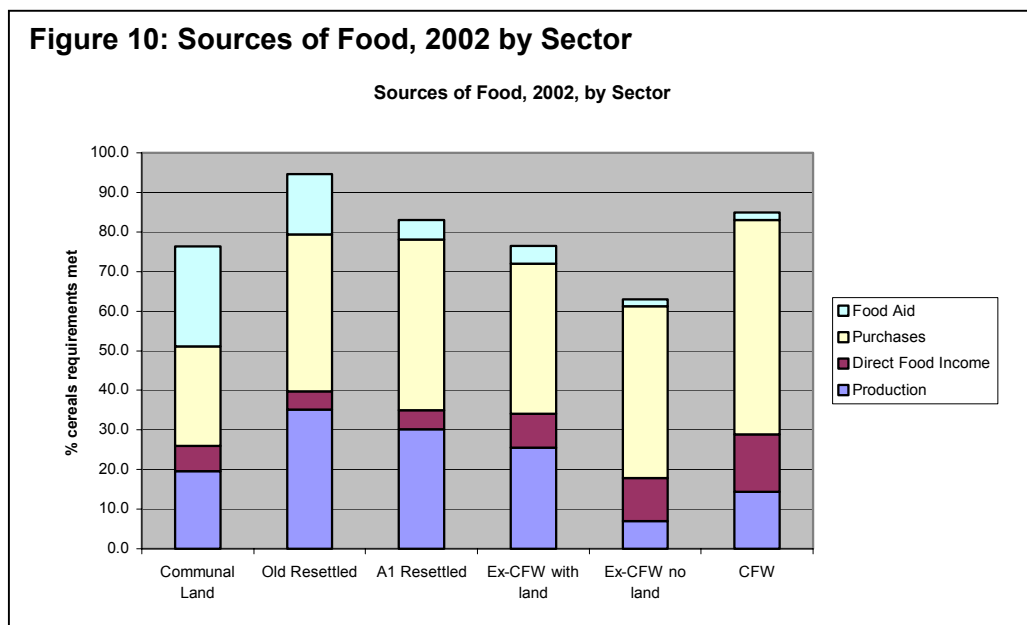
Overall, last year, 76.2% of the rural population did not meet all of their cereal requirements. However, through a variety of coping mechanisms and the provision of substantial amounts of food aid, enough food was accessed to avert a serious crisis. Nonetheless, the adoption of coping strategies such as cutting back spending on healthcare, education and agricultural inputs and selling livestock in order to purchase food, resulted in substantial costs to livelihoods, thus affecting the potential for recovery.

As shown in Figure 9 below, all provinces met more than 60% of their cereal requirements. Overall levels of cereal access varied to a limited extent across the country, with the exception of Matabeleland North. This is consistent with indications

from the 2003 National Nutrition Survey that acute malnutrition rates were quite similar across provinces, and with the expectation that people would try to maintain food consumption even if that involved high costs. It should be noted however that the means of accessing cereals varied substantially from one province to the other.



More pronounced differences in overall food access are seen by sector. Old resettlement areas were the most food secure and had the highest levels of production. Communal farmers, A1 resettled farmers, employed commercial farm-workers, and unemployed farm workers with access to land were able to access roughly the same amount of cereals. By far the worst-off group was unemployed farm workers without access to land (Figure 10).



The pattern of access to cereals follows a clear trend geographically and sectorally. Production was highest in the northern Mashonaland provinces, where it met between 22% and 35% of needs, and was lowest in the Matabeleland provinces (around 10%). The difference between areas would be typical even in a normal year, but last year the actual levels of production were substantially lower than normal, mainly due to the drought. Production was highest in resettlement areas, irrespective of the status of those doing the farming (old resettled, A1 or ex-farm workers with land), but was lower on average in communal areas. Within communal areas, as would be expected, the contribution of production was consistently lower among the less food secure than among the more food secure (i.e. there was a close link between production levels and overall food security). As their access to land is limited or non-existent, employed farm workers and those retrenched without access to land had the lowest levels of production.

Direct sources of food, such as casual laboring (for food) and gifts, provided a relatively small contribution to total cereal access last year, typically providing less than 10% of needs. The amounts were marginally higher for commercial farm workers and ex-farm workers.

6.2.2. Household Food Aid Distribution in 2002/03

Food aid provision varied greatly across provinces and sectors. The lowest levels of food aid were in Mashonaland East and West and Midlands provinces, where general rations and supplementary feeding programmes started only in the last few months of the marketing year. In Mashonaland Central, quantities of food aid distributed appeared higher because of the long-standing programmes in the northern Zambezi Valley. Manicaland also had a mixed picture, with greater amounts of aid being provided in southern parts of the province (especially Chipinge district) than in northern parts. Higher levels of food aid were provided in Masvingo and the Matabeleland Provinces. Many districts in these provinces were the first in the current crisis to have both general rations and supplementary feeding programmes set up, and have had high percentages of the population targeted (even in excess of the total population estimated to be in need), in some cases since as early as September 2001.

By sector, there is a sharply pronounced difference between food aid levels in communal and old resettlement areas with communal farmers receiving on average 25% of their needs as opposed to 15% in old resettlement areas. The commercial farming and new “Fast-Track” resettlement areas received only limited amount of supplementary feeding and some general rations through a parallel pipeline by the Farm Community Trust of Zimbabwe, and were excluded from the wider WFP programmes. The reasons behind this are varied, but include a lack of adequate information on their vulnerability¹⁰. The levels of access of former farm workers to food aid are significantly lower than that of other groups, and must be of both short-term and long-term concern.

¹⁰ Clear indications of the potential vulnerability of retrenched farmworkers by virtue of their livelihood patterns have been provided by FCTZ (2001) and SC-UK (2002), while the likely needs of this group were also highlighted in the August and December ZimVAC assessments.

6.2.3. Effects of Markets on Food Security

Purchased cereals make up the balance of food access. The ability of any household to purchase cereals is determined by the availability of food on the market, its price, and the household's income level. The first of these has already been discussed above (Section 5.5).

Livelihoods were substantially affected by the source of the grain. For those who could access grain mainly from the parallel market, the amount of food afforded was much lower, and the amount of money that had to be diverted from other necessary expenses (education, healthcare, agricultural inputs, etc.) also increased. Table 4a and 4b below indicate the percentage of total maize purchased last year that came from the GMB or shops at controlled prices and from the parallel market.

Table 4a: Source of Maize by Province **Table 4b. Source of Maize by Sector**

Province	% GMB	% Parallel Market
Manicaland	77	23
Mash. Central	70	30
Mash. East	64	36
Mash. West	61	39
Masvingo	58	42
Mat. North	65	35
Mat. South	68	32
Midlands	37	63
Total	64	36

Sector	% GMB	% Parallel Market
A1 Resettled	63	37
CFW	32	68
Communal Land	67	33
Ex-CFW no land	37	63
Ex-CFW with land	75	25
Old Resettled	83	17
Total	64	36

The proportion of maize bought from the GMB was very much lower in Midlands province than in the rest of the country, while Manicaland had the highest proportion of maize purchased from the GMB, i.e. 77% (Table 4a above). Throughout the country, households reported buying on average between 100kg and 150kg from the GMB over the last 12 months, and between 50kg and 200kg on the parallel market. By sector, communal farmers purchased in total 200kg on average, while all other groups purchased between 300kg and 350kg. Farm-workers and ex-farm-workers with no land had to buy much higher percentages of their maize from the parallel market than other groups, suggesting that GMB deliveries to these sectors were inadequate.

Through the current survey it has been possible to assess total income and therefore total purchasing power over the last year. A review of reported income levels confirms that a lack of food on the market was a major cause of food insecurity last year. Because there is such a massive divergence between controlled and parallel market prices for maize, it is necessary to review two alternative scenarios, i.e. how much could have been bought if grain had been freely available at either price.

Table 5 below indicates the percentage of the total sample who could have accessed 100% and 75% of their cereal needs under the two scenarios, and compares with the percentage who actually did meet their needs.

Table 5: Percent of Population meeting cereal needs

Price & Availability Scenario	<100% Needs Met	<75% Needs Met
Actual Needs Met	23.8	42.9
If Available @ GMB Price	74.6	81.2
If Available @ Black Market	32.9	45.9

It is not surprising that at the heavily subsidized GMB price, almost 75% of the rural population would have been food secure had adequate supplies of grain been available at that price. However, it is also important to note that, compared to the percentage of the population who did meet their needs, an additional 9% of the population would have met their minimum needs even if that grain had only been available at the much higher parallel market price. This suggests first that a high priority must be given to enabling adequate supplies of food to be put on the market, but also that a more efficient use of aid resources could be made through consideration of market-based interventions (e.g. monetization).

6.2.4. Effect of Incomes on Food Security in 2002/03

6.2.4.1. Geographical Distribution

In 2002/03, methods of earning income by households varied more by sector than by geographical area. On average, households in Mashonaland Central and East and Midlands provinces earned the most income. The major source of income in these provinces was the sale of cash crops (such as cotton, tobacco and vegetables). Gold panning was also significantly higher in these provinces in absolute terms than in the rest of the country.

For the remaining provinces, incomes in the communal and resettlement areas were largely similar. However, relatively high incomes from formal employment among commercial farm workers and among a small proportion of other households in communal and A1 areas pushed up the average earnings for some provinces. In Mashonaland West, casual laboring was higher than in other provinces, reflecting the high numbers of farm workers and ex-farm-workers sampled in that area. Livestock sales were highest in Matabeleland South and Masvingo provinces, which would be expected considering that the land there is generally more suited to livestock than to crop production. However, livestock sales were extremely higher than normal in Matabeleland North, which would raise concerns about households' future coping capacity in this area.

Levels of gifts and remittances and of petty trade were generally similar across all provinces, but there was a notably high concentration in areas along the border with South Africa.

A 1 Resettlement

Income distribution by sector indicates that the highest incomes on average were earned in the A1 resettlement areas. The major source of income for the sector was crop and vegetable sales; there were also high levels of formal employment.

Farm workers

Employed commercial farm-workers had the next highest levels of income, with 69% of that income coming from formal employment, and the balance coming from casual labouring and petty trade (the latter two normally being carried out by the workers' wives). Ex-farm workers with access to land had much lower income than employed farm workers, but they still earned more than communal farmers. Their access to land enabled them last year to earn 37% of their income through crop and vegetable sales. Their biggest source of income (43%), however, was casual labouring (possibly either for commercial farmers or resettled farmers). Most of the balance income came from petty trading.

Ex-commercial farm workers without land, however, had very low incomes – only marginally above those of communal farmers. They earned 65% of their income from casual labouring (mainly on farms) with the balance coming from a variety of sources, including some formal employment, gold-panning and petty trade. The reliance of this group on casual labouring is one of the main reasons for their vulnerability. Indeed, last year the wage rate in equivalent cereal value for casual labouring dropped dramatically over the course of the year, from an average of 9.2kg per day's work in August, to only 3.2kg in March.

Communal and Old Resettlement areas

Communal and old resettled farmers had low levels of cash income. In a good agricultural year this would not indicate a problem, as their own crop production would make them less reliant on cash. However in a year of poor crop performance when more food must be purchased, their limited ability to earn cash incomes makes them more vulnerable.

In the communal areas there are very large income differences between the food secure and the most food insecure. The better off groups earned most of their money from formal employment, remittances and petty trade. Their incomes were consistently higher across the country than for other groups. In the northern districts of the country, higher crop and vegetable sales differentiated the wealthier group from the rest of the population. In Matabeleland North and South provinces, higher livestock sales differentiated the better off from the poor households.

Generally, the most food insecure in communal areas had substantially lower cash incomes than the food secure. These areas typically relied on government public works programmes, and the sale of small livestock, which yield very little in absolute terms. Their reliance on casual labour was substantially lower than for wealthier groups.

Table 6 summarises the percentages of total income in 2002/03 for each sector coming from each source. To avoid complications relating to inflation, total income is indicated in terms of its "Maize Equivalent" value, i.e. the quantity (in kgs) of maize that could have been purchased at prevailing parallel market prices with the cash earned.

Table 6: Percent Source of Income by Sector

Updated Sector Name	Formal Employment	Remittances	On-Farm Labour	Off-Farm Labour	Crop Sales	Veg Sales	Livestock Sales	Trade	Gold-Panning	Public Works	Total Maize Equivalent Income
Communal Land	22%	6%	3%	8%	10%	18%	10%	12%	8%	5%	341 kg
Old Resettled	42%	1%	1%	17%	0%	5%	9%	8%	15%	3%	426 kg
A1 Resettled	17%	3%	4%	9%	19%	25%	1%	14%	6%	1%	1170 kg
CFW	69%	0%	15%	3%	1%	4%	0%	7%	2%	0%	835 kg
Ex-CFW no land	12%	3%	56%	9%	0%	5%	0%	5%	10%	0%	396 kg
Ex-CFW with land	0%	1%	30%	13%	36%	1%	0%	17%	0%	1%	483 kg
Average	26%	4%	6%	8%	11%	17%	6%	11%	7%	3%	447 kg

6.2.4.2 Income from the Government Public Works Programme and Social Welfare

As part of its drought relief efforts, the Government of Zimbabwe implemented a Public Works programme. The programme enabled able-bodied people to earn up to Z\$1,500 per month through working on various community projects, and it was intended that the money then be used to purchase grain from the GMB. Those households without able-bodied members received the same amount of cash without having to work, through the Social Welfare system. At the national level, the income from this source accounted for on average 5% of total income earned by households over the year. By province, the value ranged from 2% of total income in Midlands, Matabeleland South and Mashonaland Central, to 8% in Matabeleland North and 9% in Masvingo.

Table 7: Cash Earned per Household per Province

Province	Average Cash (Z\$) earned	Average Kgs Maize-Equivalent Income earned (at GMB prices)
Mashonaland East	Z\$ 5,211	411 kg
Matabeleland North	Z\$ 5,097	402 kg
Masvingo	Z\$ 5,085	401 kg
Manicaland	Z\$ 3,462	273 kg
Mashonaland Central	Z\$ 1,712	135 kg
Matabeleland South	Z\$ 1,522	120 kg
Mashonaland West	Z\$ 1,458	115 kg
Midlands	Z\$ 1,129	89 kg
National Average	Z\$ 3,335	263 kg

Table 7 indicates the average amount of cash earned per household in 2002/03 from Public Works, and the amount of maize that could have been purchased using the income earned if maize had been available at GMB prices. There are wide variations by province, with the highest amounts being earned in Mashonaland East, Matabeleland North and Masvingo (over Z\$5,000 on average per household).

6.3. Coping Strategies Used in 2002/03

In the household survey, respondents were asked whether their households had engaged in any of 18 different coping strategies over the last 3 months (i.e. between January and March). The household's degree of coping is determined both by the need to make ends meet and by the resources available to the household. For example, a household may not sell draught cattle because either it doesn't need to, or because it doesn't have any to sell. The national figures for the percentage of households engaging in each strategy are presented in Table 8 below.

Table 8 indicates that most households reduced food consumption as a means of coping. These results show a similar, though more extreme pattern to the August 2002 assessment. The next most frequently used set of coping strategies was expenditure-

switching, such as reducing spending on healthcare, education and agricultural inputs in order to use that money for food. The coping strategies practised have potentially high economic and social costs, both in the short-term and long-term. For example, cutting back expenditure on education can irreversibly harm children's future opportunities; reducing food consumption can affect people's immune systems and can also lead to stunting among children. Also, selling off assets and livestock greatly reduces households' ability to recover from short-term shocks.

A less common form of coping is selling off assets (including livestock), slaughtering livestock for food, or eating all of the maize harvest fresh from the field. Only 10 to 20% of the households applied these types of coping mechanisms. The least common strategy was migrating or sending children away to relatives or friends, to reduce the burden on the household. However, from the analysis, households in the border areas of Matabeleland South and those in the commercial farming sector (including ex-farm workers) showed a greater tendency to migrate.

Table 8: Coping Strategies

CONSUMPTION STRATEGIES		EXPENDITURE-SWITCHING STRATEGIES	
Borrowed Food	66.4%	Reduced Spending on Healthcare	41.8%
Used Less Preferred Foods	79.4%	Reduced Spending on Education	42.6%
Reduced Number Meals per Day	91.5%	Reduced Spending on Agric. Inputs	55.9%
Skipped Entire Days Without Eating	65.6%	INCOME STRATEGIES	
Ate Meals of Vegetables Only	69.2%	Sold More Livestock than Usual	14.6%
Ate Unusual Types of Wild Foods	49.6%	Sold Breeding and Draught Cattle	7.3%
Reduced Consumption of Adults to Favour Children	62.5%	Sold other Household Assets	17.6%
Ate all Maize Crop Green (Fresh from the Field)	13.5%	OTHER	
Slaughtered More Animals than Usual for Food	8.2%	Had Crops/ Livestock Stolen	22.1%
MIGRATION STRATEGIES			
Sent Children to Friends/ Relatives	10.0%		
Migrated Temporarily/ Permanently	9.1%		

Coping by Ex-Farm Workers

As would be expected, given their low overall food access last year, the ex-farm workers, especially those without land, engaged in more coping strategies than other population groups in the same areas. This was particularly noticeable for expenditure-switching, migration strategies and the sale of household assets. For example, 47% of ex-commercial farm workers without land reduced spending on healthcare, compared to 35-38% in other groups; 14% were forced to migrate, compared to 6-10% in other groups; 28% sold off household assets compared to 15-22% in other groups. Strategies more common to farming communities (i.e. related to livestock and agricultural inputs) were less frequently pursued, as they are largely unavailable to this group.

Coping by Currently Employed Farm Workers

Farm workers in the northern provinces engaged in expenditure-switching strategies more than other population groups, but the reverse situation arose in the southern provinces.

A1 Resettlement Areas

The level of coping for A1 farmers was lower in the north of the country and higher in the south, especially in Masvingo. However, the degree of coping among A1 farmers in Mashonaland Central was particularly high. No clear reasons for these patterns could be discerned from the data.

Communal Areas

The highest levels of unusual wild food consumption in communal areas were reported in the northern half of Matabeleland North, in the western Zambezi Valley and in Gokwe North and South. These are also areas where wild foods are quite a significant part of diets even in normal years, especially for poorer households. Increased reliance on this source last year may at least partially explain why, in spite of apparently very low cereal access in Matabeleland North relative to other provinces, levels of acute malnutrition overall are not much different to other provinces.

At the livelihood zone level, remarkably high levels of distress coping mechanisms were employed in the Greater Northern Gokwe zone, with more than 50% of the population reporting reducing expenditure on health, education and agriculture, selling more livestock than usual and selling other household assets. 38% of respondents in this area also reported selling breeding and draught power animals, while 26% said they had been forced to migrate as a means of coping. This highlights the risks associated with delays in responding to emergency needs. Although, the August 2002 assessment estimated that 62% of the population of Gokwe North would require food aid until the end of March 2003, while the December report indicated that the area had some of the fastest deteriorating indicators of food security in the country, food relief activities only started in February. Following various administrative delays, the first food aid distributions in that district were carried out in February, targeting only 38% of the population, with 55% being targeted in March¹¹. The area also seems to have been very poorly supplied with grain from the GMB, resulting in extremely high parallel market prices for limited amounts of grain.

The other districts that received food aid much later than was recommended are Goromonzi, Marondera, Seke, Hurungwe. However, these districts seem to have coped mainly through expenditure-switching strategies, without having to resort as much to more extreme options. The much better provision of grain supplies on the market and the lower prices available would appear to have facilitated this lower level of coping.

Other pockets with high degrees of coping in general were in the Northern Zambezi Valley and in Greater Mudzi. Surprisingly low levels of coping behaviour were observed in a belt running from Tsholotsho across southern Matabeleland North and northern Matabeleland South. However, all of the districts in those areas were among the first to receive food aid.

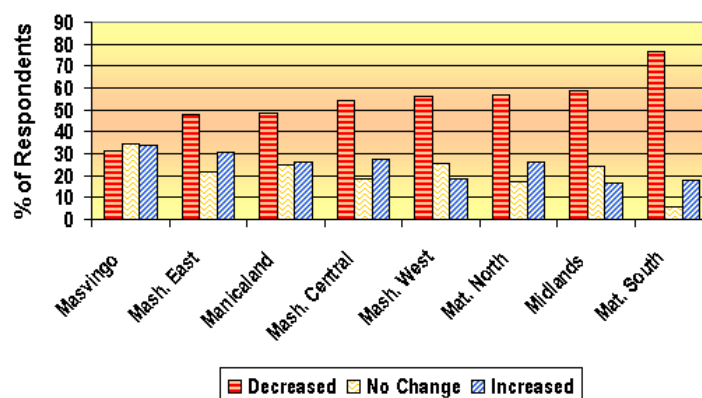
¹¹ Source: WFP

At the household level, the relationship between the provision of food aid and the degree of coping has been difficult to establish, and there appears to be no significant difference between food aid recipients and non-recipients. Good targeting would be a possible explanation for this, but a more sophisticated multi-variant analysis would be required to provide a more confident explanation.

6.3.2. Changes in Livestock Holdings from April 2002 to March 2003

The greatest levels of de-stocking (whether through sales, slaughter or death from drought or disease) occurred last year in southern Matabeleland North, all of Matabeleland South, and Chiredzi and Chipinge districts. There were pockets of heavy losses also in the northern Zambezi Valley, Mudzi and in the Gokwe area. All of these areas also saw massive declines of 60-70% in the value of those livestock over the last year (as measured by the quantity of maize that could have been purchased with the money from sales) and particularly from August to December¹². This meant that between December 2002 and March 2003 it would have been necessary to sell 3 cattle in order to buy the same quantity of maize that the sale of 1 cattle would have bought between April and July 2002.

Figure 11: % of Population Reporting Changes in Livestock Holdings



The areas with the least amount of de-stocking, and even in some cases some increases in holdings, were in Masvingo province (Zaka, Chivi, Bikita and Masvingo districts), southern Midlands (Mberengwa and Zvishavane), and resettlement areas in the Mashonaland provinces.

At the community level, it was reported in more than 50% of communities in Matabeleland South, Masvingo and Mashonaland Central that there had been increased levels of livestock deaths over the last year compared to normal. In Midlands and Matabeleland North, most communities reported a decrease in livestock deaths; a mixed picture emerged in other provinces. The main cause of death was cited as drought in Matabeleland South and disease in the rest of the country. Slaughtering of livestock for consumption was not reported as the main cause of livestock deaths in any of the 150 communities visited (Figure 11).

6.4 Towards estimating the Impact of HIV/AIDS on Household Food Security

It is now recognised that household food security in southern Africa cannot be understood without factoring HIV/AIDS into the analysis. All dimensions of food security - availability, access and utilisation of food - are affected where the prevalence of

¹² See the December 2002 ZimVAC report for details.

HIV/AIDS is high. This section seeks to illustrate links between HIV/AIDS and food security, using the primary data gathered at household level during the April 2003 VAC assessment

Two limitations to the use of the ZimVAC data for this purpose should be noted. In the first place, there are complex inter-relationships between HIV/AIDS, food security, poverty and the resultant general vulnerability of households. This requires long-term and area-specific studies. In contrast to the cross-sectional “snap-shot” national level VAC study Secondly, the VAC survey was not designed specifically as an HIV/AIDS study. Even though special efforts were made to capture the impact of HIV/AIDS on food security status, the emphasis was primarily on assessing household food security. Given the difficulties and taboos related to HIV/AIDS, proxy indicators were used to provide a sense of how households are affected by HIV/AIDS. These proxy indicators are listed in Table 9. In essence, the approach was to compare households affected by HIV/AIDS (as per the proxy indicators) with those not affected by HIV/AIDS in terms of livelihood patterns and levels of food security (Table 9)

Table 9: Link between HIV/AIDS and Food Security

HIV/AIDS Proxy indicators	HHs surveyed	
	% hh with proxy	% hh without proxy
Morbidity indicators		
Chronically ill adult aged 15-60 present in household	24	76
One chronically ill adult in the household	21	79
Two or more chronically ill adults in the household	3	97
Household head among chronically ill	11	89
Chronically ill child aged under 5 present in the household	10	90
Mortality indicators		
Adult died in the past year (aged 15-60)	8	92
Child under age 5 died in the past year	2	98
Household head died in the past year (aged 15-60)	3	97
Social indicators		
Presence of an orphan in a household	31	69
Households absorbing orphans from other units	80	20
Demographic indicators		
Absence of an adult (15-59) in a household	6	94
Households containing only children	3	97
Dependency ratio (0-14 and 60 + as a ratio of 15-59)	5 ¹	69 ²
Effective dependency ratio ³	9 ¹	60 ²
¹ : Low dependency ratio ² : High dependency ratio ³ : adding ill adults as dependents		

6.4.1 HIV/AIDS Proxy Indicators and Income and Purchasing Power

Based on answers given at the household level, it was clear that HIV/AIDS-affected households earn less income. The results of analysis using many proxies are illustrated in Table 10. The demographic indicators showed the greatest impact on income: households without

adults (15-59 years) had on average 52% less income during 2002 from all sources, whilst households with high dependency ratio had 39% less income. The death of an adult or a child showed a direct but weaker relationship. Households with orphans earned on average 31% less income (Table 10).

Table 10: Effect of HIV/AIDS on Income and Purchasing Power

Proxy	% difference in income for hhs with proxy	Proxy	% difference in income for hhs with proxy
Morbidity Indicators		Demographic Indicators	
Chronically ill adult	-31%	Medium dependency ratio	-10%
Chronically ill child	-27%	High dependency ratio	-39%
Mortality Indicators		Extreme dependency ¹	-52%
Adult died during past year	-13%	Social Indicators	
Child died during the past year	-20%	Orphan present in household	-31%

HIV/AIDS Proxy Indicators and Food Production

In discussing the impact of HIV/AIDS on agricultural production, it is important to remember that many other variables also have a strong impact on production, such as rainfall, availability and access to agricultural inputs, and land availability.

Table 11: HIV/AIDS Proxies and Food Production

HIV/AIDS Proxy	Difference in Kg Harvested - 2002/03 on HH displaying proxy		
	Cereal	Non-cereal cash crop	Sweet potato
Chronically Ill Household Head	-8.0%	-46%	62%
No Adult in the HH (15-59 years)	-34%	-71%	-21%

Analysis of results for households in communal areas only showed a clear and direct relationship between HIV/AIDS proxies and households' total production. Households without any adults aged between 15 and 59 years harvested less cereal, non-cereal cash crops and sweet potatoes than those with adults. The greatest decrease was found for cash crops while the smallest decrease was for sweet potatoes.

Households whose head was chronically ill seemed to be less affected. For that group, production of cash crops decreased the most, but production of sweet potatoes – a less labour intensive crop - actually increased. This is consistent also with the findings of the SADC-FANR VAC (2003) (Table 11).

Table 12: Percentage decrease in mean harvest (kg) 2002-2003 amongst communal HHs with Chronically Ill adult

FEZ	Cereal harvest	Non-Cereal Cash Crop Harvest
Northern Zambezi Valley	-9%	-49%
Mutare-Masvingo Middleveld	-18%	-56%
Eastern Highlands Communal	-6%	-59%

Disaggregating the survey results by food economy zone (FEZ) and using the proxy of chronically ill adult again showed large decreases in non-cereal cash crop harvest with smaller reductions in cereal harvest. Table 12 illustrates the findings for 3 selected zones.

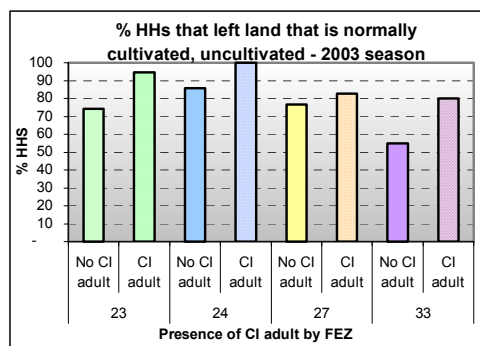
HIV/AIDS proxy indicators and the Area Planted

At the national level, there is a small difference between the percentage of proxy and non-proxy households leaving land uncultivated. While 80% of all communal households last year left land that is usually cultivated uncultivated, this frequency increased to 89% among households headed by a chronically-ill adult (Table 13).

Table 13: Chronic Illness and Area Cultivated

Presence of Chronically Ill Adult	% HHs leaving land uncultivated
No CI adult	80%
With CI adult (not head)	84%
With head CI	89%

Figure 12: % HHs that left land normally cultivated, uncultivated 2003



23 Northern Zambezi Valley 27 Masvingo Mutare Midveld
24 Lusulu Lupane South Gokwe cotton 33 Eastern Highlands Prime Communal

National level analysis masks some important differences at sub-national level. For example, in the Eastern Highlands Communal Zone (FEZ 33) almost 25% more households with a chronically ill adult left land uncultivated than those households without a chronically ill adult. Figure 12 illustrates this for selected zones.

The HIV/AIDS Proxy Indicators and School Enrolment

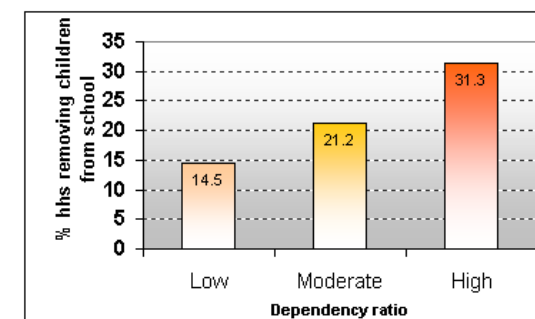
As shown in Table 14 below, a higher proportion of households with HIV/AIDS proxy indicators reported removing their children from school last year, compared to households without those indicators. For instance, 27% of households who lost an adult to chronic illness, removed a primary school aged child (between 6 and 14 years of age) in the last year, compared to 16% of households who did not have a death from chronic illness.

A striking linear relationship was found between the dependency ratio and the removal of children from school. Those households with a high dependency ratio were more than twice likely to remove a child than households with a low dependency ratio. This is clearly depicted in Figure 13 below. The high dependency ratio is a result of households having a large number of children or elderly people relative to the number of adults aged 15-59. Under situations of duress these households choose or are forced to remove some children from school in order either to reduce expenditure or to release labour for household activities. It remains unclear which children are being removed as some remain within the education system. An indication of their gender and direct relationship to the adult members would reveal details about the kinds of choices households make in pursuit of livelihood strategies under stress. Results from the community-level survey indicated only a weak pattern to drop-outs. Most communities reported no differences between drop-outs among girls and boys, and orphans and non-orphans. Those communities who did indicate a difference stated that secondary school children (of either gender) were most likely to be removed from school than primary school children, and that girls and orphaned children were marginally more likely to be removed than boys and non-orphans respectively.

Table 14: HIV/AIDS Proxy Indicators and School Enrolment

Proxy Indicator	<i>Children dropping out of school</i>	
	Households exhibiting proxy indicators	Households without proxy indicators
Adult death	27	16
Adult CI	22	15
Child death in household	25	18
Child chronically ill	24	18
Orphans present in household	26	13

Figure 13: Relationship between the dependency ratio and hhs removing children from school



6.5. Nutrition Effects

In looking at relationships that exist between food security and nutritional status at a district level, there are few discernible patterns or correlations. The dearth of distinct relationships could be due to several factors involving data incompatibility as well as the

known underlying causes of malnutrition that extend beyond food security and include adequate health services and adequate child care.

The differing methodology used in the VAC as compared to the Nutrition Survey can somewhat explain the lack of relationships found between the data as follows:

- Different populations assessed – VAC considered only rural areas while the nutrition survey included urban and rural areas;
- Level of analysis – aggregation of districts was the lowest possible level for analysis, however, it could be too high an aggregation to allow for meaningful findings;
- The VAC unit of measurement was the food economy zone whereas the nutrition survey used the districts as an aggregate measure;
- Time periods do not correspond well – food security as per the VAC covers the twelve month period up to and including December 2002. However, wasting may fluctuate in prevalence over the course of a year due to its reactivity whereas underweight and stunting are expected to be more stable over the course of a year.

When investigating the linkages between food security and nutritional status, there was no relationship found between the percent of the population that was food secure in 2002 at a district level and global acute malnutrition. However, there was a significant relationship found between the percent of the population that was food secure in 2002 and underweight (UW) and stunting (STUNT) albeit in a counter-intuitive direction (the more of the population that was food secure, the higher the prevalence of children underweight or stunted). These relationships are shown in Table 15 below as well as in the scatterplots (Figure 14 and 15). These indicators are not expected to change over the period of one year. Additionally, although a point prevalence of malnutrition is useful, the true relationship between food security and malnutrition is better highlighted through the change in malnutrition prevalence over time.

Table 15: Correlation between percent of the district population that was food secure in 2002 and nutritional status

Correlations					
		Percentage of population food secure in 2002	GAM	STUNT	UW
Percentage of population food secure in 2002	Pearson Correlation	1.000	.032	.316*	.293*
	Sig. (2-tailed)	.	.814	.017	.027
	N	58	58	57	57
GAM	Pearson Correlation	.032	1.000	.126	.527**
	Sig. (2-tailed)	.814	.	.336	.000
	N	58	61	60	60
STUNT	Pearson Correlation	.316*	.126	1.000	.625**
	Sig. (2-tailed)	.017	.336	.	.000
	N	57	60	60	59
UW	Pearson Correlation	.293*	.527**	.625**	1.000
	Sig. (2-tailed)	.027	.000	.000	.
	N	57	60	59	60

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

GAM – Global Acute Malnutrition

STUNT – Stunted Growth

UW - Underweight

Figure 14: Scatterplot of percent of the district population that was food secure in 2002 and prevalence of stunting

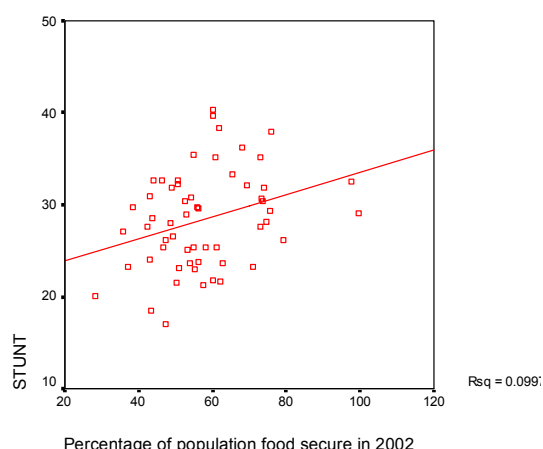
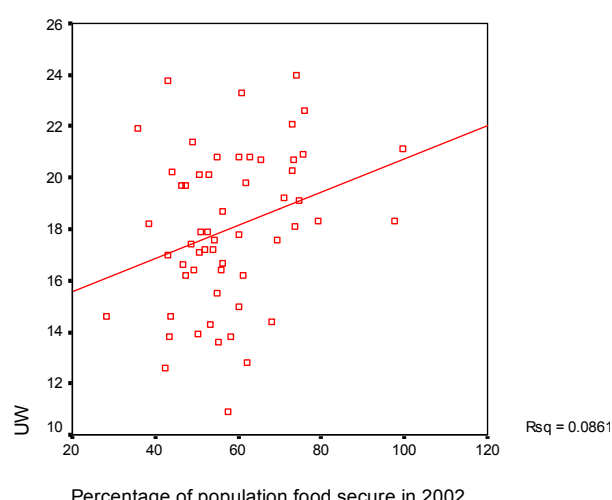


Figure 15: Scatterplot of percent of the district population that was food secure in 2002 and prevalence of underweight



At a household level, it is expected that utilization of coping mechanisms would have a relationship with short-term food security and, in turn, with malnutrition. In the district level analysis though, very little relationship is seen between employment of coping mechanisms and prevalence of malnutrition. However, there are two significant relationships that are seen through the district level analysis. Districts that displayed a greater percentage of households who reduced their spending on health care show a greater prevalence of stunting. As districts had a higher percentage of households skipping entire days without eating, they had a higher prevalence of underweight. These relationships are displayed in Table 16 below.

Table 16: Correlation between percent of the district employing coping mechanisms and nutritional status

		Correlations				
		Global Acute Malnutrition	Stunting	Underweight	Skipped days without eating	Reduced spending on health care
Global Acute Malnutrition	Pearson Correlation	1.000	.126	.527**	.151	-.111
	Sig. (2-tailed)		.336	.000	.270	.425
	N	61	60	60	55	54
Stunting	Pearson Correlation	.126	1.000	.625**	.074	.381**
	Sig. (2-tailed)	.336		.000	.595	.005
	N	60	60	59	54	53
Underweight	Pearson Correlation	.527**	.625**	1.000	.290*	.180
	Sig. (2-tailed)	.000	.000		.033	.197
	N	60	59	60	54	53
Skipped days without eating	Pearson Correlation	.151	.074	.290*	1.000	.144
	Sig. (2-tailed)	.270	.595	.033		.301
	N	55	54	54	55	54
Reduced spending on health care	Pearson Correlation	-.111	.381**	.180	.144	1.000
	Sig. (2-tailed)	.425	.005	.197	.301	
	N	54	53	53	54	54

** Correlation is significant at the 0.01 level (2-tailed).

There is also a relationship seen between districts with a higher percentage of households with primary school drop-outs and lower prevalence of global acute malnutrition. Initially, this relationship seems counter intuitive. However, in households where a child has dropped out of school, the potential impact on younger siblings could be very positive, for example, from greater time spent on care of children or additional income.

The findings indicate that there are few relationships between food security and nutritional status, but this current analysis is not exhaustive as there are many underlying causes of malnutrition and food insecurity. Other factors, namely health, environment, and caring practices, are all very important to consider when investigating linkages as well as planning interventions.

6.6. Educational Issues¹

The analysis indicates that among households with school-aged children, 89% had at least one child attending primary school; and 20% had, at least, one child dropping out temporarily or permanently from school last year. From those, almost 65% of the households had only one child dropping out. The disaggregated data shows that, in general, boys and girls were withdrawn from school in similar proportions. Among households withdrawing children from school, the most common reason for doing so was non-affordability; hunger was the second most common reason cited (Table 17). When analyzing reasons for dropping out of school, some gender patterns can be identified. While 3.2% of girls were pulled out of school in order to assist with caring for sick household members and with other household activities, 0.8% of the boys were pulled out for the same reasons (Table 17). Furthermore, 3% of boys were pulled out of school to work outside the home compared to 0.5% girls. Finally, the analysis showed that more boys than girls (8.3% vs. 3.7%) dropped out for lack of interest.

The assessment findings revealed that the higher the number of primary school aged children in the household, the higher the prevalence of drop outs in the household. For instance, in the communal sector, while 76-80% of households with two or less school-aged children had all children attending school, this prevalence would decrease as the number of primary school aged children in household increased (Table 18).

Table 17: Reasons For Pulling Children out of School by Sex

Most important reason for pulling out primary school child	Among Boys	Among Girls
Family cant afford costs	69.1	69.6
Work outside home	3.0	0.5
Help with household activities	0.4	0.9
Care for sick family member	0.4	2.3
Hunger	11.7	13.1
Not interested	8.3	3.7
Too far	0.8	0.9
Other	6.4	8.9

Table 18: No. of School Going Aged Children in HH School Attendance

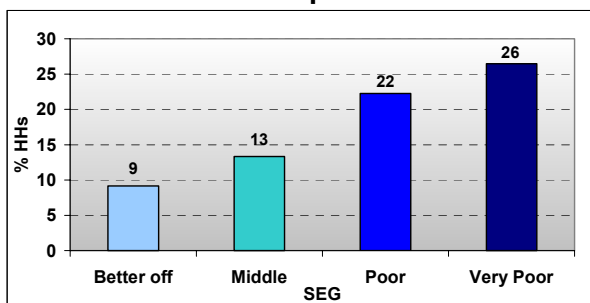
Number of primary school aged children in HH	Percentage of Primary School Age Children attending school	
	Not all children attending School	All children attending school
1	20	80
2	24	76
3	38	62
4	58	42
5	53	47
6	59	41
7	75	25
8	100	0
9	100	0
Avg	59	41

¹ All the analysis illustrated below is derived from cross-tabulations of the household survey carried out by the Zim-VAC during April 2003. The analyses refer to primary school aged children only (5-14 years).

Among all sectors, poor and very poor socio-economic groups had the highest percentage of households withdrawing children from school: 26% of very poor households had at least a child taken from school against 9% among the better off households (Figure 16 below). It was observed that drop out rates vary slightly according to the gender of the household head. Indeed, widowed female heads of households are slightly less likely to take children out of school than widowed male heads (25% and 28% respectively).

With regard to the relationship between household food security and drop out rates, school drop out rates were found to be higher among food insecure households than among food secure households. In the communal sector, only 13% of food secure households took children out of school, compared with 26% of households with a cereal deficit greater than 6 months (Table 19 below).

Figure 16: % HHs with at least one child dropping out of primary school last year by Socio-Economic Group



Comparing households with chronically ill members and households without, it was noted that households with chronically ill people presented the highest drop out rates. Also, drop out rates among households with chronically ill children were even higher than among households with chronically ill adults (Table 20).

Looking at the relationship between school feeding and drop out rates, the analysis revealed that households with children receiving school feeding for 7 or more months had the lowest school drop out rates. However, households with children receiving school feeding for a shorter period of time presented higher rates than households with children that had never received school feeding (Table 21).

School feeding seemed to play an important role among households with large cereal deficits. School drop out rates did not vary in accordance with school feeding programmes among households who are food secure (a contradictory relationship was found). However, among food insecure

Table 19: Relationship between School Drop out and Cereal Deficit

Cereal Deficit 2002 after Food Aid	% HHs with at least one child dropping out of primary school 2002
No Deficit	13
Less than 6 months deficit	21
More than 6 months deficit	26
Avg	19

Table 20: Relationship between Illness and School Drop Out

Presence of chronically ill members	% HHs with at least one child dropping out of primary school 2002
Adult (15-59 years)	No adult CI 18
	Adult CI 25
Child younger than 5 years	No child CI 19
	Child CI 31

Table 21: Relationship between School Feeding and Drop out Rates

Frequency of School Feeding during last year	% HHs with at least one child dropping out of primary school during 2002
Never received	18
3 or less months	24
4 to 6 months	20
7 or more months	15

households, school feeding programmes and school drop out rates related as expected. The relationship was even stronger among households that had less than 50% of their requirements met (Table 22).

We can therefore conclude that there is a positive relationship between household food security, school feeding and school enrollment. However, other related aspects such as household income and related inability to afford school fees are key factors when looking at reasons for pulling children out of school. It is therefore suggested that, although school feeding has a good impact on enrollment, it is not sufficient to bring children from households with limited income back to school.

Table 22: Relationship between School Feeding and Cereal Deficit

Cereal Deficit 2002 (after food aid)	Frequency of School Feeding during last year	% Communal HHs with at least one child dropping out of primary school 2002
No cereal deficit	never received	14
	7 or more months	18
6 or less months (50% or less)	never received	19
	7 or more months	14
More than 6 months (50%)	never received	25
	7 or more months	15

7. THE 2003/04 MARKETING YEAR NATIONAL FOOD SECURITY OUTLOOK

7.1. National Food supply Situation - the 2003/04 Cereal Balance Sheet

Preliminary estimates available to the ZimVAC for national cereal production in the recently ended agricultural season varied widely, from approximately 800,000 MT estimated by the Commercial Farmer's Union to 1.3 million MT from the national Crop Forecasting Committee. Following wide consultations with all agencies involved in producing these estimates, and a review of all available evidence and methods used in deriving these estimates, the ZimVAC agreed on a harvest estimate for all cereals of 1.06 million MT, of which 819,000 MT is maize.

The cereal balance sheet below indicates that, with an estimated cereal harvest of 1.06 million MT this season, a cereal deficit of 1 million MT is expected in the April 2003 to March 2004 marketing year. There are outstanding food aid commitments from last year of 95,000 MT and GMB imports of 181,000 MT, which, if imported, will reduce the cereal deficit to 755,000 MT (Table 23).

Table 23: Preliminary Zimbabwe Cereal Balance Sheet for 2003/2004 (Mt)
1 April 2003 to 31 March 2004

	Maize	Millets	Wheat	Rice	All Grain
A. Potential Domestic Availability	920,775	65,760	178,400	7,566	1,172,501
Formal Opening Stocks (April 2003) (estimate)	26,000	-	28,400	7,566	61,966
Gross Harvest Production (estimate)	819,000	65,560	150,000	-	1,034,560
Winter maize and early summer maize harvest (estimate)	10,000				10,000
Available food aid stocks as on 1 April 2003	62,775				62,775
Unmonitored Stocks : Farmers & other (estimate)	3,000	200	-	-	3,200
B. Annual Requirements	1,674,265	176,562	341,353	11,653	2,203,833
Gross Consumption Requirement	1,424,265	176,562	341,353	11,653	1,953,833
Livestock, other uses and losses	250,000	-	-	-	250,000
C. Domestic Balance (DB) (A minus B)	(753,490)	(110,802)	(162,953)	(4,087)	(1,031,332)
Carryover Food Aid Imports outstanding (Estimate)	80,037	15,000			95,037
Carryover Commercial Imports outstanding (Estimate)	161,500		20,000		181,500
D. Total Imports outstanding	241,537	15,000	20,000	-	276,537
E. Cross substitution maize for millet	(95,802)	95,802			
F. Forecasted Deficit (Closing Stocks) after Imports (March 2004)	(607,755)	-	(142,953)	(4,087)	(754,795)
Assumptions					
Est. mid-year population	11,770,789	11,770,789	11,770,789	11,770,789	11,770,789
Est. Human Annual Consumption Requirement. (Kgs/Person)	121	15	29	1	166
Total Supply (excluding livestock)	1,162,312	80,760	198,400	7,566	1,449,038
Total Demand (Human Consumption excluding Livestock)	1,424,265	176,562	341,353	11,653	1,953,833
Balance (excluding Livestock and SGR)	-261,953	-95,802	-142,953	-4,087	-504,795
Implications for Imports/Exports					
Estimated Additional Commercial Imports Required (MT)	219,155		142,953	4,087	366,195
Estimated Additional Food Aid Imports Required (MT)	388,600	0	0	0	388,600
Total Estimated Additional Imports (MT)	607,755	0	142,953	4,087	754,795
Estimated Total Commercial Imports (MT)	380,655	0	162,953	4,087	547,695
Estimated Total Food Aid (MT)	468,637	15,000	0	0	483,637
Estimated Total Imports Required for 2003/04 (MT)	849,292	15,000	162,953	4,087	1,031,332
Financial Implications for Imports/Exports					
Cost in US\$/MT May 03 USA Gulf prices	225		225		
Estimated Additional Commercial Imports Required (US\$)	49,309,930		32,164,395		81,474,325
Estimated Additional Food Aid Imports Required (US\$)	87,435,000		0		87,435,000
Total Estimated Additional Imports (US\$)	136,744,930		32,164,395		168,909,325

The total grain deficit is made up of 608,000 MT of maize, 143,000 MT of wheat, assuming a winter wheat harvest (not yet planted) of 150,000 MT, and 6,000 MT of rice. As is detailed later in this report, projected food aid needs amount to almost 389,000

MT. With 95,000MT of food aid already committed from last year but not yet distributed, this implies that new commitments of 294,000 MT of food aid are required. Assuming all of this is sourced outside the country, this leaves an additional 314,000 MT of maize to be imported by the GMB or commercial suppliers. This is only 37% of the amount reportedly imported by the GMB last year, and therefore should be a more manageable amount. All of these imports would cost US\$169 million if orders were placed early.

7.2. Cereal Production Trends and Performance in 2002/03 Production Season

7.2.1. Factors Affecting Cereal Production

Cereal production this year is expected to be higher than last year despite a number of factors that have constrained the size of the harvest. The major factors affecting production in 2002/03 can be summarized as:

- Poor rainfall in the early part of the season (October through December 2002),
- Limited availability of inputs,
- Limited financing for farm inputs for the 2002/03 agricultural season,
- Use of retained seed by some farmers and consumption of some of the seed provided as aid,
- Shortage of draught power, which led to poorer quality land preparation and less time for planting and weeding,
- Food shortages and their debilitating effect on labour availability, as farmers searched for alternative sources of income to satisfy immediate food needs and neglected their own fields,
- Transitional effects of the land resettlement program: some new farmers were divided between their old rural homes and newly acquired land; there was also reduced contribution from higher-yielding large-scale commercial farmers to national maize production.

The ZimVAC has estimated the contribution of each sector to the total maize harvest as being 150,000 MT from large-scale commercial farmers, 60,000 MT from small-scale commercial farmers, 425,000 MT from communal farmers, and 184,000 MT from resettled farmers. Resettled farmers include both “new” Fast Track and old resettlement farmers. Production in the resettlement areas is higher than last year, as this sector has expanded with the completion of the Fast Track Land Reform Programme. Production in the large-scale commercial areas, however, has decreased by about 3% compared to last year for the same reason. The contribution of the large-scale commercial sector, which accounted for in excess of 40% of total cereal production in the 1990s, is estimated to have fallen to an all-time low of 20% this year (Table 24).

Total estimated maize production for 2002/03 is more than 64% higher than last season’s production, 45% less than 2000/01’s production and 37% lower than average maize production in the 1990s (Table 24).

Table 24: Grain Harvest Estimates for 2002/03 Compared to Previous Years

VAC Estimate Production By Sector (MT)								
Crop	Sector	2002/03	2001/02	2000/01	1999/00	1998/99	1994/95	1991/92
Maize	LSCF	150,000	185,400	384,800	850,500	648,000	420,500	246,700
	SSCF	60,000	14,640	97,500	58,110	26,260	19,700	0
	CA	425,000	240,000	893,940	1,110,000	755,300	364,800	100,200
	Resettlement	184,000	58,500	100,000	130,000	90,000	34,600	15,000
	Total	819,000	498,540	1,476,240	2,148,610	1,519,560	839,600	361,900
Small Grains	LSCF	33,000	15,000	18,550	18,000	12,000	12,750	21,260
	SSCF	1,740	1,345	2,781	1,379	2,480	530	0
	CA	47,360	19,665	76,740	120,500	136,000	46,060	6,500
	Resettlement	8,560	1,318	5,700	6,340	5,360	600	750
	Total	90,660	37,328	103,771	146,219	155,840	59,940	56,025
All Grains	LSCF	183,000	200,400	403,350	868,500	660,000	433,250	267,960
	SSCF	61,740	15,985	100,281	59,489	28,740	20,230	0
	CA	472,360	259,665	970,680	1,230,500	891,300	410,860	106,700
	Resettlement	192,560	59,818	105,700	136,340	95,360	35,200	15,750
	Total	909,660	535,868	1,580,011	2,294,829	1,675,400	899,540	417,925

7.2.2. Input Usage in the 2002/03 Season

There is consensus that the country had about 47,000 MT of hybrid maize seed for the 2002/03 season. The government distributed 18,132 MT to smallholder farmers and the 'new' commercial farmers through its parastatals, the Grain Marketing Board (GMB), and the Agricultural and Rural Development Authority (ARDA). Farmers bought 24,140 MT directly or through seed dealers. NGO agricultural recovery programs distributed the remaining 4,728 MT of seed to smallholder farmers in their areas of operation. By November and December 2002, maize seed was no longer available.

If all the seeds were planted, the area under maize in the 2002/03 cropping season should have been 1,880,000 hectares. However, the area actually planted to maize was estimated by AREX to have been 1,326,000 hectares, indicating that a significant proportion of farmers did not plant all their maize seed. It has been reported that many of those were new farmers, who were still clearing their fields. In addition, seed dealers are said to have kept some seed for speculation.

Fertilizer use is another major determinant of maize yields, particularly in the poor, granite-derived, sandy soils prevalent in Zimbabwe's Communal Areas. Despite reported shortages, fertilizer sales were largely unchanged last year compared to the previous two seasons. In fact, fertilizer use estimates from sales rose from 176 kg per hectare in 1999 to 195 kg per hectare in 2002 (Table 25). However, evidence on the ground seems to suggest that fertilizers were in short supply, especially at the time of the late-planted crop.

Table 25: Fertilizer Use in Zimbabwe

Year	Amount of Fertilizer Sales (MT)	Area under Maize (Ha)	Area under All Crops (Ha)	Fertilizer Sales per Ha of All Crops (Kg/Ha)	Proportion of Cropped Area under Maize (%)
2002	420,000	1,326,000	2,155,287	195	62
2001	430,000	1,217,800	2,360,974	182	52
2000	420,000	1,223,100	2,365,398	178	52
1999	465,000	1,416,700	2,595,679	176	55

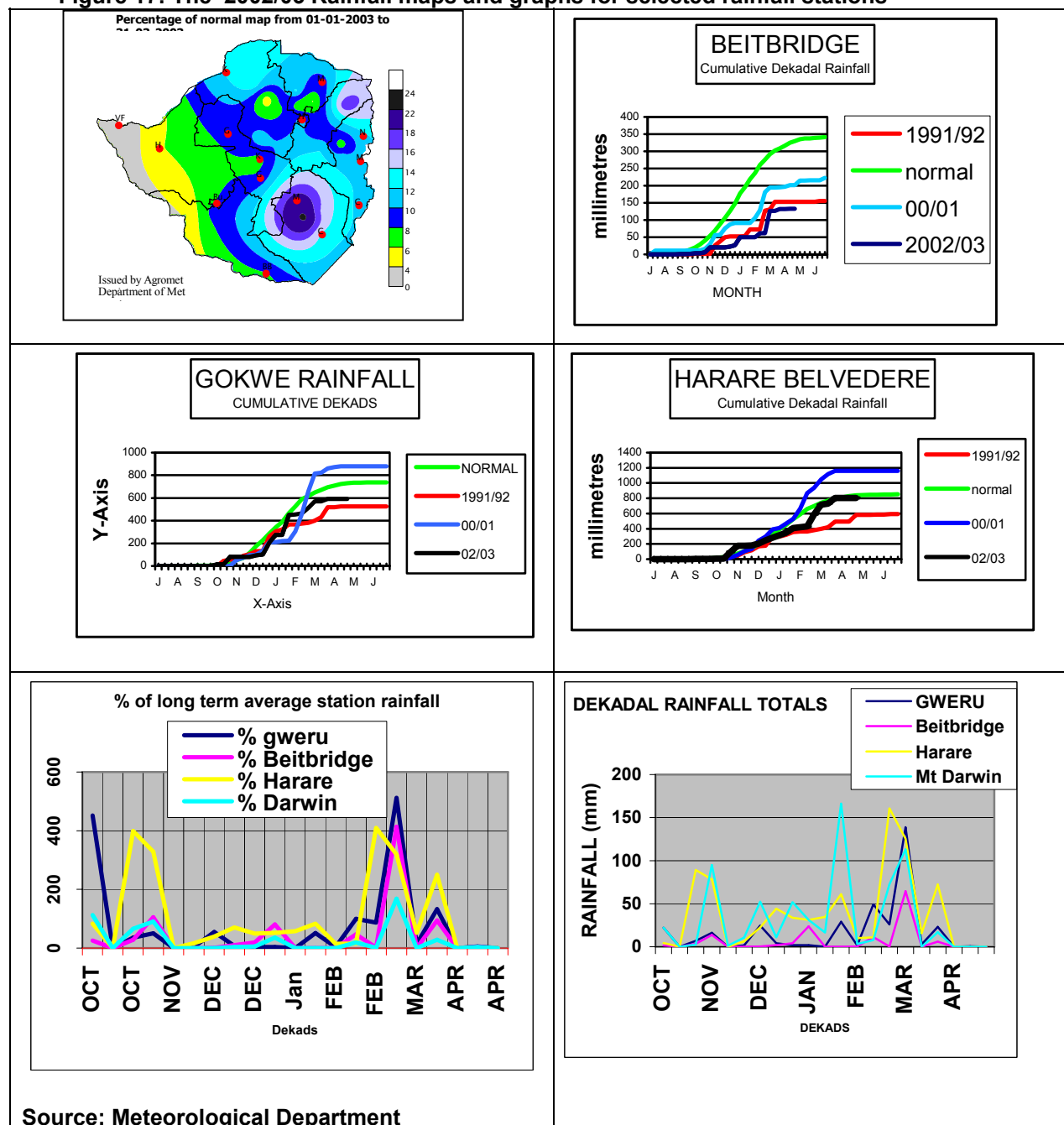
Source: Windmill

7.2.3. Rainfall Season Quality

Significant and well-distributed rains received during the last week of October and first week of November 2002 marked the start of the 2002/2003 rainy season. This was, however, followed by frequent and prolonged dry spells that suppressed crop establishment and retarded crop growth (see rainfall maps Figure 14 below). The early-planted crop, which accounted for approximately 40% of the total area planted to maize in the season and which endured long periods of moisture stress in the first half of the season, was the worst affected. The occurrence of dry spells was most prevalent in the drought stricken province of Matabeleland South and some parts of Manicaland and southern parts of Midlands. From December onwards the distribution of rainfall was largely fair in Mashonaland West and Mashonaland Central (the major maize-producing provinces). In the second half of the season, tropical cyclone Japhet induced widespread rains that helped significantly in the replenishment of water resources and the growth of the late planted crop. The weather during this period included very strong and gusty winds that caused damage to infrastructure and lodging of crops.

The percentage of normal rainfall map below indicates large rainfall deficits (<50% of normal rainfall) for the extreme western areas, and normal to above normal for the rest of the country. However, the distribution of rain over the season has been erratic, as shown by the total dekadal rainfall graphs for selected rainfall stations. The seasonal cumulative dekadal rainfall for selected stations shows the geographical variation of the rainfall received countrywide. Beitbridge and Gokwe received below normal rainfall, while Harare Belvedere received normal rainfall (Figure 17).

Figure 17: The 2002/03 Rainfall maps and graphs for selected rainfall stations



Based on this distribution, the total crop could have reached only average yields at best. But because of insufficient high temperature days and other factors for the late-planted crop, cob sizes were typically smaller than normal, reducing the yield of late-planted crops and lowering the overall yield well below average.

7.3. Government's long term plan to address food insecurity

Among several activities set to address food insecurity, the Government of Zimbabwe has:

- increased maize and wheat producer prices in order to attract grain to GMB depots as a means of rebuilding its strategic grain reserves;
- set up an irrigation support fund to support the rehabilitation of the irrigation equipment in the A1 and A2 resettlement areas in order to boost the production of winter crops;
- partially decontrolled food imports by allowing individuals to import 500kg of food without permits;
- and has initiated an agricultural recovery programme through the GMB, aimed at ensuring food security in the country by availing seed, fertiliser, tillage units and irrigation equipment to all farmers.

However the impact of the above activities on food security is likely to be limited by the continued fuel shortages, lack of irrigation management expertise and unavailability of foreign currency for imports.

7.4. Macroeconomic Prospects for 2003/04

While the government took some positive steps with the launch of the National Economic Recovery Programme in March 2003 - in particular the effective devaluation of the currency for exporters - the prospects for recovery over the next year still seem very limited. The government expects a further decline of 7.3% in GDP this year. The budget deficit for the year is predicted to be equivalent to 11% of GDP. This is considered an underestimate, however, as it does not consider the need for food imports and for subsidies for agricultural production.

While the government has set itself the target of bringing inflation down to just below 100% by the end of this year, by the end of April 2003 the rate had reached 269.2%, and there is no evidence at present to suggest that a turnaround is likely. Other forecasts, such as that of the IMF, predict a year-end inflation rate of up to 500%. An environment conducive to domestic and foreign investment is still lacking, the government continues to borrow through domestic financial markets and to expand money supply at an unprecedented rate.

Key export sectors continue to struggle, and revenues from tobacco in particular are set to decline. In contrast, the government has weekly foreign exchange requirements of approximately US\$10 million for fuel and US\$4 million for electricity. The somewhat improved grain harvest this year, combined with lower maize prices in South Africa, should assist in easing some of the pressure on government finances, but income is still likely to fall far short of expenditure needs. In the current budget year, the government is now predicted to need to borrow up to Z\$230 billion (US\$279 million) to finance its budget. The pressure on the exchange rate has begun to increase again, with the value of the Zim dollar on the parallel market dropping below US\$1:Z\$1,600 as of mid-May.

Major policies relating to food security, such as the GMB monopoly on the import of maize and wheat, and price controls on most basic commodities need to be reviewed in the light of the following considerations:

- The government is under pressure to raise funds for adequate food imports. A flourishing parallel market exists for most commodities, reversing the intended effects of price controls and providing great incentives for corruption,
- Most households could afford to pay higher than current controlled prices, though most could not afford unsubsidized free market prices,
- Queuing, paying parallel market prices, or having to buy less preferred but more expensive items have high costs for livelihoods,
- There is need for already limited government revenues also to cover the growing healthcare and social welfare needs arising from the HIV/AIDS pandemic, as well as other public services.

The facilitation - both legal and economic - of greater private sector involvement in areas such as food and fuel imports and credit for agricultural recovery, particularly if done in conjunction with the provision of more targeted safety nets from government and humanitarian agencies, would greatly ease the strain on government finances while it should also have a very positive impact on livelihoods.

7.5. Market Price Forecasts

Within the country, the parastatal Grain Marketing Board (GMB) is officially the sole buyer and seller of maize. It has pegged the maize producer price at Z\$130,000 MT and has recently increased the selling price to Z\$165,000 per MT for maize as in May 2003, removing the previous subsidy of 45%. The retail price of maize from the GMB has been increased by twelve times' last year's average price of Z\$643 per 50 kg bag, but still remains below the parallel market price prevailing in April 2003. With a price increase of this scale, most poor households in both rural and urban areas will find it difficult to afford the maize, given that incomes have not increased at the same rate. The price of maize will be one of the principal determinants of food aid needs in the 2003/04 marketing season, as is detailed in section 8 below. Policy changes that include monetization, facilitate the participation of the private sector in the importation and marketing of cereals in the country. This entails removing price controls and GMB monopoly in the importation and marketing of maize and wheat.

8. HOUSEHOLD FOOD SECURITY IN 2003-04

Levels of household food security in 2003-04 were determined using a combination of information on known variables - such as crop production and livestock holdings – and predictions for other variables based mainly on the situation last year. This section will present the overall findings for the country, followed by sub-national and sectoral breakdowns, and explanations of the sources of food and income predicted to be available in the coming 12 months.

8.1. Assumptions Used in Predictions

In predicting food access, a number of assumptions and conditions must be used. These relate both to the nutritional definition of households' "food needs", and to the means which are considered acceptable for the household to use to access these needs.

Nutritional requirements have been determined using the household demographic breakdown in the ZimVAC survey, in conjunction with age- and gender- specific kilocalorie requirements indicated in the WFP/UNHCR "Guidelines for Assessing Food and Nutritional Needs in Emergencies", and are consistent with SPHERE Minimum Standards in Food Aid.

Two key thresholds have been set which attempt to ensure that households are not required to access food and income in a way that overly jeopardizes the natural and human resource base of production and livelihoods:

- Households will keep a minimum of 5 cattle and 3 goats, and will only sell 25% of any holdings above that threshold.
- A maximum of 80% of total household income will be spent on cereals.

In reality, households will if necessary sell more livestock or spend more income on cereals than is assumed above. However, in setting these thresholds the ZimVAC attributes a limited livelihood support function to emergency food aid, rather than a strictly life-saving function.

There were two variables that could not be forecast with absolute certainty: (i) availability of grain from the GMB and (ii) the future price of maize sold by the GMB.

Availability of commodities from the GMB: In all scenarios it is assumed that those with the necessary purchasing power can purchase the grain that they require. However two possibilities were considered as to the source of that maize: (i) Maize is available in the same proportions as last year from the parallel market and the GMB; and (ii) all maize purchases can be made from the GMB.

Future Price of GMB maize: Two possibilities were studied by the ZimVAC: (i) the GMB price will remain unchanged from last year at an average of Z\$12.68/ kg., and (ii) GMB selling price will increase to Z\$165/ kg, in line with the increase in the producer price.

Based on the possible future availability and price of GMB maize, two case scenarios were developed:

Scenario 1: GMB maize is widely available; GMB selling price of Z\$165/ kg

Scenario 2: Maize is available in the same proportions as last year from the parallel market and the GMB; prices remain unchanged from last year (on average Z\$12,68/ kg from the GMB; and Z\$213.00/ kg from the parallel market

Although both case scenarios will be presented and discussed in this report, the most likely scenario is believed to be scenario 1, and therefore this is the subject of more in-depth analysis.

8.2. Overall Anticipated Levels of Food Security, 2003-04

Using the assumptions taken in the scenario 1, where GMB maize is assumed to be widely available, with the price increased to Z\$150/ kg, a total of 4,362,000 people will be food insecure in rural areas by January 2004. 388,600 MT of cereal food aid will be needed from April 2003 through March 2004 to ensure that these people meet their food needs without severely compromising their livelihoods. Table 26 below indicates the cumulative numbers of people in rural areas anticipated to require food aid for various periods over the 12 months from April 2003 to March 2004 per district, while the rest of this section explains the differences in geographical and sectoral needs.

Table 26: Rural Population in Need of Emergency Food Aid, April 2003 – March 2004

National Demographics and Requirements				Cumulative Findings April 2003 - March 2004				
Total Population	Rural Population	Total Human Domestic Cereal Yearly Req in MT	Rural Human Domestic Cereal Yearly Req in MT	Rural Population Food Secure	Max Rural Population Food Insecure	Max % of Rural Pop Food Insecure	Total MT of Food Needed	% Cereal Deficit over rural domestic human req
11,770,789	7,851,832	1,953,951	1,303,000	3,482,000	4,362,000	56%	388,600	30%

Findings rounded to the nearest thousand

Almost 3.5 million people, or 44% of the rural population will be food secure for the entire year, and will not require any emergency food aid.

Figures 18 and 19 illustrate the cumulative number of rural people in need over the course of the year, and the tonnage of emergency food aid they will require. The phasing of needs for the remaining 56% of the population with a deficit is of crucial importance for the response. As from April 2003, almost 792,000 people need emergency food aid. These people are expected to need emergency food aid throughout the year. An additional 1.43 million people can access only 25% of their requirements, and therefore have a deficit of 75%, implying 9 months' worth of food.

Figure 18: Cumulative Rural Population in Need of Food Aid (Apr03 to Mar04)

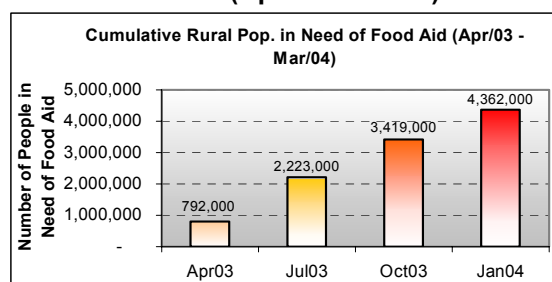


Figure 19: Phasing up of the Total Cereal Deficit

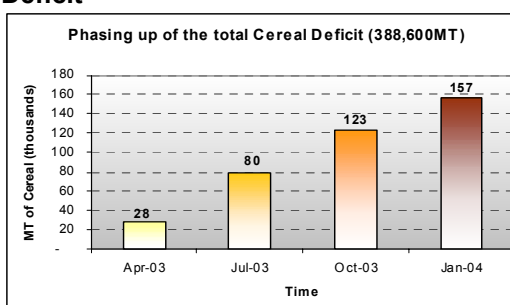
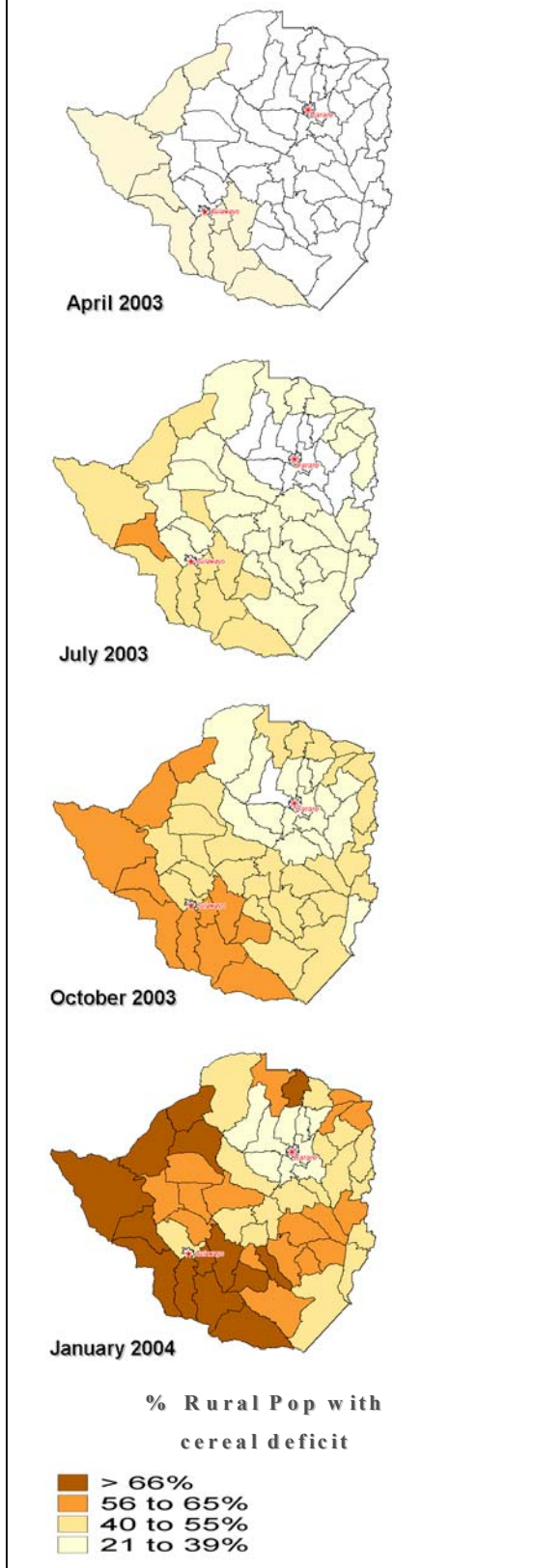


Figure 20: Rural Population Food Insecure by District: April/03 – Mar/02



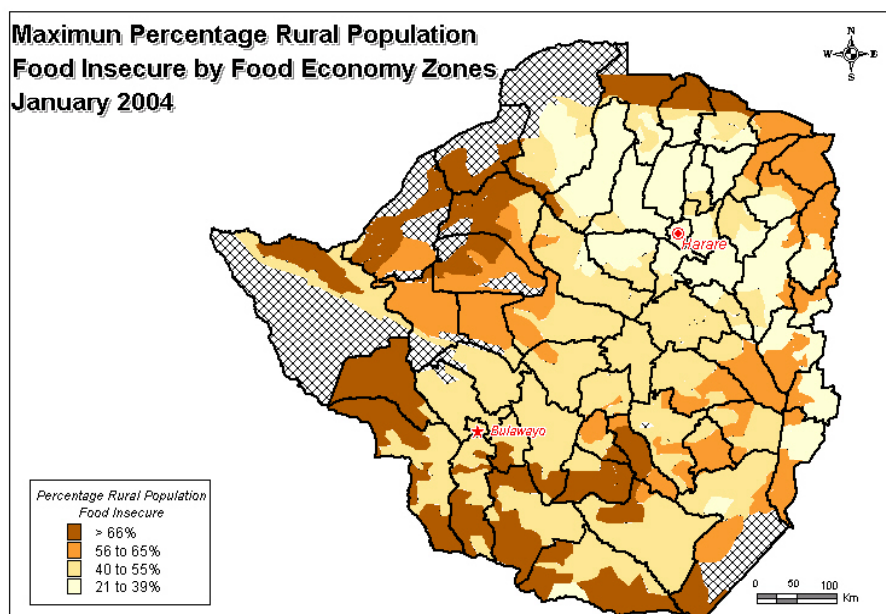
If they consume all their cereals without any saving strategies, they are likely to run out of stocks by the end of June. Almost 1.2 million people can meet half of their needs, or meet their requirements for 6 months until the end of September 2003. Over 940,000 people are short only 25% of their requirements, implying that they will need assistance only for 3 months from January to March 2004.

The vast majority of those needing food aid have livelihood patterns that do not involve accessing a constant stream of food or income (i.e. they are more likely to run out of food at a certain time, rather than constantly falling slightly short of their needs). Therefore their deficits are translated into the length of time for which they are expected to require food aid. The only exception to this is currently employed commercial farm-workers, who earn a regular monthly income. The relatively small number of those who are in need of emergency aid in this group are more likely to require smaller rations over a longer period of time to bridge their deficits.

The series of maps opposite show the spatial distribution of the food insecure rural population through time. It can be noted that the situation will start to worsen notably by October 2003 in most southern, southeastern, southwestern and northern parts of the country. The numbers in need continue to rise towards the end of the marketing year, and from January 2004 the southwestern and northwestern parts of the country will be the worst affected (Figure 20 and Table 28 below).

Needs were also studied by food economy zones and are displayed in the map below to illustrate differences within certain districts. For example, those parts of Guruve and Centenary districts which are found in the Zambezi Valley are far worse off than those areas in the prime highveld agricultural zone. Also, in much of the southern half of the country the population in communal zones is markedly less food secure than the population in commercial agricultural zones (Figure 21).

Figure 21: Maximum % of Rural Population Food Insecure by Food Economy Zone January 2004



8.2.1. Comparison of Scenarios

The detailed results presented above refer to the scenario considered by the ZimVAC to be the most likely to occur over the coming twelve months (Scenario 1). An alternative scenario (Scenario 2), however is one where the GMB selling price remains unchanged from last year, and limited availability of maize at the GMB results in people buying from the parallel market and the GMB in the same proportions as last year. Due to the higher price of maize on the parallel market, the purchasing power of incomes is reduced, resulting in a greater number of people being food insecure if parallel market prices of Z\$213.00 per kg only are considered and not the blend price. However a blend price (GMB and parallel Market) is used in Scenario 2 and due to the low GMB retail price of Z\$12.68 per kg in May 2003 less people will require food under Scenario 2. Table 27 indicates levels of food security under each scenario.

Table 27: Levels of Food Insecurity for two likely Scenarios

Scenario	Cumulative or Maximum Findings Apr/03-Mar/04			
	Rural Population Food Secure	Rural Population Food Insecure	Percentage Population Insecure	Total Cereal Food Aid Needed in MT
Scenario 1	3,482,227	4,361,632	56%	388,642
Scenario 2	4,358,404	3,485,455	44%	318,931

Table 28: Scenario One: Food Aid Requirements by Province by District¹

Administrative and Demographic Information			Cumulative or Maximum Findings Apr/03 - Mar/04		
Province	District	Rural Population Census 2002	Rural Population with Cereal Deficit	Percentage Rural Population with Cereal Deficit	Total Cereal Deficit in MT
Manicaland	Buhera	220,161	132,385	60	11,676
	Chimanimani	111,755	59,799	54	5,034
	Chipinge	261,395	131,184	50	11,187
	Makoni	244,823	119,070	49	9,300
	Mutare	217,843	126,366	58	10,757
	Mutasa	160,036	85,871	54	6,746
	Nyanga	113,478	60,254	53	4,923
Mash. Central	Bindura	110,595	38,520	35	2,981
	Centenary	109,981	73,142	67	6,374
	Guruve	191,605	111,679	58	9,300
	Mazowe	182,571	62,484	34	4,846
	Mt. Darwin	194,613	106,369	55	9,021
	Rushinga	66,415	41,983	63	3,572
	Shamva	93,735	35,427	38	2,714
Mash. East	Chikomba	109,544	54,484	50	4,887
	Goromonzi	157,647	59,930	38	4,588
	Marondera	102,647	39,868	39	3,045
	Mudzi	131,316	85,308	65	7,212
	Murehwa	150,985	69,021	46	5,181
	Mutoko	115,415	57,667	50	4,970
	Seke	78,116	30,333	39	2,356
	UMP	107,504	62,170	58	5,278
	Wedza	70,771	30,853	44	2,499
Mash. West	Chegutu	137,301	53,607	39	4,195
	Hurungwe	288,641	130,644	45	11,381
	Kadoma	146,027	73,581	50	6,098
	Kariba	35,543	25,831	73	2,778
	Makonde	112,120	35,040	31	3,030
	Zvimba	209,337	60,048	29	4,772
Masvingo	Bikita	156,349	93,283	60	7,943
	Chiredzi	212,119	106,155	50	9,465
	Chivi	155,246	105,853	68	9,160
	Gutu	194,691	117,565	60	10,365
	Masvingo	198,627	114,744	58	9,960
	Mwenezi	128,769	83,429	65	7,231
	Zaka	184,124	114,337	62	9,747
Mat. North	Binga	118,934	84,031	71	8,496
	Bubi	46,968	26,608	57	2,618
	Hwange	62,694	45,765	73	4,770
	Lupane	96,654	60,720	63	5,863
	Nkayi	111,040	69,941	63	6,952
	Tsholotsho	119,932	87,986	73	9,599
	Umguza	74,714	41,175	55	3,990
Mat. South	Beitbridge	83,304	59,299	71	6,220
	Bulilimamangwe	165,040	118,022	72	12,702
	Gwanda	121,098	87,230	72	9,018
	Insiza	88,556	61,630	70	6,189
	Matobo	101,034	72,917	72	7,595
	Umzingwane	58,630	41,384	71	4,164
Midlands	Chirumanzu	65,783	36,122	55	3,205
	Gokwe North	220,776	146,540	66	13,891
	Gokwe South	284,897	174,726	61	15,560
	Gweru	83,964	44,871	53	4,188
	Kwekwe	162,024	95,644	59	8,705
	Mberengwa	184,173	136,626	74	13,109
	Shurugwi	71,700	38,015	53	3,394
	Zvishavane	68,074	44,095	65	3,844
GRAND TOTAL		7,851,832	4,361,632	56	388,642

8.3. Food Security by Sector

The Table 29 below indicates that of the 4.4 million rural people about 3.6 million people are in need of aid, 232,700 in A1 resettlement, 174,400 in old resettlement and the remainder commercial and ex-commercial farm workers. The table also shows the percentage of the population within each sector assessed who need food aid, and the extent of their deficit.

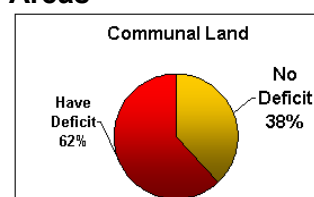
Table 29: Number and Percentage Population who Need Food Aid by Sector

Sectors	Sub Sectors	Population		Food Secure (No Food Aid)	Distribution of Food Needs			
		Total Sector Population	Food Insecure Population		25% Deficit	50% Deficit	75% Deficit	100% Deficit
Communal Sector		5,755,474	3,568,394	38%	13%	18%	20%	11%
Old Resettlement		471,384	174,412	63%	9%	9%	10%	9%
A1 Resettled		775,686	232,706	70%	8%	8%	10%	4%
A2 Resettled		128,993	0					
Farm Workers & Ex Farm Workers	CFW	578,593	386,120	79%	9%	5%	5%	2%
	Ex-CFW no land			50%	13%	2%	19%	17%
	Ex-CFW with land			64%	12%	6%	12%	6%
Small Scale Commercial and Parks		141,702	0					
Total Rural		7,851,832	4,361,632	45%	12%	15%	18%	10%
Urban		3,918,957	To be Assessed	To be Assessed				
Zimbabwe Total		11,770,789	4,361,632					

8.3.1. Communal Farmers

Communal Farmers are the largest and most diverse group within the rural population. The national figure of 62% requiring food aid masks some wide variations at sub-national level, where the percentage in need of assistance ranges from 50% to over 80%. The most food secure communal areas are in the prime agricultural areas of the Mashonaland provinces and in the Eastern Highlands, where 50% and 47% respectively of the population will require aid, and most of those for less than 6 months. Relatively high levels of crop production have been an important factor in reducing the numbers in need in those areas. Good access to markets for vegetables sales and petty trading, particularly in districts surrounding Harare also seem to play a role in making these areas better off (Figure 22).

Figure 22: Food Aid Needs in Communal Areas



The next relatively food secure areas are in a belt around southern Manicaland, eastern and south-eastern Masvingo province and across to an area encompassing communal areas in Lupane, Nkayi, Kwekwe and much of Gokwe South districts, where 55-65% of the communal population will require assistance. Similar levels of need are also to be found in the extreme north-east of the country (around Mudzi district and those neighbouring parts of Rushinga, UMP, Mutoko, Makoni and Nyanga districts classified

¹ For details see Appendix E.

as Natural Region IV). These areas are somewhat less dependent on crop production and will make up their deficits through livestock sales, vegetables sales, off-farm labouring and petty trading.

The worst off areas in the country run in a clearly defined arc around the northern, western and southern periphery of the country. Parts of the extreme south have significant disparities in the food security status of their populations. There are 30-35% of the population in those areas who do not require food aid, mainly due to their potential for livestock sales, and also because of relatively high levels of formal employment, petty trade and (especially in areas close to the South African border) remittances. At the same time, however, these areas also have the highest concentrations of people needing food aid for 9-12 months of the year (up to 40% of the population).

Some of the most food insecure areas, both in terms of the percentage of population needing food aid (80% and 70% respectively), and the severity of food insecurity are in the western Zambezi Valley, and around Gokwe North. A major factor in these areas is the carryover effects of having to rely heavily on the purchase of parallel market grain, which was some of the most expensive in the country due to the remote nature of the area. This has left them with limited coping capacity. Furthermore, levels of formal employment and remittances and the potential for further livestock sales are all quite low. Cash crop income in Gokwe is likely to be relatively high this year, but appears not to be enough to compensate for the other factors. The northern Zambezi Valley will also remain one of the worst affected parts of the country, with low levels of production, relatively low incomes and high prices.

In Umzingwane district, northern parts of Matabeleland South and in southern Midlands province, there is another belt of relatively food insecure areas among the communal lands, with 75% of the population being food insecure. Poor production and low incomes for most of the population are responsible for this, even though livestock holdings are relatively high here.

8.3.2. Old Resettled Farmers

About 63% of old resettled farmers nationally will not require assistance this year. At a provincial level, more than 70% of those living in the Mashonaland and Manicaland provinces will be food secure, mainly due to their improved crops this year, but less than 55% of those in the rest of the country will be food secure. Those requiring food aid will have similar profiles to those of communal farmers in the same areas (Figure 23).

8.3.3. A1 Resettled

In total, 70% of A1 resettled farmers will be food secure over the coming year. Over 85% of A1 farmers in the Mashonaland Central and East and Manicaland will not require food aid this year. In Masvingo, Midlands and Mashonaland West provinces, the proportions of A1 farmers who are food secure are 53%, 63% and 66% respectively. There is clearly good potential for these farmers to improve levels of food security, and therefore it will be important to ensure that they can

Figure 23: Food Aid Needs in Old Resettlement Areas

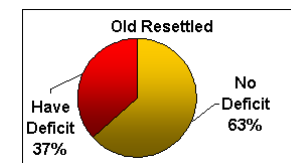


Figure 24: Food Aid Needs in A1 Resettlement Areas

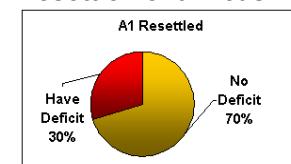
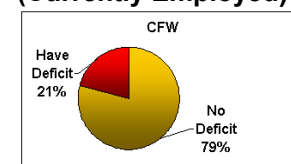


Figure 25: Food Aid Needs for Commercial Farm Workers (Currently Employed)



access the necessary inputs to make the best use of the land they have been given. However, those resettled on less productive land in the Matabeleland Provinces will require similar levels of emergency food aid as communal farmers in those areas (Figure 24).

8.3.4. Commercial Farm workers (Currently Employed)

About 79% of employed commercial farm workers are likely to be food secure next year. With standardized minimum wages in this sector and with the assumption that all households will access maize from the GMB at a consistent price, there is little difference in the food security status of this group across the country. Given their constant stream of income, the deficit of those farm-workers who do not meet their requirements will be in the form of a regular falling-short of needs, as opposed to a substantial gap over a short period of time (Figure 25).

It should be highlighted that the food security of employed farm workers is dependent on them being able to access grain from their employers, on the market or from the GMB. Availability is a crucial factor for this group. They must also remain employed, and their wages must keep pace with inflation to remain food secure. Furthermore, although emergency food aid needs for this group are relatively low, they remain a poor group overall, with very few assets and very little coping capacity. Other interventions to boost the livelihoods of this group and to ensure that they have adequate access to essential services must not be ignored.

8.3.5. Ex-Commercial Farm Workers with Access to Land

The situation for this group, who are geographically concentrated in the Mashonaland provinces, appears mixed, with their small sample size making further disaggregation difficult. In total 64% of them are food secure. Those with deficits will require food aid for 3 to 12 months (Figure 26).

8.3.6. Ex-Commercial Farm Workers without Access to Land

About 50% of ex-CFWs without access to land will require food aid this year. This group, also concentrated in the Mashonaland provinces, stand out in these provinces as the most vulnerable both in the short term and long term, effectively being a new class of landless labourers. In Mashonaland East, Central and West, 60%, 56% and 53% of them respectively will require food aid. The severity of food insecurity for this group is higher than for any other, with most of those in need of assistance requiring food aid for 9-12 months. For those ex-farm workers without a deficit, their predicted food secure status is dependent on them being able to benefit indirectly from increased production among resettled farmers and also from remaining commercial farms, through increased casual labouring opportunities. It also assumes that they will be able to access adequate amounts of

Figure 26: Food Aid Needs for Ex Commercial Farm Workers with Land

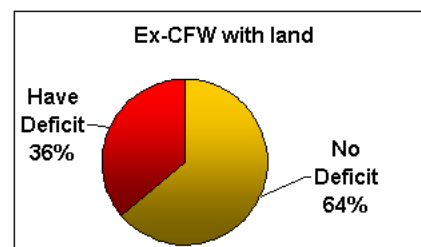
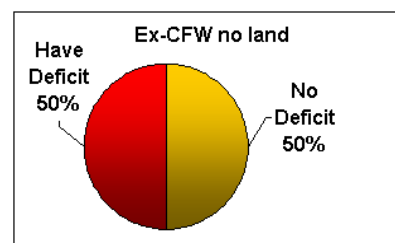


Figure 27: Food Aid Needs for Ex-Commercial Farm Workers with No Land



cereal to purchase. Given the remaining tensions in former commercial farming areas, it will be important to carry out monitoring to verify whether these assumptions are correct (Figure 27

In the longer-term, their position relative to that of ex-farm workers with land and to A1 resettled farmers in the same areas indicates that there is a clear need to provide this group with land for farming. Their current heavy reliance on casual labouring leaves them in a precarious position, and will not enable them to accumulate wealth.

8.4. Details of Access to Food and Income in 2003-04

8.4.1. Production

8.4.1.1 Production by Province

With much improved rainfall particularly during the later part of the growing season, cereal production levels are estimated to have more than doubled in the country this year as compared to last year. The ZimVAC household survey found that for the surveyed households excluding the small scale and A2 resettled farmers), the average contribution from production to minimum grain available has increased from 26% last year to 77% this year, as indicated below in Table 30.

As is indicated above, there are very large improvements in the contribution of crops to food needs this year, particularly in Manicaland, Mashonaland East and Mashonaland Central, where the percentage of needs expected to be met rose from 26% to 91%, 56% to 175% and 35% to 129% respectively. Mashonaland West also had a large increase from 30% to 77%. These figures are averages, however, and not all farmers in these areas performed so well. For example, data disaggregated to the livelihood zone level (reproduced in the data annex) indicates that within those provinces, production contributes relatively low amounts to food needs in the northern Zambezi Valley (lower Muzarabani/ Centenary and Guruve districts – 14%) and in Greater Mudzi (35%).

The contribution of production to minimum food requirements either remained at very low levels in spite of a modest increase or declined in most of Matabeleland South and North (contributing 24% and 16% of food needs this year respectively), and in Masvingo and Midlands provinces (42% and 37% respectively).

Table 30: Contribution of Production to Grain Available at Household Level by Province

<u>Province Name</u>	<u>% Grain Requirements met by Production, 2002</u>	<u>% Grain Requirements met by Production, 2003</u>
Manicaland	26%	91%
Mash. Central	56%	175%
Mash. East	35%	129%
Mash. West	30%	77%
Masvingo	16%	42%
Mat. North	10%	16%
Mat. South	8%	24%
Midlands	22%	37%
Total	26%	77%

8.4.1.2. Production by Sector

Table 31 below indicates the average contributions from production in 2002 and 2003 to minimum grain requirements by sector.

The A1 resettled farmers performed best overall, with average production levels increasing almost five-fold this year to 328% of requirements, compared to 65% last year. Most of that increase comes from resettled farmers in Mashonaland Central, East and Manicaland. Within communal areas, the contribution to food needs from production doubled on average from 22% of requirements to 45%. Production as a source of food is least important among ex-CFWs without land (6% of requirements) and currently-employed CFWs (37%).

8.4.1.3. Production – Self-Sufficiency

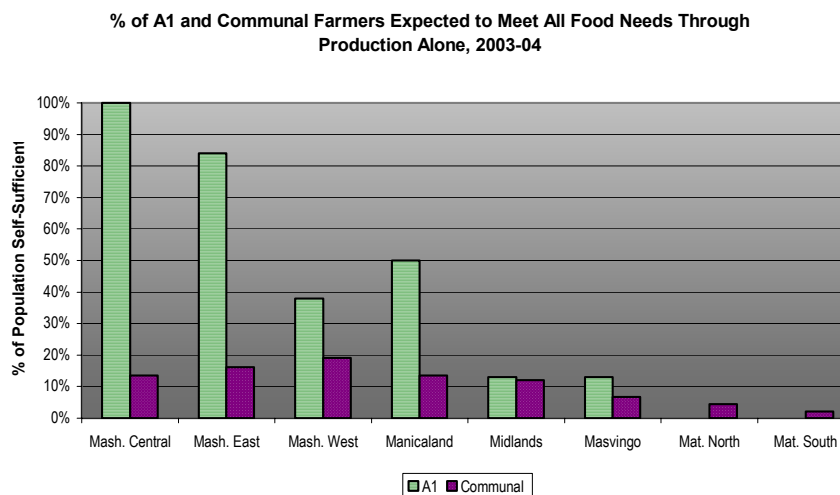
Table 31: Contribution of Production to Grain Available at Household Level by Sector

Sector	% Grain	% Grain
	Requiremen	Requirements
	ts met by	met by
	Production,	Production,
	2002	2003
A1 Resettled	65%	328%
CFW	15%	37%
Communal Land	22%	45%
Ex-CFW no land	7%	6%
Ex-CFW with land	43%	187%
Old Resettled	38%	163%
Total	26%	77%

Another way of looking at the contribution of production is to examine the percentage of farmers who will be self-sufficient, i.e. who will meet 100% of their requirements or more from their own crops¹³. Figure 28 below indicates the percentage of A1 and communal farmers in each province who will be self-sufficient in the coming year.

The graph highlights the extremely good performance of A1 resettled farmers in Mashonaland Central and East provinces in particular, where 100% and 83% of those farmers will be self-sufficient. In contrast, in Midlands and Matabeleland North and South over 85% of

Figure 28: Percentage of A1 and Communal Farmers Expected to Meet All Food Needs Through Production Alone 2003/04



¹³ It is assumed that all cereal production will be available for consumption by households. Except where cereals were specifically indicated by respondents to be cash crops for sale, no sales have been assumed in our calculations.

those resettled only harvested enough to meet less than 25% of their cereal needs for the year, compared to 60-90% of communal farmers. In those provinces, the profile of A1 farmers tends to be worse than that of ordinary communal farmers.

8.4.2. The Role of Direct Sources of Food in Food Security

For on-farm casual labour, predictions about levels of earnings (both in terms of cash and direct payments of food) were made based on the relationship between levels of production and the level of earnings last year. It would be expected that the greater the level of production, the greater the amount of employment and income there would be from on-farm casual labour. It was found that a 100% change in production was associated with a 20% change in income from on-farm labour.

Therefore, in the same way that production levels changed across geographical area and sectors, payments for on-farm labour also changed. For other direct sources of food (remittances, gifts, off-farm labour), it was assumed that people could get the same amounts of food as last year. Overall, then, direct sources of food are expected to continue to provide a relatively small proportion of cereal requirements for most of the population, only 5% to 10%. For commercial farm-workers and ex-farm-workers (especially those without land), however, the contribution to food needs provided by on-farm labour could be substantially higher, ranging from 25% to 40% in the more productive Mashonaland provinces. While the figure for ex-farm workers is high relative to other groups, it should be remembered that this is their primary source of food and income.

8.4.3. The Role of Income in Food Security

8.4.3.1. Cash Crop Sales as a Source of Income

Estimates of the potential income from cash crop sales were derived through multiplying the quantity of each crop expected by respondents to be harvested by current selling prices. Estimates of typical profit margins for each crop were provided by AREX, and only the expected profit from cash crops was included in estimates of net income.

The analysis indicates that overall, levels of cash crop income are high in Mashonaland Central, particularly among the A1 resettled farmers and also for much of the population in the otherwise poor northern Zambezi Valley. Surprisingly, however, elsewhere in the more productive provinces the contribution of cash crops amongst the A1 resettled, old resettled and communal farmers is relatively small. Only 20% to 25% of farmers have cash crop income, and the income would purchase less than 25% of their cereal needs. In Masvingo province (parts of Bikita and Masvingo districts) and particularly in Midlands province (in Gokwe North and South), a greater proportion of communal farmers have some cash crops, but the relative contribution to food needs is similarly small. In Matabeleland North and South, less than 10% of farmers reported having any cash crops.

Cotton is the most important cash crop in the northern Zambezi Valley and in Gokwe. In communal areas of Masvingo province groundnuts were cited as the most important crop; while in the Mashonaland provinces tobacco, maize and groundnuts were all important.

8.4.3.2. Livestock Sales as a Source of Income

For the coming year, a projection of the total possible value of livestock holdings was made, and various scenarios were run to see the effect of differing levels of livestock sales. Because livestock are an important productive asset (as draught power), a source of food (milk, meat) and a source of income (especially in the south of the country), for this analysis it was decided to set a limit on the levels of livestock sales that would be assumed in our calculations of income. The assumption used was that households would keep a minimum of 5 cattle and 3 goats, and that 25% of all holdings above that minimum threshold would be sold. This is considered to be a “normal” level of sales. In reality, people will sell more than this if necessary, but our intention is to support livelihoods by discouraging the sale of all assets.

Nationwide, the majority of the population will meet less than 25% of their cereal needs through the sale of livestock. Only 5.3% of the population have enough livestock to sell to meet 100% or more of their cereal needs. There are significant sectoral and provincial differences, however. In Matabeleland North and South, 12.6% and 9.8% of households respectively can meet their needs through livestock sales alone, while in the rest of the country the figures range from 2.2% to 4.7%.

In the Mashonaland, Manicaland and Midlands provinces, A1 resettled and Old Resettled farmers are significantly better off in terms of livestock holdings, while in Masvingo and the Matabeleland provinces, the situation is reversed, with communal farmers and even some farm workers having the greater livestock holdings.

8.4.3.3. Other Sources of Income

Potential cash income from on-farm labour was calculated in the same way as described earlier for food income from that source (i.e. it changes in relation to production levels). The large increase in production in resettlement areas in the Mashonaland provinces has resulted in expected income levels for current and former commercial farm-workers increasing. In communal areas, the highest levels of on-farm casual labouring will be found in the highveld and middleveld areas in the Mashonaland provinces and Manicaland, and in parts of Masvingo. Elsewhere in the country, the contribution from this source will remain quite low.

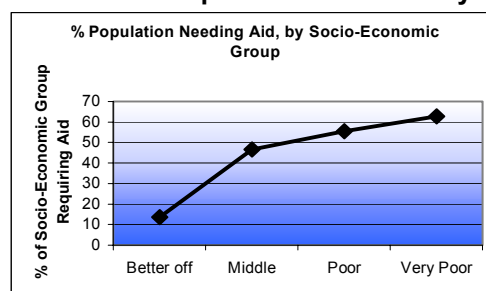
For all other sources of income (off-farm casual labour, gold panning, gifts and remittances, petty trading, formal employment and vegetable sales), it was assumed that people would be able to earn similar levels to last year. For many of these activities, the prices charged for the products or services tend to move in line with maize prices (albeit with a time lag), and therefore real incomes remain quite similar in spite of inflation. This is not necessarily the case with formal employment, where inflation has certainly eroded purchasing power significantly. However, in the absence of a strong basis for projecting the likely decline in real incomes, and given the substantial increases in minimum wages agreed by the Tri-Partite Negotiating Forum, it was decided to assume that real incomes would be unchanged although it is acknowledged that this may be somewhat unrealistic.

8.5. Demographic and Socio-Economic Characteristics of Food Insecure Households

8.5.1. Socio-Economic Group and Food Security

Four socio-economic groups were defined from the household survey using a composite index of the value of assets, livestock and annual income. As expected, there is a strong linkage between socio-economic groups and food security. While 71% of the very poor households need food aid, only 15% of the better off households will require assistance. Figure 29 illustrates the relationship between socio-economic group and food security.

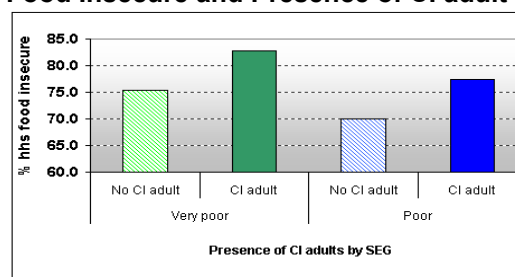
Figure 29: Relationship between Socio Economic Groups and Food Security



8.5.2. HIV/AIDS Proxy Indicators and Household Food Security

The analysis shown in Figure 30 highlights that a greater proportion of households with a chronically ill adult will be food insecure compared to those without a chronically ill adult. It is important to note, however, that this finding only applies to the very poor and poor socio-economic groups. For the middle group the relationship was actually reversed, and for the better off there was little difference between households with and without a chronically ill adult. This might be due to the greater resources and capacity to cope among middle and better off households compared to the poor and very poor, particularly in the early stages of chronic illness.

Figure 30: Percentage Rural Communal HHs Food Insecure and Presence of CI adult



8.5.3. Gender and Food Security

Women head 29.1% of the households surveyed. However, it was noted that the distribution of female-headed households (FHHs) is uneven among the different sectors. In communal areas, women headed 32.2% of the households. This number compares very close to the VAC August assessment findings, where 32% of the households were FHHs. Old resettled areas share the same range, with 30% of the households being female-headed. The proportion of FHHs drops significantly among the A1 resettled, CFW and Ex-CFW. Table 32 illustrates the proportion of FHHs among the different sectors.

Table 32: Distribution of Gender HH Head by Sector

Gender of Head	Communal Agr.	Old resettled	A1 resettled	CFW	Ex-CFW	Average
Male	67.8	70.0	84.9	80.5	83.3	70.9
Female	32.2	30.0	15.1	19.5	16.7	29.1

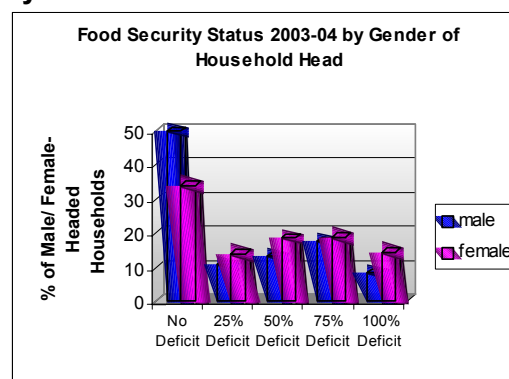
Looking at overall food security for the coming year, Figure 31 indicates that male-headed households (MHH) will typically be more food secure than female-headed households. While 50% of MHHs will have no deficit in the coming twelve months, only 34% of FHH will have no deficit. In contrast, 14% of FHH will have a deficit of 100% compared to only 8% of MHH.

The differences in food security by the gender of the HH head become clearer when broken down by sector. Table 33 indicates that there are extremely stark differences in the food security status of MHHs and FHHs among ex-commercial farm-workers. While 86% and 83% respectively of FHHs among ex-CFWs with and without land are food insecure, the equivalent percentages among MHHs are only 28% and 42%. Substantial differences also exist in the communal and old resettled sectors. Among currently employed farm workers the difference is small, while among the A1 resettled farmers there are actually a greater percentage of FHHs who are food secure.

Within the communal sector, FHHs this year will harvest slightly less cereal than MHHs. FHHs will meet, on average, 41% of their requirements through production, compared to 46% for MHHs). It is in relation to income that FHHs are most disadvantaged: while MHHs will on average meet 78% of their requirements from purchases, FHHs can only meet 44% of their requirements in this way. FHHs will on average meet a slightly larger proportion of their requirements through remittances and other direct sources of cereal than MHHs, however (11% compared to 9%).

8.5.4. Orphans and Food Security

Two questions were included in the household survey concerning orphans. The first question asked about the presence of any orphans in the household, while the second question focused on orphans brought from other households. Orphans were defined as “children with one or both parents lost, and less than 15 years of age”. The distribution of households catering for orphans is constant

Figure 31: Food Security Status 2003/04 by Gender of Household Head**Table 33: Comparison of Food Security Status between FHH and MHH**

Gender of HH Head	Have Deficit	
	Male	Female
Communal Land	58%	70%
Old Resettled	32%	48%
A1 Resettled	30%	26%
CFW	20%	24%
Ex-CFW no land	42%	83%
Ex-CFW with land	28%	86%

Table 34: Percentage Distribution of Orphans by Ty of Household

Presence of orphans		Percentage of hh	
		All sectors	Communal Sector
Proxy 1	No orphans	69.0%	66.8%
	With orphans	31.0%	33.2%
Proxy 2	No orphans from other hh	79.5%	78.6%
	With orphans from other hh	20.5%	21.4%

among the different sectors. In general, 31% of the households had at least one orphan. 20.5% of the households had at least one orphan from other households. Table 34 illustrates the frequency of orphans.

A greater proportion of households headed by women have orphans, compared to those headed by men. While 27.3% of all FHHs among the communal sector had at least one orphan from another household, only 18.6% of the MHHs had such orphans.

Households headed by an elderly person (>60 years) were also found to include more orphans. While only 16.6% of households headed by a non-elderly members took in orphans, 33.5% of the households headed by an elderly person took orphans. Table 35 shows that the most likely households to take in orphans are the households headed by elderly women.

Table 35: Households Likely to take in Orphans

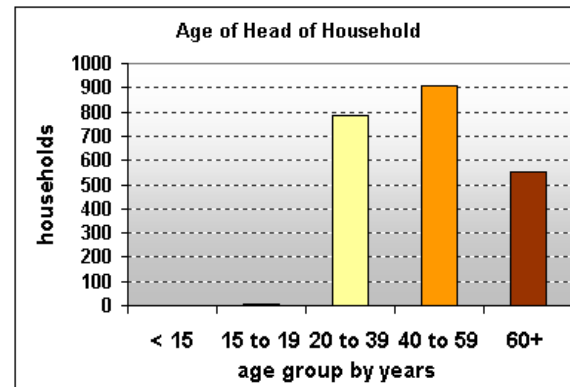
Age of Head	Gender of head	Without orphans from other hh	With orphans from other hh
Head not elderly	Male	85.7%	14.3%
	Female	78.3%	21.7%
	Average	83.4%	16.6%
Elderly head	Male	69.8%	30.2%
	Female	60.2%	39.8%
	Average	66.5%	33.5%

Households that take orphans will, in general, be more food insecure over the coming year. While 63% of the households with orphans need food aid, only 51% of the households without orphans need food aid. This may be due to the juxtaposition of many vulnerable characteristics (i.e. women and elderly) or because the presence of an orphan places greater demands on the food security of a household.

8.5.5. Age of Household Head and Food Security

The distribution of households by the age group of their head is illustrated in Figure 32. The presence of child headed households is virtually non-existent. Only 1 household (0.04% of the total sample) was identified as headed by a child younger than 15 years old. A further 9 households (0.4%) were identified as being headed by a youth aged from 15 to 19 years. These findings conform with the August VAC assessment results, where no households were headed by a child younger than 15 years and 0.3% of the households were headed by a youth.

Figure 32: Age of Head of Household



Elderly headed households (older than 60 years) represented 24.6% of the total population. The distribution of elderly headed households (EHHs) among the different sectors was uneven. Communal and old resettled areas presented the largest proportion of EHHs, with proportions of 28.2 and 32.2% respectively. CFW and Ex-CFW presented the lowest proportion of EHHs, with proportions of 3.9 and 7.9% respectively. EHHs accounted for 12.7% of the population. It is not surprising that the presence of EHHs is not common among the A1 resettled areas, as elderly people were not targeted as beneficiaries in the resettlement process. The uncommon presence of EHHs among CFW and Ex-CFW is also not surprising due to the labour intensive nature of work on commercial farms.

Within the households sampled, those headed by an elderly person were found to be marginally more likely to be food insecure. 59% of EHHs will require food aid compared to 53% of non-elderly headed households. These differences become more prominent when analyzing the impact that the presence of an elderly head has on different socio-economic groups. For example, 60% of very poor non-EHHs will be food insecure, but this figure increases to 75% among EHHs. The same pattern is noticed within the poor SEG. On the other hand, the presence of EHHs does not appear to have a major impact for households in the middle and better off group. Table 36 illustrates the variation of the food aid needs by SEG and presence of EHHs.

Table 36: Variation of the food aid needs by Social Economic Group (SEG) and presence of EHHs

SEG	Age of Head	%HHs needing emergency food aid
Very Poor	Head not elderly	60%
	Head elderly	75%
	Average	63%
Poor	Head not elderly	52%
	Head elderly	66%
	Average	55%
Middle	Head not elderly	46%
	Head elderly	48%
	Average	47%
Better off	Head not elderly	13%
	Head elderly	15%
	Average	14%

Table 37: The percentage of households, disaggregated by the age and gender of the household head

Gender of head	Age of head	Presence of orphans	Need Aid
Male	Not Elderly	No orphan	48%
		With orphan	55%
	Elderly	No orphan	50%
		With orphan	60%
Female	Not Elderly	No orphan	61%
		With orphan	68%
	Elderly	No orphan	67%
		With orphan	74%

When taking multiple factors into account, the cumulative effects on food security are greater. Table 37 examines the percentage of

households, disaggregated by the age and gender of the household head and by the presence of orphans, that will require food aid over the coming year. At one extreme, only 48% of non-elderly male-headed households without orphans will have a deficit, compared to 74% of elderly female-headed households with orphans.

8.5.6. Size of Household and Food Security

The size of household has a strong bearing on food security. Table 38 indicates how as the household size increases from 1-2 members to 3-6 members to more than 7 members, the proportion that needs food aid rises dramatically from 26% to 49% to 67%.

Table 38: Food Aid Needs and Household Size

Size of hh	No Food Aid Need	Need Food Aid
1 or 2 members	74%	26%
3 to 6 members	51%	49%
7 or more members	33%	67%

Table 39¹⁴ illustrates explanations for this by examining the average percentage of minimum cereal requirements and the total income predicted to be accessed over the coming year by households of different sizes. With increasing family size, the amount of requirements met from each source declines (e.g. production provides 51% of the smallest households' requirements, but only 25% of the largest households'). It is interesting to note that total nominal income rises as family size increases (from

¹⁴ In this table the sample has been filtered to exclude outliers who will get more than 250% of their requirements from either production, direct sources or purchases.

Z\$29,020 to Z\$75,033), but that income will not rise fast enough to match the increasing consumption requirements of larger families, as reflected in the declining contribution of purchases from 67% to 34% of their requirements.

Table 39: Average percentage of minimum cereal requirements by size of household						
Size of HH		Production as % Rqmts.	Direct Sources as % Rqmts.	Purchase as % Rqmts.	Total Potential Income 2003 (Z\$)	Cereal Food Surplus/Gap (+/-) as % Rqmts.
1-2 Members	Mean	51%	19%	67%	Z\$29,020	+36%
	Std. Dev.	65%	42%	72%	Z\$33,641	110%
3-6 members	Mean	37%	9%	49%	Z\$54,069	-4%
	Std. Dev.	47%	24%	56%	Z\$61,052	80%
7 or more members	Mean	25%	6%	36%	Z\$75,033	-32%
	Std. Dev.	34%	16%	44%	Z\$91,688	62%
Average	Mean	33%	9%	44%	Z\$62,038	-14%
	Std. Dev.	44%	22%	53%	Z\$76,012	77%

As would be expected, larger families are more likely to include orphans from other families, as indicated in Table 40, with only 4.9% of households with 1-2 members having orphans, compared to 30.2% of households with 7 or more members.

Table 40: Household Sizes as it Relates to Orphans

Size of hh	No Orphans from other hh	With Orphans from other hh
1-2 member	95.1%	4.9%
3-6 members	85.1%	14.9%
7 or more members	69.8%	30.2%

9. RECOMMENDATIONS AND CONCLUSIONS

The food aid needs determined by the analysis above is to help populations cope with the vulnerability that was carried over from the previous season. The 4.4 million identified as the people in need of food aid are the ones who would engage in erosive coping mechanisms if not assisted. These people need assistance for them to be able to maintain their productive assets, afford health, education and agricultural inputs and prevent them from engaging in high risk behaviors that could increase the spread of HIV/AIDS. On the other hand food aid is required to avert massive increases in malnutrition and avert starvation.

The emergency food aid needs above assume that food will be available on the markets for those with money to be able to buy. Such an assumption would not have held over the last two years. Therefore, the ZimVAC strongly emphasizes the need for the government to ensure availability of food commodities on the markets. On the other hand, periodic monitoring has to be carried out and aid agencies should put contingency plans in case the government is not able to import enough quantities.

9.1. Policy Implications

The government need to ensure that adequate supplies of grain are imported to meet market demand over the coming year, whether it is through the GMB or through the legal and economic facilitation of greater private sector involvement. While subsidies of grain prices are worthwhile, there is strong evidence to suggest that the rest of the population not requiring food aid could afford to pay more than the current controlled price for maize. Decreasing subsidies would reduce pressure on government finances, and should also reduce the premium for parallel market grain sales and thus the incentives for corruption and the re-sale of GMB grain.

While it is beyond the scope of the current assessment to address macroeconomic policy, it is clear that the root causes of the current economic decline must urgently and comprehensively be addressed. It is the prerogative of any Government to provide adequate resources for financing emergency needs, social services and to provide a basis for recovery.

The HIV/AIDS problem, in addition to constituting both a short-term and long-term emergency in its own right, seriously threatens the ability of households, communities and the country as a whole to recover from other “shocks” such as the current food crisis. The food security situation cannot, therefore, be tackled in isolation; its causes and outcomes must be addressed in a holistic manner. The government is already administering the AIDS Levy through the National AIDS Council, and it is important that the community prevention and mitigation programmes encompass the food issues as well. Labour saving technologies are encouraged for the affected and unaffected households to increase on time available for food production.

The performance of A1 resettled farmers surveyed in this assessment indicates that this sector has substantial potential to assist in the revival of the agricultural sector. The newly resettled farmers require financial assistance, that could be raised by government alone or through partnership with the private sector and/ or international agencies, for the inputs and infrastructure required to realize this potential.

The situation of ex-commercial farm-workers requires a long-term solution. It is recommended that land be identified for redistribution to this group to provide them with a basis for sustainable livelihoods.

The assessment revealed that the greatest constraint to accessing education and healthcare was cost, with hunger being a significant second constraint in the case of education. This suggests that substantial improvements in access to basic services could be made by the reduction or abolition of user costs, or by the expansion and improved targeting of safety nets such as BEAM.

9.1.1. Food Aid and Alternatives

Regarding the targeting of emergency food aid, the findings of this survey indicate that no hard and fast rules regarding vulnerable groups can be applied. Some geographical and sectoral targeting will be possible, but targeting criteria based strictly on demographic criteria will have big exclusion and inclusion errors. Formal employment and high livestock holdings are good indicators of food security, but things like “female-headed households”, “families above a certain size”, and “families hosting orphans”, while increasing the likelihood of being food insecure, do not automatically equate to needing food aid. Targeting criteria will need to be relatively flexible, and some form of community-based targeting, if applied with adequate checks and balances and monitoring, would appear to be the most appropriate strategy to adopt.

In accordance with the findings relating to family size and food security, it is strongly recommended that limits on the numbers of household members who can receive food aid rations (which discriminate against large families) be removed. Improved screening and verification must address fears of over-registration of household members.

Given the purchasing power of some sectors of the community, and if adequate resources are provided to necessary free food aid programmes first, monetization of food aid should be considered, especially in somewhat better off areas with higher incomes (e.g. for commercial farm workers).

Food aid agencies should also consider the types of food for relief. Much as the cereals contribute 70% of the daily energy requirements, programming for HIV/AIDS infected people requires consideration of highly fortified foods and more nutritious foods. The high costs of other foods like vegetable oil or kapenta fish is a cause of concern. Aid agencies might also consider how households in their target areas could access fats and proteins. It has to be noted that high consumption of cereals only is not good for the long-term development of people, especially children. There is need to consider the high energy requirements for those infected by HIV/AIDS.

Food-for-work is recommended cautiously. In addition to the normal high costs of administration and complementary inputs, with the high prevalence of HIV/AIDS there is likely to be a significant proportion of households in need of food aid who lack adequate labour for income-earning activities. Unless the necessary time and resources are provided to ensure that such households are identified and assisted without having to work, then FFW could be counter-productive.

Some of the most food insecure areas of the country are those where maize prices are highest and terms of trade for livestock and casual labour are lowest. Possibilities for innovative programmes to influence market forces in a manner conducive to improved household food security should be further investigated (e.g. facilitating transport of grain to, or livestock from, remote markets; providing credit to large farmers to facilitate increased employment of and/or better payment rates to labourers).

In areas of high livestock holdings, managed de-stocking (i.e. programmes to purchase livestock at fair prices in exchange either for cash or for food) would be very useful in ensuring that people can purchase more grain while maintaining more of their livestock holdings. In areas where heavy de-stocking has already taken place over the past year, animal multiplication and re-stocking programmes would also be worthwhile. However, any Livestock Development Programme should also involve an aspect of animal health, given the threat of Foot and Mouth and other animal diseases.

9.1.2. Short Term Emergency Interventions

- Plans need to be put in place urgently for the procurement of 754,795 MT of cereals to fill in the food gap and to avoid logistical problems experienced last year.
- Maize availability was a major constraint on food security last year. Government needs to ensure that enough maize is available this year both in the rural and urban areas.
- The GMB needs to closely monitor the marketing of cereals in order to avoid profiteering and eventual shortages.
- Government should provide a conducive environment to facilitate the private sector in importing food and even consider the option of monetization.
- An increase of up to Z\$165 per kg over last year's controlled retail maize price would not severely compromise people's access to maize, while reducing pressure on Government finances
- At least 388,600 MT must be distributed as food aid, targeted to an estimated 4.4 million rural food insecure people.
- Support in the provision of inputs and infrastructure to A1 resettlement farmers should be strengthened to allow them to realize their full potential.
- Emphasis should be put on appropriate targeting of food aid beneficiaries, such as HIV/AIDS affected households, poor households, female-headed households, through community-based approaches.
- Food for work should be encouraged for poor able-bodied individuals through NGOs.
- Public Works Programme should continue but an improved remuneration package commensurate with the price of maize should be considered.
- Provision of nutritious food to the chronically ill, through the Community Home - Based Care Programme should be encouraged.

9.1.3. Recovery and Longer Term Intervention

- Land should be identified for redistribution to landless families, in particular in cases where the head of the household is unemployed.
- The Government's current efforts to curb the economic decline should be enhanced with particular emphasis on reducing inflation and budget deficit.
- Interventions with longer-term impact, such as school and child supplementary feeding and agricultural recovery should be enhanced.

- Livestock destocking and/or restocking should be considered in the southern parts of the country and measures to implement disease control programs put in place.
- Provision of seeds and other agricultural inputs should be timeously planned for 2003/04 production season to enhance future food security. Plans to ensure that all farmers access enough seeds of their choice must be put in place.
- All stakeholders in the agricultural sector must develop a strategic plan on increasing production to levels attained in the 1980s or surpassing them for major crops and livestock.
- Response to households' non-food needs, in particular those affected by HIV/AIDS, is an essential part of food security and community safety nets and should be given priority.
- Targeting under safety nets programmes, such as BEAM, should be extended to increase coverage of all vulnerable children.
- Basic services such as healthcare and HIV/AIDS testing should be made accessible to all communities at no or minimal cost.
- Monitoring studies coordinated by ZimVAC should be planned and carried out during the next few months to ensure that changes in livelihoods are captured.
- Urban vulnerability assessments coordinated by ZimVAC should be carried out urgently given that there is a lack of current information on urban needs.

Appendix A: Zimbabwe Vulnerability Assessment Committee April 2003 Assessment - Household Interview

1. Enumerator Number _____ 2. District Name _____ 3. District Code | | | |
4. Ward Name _____ 5. Ward Code | | | |
6. Village Name _____ 7. Village Surveyed | | | 8. FEZ (ID) | | |

1.1.1.1 A. Household Demographics

9.	Sex of household head (circle one)	Male	Female
10.	Does the head of household stay most of the time in this homestead?	No	Yes
11.	How old is the household head in years (circle one)-(approx)?	Up to 15years 40 to 59 years	16 to 19 years 60 years or older
12.	What is the Marital Status of the household head?	1 = married 4 = single	2 = widowed 5 = orphan/child 3 = divorced/separated 6 = other
13.	Household Size – How many people CURRENTLY eat and sleep in the household (exclude temporary visitors (for <1 month), and include the respondent)	Members	
14.	How many children under 5 years live permanently in the household? (< 5)	Children from 0 to 4 years	
	How many children 5-14 years live permanently in the household? (5 to 14)	Children from 5 to 14 years	
	How many youths 15-19 years live permanently in the household? (15 to 19)	Males 15-19	Females 15-19
	How many adults 20-59 years live permanently in the household? (20 to 59)	Males 20-59	Females 20-59
	How many elderly older than 60 years live permanently in the household? (60 or older)	Elderly older than 60	
	From the total number of children aged up to 15 years old, how many are orphaned children ? (Defined as "one or both parents lost, and less than 15 years")	Orphans (if none, skip to Q15)	
	From the total orphans described above, how many have come from other households ?	Orphans	
15.	Has any female child under 15 years got married in the last 12 months? (circle one)	No	Yes Not Applicable
16.	Has your family lived in this community for more than one year?	No	Yes

B. EDUCATION

17.	From the total number of children aged between 5 to 14 years old, how many are currently attending primary school ?	children	
18.	Did any child aged between 5 to 14 years old drop out of primary school for more than one month in the last 12 months? (circle one)	No – skip to question 22 Yes Not applicable	19. If yes, how many?
20.	If any boys dropped out of primary school, what was the main reason ? (choose only one option)	1=Family cant afford costs (books, uniform, fees etc.) 2= Work outside home for food or cash 3= Help with household activities 4= Care for sick family member 5= Hunger 6= Not interested/ not good student 7 = Too far 8= Other 99= N/A (no children dropped out)	

21.	If any girls dropped out of primary school, what was the main reason ? (choose only one option)	1= Family cant afford costs (books, uniform, fees etc.) 2= Work outside home for food or cash 3= Help with household activities 4= Care for sick family member 5= Hunger 6= Not interested/ not good student 7= Early marriage or pregnancy 8 = Too far 9= Other 99= N/A (no children dropped out)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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1.1.1.2 C. ASSETS and Livestock Ownership

22.	Does your household own any of the following items : Please Check all that Apply	Hoe <input type="checkbox"/> Ox-Plough <input type="checkbox"/> Radio <input type="checkbox"/> Television <input type="checkbox"/>	Scotch Cart <input type="checkbox"/> Iron/ Asbestos Roofing Sheet (<i>not scrap metal</i>) <input type="checkbox"/> Wheelbarrow <input type="checkbox"/>
23. 24.	How many livestock does your household own now and how many did your household own at the same time last year (April 2002)?	Of the following livestock.... All Cattle of which, draught cattle Goats Sheep Donkeys Poultry (chickens, ducks, turkeys, guinea fowl etc.) Pigs Other	How many does your HH currently own? How many did your HH own at the same time last year (April/02)?

1.1.1.3 D. Land Use and Production

D.1 AREA CULTIVATED

25.	Compared to last year's summer growing season (i.e. planted Nov/Dec01-harvested Apr02), did you cultivate more, less or the same amount of land during this current cropping season (Nov/02-Apr/03)? (circle one)	Cultivated more land this season Cultivated same amount of land Cultivated less land this season N/A (HH doesn't cultivate) – if N/A, skip to section E
26.	During this current summer growing season (planted Nov/Dec02 – harvesting Apr/03), did you leave any land uncultivated that would normally be cultivated? (circle one)	No (<i>if no skip to Q29</i>) Yes N/A (HH doesn't cultivate)
27.	Was the area left uncultivated during this current summer season (i.e. harvesting Apr/03) bigger, smaller or the same as the area left uncultivated during the last year summer season (i.e. harvested Apr/02)? (circle one)	Left more land uncultivated this season Left the same amount of land uncultivated Left less land uncultivated this season N/A (HH doesn't cultivate)
28.	If any land was left uncultivated during this current summer season (Dec/02-Apr/03), what were the reasons : (tick all relevant boxes)	lack of labour (<i>incl. illness</i>) <input type="checkbox"/> lack of seed <input type="checkbox"/> lack of draught power <input type="checkbox"/> lack of fertilizer <input type="checkbox"/> lack of rainfall <input type="checkbox"/> To leave as fallow <input type="checkbox"/> Other <input type="checkbox"/>

4 D.2 Production – Last Year’s Harvest (Harvested during 2002)		
5 D.2a Cereal and Sweet Potatoes <u>SUMMER</u> Harvest Season 2002 (Mar-Jun/02)		
29.	Did you harvest MAIZE during last year’s summer harvest (Mar-Jun/02)?	No = 0 if no skip to Q33 Yes = 1
30.	If yes, what was your TOTAL harvest of MAIZE for 2002? (in kgs)	_ _ _ _ kgs
31.	Did you give away, sell or exchange any MAIZE from that harvest?	1= Yes 0= No – if no skip to Q. 33
32.	If yes, how many kgs of MAIZE did you sell, exchange or give away? (in kgs)	_ _ _ _ kgs
33.	Did you harvest SORGHUM during last year’s summer harvest (Mar-Jun/02)?	No = 0 if no skip to Q37 Yes = 1
34.	If yes, what was your TOTAL harvest of SORGHUM during 2002? (in kgs)	_ _ _ _ kgs
35.	Did you give away, sell or exchange any SORGHUM from that harvest?	1= Yes 0= No – go to question 37
36.	If yes, how many kgs of SORGHUM did you sell, exchange or give away? (in kgs)	_ _ _ _ kgs
37.	Did you harvest MILLET (rapoko and/ or mhunga) during last year’s summer harvest (Mar-Jun/02)?	No = 0 if no skip to Q41 Yes = 1
38.	If yes, how many kgs of MILLET did you harvest during 2002?	_ _ _ _ kgs
39.	Did you give away, sell or exchange any MILLET from that harvest?	No = 0 if no skip to Q41 Yes = 1
40.	If yes, how many kgs of MILLET did you sell or give away?	_ _ _ _ kgs
41.	Did you harvest sweet potatoes during last year’s summer harvest (Mar-Jun/02)?	1= Yes 0= No – go to question 43
42.	If yes, how many kgs of sweet potatoes did you harvest?	_ _ _ _ kgs
6 D.2b Production – Winter (Dry Season) Harvest 2002		
43.	Did you harvest any winter (dry season) MAIZE crop during 2002?	1= Yes 0= No – go to question 45
44.	If yes, what was your TOTAL MAIZE harvest during last year’s dry season?	_ _ _ _ kgs
45.	Did you harvest any winter (dry season) WHEAT crop during 2002?	1= Yes 0= No – go to question 45
46.	If yes, what was your TOTAL WHEAT harvest during last year’s dry season?	_ _ _ _ kgs

7 D.2c Cash Crops <u>SUMMER Harvest Season 2002 (Mar-Jun/02)</u>		
1.1.	1.1.1.9 WHAT WAS YOUR MOST IMPORTANT CASH CROP DURING LAST YEAR'S SUMMER SEASON? (CIRCLE ONE)	1.1.1.10 1: COTTON 5: WHEAT 2: tobacco 6: sunflower 3: maize 7: soyabeans 4: groundnuts 8: other 9: not applicable (no cash crops) – skip to Section D.3
1.1.	1.1.1.12 HOW MANY KGS OF THAT CROP DID YOU HARVEST DURING 2002?	_ _ _ _ kgs
1.1.	1.1.1.14 WHAT WAS YOUR SECOND MOST IMPORTANT CASH CROP DURING LAST YEAR'S SUMMER SEASON?	1.1.1.15 1: COTTON 5: WHEAT 2: tobacco 6: sunflower 3: maize 7: soyabeans 4: groundnuts 8: other 9: not applicable (no other cash crops) – skip to Section D.3
1.1.	1.1.1.17 HOW MANY KGS OF THAT CROP DID YOU HARVEST DURING 2002?	_ _ _ _ kgs
18 D.3 Production – This Year's Harvest (Harvests during 2003)		
19 D.3a Production – SUMMER HARVEST 2003 (Harvesting Now)		
51.	Have you already or are you expecting to harvest MAIZE during this current summer harvest (Apr-Jun/03)?	1= Yes 0= No – go to question 55
52.	If yes, how many kgs of MAIZE in total have you already harvested and do you expect to harvest? (Sum both what has been harvested already and what remains to be harvested)	_ _ _ _ kgs
53.	Has your household already consumed dry maize from this year's harvest?	1= Yes 0= No – go to question 55
54.	If yes, how many kgs have you consumed already?	_ _ _ _ kgs
55.	Have you already or are you expecting to harvest SORGHUM during this current summer harvest (Apr-Jun/03)?	1= Yes 0= No – go to question 57
56.	If yes, how many kgs of SORGHUM in total have you already harvested and do you expect to harvest? (Sum both what has been harvested already and what remains to be harvested)	_ _ _ _ kgs
57.	Have you already or are you expecting to harvest MILLET (rapoko and/ or mhunga) during this current summer harvest (Apr-Jun/03)?	1= Yes 0= No – go to question 61
58.	If yes, how many kgs of MILLET in total have you already harvested and do you expect to harvest? (Sum both what has been harvested already and what remains to be harvested)	_ _ _ _ kgs
59.	Has your household already consumed MILLET from this current harvest?	1= Yes 0= No – go to question 61
60.	If yes, how many kgs have you consumed already?	_ _ _ _ kgs
61.	Have you already or are you expecting to harvest SWEET POTATOES during this current summer harvest (Apr-Jun/03)?	1= Yes 0= No – go to question 63
62.	If yes, how many kgs of SWEET POTATOES in total have you already harvested and do you expect to harvest? (Sum both)	_ _ _ _ kgs

20 D.3b Cash Crops <u>SUMMER Harvest Season 2003 (Mar-Jun/03)</u>		
1.1.	1.1.1.22 WHAT IS YOUR MOST IMPORTANT CASH CROP FOR THIS YEAR'S SUMMER SEASON? (CIRCLE ONE)	1.1.1.23 1: COTTON 5: WHEAT 2: tobacco 6: sunflower 3: maize 7: soyabeans 4: groundnuts 8: other 9: not applicable (no cash crops) – skip to Section E
1.1.	1.1.1.25 HOW MANY KGS OF THAT CROP HAVE YOU ALREADY OR DO YOU EXPECT TO HARVEST IN TOTAL DURING 2003? (SUM BOTH WHAT HAS BEEN HARVESTED ALREADY AND WHAT REMAINS TO BE HARVESTED)	_ _ _ _ kgs
1.1.	1.1.1.27 WHAT IS YOUR SECOND MOST IMPORTANT CASH CROP FOR THIS YEAR'S SUMMER SEASON? (CIRCLE ONE)	1.1.1.28 1: COTTON 5: WHEAT 2: tobacco 6: sunflower 3: maize 7: soyabeans 4: groundnuts 8: other 9: not applicable (no other cash crops) – skip to Section E
1.1.	1.1.1.30 HOW MANY KGS OF THAT CROP HAVE YOU ALREADY OR DO YOU EXPECT TO HARVEST IN TOTAL DURING 2003? (SUM BOTH WHAT HAS BEEN HARVESTED ALREADY AND WHAT REMAINS TO BE HARVESTED)	_ _ _ _ kgs
31 E. Other Direct Sources of Cereals		
N.B. Government Public Works, or "Food for Work" programmes should be included under the "Income" section, as cash rather than cereals are earned		
67. Did anyone in the household earn CEREALS from On-Farm casual Labour during the last 12 months?		No – if no skip to 69 Yes
68. If yes, how many kgs have you received from On-farm casual labour during the last 12 months?		_ _ _ _ kgs
69. Did anyone in the household earn CEREALS from Off-Farm casual Labour during the last 12 months?		No – if no skip to 71 Yes
70. If yes, how many kgs have you received from off-farm casual labour during the last 12 months?		_ _ _ _ kgs
71. Did anyone in the household receive CEREALS from Gifts and Remittances during the last 12 months?		No – if no skip to 73 Yes
72. If yes, how many kgs have you received from gifts and remittances during the last 12 months?		_ _ _ _ kgs
73. Did anyone in the household receive/earn CEREALS from any other sources during the last 12 months?		No – if no skip to 75 Yes
74. If yes, how many kgs have you received from other sources during the last 12 months?		_ _ _ _ kgs
32 F. Cereals from Food Aid		
75. Did you receive CEREALS or CSB from General Food Aid (whole family rations)?		No – if no skip to 77 Yes
76. If yes, how many kgs of cereals and CSB have you received from general food aid during the last 12 months?		_ _ _ _ kgs
77. Did you receive CEREALS or CSB from programmes specifically targeted at the chronically ill, orphans or pregnant/ lactating mothers ?		No – if no skip to 79 Yes
78. If yes, how many kgs of cereals and CSB have you received during the last 12 months?		_ _ _ _ kgs
79. Did any child younger than 7 years received supplementary feeding (porridge) during the last 12 months? (circle one)		No – if no skip to 82 Yes Not applicable (no under 5s in HH)
80. If yes, how many children received supplementary feeding during the last 12 months? (not including school feeding)		.33 _ _ CHILDREN
81. If yes, for how many months?		.34 _ _ MONTHS
82. Did any of the children of primary school age receive porridge at the school ?		No – if no skip to 85 Yes Not applicable (no children in HH)
83. If yes, how many children received porridge at primary schools during the last 12 months?		.35 _ _ CHILDREN
84. If yes, for how many months?		.36 _ _ MONTHS

37 G. Cereal Purchases		
During the last 12 months (April 2002 to now)...		
85.	How much cereal (including mealie meal) did your household purchase <u>during the last 12 months</u> from GMB or at controlled prices? (kgs)	_ _ _ _ kgs
86.	Taking into account the months that GMB was not available or sufficient, how much cereal (including mealie meal) did your household purchase at uncontrolled prices or from local markets (or the black market) during the last 12 months? (kgs)	_ _ _ _ kgs
During the last 4 months (December 2002 to now)...		
87.	How much rice did your household purchase during the last 4 months? (kgs)	_ _ _ _ kgs
88.	How much potatoes/ sweet potatoes did your household purchase during the last 4 months?	_ _ _ _ kgs
89.	How much flour did your household purchase during the last 4 months?	_ _ _ _ kgs
90.	How much bread did your household purchase during the last 4 months? (N.b. 1 loaf = roughly 400g)	_ _ _ _ kgs
Imagine that during the last 12 months (April 2002 to now)...		
91.	If cereals had been readily available at GMB/ controlled prices and no food aid was delivered, how much cereal would you have been able to buy from GMB per month (on average) with the income you were earning?	_ _ _ _ kgs
92.	If cereals had been readily available at uncontrolled prices/black market and no food aid and GMB was delivered, how much cereal would you have been able to buy from shops with uncontrolled prices per month (on average) with the income you were earning?	_ _ _ _ kgs
1.1.1.38 H. Income Sources		
39 H.1 Non-Seasonal Income Sources – Last 4 months		
93.	Did anyone in your household earn income from Formal Employment during the last 4 months (December to March)?	No – if no, skip to Q96 Yes
94.	If yes, how much did you earn from formal employment during the last 4 months?	Z\$ _____
95.	For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
96.	Did anyone in your household earn income from sales of livestock during the last 4 months?	No – if no skip to Q99 Yes
97.	If yes, how much did you earn from sales of livestock during the last 4 months?	Z\$ _____
98.	For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
99.	Did anyone in your household earn income from trading and self-employment during the last 4 months?	No – if no, skip to Q102 Yes
100.	If yes, how much did you earn from trading and self-employment during the last 4 months? (n.b. profits only – do not include input costs)	Z\$ _____
101.	For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
102.	Did anyone in your household earn income from gold panning during the last 4 months?	No – if no, skip to Q105 Yes
103.	If yes, how much did you earn from gold panning during the last 4 months?	Z\$ _____
104.	For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable

105. Did anyone in your household earn income from remittances and gifts during the last 4 months?	No – if no, skip to Q108 Yes
106. If yes, how much did you earn from remittances and gifts during the last 4 months?	Z\$ _____
107. For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
108. Did anyone in your household earn income from Government Public Works ("Food for Work") during the last 4 months?	No – if no, skip to Q110 Yes
109. If yes, how much did you earn from "food for work" during the last 4 months?	Z\$ _____

10 H.2 Seasonal Income Sources – Last 12 Months	
110. Did anyone in your household earn income from Cereal and Cash Crop Sales during the last 12 months?	No – if no, skip to Q113 Yes
111. If yes, how much did you earn from sales of cereal and cash crops during the last 12 months?	Z\$ _____
112. For these coming 12 months, are you expecting to earn more, less or the same than the last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
113. Did anyone in your household earn income from On-farm Casual Labor during the last 12 months?	No – if no, skip to Q116 Yes
114. If yes, how much did you earn from on-farm casual labor during the last 12 months?	Z\$ _____
115. For these coming 12 months, are you expecting to earn more, less or the same than the last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
116. Did anyone in your household earn income from Off-farm Casual Labor during the last 12 months?	No – if no, skip to Q119 Yes
117. If yes, how much did you earn from off-farm casual labor during the last 12 months?	Z\$ _____
118. For these coming 12 months, are you expecting to earn more, less or the same than the last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
119. Did anyone in your household earn income from Vegetable sales/gardening during the last 12 months?	No – if no, skip to Q122 Yes
120. If yes, how much did you earn from Vegetable sales/gardening during the last 12 months?	Z\$ _____
121. For these coming 12 months, are you expecting to earn more, less or the same than last 12 months?	1= More 2= Same 3= Less 99= Don't know or Not applicable
11 I. Expenditure Patterns	
122. What is the main/ biggest expense your household has had over the last 12 months? (1= staple foods, 2= non-staple foods, 3=household goods, 4= education, 5=health, 6= funerals, 7= travel, 8= agricultural inputs, 9= other)	<input type="text"/>
123. What is the second main/ biggest expense your household has had over the last 12 months? (1= staple foods, 2= non-staple foods, 3=household goods, 4= education, 5=health, 6= funerals, 7= travel, 8= agricultural inputs, 9= other)	<input type="text"/>
124. What is the third main/ biggest expense your household has had over the last 12 months? (1= staple foods, 2= non-staple foods, 3=household goods, 4= education, 5=health, 6= funerals, 7= travel, 8= agricultural inputs, 9= other)	<input type="text"/>

1.1.1.42 J. Agricultural Inputs	
125. Did you have enough seeds for your main cereal crops last 12 months?	No Yes – if yes skip to Q127 NA / did not cultivate cereals – if NA skip to Q128
126. If not, what was the reason ?	1= Could not afford to purchase 2= Was not available in the market 3= Both of the above 4= Other

127.	What was the main source for the seed that you used? (one answer only)	1=from last harvest/ retained seed/carry over 2=purchased 3=provided by NGO 4=provided by government 5= gifts/remittances 6=other
128.	Did you have enough seeds for your main cash crop?	No Yes – if yes, skip to Q130 NA / did not cultivate cash crops - if NA, skip to q130
129.	If not, what was the reason?	1= Could not afford to purchase 2= Was not available in the market 3= Both of the above 4= Other
130.	Did you have sufficient chemical fertilizer for your main cereal crop?	No Yes – if yes, skip to Q132 NA / did not cultivate cereals – if NA, skip to Q132
131.	If not, what was the reason?	1= Did NOT want to use fertilizer 2= Preferred to use organic fertilizer (manure) 3= Could not afford to purchase 4= It was not available in the market 5= Both 3 and 4 of the above 6= Other
132.	Has the household got access to enough water for gardening?	No Yes N/A (no crops)

13 K. Consumption and food frequency			
YESTERDAY, DID ANYONE IN YOUR HOUSEHOLD CONSUME ANY OF THE FOLLOWING FOOD TYPES....:			
Food item	Yes/ No	Food item	Yes/ No
133. Maize/ Maize Meal	Yes No	Fruits (not wild fruits)	Yes No
Other Cereals (sorghum, millet, rice, etc.)	Yes No	Wild foods (leaves, roots, tubers, fruits, insects...)	Yes No
Bread/ flour	Yes No	Meat (chicken, beef, wild....)	Yes No
Cassava, potatoes	Yes No	Eggs	Yes No
Sugar or sugar products	Yes No	Fish (fresh or dried)	Yes No
Nuts & Pulses (groundnuts, beans etc.)	Yes No	Cooking oil, fats	Yes No
Vegetables	Yes No	Milk	Yes No

L. COPING STRATEGIES			
Which of the following Coping Strategies did the household utilise in the period from December 2002 to March 2003?			
Consumption Strategies			
134.	Has the household borrowed food or money to buy food, or bought food on credit?	No	Yes
	Has the household relied on less preferred foods as substitutes for maize?	No	Yes
	Have the household members regularly reduced the number of meals eaten per day?	No	Yes

Have HH members regularly skipped entire days without eating due to lack of money or food?	No	Yes	
Have HH members regularly eaten less preferred food as substitute for maize?	No	Yes	
Have HH members regularly eaten meals of vegetables only?	No	Yes	
Eaten unusual types of wild food that are not normally eaten?	No	Yes	
135. Has the HH restricted consumption of adults so that children can eat normally?	No	Yes	N/A
136. Eaten all maize green/ fresh from the field? (i.e. nothing left to harvest)	No	Yes	N/A
137. Slaughtered more animals than normal for food?	No	Yes	N/A
Expenditure Strategies			
138. Have you avoided spending on healthcare because you had to buy food?	No	Yes	
139. Has the HH reduced expenditure on education to buy food?	No	Yes	N/A
140. Has the HH reduced expenditure on agricultural and livestock inputs?	No	Yes	N/A
Income Strategies			
141. Has the HH sold more than the usual number of livestock to get food?	No	Yes	N/A
142. Has the HH sold breeding and draft cattle to get food?	No	Yes	N/A
143. Has the HH sold other HH assets to get food?	No	Yes	N/A
144. Has the household had crops or livestock stolen?	No	Yes	N/A
Migration Strategies			
145. Send children away to friends or relatives?	No	Yes	N/A
146. Been forced to temporarily or permanently migrate to find food or work?	No	Yes	

1.1.1.44 M. HEALTH			
147	Did anyone in the household get sick over the last two weeks?	Yes No – if no, skip to Q150	
148	If “yes”, where did you go for health care? (Multiple answer allowed)	1. Did not seek health care outside household 2. Pharmacy/dispensary (without doctor consultation) 3. Clinic/hospital/village health worker (formal health care) 4. Traditional Healer/Faith 5. Other 99. No one was sick – not applicable	
149	If someone was sick and did NOT seek FORMAL health care, what was the MAIN reason?	1. No money to pay for treatment (fees and drugs) 2. No transport, too far, or too expensive to get there 3. Poor quality of service (no drugs/ staff)/lack of confidence 4. Prefer not to go – religious or cultural reasons 5. Illness was minor 6. Other reasons 99. Sought formal health care – Not applicable	
150	How many adults (15-60 years) in the household have been ill for more than 3 months during the last 12 months? (Please refer to members that keep getting sick over and over, i.e. chronically ill)	1. Only One 2. Two 3. Three or more 4. None were chronically ill – skip to question Q152	
151	Is the head of household among those who have been ill for more than 3 months last 12 months?	Yes No	
152	How many children under 5 years old in the household have been ill for more than 3 months during the last 12 months? (Please refer to members that keep getting sick over and over, i.e. chronic illness)	1. Only One 2. Two 3. Three or more 4. None are chronically ill	
153	How many adults (15-60 years) died in the last 12 months after being ill for more than 3 months?	1. Only One 2. Two 3. Three or more 4. None died – skip to question Q155	
154	Was the head of household one of the people that died?	Yes No	
155	How many children under 5 years old died in the last 12 months after being ill for more than 3 months?	1. Only One 2. Two 3. Three or more 4. No children died	

Appendix B: Zimbabwe Vulnerability Assessment Committee April 2003 Assessment - Community Interview

Composition of Interview:

- The interview will include village leaders and representatives with no more than 8 people in the group
- The group should comprise at least 50% women

1. District Name _____ 2. District Code | | | |

3. Ward Name _____ 4. Ward Code | | | |

5. Village Name _____ 6. Village Code | | | 7. FEZ (ID) | | |

8. Village's Main Livelihood Type: 1. Communal Farmer 2. Old Resettled 3. A1 Resettled (villagised)
4. A2 Resettled (small-scale commercial) 5. Commercial/Paid Farm Worker 6. Mine Worker 7. Other

9.	What is the estimated total village population?	9: Households:	10: People:		
1.1.1.44.1.1.1 A. Food Supplies and Availability					
11.	What has been the availability over the past month of the following commodities, either from purchase or own production but excluding food aid? (tick one box below)				
	Commodity	readily available	occasionally available	Not / rarely available	Most common source (select 1 only): 1 = local shops 2 = GMB 3 = local black market 4 = own production 5 = other
12.	Cereal grain				13.
14.	Maize meal				15.
16.	Bread/ flour				17.
18.	Sugar				19.
20.	Salt				21.
22.	Vegetables				23.
24.	Groundnuts				25.
26.	Beans				27.
28.	Cooking oil				29.
30.	Since the beginning of December, how many GMB deliveries has this village received?				deliveries
31.	How much grain (in metric tons) has been delivered by GMB each month since December to your area?				31. December 2002: MT 32. January 2003: MT 33. February 2003: MT 34. March 2003: MT
35.	How many households on average were able to purchase GMB maize at each delivery?				households
36.	Were the deliveries from the GMB adequate for this village?				0 = No 1 = Yes
37.	Is food aid (general rations) being provided in this village?				0 = No 1 = Yes
38.	If yes, for how many months has food aid been provided in this village?				months
39.	Approximately what percentage of the village population are receiving food aid?				%

B. MARKETS & PRICES		
	Indicate the current purchasing prices for maize and wheat from GMB and local market sources:	
40.	MAIZE: GMB, 50kg bag	Z\$ _ _ _ _ _
41.	MAIZE: GMB, 20kg bucket	Z\$ _ _ _ _ _
42.	MAIZE: Local markets, 50kg bag	Z\$ _ _ _ _ _
43.	MAIZE: Local markets, 20kg bucket	Z\$ _ _ _ _ _
	Livestock – indicate the current average selling price of the following	
44.	Cattle (average sized bull)	Z\$ _ _ _ _ _
45.	Goat	Z\$ _ _ _ _ _
46.	Chicken	Z\$ _ _ _ _ _
47.	Donkey	Z\$ _ _ _ _ _
48.	Compared to last year, has there been any change in animal deaths over the last three months?	1 = increase 2 = decrease 3 = no change
49.	What is the main cause of death? (Tick one)	1 = disease 2 = drought 3 = slaughter for consumption or sale 4 = other
	Casual Labour	
50.	What is the average wage rate for agricultural labor per day at the moment in the district?	1.1.1.45 Z\$ _ _ _ _ _
51.	Do you expect agricultural labouring opportunities to change next year?	1 = increase 2 = decrease 3 = no change

1.1.1.45.1 C. Education, Health Water and Sanitation		
52.	Did any children drop out of school in the last year?	0 = No 1 = Yes
53.	If YES , which group had the most drop-outs?	1 = Girls in Primary School 2 = Girls in Secondary School 3 = Boys in Primary School 4 = Boys in Secondary School
54.	Were orphaned children more or less likely to drop out than other children?	1 = More likely 2 = Less likely 3 = No difference
55.	What is the main source of drinking water for this village?	1 = Shallow well 2 = Deep open well 3 = Protected well 4 = Hand pump 5 = Tap 6 = River/ stream 7 = Other
56.	How long does it take an average household to fetch water from your main source?	1 = Less than 30 minutes 2 = 30 minutes to 1 hour 3 = 1 hour to 2 hours 4 = more than 2 hours
57.	What facilities are available to care for the HIV/AIDS infected in the village? Mark each available facility: 0 = No, 1 = Yes	Home-based care programmes _ Voluntary counselling and testing _ General health services _

D. COPING STRATEGIES		
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58.	If maize is not available, what are people mainly eating instead? (Rank the main substitutes from 1 to 5)	1: Other Cereals <input type="checkbox"/> 2 = Bread/ flour <input type="checkbox"/> 3 = Vegetables Only <input type="checkbox"/> 4 = Wild Foods (fruit, leaves, roots, insects) <input type="checkbox"/> 5 = Others <input type="checkbox"/>
59.	Has there been an increase in any of the following activities in this area over the last year?	1.1.1.46 Prostitution 0 = <i>No</i> 1 = Yes Gold Panning 0 = No 1 = Yes Theft 0 = No 1 = Yes Early Marriage of Children 0 = No 1 = Yes 1.1.1.47
60.	Compared to last year, has the migration of people out of this village been higher or lower than normal?	1 = Higher than Normal 2 = Lower than Normal 3 = No change
61.	Overall, which types of people do you think are the most vulnerable to food insecurity? (Tick all relevant groups)	Widows/ Female-headed HHs <input type="checkbox"/> Child-Headed HHs <input type="checkbox"/> Elderly-Headed HHs <input type="checkbox"/> Chronically ill <input type="checkbox"/> Disabled <input type="checkbox"/> Ex-commercial farm workers <input type="checkbox"/> Young children <input type="checkbox"/> People with no income, assets or inputs <input type="checkbox"/> Other (go to Q?) <input type="checkbox"/>
62.	If "other", specify the type of group:	_____

Appendix C: Estimating the Contribution of each Income Source to Food Security

1. Framework for Calculating the Food Gap *April 2003 ZimVAC Assessment*

Definition of “Food Aid Needs”

Needs must be defined not only based on physical energy requirements, but also on acceptable costs that can be incurred by households in meeting those requirements on their own.

Minimum HH cereal requirements will be calculated based on the demographic breakdown within the household and energy requirements by age and gender (using 1997 WFP/ UNHCR Guidelines). Cereal requirements will be set at the equivalent of 70% of minimum total energy requirements. This will be converted into kgs of cereal for easy comparison with data on food access collected from the households.

Food aid needs will be determined largely on a “life-saving” basis, but all costs in terms of livelihoods, future productivity and human rights involved in accessing food will be clearly stated. (E.g. if a household can access food through withdrawing a child from school and getting them to work, then technically they are “food secure” and do not require “life-saving” food aid. However, the ZimVAC will clearly recommend either that additional food aid is provided to prevent households engaging in such strategies for accessing food, or that other interventions are undertaken for the same end.)

1. Sources of Food 2002-03

Calculate the percentage of minimum cereal needs accessed from each source (production, direct sources, food aid, purchases) by livelihood zone, or summarise by sector and province.

- HH data on production to be cross-checked with secondary data on production
- HH data on food aid to be cross-checked with WFP/ NGOs data

2. Sources of Income and Potential Purchasing Power

Income ordinarily determines the amount of food purchasable, however due to the limited availability of food in Zimbabwe, income last year may not necessarily be strongly related to the actual amount of food purchased. Quantification of income sources is possible from the household questionnaire, and by relating this to cereal prices it will be possible to estimate how much food could have been accessed had it been available. This can be cross-checked with

households' own estimates of what they could have bought had food been readily available at GMB/ parallel market prices.

Quantification of Income, and Proportions from Each Source

Non-Seasonal Sources – Formal Labour; Gifts and Remittances; Off-Farm Casual Labour; Petty Trade and Self-Employment; Public Works; Gold-Panning (data provided for the last 4 months):

Take the nominal (Z\$) value of income for each source and divide by the parallel market price of maize for that period to get the maize equivalent income for that period. To extrapolate for the full year, the sources are further divided into those assumed to be affected/ not affected by inflation.

- Sources affected by inflation (i.e. nominal income remains largely unchanged in spite of price changes): Formal labour, gifts and remittances, Public Works, gold panning: Nominal income for December to March is divided by the price of parallel market maize for April to July and August to November to get maize equivalent income for those periods. MEI for all 3 periods is added to give the total for the year.
- Sources not affected by inflation (i.e. nominal income changes roughly in line with inflation): Petty Trade: assume the same MEI for the other 4-month periods as for December to March.

Seasonal Income Sources – Cash Crop Sales, Livestock Sales, On-farm and Off-Farm Casual Labour, Vegetable Sales:

Calculate the MEI of each source by dividing the nominal income by the average price of parallel market maize during the season in which that income was earned.

Total the MEI from all sources, and calculate the proportion of total purchasing power coming from each source.

As a rule of thumb, assume that roughly 80% of income was spent on maize. Compare the derived maize equivalent income with actual quantities of maize purchased (Qs 85-86) Cross-check this with HH's own estimates of what they could have purchased if food had been readily available (Qs 91-92) to assess the relative extent of availability and access problems in food insecurity.

3. Likely Access to Food 2003-04

Calculate the likely amount of food to be accessed through various sources and compare this to minimum cereal requirements. Any gap remaining will constitute food aid needs.

Cereal Production

Use HH predictions for expected cereal harvest, cross-checked with the most up to date secondary data from the Crop Forecasting Committee and other sources. Assume that all cereal production will be available for consumption, i.e. assume no cereal sales at HH level unless minimum food needs have been met.

Direct Sources of Food

On-farm Casual Labour: using the HH data on this source last year, calculate a ratio between production and levels of on-farm labour (elasticity of demand for labour, i.e. an X% increase in production leads to a Y% change in labour employment). Using this ratio, estimate the likely change in quantity of food accessible from on-farm labour based on the change in production¹⁵.

Off-farm casual labour: no strong basis for estimating likely change, therefore assume same levels as last year

Gifts and remittances: no strong basis for estimating likely change, therefore assume same levels as last year

Food Aid and Supplementary Feeding: to be left out of calculations; assume no food aid.

Food Purchases

Purchasing power is to be determined through income sources (see below). Scenarios for purchases will then have to be developed based on availability considerations, and prices.

Income Sources

An estimate of total income (or maize purchasing power) for next year will be derived from estimates for each source, calculated as follows:

Cash crop sales:

(a) Grain sales: no estimates will be made regarding grain sales. If a household produces more grain than it requires for its own consumption, then that household is already considered food secure; (b) Non-food crop sales: collect secondary data on prices of cotton, tobacco, etc., and multiply first by households' estimates of production, and then by the estimated rate of return for that crop (i.e. the profit margin, so that the need to pay for next year's inputs or to repay loans for this year's inputs are taken into consideration).

Livestock sales:

Set a minimum threshold for acceptable levels of de-stocking (e.g. households can sell all cattle as necessary until a minimum of 5 are remaining, or all goats until 3 are remaining). This minimum should be constant across the country and used for determination of strict food aid needs.

¹⁵ N.B. The relationship identified from the household survey results was that a 100% increase in production was related to a 20% increase in earnings from casual labour.

Assume households can sell livestock until the minimum threshold is met. Calculate the MEI of those potential sales based on last year's mid-year average livestock/ maize terms of trade.

On-farm casual labour:

Using the same ratio referred to above in relation to labour as a source of food, estimate the likely change in quantity of cash accessible from on-farm labour this year based on the change in production. Calculate the MEI of this using last year's average labour/ maize terms of trade or food payment rate.

Off-farm casual labour, vegetable sales and petty trade:

We have no solid basis for determining how these will change next year, but we know that payments/ income tend to change in line with inflation. Therefore we assume that the MEI this year from each source will be the same as last year.

Formal employment, gifts and remittances, gold panning:

We have no solid basis for determining how these will change next year, but we know that payments/ income tends to lag behind inflation. Therefore we assume that the same nominal income will be earned, but we devalue it by an estimate of the likely mid-year inflation rate.

Add up total MEI from all sources. Assume that 80% will actually be used for cereal purchases (with the remaining 20% being spent on other foods, non-food items, education, health, etc.). Add this to other projected sources of food to give an estimate of total food access for 2003-04. Compare with HH food requirements to calculate food surplus/ deficit. Deficits will be converted into a percentage of minimum household cereal requirements.

1.1.2 Classification of Households for Emergency Food Aid

For the purpose of emergency food aid targeting, it is recognized that it will not be feasible to re-target every month, and continuously add new beneficiaries to registration lists. Quarterly re-targeting is considered most feasible, therefore households will be categorized by the size of their deficit or surplus as follows:

- Surplus or no deficit: Food Secure (no food aid)
- Deficit of <12.5%: Food Secure (no food aid; it would be impractical to provide 6 weeks food aid)
- Deficit of 12.5% - 37.5%: 25% Deficit (requires 3 months of food aid)
- Deficit of 37.5% - 62.5%: 50% Deficit (requires 6 months of food aid)
- Deficit of 62.5% - 87.5%: 75% Deficit (requires 9 months of food aid)
- Deficit of >87.5%: 100% Deficit (requires 12 months of food aid)

2. METHODOLOGICAL FRAMEWORK

Sampling and analysis was done at the food economy zone (FEZ). Analysis was then extrapolated to the district by using the overlay of the 2002 Census population by ward and the FEZ.

The food security status of each surveyed household was calculated based on the assumption that:

$$\text{HCG} = (\text{Pr} + \text{DS} + \text{PP}) / \text{HHreq year} * 100$$

Where

HFG is the HH year cereal gap

Pr is the cereal production available for HH consumption Apr/03 thru Mar/04

DS is the direct sources of cereal

PP is the potential purchase from all income sources

HHreq year is the HH's yearly cereal requirement

The result should give an indication of the percentage household's cereal requirement to be met. The result was then subtracted from 100 to give the percentage shortage of yearly cereal requirements. The shortage was recoded into five time frames as:

-12.5 thru Highest = No cereal shortages (HH is Food Secure)

-37.5 thru -12.5 = 25% cereal requirements will not be met (3 months food insecure)

-62.5 thru -37.5 = 50% of cereal requirements will not be met (6 months food insecure)

-87.5 thru -62.5 = 75% of cereal requirements will not be met (9 months food insecure)

-105 thru -87.5 = 100% cereal requirements will not be met (12 months food insecure)

It is worthy to call attention to the fact that recoding into time periods did not account for 'extreme' cases. A buffer value of 12.5% was given to each time period.

Calculation of household's yearly cereal requirement

The calculations of household's yearly cereal requirement was based on the energy requirement for emergency affected populations in developing countries from based on researches from WHO Technical report series No 724.

0-4 years – 1290 Kcal per day

5-14 years – 2210 Kcal per day

15-19 years – male: 2700 kcal per day; female 2120 kcal per day

20 – 59 years - male: 2460 kcal per day; female 1990 kcal per day

60+ - 1890 kcal per day

The daily ration for each member of the household was multiplied by 0.70 to give the cereal energy requirement. This is due to the fact that it is understood that

30% of the dietary requirements of rural populations in Zimbabwe is obtained through other commodities, such as pulses, fruits, vegetables, meat etc. The energy requirement was divided by the maize energy equivalent to result in kgs needed. The kgs required per day was multiplied by 365 and summed.

Calculation of Production

Production was calculated as:

$$(MP-MC) + (MiP - MiC) + (SP) + (SwP * 0.32)$$

Where

MP is maize produced in kg

MC is maize already consumed in kgs

MiP is millet produced in kg

MiC is millet already consumed in kgs

SP is sorghum produced

SWP is sweet potatoes produced in kgs

Calculation of direct source of cereal

Households were asked about the quantities earned of cereals by means of off-farm casual labour, on-farm casual labour, gifts and remittances and others for the consumption year of Apr 2002 – Mar 2003.

A relationship between on-farm casual labour and households production was calculated as 5 as 1 by food economy zone (FEZ). This means that a 5% increase in production will result in a 1% increase in casual labour. When extrapolating to this coming year, casual labour from last year was modified conform this year's production.

Calculation of Potential Purchase

Potential purchase was calculated by looking at the income earned during the last consumption year and extrapolating it to this consumption year.

Incomes from 'non-seasonal sources' were asked for the last 4 months and them multiplied by 3.

Income from 'seasonal sources' were asked for the last 12 months

Income from on-farm casual labour was calculated as the cereal from direct sources (see above)

Income from sale of livestock was calculated as 25% of all livestock being sold given that a minimum size of 5 cattle and 3 goats is maintained

45% of the income from cash crop sales was thought to be used to pay loans, agricultural inputs and labour. Thus only 55% of all income from cash crops were accounted.

A maximum of 80% of the sum of all income sources was thought to be spent on the purchase of cereal.

The potential income was then divided by the market price of maize

Appendix D: Sampling Methodology and Sampling Scheme at Village Level

A two stage multisampling scheme was used by the Central Statistical Office (CSO) to draw out the 150 sample sites in the country. The sampling methodology used for the survey is within the CSO national household survey and hence produced a representative sample, with the main sampling principle being using the August 2002, Census results and Enumeration areas (Eas) developed then as the basis of sampling. The sample was drawn proportionate to the population distribution in the country, with the sites being determined

- a) Proportionate to population by province
- b) Proportionate to population by farming sector (communal, resettlement, commercial farming areas, small scale commercial areas)
- c) EAS being randomly sampled across the country and within provinces and sectors
- d) Rationalization of sites being done to ensure adequate coverage of the livelihood zones

1.1.2.1 A. Proportional Sampling of EAS by Province

In the sampling the rural population distribution was considered and the proportions calculated. This determined the number of sites per province, of which considering the time available for the survey and the resources the sites were distributed as indicated on Table 1 below.

Province	Proportion	EAS/Province
Manicaland	0.173	26
Mash Central	0.110	17
Mash East	0.124	19
Mash West	0.135	20
Masvingo	0.146	22
Mat North	0.077	12
Mat South	0.072	11
Midlands	0.162	24
Total	1.000	150

B. Number of EAS by Sector by Province

The number of sites per sector were determined by looking at the proportion of the population by sector in each province, giving the number of sites per sector and by province as indicated on Table 2 below.

Table 2: Proportional Sampling of Enumeration Areas by Province by Sector

Province	Rural Populatio n 2002	August Communa l Sites	Commerci al Farming Area Sites	Small Scale Commerci al Sites	Old Area Resettlement Sites	Total Sites	No. of Food Economy Zones
Manicaland	1,325,046	21	2	0	3	26	8
Mash Central	904,760	12	3	0	1	17	4
Mash East	1,004,146	15	2	1	1	19	4
Mash West	902,190	11	6	1	3	20	6
Mat North	601,987	19	1	0	1	22	8
Mat South	586,733	10	1	0	1	12	4
Midlands	1,121,539	10	1	0	0	11	5
Masvingo	1,194,926	19	1	1	3	24	4
Zimbabwe	7,641,327	116	17	3	14	150	

1.1.2.1.1 C. Selection of the EAS within the province

A computer program at CSO was used to randomly pick the EAS (An EAS is an area within a ward with 80 to 120 households and could be a village within a ward or could cut across two villages or a village can be two EAS depending on population density). The table shown below was then the basis of the sample. The names of the provinces, districts and wards to be sampled were then derived using the code book from CSO and the ward data updated from the rezoning exercise.

1.1.2.2 Table 3: Part of the CSO Selected EAS by Province

Observatio n	Province Code	District Code	Ward No.	Sector Code	EA Code	Stratu m	Strata Sample	Households 2002
1	1	101	3	1	70	11	21	121
2	1	101	11	1	80	11	21	139
23	1	106	23	3	30	12	2	115
35	2	205	14	1	160	21	12	100
48	3	305	4	1	110	31	15	97
60	3	308	14	3	50	32	2	64
84	5	501	6	1	60	51	19	117
99	5	506	10	1	30	51	19	92
114	6	601	14	3	90	62	1	94
147	8	802	18	5	50	83	1	149
150	8	806	13	4	30	84	3	233

1.1.2.2.1 D. Distribution and Names of Wards Selected

Table 4: List of Sampled Sites by Food Economy and District

Province	District	Farming Sector	Ward Name	Livelihood Zone	Ward No.	FEZ Code	Site Code
Manicaland	Buhera	Save CL	Chimombe/Chiweshe	Central and N. Semi-Intensive	11	29	102
Manicaland	Buhera	Save CL	Chikuwa	Masvingo-Mutare Middleveld	19	27	100
Manicaland	Buhera	Save CL	Mushumba East	Masvingo-Mutare Middleveld	25	27	103
Manicaland	Buhera	Save CL	Garamwera	Central and N. Semi-Intensive	3	29	101
Manicaland	Chimanimani	Mutambara CL	Mhandarume	Masvingo-Mutare Middleveld	2	27	104
Manicaland	Chimanimani	Muwushu CL	Changazi	Masvingo-Mutare Middleveld	20	27	105
Manicaland	Chipinga	Ndowoyo CL	Gumira	Chipinga Save Valley/E. Chiredzi	22	12	110
Manicaland	Chipinga	Ndowoyo CL	Mbuyanehanda	Chipinga Save Valley/E. Chiredzi	27	12	109
Manicaland	Chipinga	Ndowoyo CL	Mutandahwe	Ndowoyo	29	11	108
Manicaland	Chipinga	LSCA Resettl A2	Middle Sabi	Irrigated Fruit/Sugar Farming	5	18	107
Manicaland	Chipinga	LSCA Resettl A2	Chipinga ICA	Eastern Highlands Commercial	8	34	106
Manicaland	Makoni	Makoni CL	Rusununguko	Eastern Highlands Prime Communal	20	33	111
Manicaland	Makoni	Tanda CL	Tanda	Greater Mudzi	3	30	114
Manicaland	Makoni	Resettl Old	Mutanda	Eastern Highlands Commercial	31	34	115
Manicaland	Makoni	LSCA Resettl A2	Headlands LSCFA	Mashonaland Commercial	6	32	112
Manicaland	Makoni	Resettl Old	Inyati Resettlement	Highveld Prime Communal	8	32	113
Manicaland	Mutare	Zimunya CL	Chishakwe	Eastern Highlands Prime Communal	15	33	116
Manicaland	Mutare	Chinyauwera CL	Chitora	Eastern Highlands Prime Communal	21	33	117
Manicaland	Mutare	Dora CL	Dora	Eastern Highlands Prime Communal	5	33	118
Manicaland	Mutasa	Holdenby CL	Chikomba	Eastern Highlands Prime Communal	1	33	200
Manicaland	Mutasa	Manyika CL	Rutungagore	Eastern Highlands Prime Communal	14	33	202
Manicaland	Mutasa	LSCA Resettl A2	Old Mutare	Eastern Highlands Commercial	23	34	119
Manicaland	Mutasa	Manga CL	Samanga B	Eastern Highlands Prime Communal	7	33	201
Manicaland	Nyanga	LSCA Resettl A2	Nyajezi	Eastern Highlands Commercial	30		203
Manicaland	Nyanga	Nyamaropa CL	Nyamubarawanda	Eastern Highlands Prime Communal	13	33	204
Province	District	Farming Sector	Ward Name	Livelihood Zone	Ward No.	FEZ Code	Site Code
Manicaland	Nyanga	Inyanga North CL	Shungu	Greater Mudzi	2	30	205
Mash. Central	Bindura	Musana CL	Guwa	Highveld Prime Communal	18	31	207
Mash. Central	Bindura	LSCA Resettl A2	6	Mashonaland Commercial	6	32	206
Mash. Central	Centenary	LSCA Resettl A2	12	Mashonaland Commercial	12	32	209
Mash. Central	Centenary	Muzarabani CL	4	Northern Zambezi Valley	4	23	208
Mash. Central	Guruve	Bakasa CL	Negomo	Mashonaland Commercial	14	32	211
Mash. Central	Guruve	Guruve CL	Bepura 2	Highveld Prime Communal	25	31	212
Mash. Central	Guruve	Dande CL	Matsiwo	Northern Zambezi Valley	5	23	210
Mash. Central	Mazowe	Chiweshe CL	Chiwororo	Highveld Prime Communal	11	31	214
Mash. Central	Mazowe	Resettl A1	26	Mashonaland Commercial	26	32	215
Mash. Central	Mazowe	Chiweshe CL	Nehanda	Highveld Prime Communal	7	31	213
Mash. Central	Mt. Darwin	Kandeya CL	Karanda	Highveld Prime Communal	14	31	217
Mash. Central	Mt. Darwin	Mukumbura CL	Mukumbura	Northern Zambezi Valley	2	23	216
Mash. Central	Mt. Darwin	Kandeya CL	Nembire	Central and N. Semi-Intensive	7	29	218
Mash. Central	Rushinga	Chimanda CL	Rusambo	Greater Mudzi	17	30	220

Mash. Central	Rushinga	Chimanda CL	3	Greater Mudzi	3	30	219
Mash. Central	Shamva	Bushu CL	Gono	Highveld Prime Communal	11	31	221
Mash. East	Chikomba	Save North CL	30	Central and N. Semi-Intensive	30		223
Mash. East	Chikomba	Nharira CL	Nyamatsanga	Central and N. Semi-Intensive	21	29	222
Mash. East	Goromonzi	Chikwaka CL	Gutu	Highveld Prime Communal	11	31	224
Mash. East	Marondera	LSCA Resettl A2	Marondera North I.C.A.	Mashonaland Commercial	1	32	225
Mash. East	Marondera	Chiota CL	15	Highveld Prime Communal	15	31	226
Mash. East	Marondera	Resettl A1	8	Mashonaland Commercial	8	32	227
Mash. East	Mudzi	Mudzi CL	Masarakufa	Greater Mudzi	11	30	229
Mash. East	Mudzi	Ngarwe CL	Mukota B	Greater Mudzi	4	30	228
Mash. East	Murehwa	Mangwende CL	Kadzere	Highveld Prime Communal	13	31	231
Mash. East	Murehwa	Mangwende CL	Cheunje	Highveld Prime Communal	2	31	232
Mash. East	Murehwa	Resettl A1	Macheke Virginia	Mashonaland Commercial	25	32	230
Mash. East	Mutoko	Mutoko CL	Nyamhanza B	Greater Mudzi	18	30	234
Mash. East	Mutoko	Mutoko CL	Kabasa A	Central and N. Semi-Intensive	7	30	233
Mash. East	Seke	LSCA Resettl A2	Beatrice ICA	Mashonaland Commercial	14	32	236
Mash. East	Seke	Seke CL	Mutiusinazita	Highveld Prime Communal	4	31	235
Mash. East	UMP	Pfungwe CL	Chonze I	Greater Mudzi	13	30	237
Mash. East	UMP	Uzumba CL	Chigwarada	Central and N. Semi-Intensive	6	29	238
Mash. East	Wedza	Resettl A1	Wedza West	Mashonaland Commercial	1	32	240
Mash. East	Wedza	Wedza CL	Goto	Highveld Prime Communal	8	31	239
Mash. West	Chegutu	LSCA Resettl A2	11	Mashonaland Commercial	11	32	242
Mash. West	Chegutu	Mhondoro CL	Rwiizi	Highveld Prime Communal	5	31	241
Mash. West	Hurungwe	Hurungwe CL	10	Highveld Prime Communal	10	31	248
Mash. West	Hurungwe	Hurungwe CL	13	Central and N. Semi-Intensive	13	29	247
Mash. West	Hurungwe	Hurungwe CL	16	Central and N. Semi-Intensive	16	29	245
Mash. West	Hurungwe	LSCA Resettl A2	Karoi South ICA	Mashonaland Commercial	3	32	244
Mash. West	Hurungwe	LSCA Resettl A2	4	Mashonaland Commercial	4	32	243
Mash. West	Hurungwe	Mukwichi CL	9	Central and N. Semi-Intensive	9	29	246
Mash. West	Kadoma	Ngezi CL	1	Highveld Prime Communal	1	31	253
Mash. West	Kadoma	LSCA Resettl A2	10	Cattle and Game Ranching	10	17	252
Mash. West	Kadoma	LSCA Resettl A2	15	Cattle and Game Ranching	15	17	250
Mash. West	Kadoma	Resettl Old	Muzvezve II Resettl	Highveld Prime Communal	16		249
Mash. West	Kadoma	Sanyati CL	23	Lusulu N. Lupane S. Gokwe	23	24	251
Mash. West	Kariba	Omay CL	Musamba Karuma A	Siabuwa-Nebiri.. Low Cotton	5	10	254
Mash. West	Makonde	LSCA Resettl A2	1	Mashonaland Commercial	1	32	255
Province	District	Farming Sector	Ward Name	Livelihood Zone	Ward No.	FEZ Code	Site Code
Mash. West	Makonde	LSCA Resettl A2	8	Mashonaland Commercial	8	32	256
Mash. West	Zvimba	Zvimba CL	Nyamangara	Highveld Prime Communal	1	31	259
Mash. West	Zvimba	CHIRAU CL	Chivanje	Highveld Prime Communal	11	31	263
Mash. West	Zvimba	LSCA Resettl A2	14	Mashonaland Commercial	14	32	257
Mash. West	Zvimba	LSCA Resettl A2	18	Mashonaland Commercial	18	32	258
Mash. West	Zvimba	LSCA Resettl A2	20	Mashonaland Commercial	20	32	260
Mash. West	Zvimba	LSCA Resettl A2	21	Mashonaland Commercial	21	32	261
Mash. West	Zvimba	LSCA Resettl A2	26	Mashonaland Commercial	26	32	262
Masvingo	Bikita	Bikita CL	Nyarushiri	Gr. Zim.-Bikita Semi-Intensive	13	28	266
Masvingo	Bikita	Bikita CL	Chirorwe	Masvingo-Mutare Middleveld	20	27	265

Masvingo	Bikita	Bikita CL	Matsvange	Masvingo-Mutare Middleveld	5	27	264
Masvingo	Chiredzi	Sengwe CL	Xini/Maose	Beitbridge Lowveld	15	14	270
Masvingo	Chiredzi	LSCA Resettl A2	Lundi/Tokwe	Cattle and Game Ranching	16	17	267
Masvingo	Chiredzi	LSCA Resettl A2	Triangle Estates	Irrigated Fruit/Sugar Farming	18	18	271
Masvingo	Chiredzi	LSCA Resettl A2	Mkwesine	Irrigated Fruit/Sugar Farming	21	18	268
Masvingo	Chiredzi	Matibi II CL	Chechingwe	Chipinge Save Valley/E. Chiredzi	7	12	269
Masvingo	Chivi	Chivi CL	Chitenderano	Mwenezi.. and Central Chivi	11	15	1
Masvingo	Chivi	Chivi CL	Mukamba	Mwenezi.. and Central Chivi	21	15	2
Masvingo	Chivi	Chivi CL	Neruvanga	Masvingo-Mutare Middleveld	28	27	3
Masvingo	Gutu	Gutu CL	Makudo/Chinyika	Central and N. Semi-Intensive	10	29	5
Masvingo	Gutu	Gutu CL	Kubiku	Masvingo-Mutare Middleveld	16	27	6
Masvingo	Gutu	SSCA	Dewure SSCFA	Masvingo-Mutare Middleveld	20	27	7
Masvingo	Gutu	Chikwanda CL	Chikwanda/Mazare	Masvingo-Mutare Middleveld	27	27	4
Masvingo	Masvingo	Masvingo CL	Shumba North	Masvingo-Mutare Middleveld	17	27	10
Masvingo	Masvingo	Zimutu CL	Zimuto/Mushavi	Masvingo-Mutare Middleveld	2	27	8
Masvingo	Masvingo	Nyajena CL	Nyikavanhu	Masvingo-Mutare Middleveld	29	27	9
Masvingo	Mwenezi	LSCA Resettl A2	LSCFA	Cattle and Game Ranching	13	17	11
Masvingo	Mwenezi	MATIBI I CL	Chizumba/Mashava	Mwenezi.. and Central Chivi	7	15	12
Masvingo	Zaka	Ndanga CL	Tasungana	Gr. Zim.-Bikita Semi-Intensive	12	28	14
Masvingo	Zaka	Ndanga CL	Zibwowa	Masvingo-Mutare Middleveld	20	27	16
Masvingo	Zaka	Ndanga CL	Bota South	Masvingo-Mutare Middleveld	28	27	15
Masvingo	Zaka	Ndanga CL	Mutumwi	Gr. Zim.-Bikita Semi-Intensive	4	28	13
Mat. North	Binga	Manjolo CL	Saba-Lubanda	Poor Resource Kariba Valley	13	19	19
Mat. North	Binga	Manjolo CL	Kabuba	Lusulu..Communal	17	24	20
Mat. North	Binga	Siabuwa CL	Nabusengwa	Siabuwa-Nebiri.. Low Cotton	2	10	17
Mat. North	Binga	Busi CL	Sinamagonde	Lusulu..Communal	21	24	21
Mat. North	Binga	Manjolo CL	Sikalenge	Poor Resource Kariba Valley	6	19	18
Mat. North	Bubi	LSCA Resettl A2	Bubi ICA	Cattle and Game Ranching	1	17	22
Mat. North	Hwange	Hwange CL	Simangani	Poor Resource Kariba Valley	10	19	25
Mat. North	Hwange	Hwange CL	Makwandara	Kariangwe-Jambezi	14	20	23
Mat. North	Hwange	Hwange CL	Chidobe	Kariangwe-Jambezi	2	20	24
Mat. North	Lupane	Lupane CL	Matshiya	Eastern Kalahari Sandveld	15	25	28
Mat. North	Lupane	Lupane CL	Lupanda	Western Kalahari Sandveld	22	16	27
Mat. North	Lupane	Lupane CL	Sobendle	Eastern Kalahari Sandveld	8	25	26
Mat. North	Nkayi	Nkayi CL	Sikhobokhobo	Eastern Kalahari Sandveld	12	25	30
Mat. North	Nkayi	Nkayi CL	Malindi	Eastern Kalahari Sandveld	19	25	31
Mat. North	Nkayi	Nkayi CL	Siphunyuka	Eastern Kalahari Sandveld	25	25	32
Mat. North	Nkayi	Nkayi CL	Ngomambi South	Eastern Kalahari Sandveld	5	25	29
Mat. North	Tsholotsho	Tsholotsho CL	10	Western Kalahari Sandveld	10	16	34
Mat. North	Tsholotsho	Tsholotsho CL	15	Western Kalahari Sandveld	15	16	35
Mat. North	Tsholotsho	Tsholotsho CL	6	Western Kalahari Sandveld	6	16	33
Province	District	Farming Sector	Ward Name	Livelihood Zone	Ward No.	FEZ Code	Site Code
Mat. North	Umguza	LSCA Resettl A2	2	Matabeleland Mid-/Highveld	2	26	37
Mat. North	Umguza	LSCA Resettl A2	8	Cattle and Game Ranching	8	17	36
Mat. South	Beitbridge	Siyoka CL	Siyoka 1	Beitbridge Lowveld	12	14	39
Mat. South	Beitbridge	LSCA Resettl A2	Limpopo I.C.A.	Cattle and Game Ranching	14	17	40
Mat. South	Beitbridge	Mtetengwe CL	Mtetengwe 1	Beitbridge Lowveld	4	14	38

Mat. South	Bulilimamangwe North	Nata CL	Mbezu	Western Kalahari Sandveld	3	16	42
Mat. South	Bulilimamangwe North	SSCA	Somnene SSCA	Western Kalahari Sandveld	18	16	41
Mat. South	Gwanda	Matshetshe CL	Matshetshe	Matabeleland Mid-/Highveld	1	26	45
Mat. South	Gwanda	Gwaranyemba CL	Gwaranyemba	Beitbridge Lowveld	13	14	43
Mat. South	Gwanda	Dibilishaba CL	Hwali	Beitbridge Lowveld	20	14	44
Mat. South	Insiza	LSCA Resettl A2	17	Cattle and Game Ranching	17	17	46
Mat. South	Matobo	Semukwe CL	Sontala	Beitbridge Lowveld	12	14	47
Mat. South	Matobo	Mbongolo CL	Dzembe	Beitbridge Lowveld	2	14	48
Mat. South	Umzingwane	Mzinyatini CL	Mawabeni	Matabeleland Mid-/Highveld	5	26	49
Midlands	Gokwe North	Chireya/Chirisa CL	Chireya 1	Greater N. Gokwe High Cotton	4	22	52
Midlands	Gokwe North	Chireya/Chirisa CL	Chireya III	Greater N. Gokwe High Cotton	9	22	50
Midlands	Gokwe North	Sebungwe CL	Nembudziya III	Lusulu N. Lupane S. Gokwe	15	24	51
Midlands	Gokwe South	Gokwe South CL	Njelele I	Lusulu N. Lupane S. Gokwe	16	24	54
Midlands	Gokwe South	Gokwe South CL	Chisina III	Lusulu N. Lupane S. Gokwe	25	24	55
Midlands	Gokwe South	Gokwe South CL	Ngomeni	Lusulu N. Lupane S. Gokwe	5	24	53
Midlands	Gokwe South	GOKWE CL	Nemangwe V	Greater N. Gokwe High Cotton	9	22	56
Midlands	Gweru	LSCA Resettl A2	Gweru East ICA	Cattle and Game Ranching	14	17	57
Midlands	Kwekwe	Silobela CL	Inhlangano	Eastern Kalahari Sandveld	28	25	58
Midlands	Kwekwe	Zhombe CL	Gwesela West	Lusulu N. Lupane S. Gokwe	9	24	59
Midlands	Mberengwa	Mberengwa CL	Ngungumbane	Mwenezi.. and Central Chivi	20	15	60

1.1.2.2.2 E. Sampling at Village or EA area

Selecting the Enumeration Areas

The teams will be given a list of Enumeration Areas (EAs) that they should visit during the fieldwork. The EAs will be selected thru a random sampling technique that will take into account the:

- Livelihood Zones (LZ) boundaries – EAs will be selected within LZ proportionally to the LZ population. The most populated LZs will have the largest amount of EAs selected.
- Province Boundaries – to ensure that provincial statements can be derived from this assessment, the random sampling will take into account the provincial boundaries within the LZ. Once again, the number of EAs selected within the overlap of a province and a LZ will depend upon the distribution of the population of a given LZ between the provinces.
- Sectors – in order to allow a deeper understanding of the vulnerability status of the different rural sectors of Zimbabwe, the sampling will cover the A1, A2, Old Resettled and Old Commercial Farm Workers.

Selecting the villages

Unfortunately, the teams won't receive a list of villages to visit within an EA as the distribution of villages within EAs is not readily available. The teams are expected to randomly select the village(s) to be surveyed once they are in the respective EA. The selection of village(s) within a EA should be a rapid and easy exercise where

- Identify and List all the Villages that fall within the EA: The team arrive in the District Office or another relevant administrative section. There they will identify and list all the villages that fall completely or partially within the selected EA.
- Each village will be given a ordinal number (i.e. 1, 2, 3...)
- A sample of TWO villages will be drawn from this list using a 'random list' that will be handed to the team leaders.
 - The first selected village will be the village that will be surveyed.
 - The second selected village will be the "emergency village": In case any major problems occur in the first selected village – e.g. funeral, village with very few households – the second selected village will act as an "emergency village" and will be visited once the first selected village present major problems.

Major problems that can be met in sampling the village

Given that our sample size per day is 16 household interviews, the best-case scenario would be to interview ALL the 16 households within the same village.

However, as it was said above, major problems can avoid that the village is completely or partially surveyed. What do we do when this happens?

➤ Village too small

- *If a village has exactly 16 or more HHs,*
The team is expect to carry out ALL their 16 HHs interview in the first chosen village.
- *If a village has less than 16 HHs,*
The team is expected to survey all the HHs from the first chosen village (without sampling) and carry out the Focus Group Discussion in the first chosen village. The difference between the number of HHs surveyed and our minimal sample of 16 will be surveyed in the “emergency village” (second village randomly selected in the EAs)

➤ Funerals

- If there is a funeral in the first chosen village, the group may assess the possibilities to carry out the survey in the first chosen village.
- If the situation allows the team to survey HHs and carry out the Focal Group Discussion in the first chosen village, the survey will occur
- If the situation doesn't allow the team to carry out a Random Selection of HHs (per example, there are only 2 HHs available), the village should be dropped out and the team should go to the “emergency village”

If the team finds any major problems while surveying the first selected village, it is the responsibility of the team to assess the situation. If the random sampling of HHs would be biased by the problem, it is preferable that the team leaves the first selected village and take the “emergency village”. If the village has less than 16 HHs, don't do random sampling and survey ALL the HHs.

1.1.2.2.3 Selection of the 16 Households in the selected village

There are two approaches that can be potentially used during this assessment: Random selection of households using village listing and transect.

1. Village listing

This approach is characterized by the random selection of households using an existent list of households per village. The household are selected using a random list of numbers.

The main pros of this approach are:

- Random with equal probabilities – more scientifically accepted
- Enumerator doesn't have any power of decision over sampling procedure
- Enumerator ‘forced’ to find the households selected
- Fast to select household
- Not walking without destiny

The main cons of this approach are:

- Difficult and time consuming if list is not accurate or available
- Unreliable if inaccurate or out-dated: most recent migrations not accounted
- Respects administrative or traditional villages Rather than spatial villages (mixed villages might be differentiated by 'village headman' while sharing same stress indicators)

2. *Transect*

The transect approach draws an imaginary straight line connecting the center of the village with the outer limit of the village.

The main pros of this approach are:

- Don't need preparation
- Covers the spatial village rather than 'administrative village'

The main cons of this approach are:

- Difficult to identify household
- Allows enumerator to develop bias: s/he can decide on hh, s/he might not walk to the end of village etc.
- Large villages are time consuming
- Difficult to walk straight
- Not perfectly random

As you can see, both approaches have constraints and strengths and it is up to the Zim-VAC to choose which approach best fits its needs and resources.

random selection of hhs thru village listing, how it is done

If the Zim-VAC decides to use the selection of HHs using a random selection of HHs using a village listing, the following assumptions will be taken:

- The list of HHs for the villages are present in almost all villages
- The list is reliable – i.e. accurate and up-dated

Step by step

1. Find the list of HHs within the selected village
2. Using a random table, select the 16 HHs to be surveyed and 4 'emergency' HHs – each enumerator will be given 1 "emergency HH" so that in the event that a HH can't be found, there is an emergency HH already selected.
3. Ask a local person to identify which direction each of the selected HHs live. Divide the selected HHs into North, South, West and East direction and assign each enumerator to one direction.

random selection of hhs thru transcet, how it is done

If the Zim-VAC decides to use the selection of HHs using a random selection of HHs using a village transect the following assumptions will be taken:

- The spatial distribution of HHs is evenly distributed, this meaning that all the poorest are not clustered in one side of the village
- The villages are not larger than 3 kms, so that enumerators are expected to walk to the outer boundary of the village

Step by Step

1. Find the geographical center of the village (important to find the geo. center of the village and not the business or social center of the village)
2. Spin a pen and visualize the two directions the pen point. Allocate two enumerators to follow each direction
3. Spin a pen again and visualize the two other directions the pen point (important, if the pen points the same direction than before, spin it until the directions are different. Allocate the two remaining enumerators to follow each direction
4. Each enumerator is expected to walk to the outer boundary of the village counting – and drawing – all the HHs that s/he can see in the way (all HHs falling within a radius of 200m of the transect should be counted).
5. Once the enumerator reaches the end of the village, the total amount of HHs counted will be called the “Transect Total Population” (Tot Pop). Given that the sampling size for each enumerator is 4, the interval (I) will be calculated as:

$$I = \text{Tot Pop}/4$$

In the case the Tot Pop is 20 HHs, the interval $I = 25/4$ resulting on 6.2

This means that the Interval between the HHs surveyed will be each 6 HHs (note that you must always round the interval DOWN)

In the event that the Tot Pop < 4, the sampling size for each enumerator will decrease to two. Thus

$$I = \text{Tot Pop}/2$$

If the sampling size per transect decreases to two, the enumerator is expected to go back to the center and spin the pen again and repeat the process for the second transect. Attention should be given to the event that the pen points directions that were already covered. In this case, the pen will be twisted until a ‘new’ direction is pointed.

6. Each enumerator should be given a number of 1 to 2. This number will allow the enumerator to identify which will be the first HH s/he will be surveying when walking back towards the village center. If the enumerator receives the “number 1”, s/he will start surveying the LAST HH from the transect (i.e. the HHs that is in the limit of the village). If the enumerator receives the number 2, s/he will start counting with the LAST HH from the

- transect (i.e. the HH that is in the limit of the village will NOT be surveyed but will be counted as a HH)
7. In the event of the selected HH not being available, the next HH towards the end of the village will be surveyed.
 8. In the event that there are two HHs in front of each other, the enumerator is expect to survey the HHs on the RIGHT.

1.1.3 Important reminders

Make sure that the random selected HHs are surveyed. Enumerators are expected to do the hardest effort to find the selected HHs. If the HH is said to be in the field, go to the field. If the HH whent to the market, carry on with the other HHs and come back later. Try your hardest. It is important that we don't end-up with a sample of the elderly or unproductive HHs just because they were the only ones there.

Appendix E: Food Requirements by District

Administrative and Demographic Information			People with NO Cereal Deficit	Deficit as Percentage of Cereal Requirement				Cumulative Population in Need of Support										Cereal Deficit in Metric Tones				
Province	District	Rural Population in Census 2002		People with 100% of cereal req as deficit	People with 75% of cereal req as deficit	People with 50% of cereal req as deficit	People with 25% of cereal req as deficit	Pop needing support by Jul/03	Pop needing support by Oct/03	Pop needing support by Jan/03	% needing support by Jan/03	% needing support by Jul/03	% needing support by Oct/03	% needing support by Jan/03	MT needed between Jun/03 and Sep/03	MT needed between Oct/03 and Dec/03	MT needed between Jan-Mar/04	Total Cumulative MT to be needed between Apr/03-Mar/04				
Manicaland	Buhera	220,161	87,776	24,665	39,723	38,509	29,489	64,387	102,896	132,385	11	29	47	60	888	2,318	3,704	4,766	11,676			
	Chimanima	111,755	51,956	9,045	17,217	18,470	15,067	26,261	44,732	59,799	8	23	40	54	326	945	1,610	2,153	5,034			
	Chipinge	261,395	130,211	13,053	52,870	34,665	30,596	65,923	100,588	131,184	5	25	38	50	470	2,373	3,621	4,723	11,187			
	Makoni	244,823	125,752	9,783	35,121	39,687	34,480	44,904	84,590	119,070	4	18	35	49	352	1,617	3,045	4,287	9,300			
	Mutare	217,843	91,477	19,374	37,856	38,615	30,521	57,230	95,845	126,366	9	26	44	58	697	2,060	3,450	4,549	10,757			
	Mutasa	160,036	74,165	7,006	23,431	33,651	21,784	30,437	64,087	85,871	4	19	40	54	252	1,096	2,307	3,091	6,746			
	Nyanga	113,478	52,407	5,999	18,748	20,992	14,515	24,747	45,739	60,254	5	22	40	53	216	891	1,647	2,169	4,923			
	Bindura	110,595	72,074	3,599	11,473	10,535	12,914	15,072	25,607	38,520	3	14	23	35	130	543	922	1,387	2,981			
Mash. Central																						

Mash. East	Centenary	109,98 1	36,839	12,447	21,140	24,281	15,275	12,447	33,58 7	57,86 7	73,142	11	31	53	67	448	1,209	2,083	2,633	6,374
	Gurube	191,60 5	79,880	15,333	32,090	36,482	27,774	15,333	47,42 3	83,90 5	111,67 9	8	25	44	58	552	1,707	3,021	4,020	9,300
	Mazowe	182,57 1	120,087	5,961	18,670	16,899	20,954	5,961	24,63 1	41,53 0	62,484	3	13	23	34	215	887	1,495	2,249	4,846
	Mt. Darwin	194,61 3	88,244	16,520	30,435	33,777	25,637	16,520	46,95 5	80,73 2	106,36 9	8	24	41	55	595	1,690	2,906	3,829	9,021
	Rushinga	66,415	24,432	3,479	16,401	13,995	8,108	3,479	19,88 0	33,87 5	41,983	5	30	51	63	125	716	1,220	1,511	3,572
	Shamva	93,735	58,308	3,000	10,403	10,165	11,859	3,000	13,40 3	23,56 7	35,427	3	14	25	38	108	482	848	1,275	2,714
	Chikomba	109,54 4	55,060	11,185	16,172	15,356	11,771	11,185	27,35 7	42,71 3	54,484	10	25	39	50	403	985	1,538	1,961	4,887
	Goromonzi	157,64 7	97,718	5,038	17,581	17,251	20,060	5,038	22,62 0	39,87 0	59,930	3	14	25	38	181	814	1,435	2,157	4,588
	Marondera	102,64 7	62,779	3,265	11,654	11,609	13,340	3,265	14,92 0	26,52 8	39,868	3	15	26	39	118	537	955	1,435	3,045
	Mudzi	131,31 6	46,009	5,751	34,506	28,755	16,295	5,751	40,25 8	69,01 3	85,308	4	31	53	65	207	1,449	2,484	3,071	7,212
Mash. East	Murehwa	150,98 5	81,964	4,613	19,679	21,693	23,036	4,613	24,29 2	45,98 5	69,021	3	16	30	46	166	875	1,655	2,485	5,181

	Chiredzi	212,11 9	105,964	13,049	45,001	27,611	20,494	13,049	58,05 0	85,66 1	106,15 5	6	27	40	50	470	2,090	3,084	3,822	9,465
	Chivi	155,24 6	49,393	14,511	36,376	32,296	22,671	14,511	50,88 6	83,18 2	105,85 3	9	33	54	68	522	1,832	2,995	3,811	9,160
	Gutu	194,69 1	77,125	21,830	35,348	34,162	26,225	21,830	57,17 8	91,34 0	117,56 5	11	29	47	60	786	2,058	3,288	4,232	10,365
	Masvingo	198,62 7	83,883	19,286	35,578	32,916	26,965	19,286	54,86 3	87,77 9	114,74 4	10	28	44	58	694	1,975	3,160	4,131	9,960
	Mwenezi	128,76 9	45,340	11,009	29,842	24,731	17,847	11,009	40,85 1	65,58 2	83,429 7	9	32	51	65	396	1,471	2,361	3,003	7,231
	Zaka	184,12 4	69,786	18,713	31,344	37,591	26,690	18,713	50,05 7	87,64 8	114,33 7	10	27	48	62	674	1,802	3,155	4,116	9,747
	Binga	118,93 4	34,903	27,847	24,964	18,487	12,733	27,847	52,81 2	71,29 8	84,031 2	23	44	60	71	1,003	1,901	2,567	3,025	8,496
	Bubi	46,968	17,718	7,074	9,550	5,802	4,182	7,074	16,62 4	22,42 6	26,608 6	15	35	48	57	255	598	807	958	2,618
Mat. North	Hwange	62,694	16,929	16,391	14,003	9,547	5,824	16,391	30,39 4	39,94 2	45,765 2	26	48	64	73	590	1,094	1,438	1,648	4,770
	Lupane	96,654	35,934	14,038	22,856	14,306	9,521	14,038	36,89 4	51,19 9	60,720 9	15	38	53	63	505	1,328	1,843	2,186	5,863
	Nkayi	111,04 0	41,099	17,402	27,799	15,356	9,385	17,402	45,20 1	60,55 6	69,941 6	16	41	55	63	626	1,627	2,180	2,518	6,952

Appendix F: Details of Names and Organizations that Participated in the Survey

COORDINATION TEAM

NAME	Organisation
1. Isaac Tarakidzwa	WFP
2. Sophie Chotard	WFP
3. Christine Mitchell	WFP
4. Bridget Chiwawa	GOAL
5. Joyce Chanetsa	Food & Nutrition Programme
6. Michael O'Donnell	SC UK
7. Eliot Vhurumuku	FEWSNET
8. Lameck Betera	Civil Protection
9. Blessing Butaumocho	FEWSNET
10. Charity Mutohondza	NEWU

FIELD RESEARCHERS

Province	Name	Organisation	No Sites	Vehicle
Mat South	1. T Maphosa 2. A. Alibaba 3. J. Dube 4. G. Ncube 5. N.T Dube	CARE AREX Local GVT WV WFP	12	WFP
Mat North	6. K. Ncube 7. A. Mpofu 8. Mushayabasa 9. A. Mukwenya	Local Gvt Social Welfare WFP/UZ Local Gvt	11	UNICEF
	10. D Mpala 11. L Dhlamini 12. K. Moyo 13. S. Matanhire	Arex Local Gvt WFP C-SAFE	11	RRU
Manicaland	14. A. Maronngwe 15. N. Gono 16. C. Mutize 17. S Dhliwayo	Local Gvt Arex CRS WFP	8	RRU

	18. Matunga 19. Museka 20. L. Chiinze 21. Marimanzi	CAFFOD Local Gvt WFP Social Welfare	9	WFP
	22. E. Ncube 23. A.T Mpofu 24. Gombigo 25. R. Chipere	WFP Health Social Welfare Health	9	WFP
Midlands	26. S. Marwei 27. F Mposhi 28. M. Chiroodza 29. P. Nyenga 30. P. Chipepera	Local Gvt AREX WFP WFP Health	11	WFP
Mash West	31. K. Karombe 32. F Dube 33. B. Dzvairo 34. P. Mwangobole	Local Gvt Health GOAL WFP	10	UNICEF/NEWU
Mash West	35. O. Svubure 36. R. Chipere 37. C. Mapenzauswa 38. J. Mungoni	AREX Health CRS CRS	10	WFP
Masvingo	39. C.M Ndava 40. Mukwende 41. R. Mutema 42. D. Mhembere	AREX Local Gvt CARE WFP	8	WFP
	43. A. Chigumira 44. T. Mapfumo 45. S. Govoh 46. J. Murapa	Health Social Welfare CARE AREX	8	WFP
	47. Kwanga 48. J. Madzima 49. P. Mfumi	CARE Social Welfar AREX	8	WFP
Mash East	50. Kupakuwana 51. Zimunya 52. P. Ganga 53. Mugoni	Local Gvt Health WFP CRS	9	WFP
	54. J. Chigidji 55. C. Chipangura 56. E. Maponde 57. G. Buhera 58. Gumbeze	Local Gvt Social Welfare AREX FCTZ ZCDT	10	FCTZ

Mash Central	59. A. Mangwiro 60. T. King 61. G Tsenengamu 62. C. Mwaramba	Local Gvt Zim Red Cross Health WFP	8	WFP
	63. M. Shumba 64. C. W Singende 65. O. Chipfupi 66. Chingwara	Arex Social Welfare Zim Red Cross CSO	9	GOAL