ZIMBABWE

CURRENT VULNERABILITY ASSESSMENT

for 1998/99

by

USAID Famine Early Warning System – Zimbabwe
SADC Food Security Technical and Administrative Unit
Merchant House, 5th Floor, 43 Robson Manyaika Avenue,
P. O. Box 3730, Harare, Zimbabwe

and

The National Early Warning Unit, Zimbabwe
Department of Agricultural Technical and Extension Services,
P. O. Box CY639, Causeway, Harare, Zimbabwe

Department of Agricultural Technical and Extension Services
agritex
MINISTRY OF AGRICULTURE
P.O. Box CY 639, Causeway, Harare, Zimbabwe Tel: 263-4-730821-6
Fax: 263-4-730525

27 October 1998

TABLE OF CONTENTS

Executive Summary iv
Country Map vii

Section I. Conceptual Approach and Introduction 1

Section II. Food Availability
II-A. National Cereal Production 3
Table 1 Time series Comparison of All Sector Cereal Production
Table 2 Time series Comparison of Communal Area Cereal Production
II-B. National Cereal Supply Situation for the Current Marketing Year 4
Table 3 Zimbabwe 1998/99 Food Balance Sheet
Population
Production: maize, millets wheat and rice
II-C. National Trends in Cereal Availability/Balance Since1991/92 5
Table 4 Comparison of Cereal Balance Sheets
Stocks
Imports/Exports (Cereal Imports and Exports)
Consumption Requirements
II-D. Sub-National Food Availability 6
II-E. Conclusions about Food Availability 6

Section III. Sub-National Food Access
III-A. Retained Stocks: Performance and Trends 7
Estimated Retained Stocks
Table 5 Communal Area Carryover Stocks
III-B. Income Sources, Trends and Performance 7
Staple Crops Context: Maize, Irrigated maize, millets and sorghum
Food Access from Grain Crops Production
Map 2 Communal Areas per Capita Grain Production in 1997/98
Map 3 Comparison of per Capita Grain Production to the 1990s Average
Table 6 Summary of Communal Area Food Access from Grain Production
III-C. Income from Cash Crops: Performance and Trends 9
Cash Crops – Context: Cotton, Groundnuts, Sunflowers, Other Cash Crops
Table 7 Summary of per capita Maize-Equivalent Income from Cash Crops
Summary of Cash Crops Performance
III-D. Food Aid: Performance and Trends 12
Food Relief Distributed
Table 8 Food Relief Allocated for Distribution by Government by District
III-E. Livestock Off-take Income: Performance and Trends 13
Livestock Off-take Context: Cattle, Small Livestock (goats, sheep, pigs, etc)
Table 9 Estimated Communal Area Livestock Numbers
Livestock Income Summary (Non Cattle and Cattle Owners)
Table 10 Per Capita Maize-Equivalent Income from Cattle Sales
Table 11 Per capita Maize Equivalent from Small Livestock
III-F. Wages, Remittances and Off-Farm Income: Performance and Trends 16
Table 12 Other Income Sources by Province
Wages, Remittances, Off-Farm Income
III-G Other Income Sources: Performance and Trends 17
III-H. Information Gaps 17

Section IV. Summary of Current Food Security
IV-A. Current Food Security Levels 19
Map 4 Most Food Insecure Communal Areas
Table 13 Most Food Insecure Communal Areas
IV-B. Confirmation of Vulnerable Areas 21
IV-C. Food Access Trends Over Time 22
Table 14 Comparison of Food Access Levels over Time for the Communal Sector
IV-D Source of MEI and Food Access by Food Security Status 23
Table 15 Sources of MEI in 1997/98 by Secure/Insecure
Food Secure vs Food Insecure
Cattle Owners vs Non-Cattle Owners

Section V. Risk
V-A. Risk Factors 24
Map 5 Normal Grain Movement and Trade in Communal Areas
V-B. Potential Coping Resources 25
V-C. Confirmatory Indicators 25

Section VI: Actions Required
Table 16 Districts of Priority for further Food Security Assessments 26

Section VII: Technical Appendices 28
Appendix A: Approach to Food Security and Vulnerability Assessment: Methodology 29
Appendix B: Estimated Communal Area Carryover Stocks
Appendix C: Communal Area Grain Per Capita
Appendix D: Communal Area Cash Crops Maize Equivalent per Capita
Appendix E: Comparison of Zimbabwe Communal Area Maize Equivalent per Capita
Appendix F: Communal Areas Total and Per capita Livestock Numbers in 1997
Appendix G: Communal Areas per Capita Maize Equivalent from Livestock Income (Normal Off-Take)
Appendix H: Summary of All Income Sources in Maize-Equivalent Income
Appendix I: Comparison of Communal Areas per Capita Maize Equivalent from Livestock
Appendix J: Percent Contribution of All Income for Non-Cattle Owners
Appendix K: Percent Contribution of All Income for Cattle Owners
Appendix L: Cash Crops Production in MT

ABBREVIATIONS

SGR	Strategic Grain Reserve
GMB	Grain Marketing Board
GLP	Grain Loan Programme
PDMTF	Provincial Drought Mitigation Task Force
NEWU	Zimbabwe National Early Warning Unit

EXECUTIVE SUMMARY

Objectives of the Analysis

This assessment was carried out jointly by the Zimbabwe National Early Warning Unit (NEWU) and the USAID Famine Early Warning System. The report is aimed at assessing national food security and vulnerability in 174 communal areas of Zimbabwe for the period April 1998 to March 1999.

Food Availability:

Food availability in Zimbabwe is not expected to be a problem nationally if a large cereal import program is carried out as planned by government. Low cereal production levels from the 1998 harvest and stocks held in the country have left the country with a million-ton cereal deficit to fill, of which maize comprises 754,000 MT. Surplus maize available in South Africa already being sourced will be able to meet most of Zimbabwe's and the region's import requirements. The country will also be exporting large quantities (up to 380,000 MT) of grain, benefiting from market differentials in northern Zimbabwe.

Food Access:

There has been a general decline in food access for communal residents during the 1998/99-consumption year as given by the maize-equivalent income (see text for details). Two factors are responsible for most of this decline. The first and most important is the extreme increase in the price of the primary staple crop, maize, over the 1998/99 marketing year. Prices for this commodity doubled over the 1998/99 marketing period, and are still increasing in some areas. As the price of maize spirals upward, the value of most other income flows to residents in Zimbabwe's communal areas are not keeping pace, and most populations are left with less access to food. The second major factor was a very poor 1997/98 rainy season in the southern half of the country and greatly reduced harvests in those areas.

Food Security:

According to the recent vulnerability assessment, just over half of all communal areas are food insecure. Some 80 communal areas (totaling approximately 3.2 million people) do not meet the minimum threshold of 250 kgs per capita maize-equivalent income for the 1998/99 consumption period. A good number, but not all, of these areas have the worrisome combination of a very low level of current food access and a substantial decline from their average conditions of access. This combination suggests the need for more intense local assessments to see whether and how many of these people might require assistance in meeting their consumption requirements for the year.

Nevertheless, it is also clear that even in communal areas of very low access to food, there are households that are not experiencing major food security problems. Blanket food aid programmes that can not distinguish between the food secure and food insecure households will dilute scarce resources intended for the most needy, and build dependence in those that do not urgently need such assistance. The analysis has identified the following communal areas as **highly food insecure** (less than 250 kgs per capita maize-equivalent income) and **moderately food insecure** (250 to 320 kgs per capita) areas. Communal areas that are **food secure** (more than 320 kg per capita) are listed in the appendices. The CVA estimates 1.4 million people reside in areas that fall in the highly food insecure category and about 1.8 million people reside in areas that fall in the moderately food insecure category. Not all of the people in these areas are food insecure, due to individual differences in access to food. Rather, these are the areas in which there is the highest probability of finding households and communities that are short of the minimum amount of food access required for the 1998/99-consumption period. In-depth local needs assessments are required for better targeting of any assistance.

The analysis isolated the following areas as Moderately and Highly Food Insecure Areas

Province	District	Communal Areas Affected	Communal areas
Manicaland	Buhera	1 of 1	**Save (south)**
	Chipinge	3 of 4	Ndowoyo, Tamandayi and Musikavanhu
	Mutare	4 of 6	**Marange South**, Chinyauhera, Muromo and parts of Zimunya
	Makoni South	1 of 2	Chiduku
	Makoni North	Some wards	Tanda (Chiyendambuya area)
	Mutasa	Some wards	Manyika and Mutasa South
	Nyanga	Some wards	Nyamaropa (Katerere Area)
Mashonaland Central	Rushinga	2 of 2	**Chimhanda and Masoso East (Mukosa ward)**
	Guruve	Some wards	Dande and Dande South
	Mt. Darwin	Some wards	Mukumbura East and Chiswiti
	Centenary	Some wards	Mukumbura West
Mashonaland East	UMP	1 of 3	**Pfungwe**
	Mudzi	Some wards	Chikwizo (Chikwizo A) and Mkota (Goronga B)
	Chikomba	Some wards	Save North (Isolated areas)
Mashonaland West	Kariba	1 of 3	**Omay**
	Makonde	1 of 2	Magondi
	Chegutu	Some wards	Mhondoro (North)
Masvingo	Chiredzi	3 of 3	**Matibi 2, Sangwe and Sengwe**
	Mwenezi	2 of 2	**Matibi 1 and Maranda**
	Zaka	1 of 1	Ndanga (South and Central)
	Bikita	2 of 2	Bikita (Central and South), Matsai and Devure Resettlement
	Chivi	1 of 2	Chivi North (Takavarasha area)
	Gutu	Some wards	Gutu East (Munyikwa area)
Matebeleland North	Hwange	1 large	**Hwange (except Dete Belt)**
	Binga	2 of 4	**Manjolo and Siabuwa**
	Tsholotsho	I of 1	Tsholotsho Central and Western
Matebeleland South	Beitbridge	8 of 8	**All**
	Bulilimamangwe	7 of 11	**All** except Maitengwe, Mpande, Ngulube and Sansukwe
	Gwanda	5 of 7	**All** ,Shashi to be included because of grazing problems
	Matobo	4 of 8	Gulati, Kumalo, Semukwe and Tshatshani
Midlands	Zvishavane	3 of 3	**Mazvihwa, Ungova and Runde**
	Mberengwa	1 large	**Mberengwa**
	Gokwe North	Some wards	Some areas in Goredema, Chireya/Chirisa and Sebungwe

Note: *Shaded and bolded areas were identified as Highly Food Insecure*

Risk:

A small area of extremely poor pastures has been identified in parts of Beitbridge, Gwanda, and Chiredzi. This problem threatens the viability of a large percentage of the livestock herds in those areas. Increased levels of livestock mortality poses a substantial threat to the food security of the affected communal areas on a medium-term basis. Assistance to prevent cattle deaths such as in making more fodder available immediately, even on a commercial basis, is urgently required.

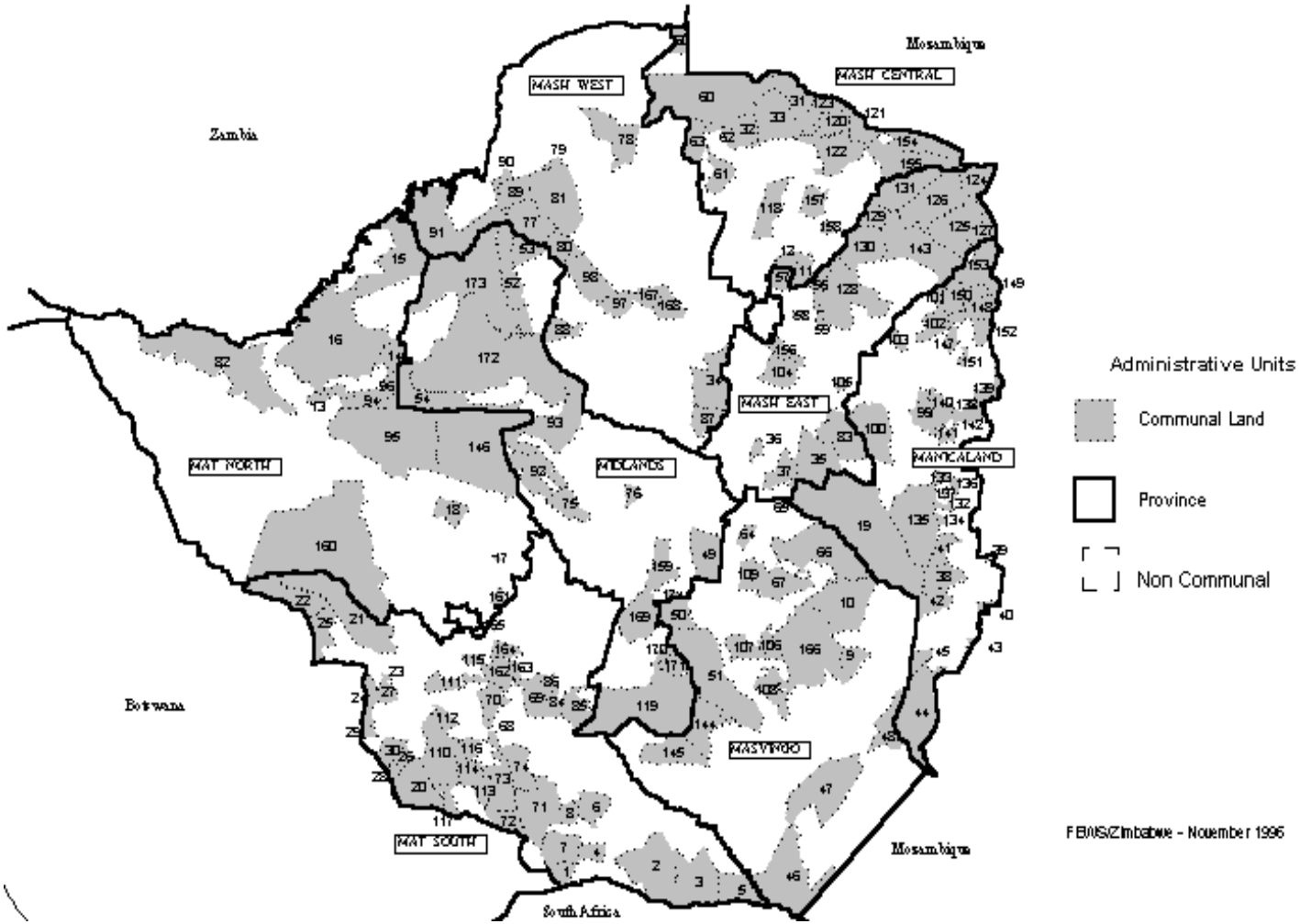
A number of market-related factors pose immediate and significant risks to people's ability to realize the income flows described here over the 1998/99-consumption period. The combination of rising maize prices and Government interference in the pricing of food items may present a worst case scenario for rural populations that are dependent upon the purchase of maize for their food security. The rising prices decrease the amount of food these populations are able to purchase, and the price interference will ultimately decrease the flow of grain out to the poor market infrastructure of distant rural areas.

Although the Government has already announced that the Grain Loan Programme will be providing a large amount of grain to those who wish to engage a loan, and free food to the most vulnerable cases, history has shown that these programmes have been erratic in their performance. Given the poor year in several areas, it becomes important to monitor those areas that are designated to receive such assistance to see if they are actually receiving their allocations.

Actions Required:

- Based upon the limited food access for households in the most food insecure communal areas, food aid may be required in some areas to maintain acceptable levels of nutrition. This is due primarily to the effects of the spiraling maize prices, stagnating incomes, and poor harvests in some areas that have combined to reduce the ability of a large number of households to meet their consumption requirements.
- A review and agreement on a set of household targeting criteria are urgently needed to help determine who should receive food aid. Although free food and Grain Loans are already being distributed in some areas, there is a need for further monitoring and improved targeting.
- The threat of inadequate pastures for livestock in the extreme southern areas needs to be addressed before the rains begin in late November, or food security conditions will degrade in the medium-term in those areas.
- For effective targeting, even in the areas identified as vulnerable, more detailed assessments of food security at the household level are required.
- For planning purposes, an initial figure of between 130,000-234,900 MT might be considered as the range of food aid possibly required.
- District-level declarations of disaster may be required in order to carry out more intense household-level assessments, to un-block potential funding from Government, NGO, and International Organizations, and to begin responding to the problems identified on the ground.
- There is need to come up with a more sustainable or development-oriented food relief programmes as the Grain Loan Programme is being regarded as free food by most recipients.
- Efforts to make more grain available is required in most of the food insecure areas, as there appears to be a problem of grain availability rather than accessibility.
- There is need to study the traditional coping mechanisms for accessing food in order to strengthen or revive them before engaging in any relief programmes.
- Relief packages should be properly targeted so as to encourage adoption of appropriate technologies in specific areas. For example, distributing small grains in areas where they suitable.
- There is need for Government and Donors to consider extending loans for inputs at concessional terms to the small holder farmers to ensure food security next year, as most farmers may not afford the inputs due to increased prices and low income levels given the poor production in 1997/98.

Country Map



Map 1: (see below for key)

Key to Communal Lands Map

Code	Communal Land	District
62	Bakasa CL	Guruve
10	Bikita CL	Bikita
26	Brunapeg CL	Bulilimamangwe
158	Bushu CL	Shamva
14	Busi CL	Binga
100	Chiduku CL	Makoni
101	Chikore CL	Makoni
39	Chikukwa CL	Chimanimani
56	Chikwaka CL	Goromonzi
67	Chikwanda CL	Gutu
127	Chikwizo CL	Mudzi
155	Chimanda CL	Rushinga
57	Chinamora CL	Goromonzi
132	Chinyauhera CL	Mutare
58	Chinyika CL	Goromonzi
104	Chiota CL	Marondera
5	Chipise CL	Beitbridge
167	Chirau CL	Zvimba
49	Chirumanzu CL	Chirumanzu
120	Chiswiti CL	MT. Darwin
51	Chivi CL	Chivi
118	Chiweshe CL	Mazowe
76	Chiwundura CL	Gweru
96	Dandanda CL	Lupane
60	Dande CL	Guruve
8	Dendele CL	Beitbridge
65	Denhere CL	Gutu
71	Dibilishaba CL	Gwanda
3	Diti CL	Beitbridge
133	Dora CL	Mutare
165	Esiphezini CL	Umzingwane
53	Gandavaroyi CL	Gokwe North
90	Gatshe Gatshe CL	Kariba
86	Glassblock CL	Insiza
85	Godlwayo CL	Insiza
173	Gokwe (new) CL	Gokwe South
172	Goredema CL	Gokwe North
115	Gulati CL	Matobo
61	Guruve CL	Guruve
32	Gutsa CL	Centenary
66	Gutu CL	Gutu
73	Gwanda CL	Gwanda
74	Gwaranyemba CL	Gwanda
139	Holdenby CL	Mutasa
81	Hurungwe CL	Hurungwe
82	Hwange CL	Hwange
23	Ingwezi CL	Bulilimaman
18	Inkosikazi CL	Bubi
84	Insiza CL	Insiza
153	Inyanga North CL	Nyanga
17	Inyati CL	Bubi
63	Kachuta CL	Guruve
54	Kana CL	Gokwe South
122	Kandeya CL	MT. Darwin
89	Kanyati CL	Kariba
111	Kumalo CL	Matobo
59	Kunzwi CL	Goromonzi
13	Lubimbi CL	Binga
95	Lupane CL	Lupane
7	Machuchuta CL	Beitbridge
157	Madziwa CL	Shamva
97	Magondi CL	Makonde
22	Maitengwe CL	Bulilimamangwe
99	Makoni CL	Makoni
68	Makwe CL	Gwanda
117	Mambali CL	Matobo
138	Manga CL	Mutasa
128	Mangwende CL	Murehwa
16	Manjolo CL	Binga
75	Manyame CL	Gweru
36	Manyene CL	Chikomba
140	Manyika CL	Mutasa
1	Maramani CL	Beitbridge
129	Maramba CL	UMP
145	Maranda CL	Mwenezi
135	Marange CL	Mutare
116	Maribeha CL	Matobo
12	Masembura CL	Bindura
4	Masera CL	Beitbridge
50	Mashava South CL	Chivi
154	Masoso East CL	Rushinga
121	Masoso West CL	MT Darwin
107	Masvingo CL	Masvingo
144	Matibi I CL	Mwenezi
47	Matibi II CL	Chiredzi
149	Matizi CL	Nyanga
162	Matopo CL	Umzingwane
9	Matsai CL	Bikita
69	Matshetshe CL	Gwanda
170	Mazvihwa CL	Zvishavane
119	Mberengwa CL	Mberengwa
114	Mbongolo CL	Matobo
124	Mkota CL	Mudzi
34	Mondoro CL	Chegutu
27	Mpande CL	Bulilimamangwe
30	Mphoengs CL	Bulilimamangwe
25	Mpimbila CL	Bulilimamangwe
2	MTetengwe CL	Beitbridge
106	MTirikwi CL	Masvingo
125	Mudzi CL	Mudzi
123	Mukumbura E. CL	MT. Darwin
31	Mukumbura W. CL	Centenary
78	Mukwichi CL	Hurungwe
143	Mutoko CL	Mutoko
38	Muwushu CL	Chimanimani
33	Muzarabani CL	Centenary
164	Mzinyatini CL	Umzingwane
41	Mutambara CL	Chimanimani
142	Mutasa North CL	Mutasa
141	Mutasa South CL	Mutasa
42	Mutema CL	Chipinge
98	Mupfure CL	Makonde
134	Muromo CL	Mutare
11	Msana CL	Bindura
45	Musikavanhu CL	Chipinge
94	Mzola CL	Lupane
21	Nata CL	Bulilimamangwe
166	Ndanga CL	Zaka
44	Ndowoyo CL	Chipinge
126	Ngarwe CL	Mudzi
87	Ngezi CL	Kadoma
40	Ngorima CL	Chimanimani
28	Ngulube CL	Bulilimamangwe
37	Nharira CL	Chikomba
146	Nkayi CL	Nkayi
163	Nswazi CL	Umzingwane
161	Ntabazinduna CL	Umguza
108	Nyajena CL	Masvingo
152	Nyamaropa CL	Nyanga
151	Nyanga CL	Nyanga
79	Nyaodza CL	Hurungwe
91	Omay CL	Kariba
131	Pfungwe CL	UMP
80	Piriwiri CL	Hurungwe
29	Radtladi CL	Bulilimamangwe
24	Ramakwebane CL	Bulilimamangwe
77	Rengwe CL	Hurungwe
137	Rowa CL	Mutare
169	Runde CL	Zvishavane
48	Sangwe CL	Chiredzi
20	Sansukwe CL	Bulilimamangwe
88	Sanyati CL	Kadoma
19	Save CL	Buhera
35	Save North CL	Chikomba
148	Sawunyama CL	Nyanga
52	Sebungwe CL	Gokwe North
113	Seear Block CL	Matobo
156	Seke CL	Seke
110	Semukwe CL	Matobo
46	Sengwe CL	Chiredzi
64	Serima CL	Gutu
72	Shashi CL	Gwanda
159	Shurugwi CL	Shurugwi
15	Siabuwa CL	Binga
92	Silobela CL	Kwekwe
6	Siyoka CL	Beitbridge
150	St. Swithins CL	Nyanga
105	Svosve CL	Marondera
43	Tamandayi CL	Chipinge
102	Tanda CL	Makoni
112	Tshatshani CL	Matobo
160	Tsholotsho CL	Tsholotsho
171	Ungova CL	Zvishavane
130	Uzumba CL	UMP
83	Wedza CL	Hwedza
70	Wenlock CL	Gwanda
103	Weya CL	Makoni
93	Zhombe CL	Kwekwe
147	Zimbiti CL	Nyanga
136	Zimunya CL	Mutare
109	Zimutu CL	Masvingo
168	Zvimba CL	Zvimba

SECTION I: CONCEPTUAL APPROACH and INTRODUCTION

***Conceptual Approach*:** A Current Vulnerability Assessment (CVA) presents an analysis of the impact of recent events on the ability of populations to meet their food consumption requirements during a given period. Vulnerability is a concept that combines "food security" with a consideration of the "risk" factors that increase or decrease food security conditions over time.

Food security is a measure of whether an individual, household, community, or any population group has access to sufficient, safe, and nutritious foods that meet dietary needs and food preferences for an active life. There are two important aspects of food security: food availability and food access. *Food availability* is defined as the amount of food which is, and will be, physically present in a specified area during the current consumption year. *Food access* refers to a household's ability to acquire that "available" food, either through its own (on-farm) production and stocks, market transactions (cash or in-kind), or transfers (private or government) for the current consumption year.

Risk factors include two different types of elements: "*shocks*" and "*coping resources.*" Shocks are events or conditions which may diminish (or increase) a population's food security, such as droughts, conflict, or economic changes. Coping resources are factors that enable an affected population's ability to re-establish its food security once a shock occurs (see Appendix A for more details).

The CVA analysis is founded on a model of household income, or more implicitly, strategies households use to acquire food (whether acquiring food directly through production, or through earning cash and purchasing food, or through barter). It assumes that household income is composed of production for home consumption, income-generating activities, ability to access transfers (both public and private), and assets (both current stocks and ability to acquire new assets) (see Appendix A for details).

CVA objectives:

- Quantify the aggregate food availability at national level and for the communal-sector populations from all income sources (production, income, and transfers).
- Evaluate the overall vulnerability of communal-sector populations by comparing food available and accessible with income and consumption requirements.
- *Describe factors that impede food access in the communal sector during the current consumption period.*
- Analyse the need for targeted monitoring and further in-depth assessments of the most vulnerable communal populations.

CVA Methodology

Zimbabwe CVA Process: This assessment is being carried out as a joint collaboration of the National Early Warning Unit (NEWU) in the Ministry of Agriculture's Department of Agricultural Technical and Extension Services (AGRITEX), and FEWS/Zimbabwe.

The CVA is conducted in a logical manner. Section 2 looks at the food available on a national level. Section 3 focuses on performance of each income source at communal area level. Section 4 aggregates the income sources for each communal area by the socio-economic group to form the basis of judging food security conditions. Section 5 looks at the potential shocks and their effect of food access. Finally section 6 draws the conclusions of the CVA. From Section 3 onwards, data from communal level was aggregated and calculations made to summarize the MEI at both district and province level for those interested in an aggregate picture. This summary is mainly in the Appendices and is described in passing in the text as focus is at communal area level.

Basic Characteristics of this CVA. The consumption period for this Current Vulnerability Assessment is April 1998 to March 1999. The data used here come primarily from secondary data sources in the country, principally produced by Government agencies. The 1997/98 crop production and 1997 livestock data was used in the analysis. The 1998 population figures are FEWS-derived estimates of the mid–marketing year (October) population, based upon the 1992 Census estimates, and observed ward-level growth rates between 1982 and

1992. The CVA generally uses the rural Communal Area as its most disaggregated unit of investigation. This sector comprises between 60-70 percent of Zimbabwe's total population. The CVA breaks down the communal population into two socio-economic groups (cattle owners and non-cattle owners). Local knowledge of vulnerability gathered through a participatory rapid rural appraisal is used in combination with results of the primary data analysis in the CVA (see Appendix A for more details).

As highlighted on Map 1 above, the focus of the CVA is the communal sector. Other sectors namely the urban areas and the 3 other farming sectors namely; a) the resettlement sector relatively very small, b) the small-scale commercial sector and c) the large-scale commercial sector and national parks occupying the remaining half of the country will not be treated. The analysis is done at the communal sector because of its size and the chronic food security conditions in this sector which result partly from the poor resource base.

Maize-Equivalent Income (MEI): Food Access will be measured here in Maize-Equivalent Income (MEI) units. This means that the monetary value of all production, income, and transfers in communal areas will be converted into the amount of maize that could be purchased by exchanging them at the time of this assessment. This procedure maintains an immediate link of the income with the staple food in Zimbabwe, and allows us to compare current "income" and "food access" conditions directly with those of previous years without having to factor in inflation and other economic factors. For this CVA, two prices were used to value maize: 1) that of the surplus areas or where grain is readily available (estimated at Z$2,500 per ton, higher than the GMB floor buying price but lower than the selling price), and 2) that of the deficit areas where grain is difficult to obtain (Z$3,000 higher than the GMB selling price). Both prices correspond to the maximum market prices at the time of this analysis in August 1998.

The Standard of Food Security Used in the Assessment: How much income and/or production is required for a communal-area population in Zimbabwe to be relatively food secure in the immediate future? As in Section II, the *status quo* average consumption of grains over the 1990s has been approximately 200 kgs of cereals per capita per annum, from all domestic and external sources.

Recognizing that minimal food security requires the consumption of foods other than cereals, and that trying to minimize the occasions when this assessment method would identify an area as food secure when it might not be, we will add an additional amount of maize equivalent to bring the minimum standard of food security up to a threshold of 250 kgs per capita. Below this amount, some degree of highly food insecurity is suspected. Given the data problems in 1997/98 crop forecasts where an element of overforecasting of yields was sighted in field visits, another category of moderate food insecure is set at a threshold of 250 to 320 kgs per capita to cover the overestimation.

In order to reflect the appropriate magnitude of food insecurity in country while respecting the limitations of the data, this CVA considered four broad categories of food insecurity, namely:

- **Extremely food-insecure** populations who have depleted their asset base to such a degree that without immediate outside assistance, they will face famine. Appropriate interventions include emergency food distributions and long-term rehabilitation programs.
- **Highly food-insecure** populations who cannot meet their food needs during the current year without reducing consumption or drawing down assets to such a degree that they compromise their future food security. Appropriate interventions include nutritional support for vulnerable groups, food for work, income and asset support, and market interventions.
- **Moderately food-insecure** populations who can meet their food needs in the current year, but only by drawing down savings or relying heavily on secondary-income activities. Should market access or income from secondary activities be compromised, these populations might become highly food insecure in the current year. No interventions are necessary, but positioning of cereals would facilitate market interventions if conditions deteriorate.
- **Food-secure** populations who can meet their food needs in the current year without altering normal income activities or depleting savings.

This CVA has grouped communal areas into **highly food-insecure (**where maize-equivalent income falls below 250 kg per capita per year), **moderately food-insecure** (between 250 and 320 kg per capita) and **food secure** (more than 320 kg per capita). While we believe that people in some communal areas are worse-off than others within the highly food-insecure category, we hesitate to classify them as extremely food-insecure due to data limitations.

SECTION II: FOOD AVAILABILITY

Section Objectives:

- *Identify amounts of food that will be available from stocks, national production, and food imports and exports from April 1998 to March 1999. Compare them to consumption requirements, and to average or reference periods.*
- *Analyse government policies, or other factors affecting the availability of any of the elements in the national food balance sheet.*
- *Identify any geographic areas where problems of poor availability will likely not be solved by market mechanisms.*

II-A. National Cereal Production

Table 1 shows production levels of major cereal crops for the 1997/98 cropping season, compared to last year (1996/97) and to average production in the 1980s and 1990s. The total cereals production for the 1997/98 season of approximately 1.8 million tonnes is less than 1996/97 output by 33 percent, and less than the 1980s and 1990s average by 26 percent and 15 percent respectively. The reduction in output has been due to an unfavourable rainy season particularly in the southern parts of the country, where the season started late (end of December) and ended early (mid February). However in most northern areas, near normal rainfall amounts were received and reasonable yields were obtained. There was a general decrease in total cropped area (91 percent of last year) and reasons for this included erratic and below normal rainfall and fears of widely publicised El Niño-induced drought.

Table 1: Time-Series Comparison of All-Sector (communal, resettlement , small-scale and large-scale commercial) Cereal Production (MT)

	Maize	Sorghum	Mhunga (Pearl Millet)	Rapoko (Finger Millet)	Wheat	Total Cereals
1997/98	1,418,030	74,703	33,238	13,440	270,000	1,809,410
1996/97	2,192,170	130,068	68,235	20,021	270,000	2,680,494
80's Average	1,929,490	96,110	104,265	62,861	213,910	2,406,635
90's Average	1,703,660	82,595	64,958	32,528	217,402	2,101,143
1997/98 as percent of 80s average	73	78	32	21	117	74
1997/98 as percent of 90s average	83	90	51	41	115	85
1997/98 as percent of 1996/97	65	57	49	67	100	67

Note: 1997/98 wheat harvest is an estimate as the crop is still growing. Source: Ministry of Agriculture – Economics Division

Table 2: Time-Series Comparison of Communal Area Cereal Production (MT)

	Maize	Sorghum	Mhunga (Pearl Millet)	Rapoko (Finger Millet)	Total Cereals
1997/98	676,900	52,000	29,000	7,500	765,400
1996/97	1,157,400	108,240	66,000	15,000	1,346,640
80's Average	888,246	71,490	101,829	61,588	959,736
90's Average	811,138	54,361	45,818	21,490	932,807
1997/98 as percent of 80s average	76	73	28	12	80
1997/98 as percent of 90s average	83	96	63	35	82
1997/98 as percent of 1996/97	58	48	44	50	57

Source: Ministry of Agriculture - Economics Division

Table 2 shows communal area production of major cereals for the 1997/98 cropping season, and compared to the 1996/97 cropping season and average production of the 1980s and 1990s. The 1997/98 cereal production is 20 percent less than the 1980s average, 18 percent less than the 1990s average, and 43 percent less than last season's production. There is a drastic decrease in output from the previous season due to the El Niño-induced

erratic rains. The most affected areas were those in the southern parts of the country where some farmers failed to plant.

II-B. National Cereal Supply Situation for the Current Consumption Year (1998/99)

Table 3: Zimbabwe 1998/99 Cereals Balance Sheet (MT) for the Period April 1998 to March 1999

	Maize	Millets	Wheat	Rice	All Grain
A. Potential Domestic Availability(A1+A2+A3)	1,929,529	114,229	287,951	185	2,331,894
A1 Formal Opening Stocks (April 98)	308,149	384	17,951	185	326,669
A2 Gross Harvest Production	1,466,380	104,995	270,000	-	1,841,375
A3 Unmonitored Stocks : Farmers (estimate)	155,000	8,850	-	-	163,850
B. Annual Requirements (B3+B4+B5+B6)	2,577,824	221,156	554,849	12,370	3,366,200
B1 Est. mid-year population (3.1 percent Pop. Growth rate)	12,494,689	12,494,689	12,494,689	12,494,689	12,494,689
B2 Est. Human Annual Consumption Requirements.	127	18	28	1	174
B3 Gross Consumption Requirement (B1 x B2)	1,589,324	221,156	354,849	12,370	2,177,700
B4 Livestock, other uses and losses	460,000	-	-	-	460,000
B5 Normal Strategic Reserve	500,000	-	200,000	-	700,000
B6 Millers Minimum Operating Stocks	28,500	-	-	-	28,500
C. Domestic Balance (A - B)	(648,295)	(106,927)	(266,898)	(12,185)	(1,034,306)
D. Cross Substitution (maize for millet shortfall)	(106,927)	106,927	-	-	-
E. Cereal Exports Likely	(300,000)	-	(80,000)	-	(380,000)
F. Cereal Imports Planned	610,000	-	150,000	8,000	768,000
G. Forecasted Uncovered Imports/Exports (March 1999) (C+D+E+F)	(445,222)	-	(196,898)	(4,185)	(646,306)
H. Forecasted Closing Stocks (March 1999) (B5+G)	54,778	-	3,102	(4,185)	53,694

Source: NEWU, Crop Forecasting Committee and FEWS - (Figures in the table provided and calculated by NEWU and FEWS)

Note: *(B2) Estimated Human Consumption Requirement is based on the 1990's average status quo human consumption (average estimated consumption per person from 1990/91 to 1997/98)*

(C) and (D) The exports and imports figures are based on Government Import and Exports Commitments

(G) Uncovered imports or exports refers to the deficit or surplus which remains after committed exports and imports are carried out.

Population: The country's population is estimated at 12,495,000 for the mid-point (October 1) in the 1998/99 Marketing (Consumption) Year. The population figures have been calculated using the 1992 census estimates and derived ward-level growth rates between the 1982 and 1992 censuses estimated at 3.1 percent per annum.

Production: Total cereal production for the current marketing year was approximately 1.841 million tonnes, 43 percent less than 1996/97 production and 18 percent less than the 1990s average.

Maize: Total available maize grain for the 1998/99 marketing year is about 1.93 million tonnes. This is comprised of the estimated production of 1.466 million tonnes and carry-over stocks of 0.463 million tonnes from the 1997/98 marketing year. The total maize requirement, based on mid-marketing year population figures, is estimated at about 2.578 million tonnes. The total national requirements are made up of 1.589 million tonnes of human consumption requirements, 500,000 tonnes of physical Strategic Grain Reserves (an amount the Government wants to maintain for food security purposes), 460,000 tonnes for livestock feed, and 28,500 tonnes of millers' minimum-operating stocks. The maize deficit is 648,295 tonnes.

The addition of a 106,927 MT cross-substitution of maize to cover a shortfall in the millets increases the national maize grain deficit to 755,222 tonnes. The national maize deficit further rises to 1,055,222 tonnes because GMB has export commitments of 62,171 tonnes carried over from the 1997/98 marketing year and will export 237,829 in the current marketing year. However, if the announced plan for importing 610,000 tonnes of maize is implemented, this will result in 445,222 tonnes shortfall. Given that the physical Strategic Grain Reserve is 500,000 tonnes of maize grain, closing stocks of about 55,000 tonnes are envisaged at the end of the 1998/99 marketing year (March 1999). The closing stocks fall far short of the expected SGR requirement of 500,000 MT. This shows Government's inability to maintain the desired physical SGR stocks.

Millets: The supply and demand for sorghum and millets shows a shortfall of 106,927 tonnes (see Table 3 above). Since small grains are easily substituted by maize, the deficit of millets can be covered by additional consumption of maize.

Wheat: Total available wheat for the 1998/99 marketing year is estimated at 287,951 tonnes (see Table 3 above). This is made up of 17,951 tonnes carried over from the previous marketing year and an expected gross harvest production of 270,000 tonnes by the Commercial Farmers' Union (in late 1998). The annual requirement is estimated at 554,849 tonnes, leaving a shortfall of 266,898 tonnes. Exports of 80,000 tonnes are expected in the 1998/99 marketing year, thus increasing the shortfall to 346,898 tonnes. Currently, there are plans for importing 150,000 tonnes, reducing the deficit to 196,898 tonnes. With a Strategic Reserve of 200,000 tonnes, the forecasted closing stocks (31 March 1999) are estimated at about 3,102 tonnes. The wheat crop mainly comes from the Large-Scale Commercial farming area and an insignificant amount is grown in the communal sector.

Rice: The 1998/99 marketing year annual requirement for rice is estimated at 12,370 tonnes. About 185 tonnes were carried over from the previous marketing year. Imports are required to cover the shortfall of 12,185 tonnes. If GMB is to import 8,000 tonnes as per its plan, then the uncovered rice shortfall will be 4,185 tonnes. Millers and other private buyers, *as in the past*, can cover this shortfall through imports.

II-C. National Trends in Cereal Availability/Balance Since 1991/92

Table 4: Comparison of Cereal Balance Sheets ('000 MT)

	98/99	97/98	96/97	95/96	94/95	93/94	92/93	91/92
A. Domestic Availability	2332	3338	3157	2355	3949	2896	625	2465
A1. Formal Opening Stocks (April 1)	327	633	50	970	1000	698	207	689
A2. Gross Harvest Production	1841	2660	3087	985	2549	2198	418	1776
A3. Unmonitored Stocks	164	45	20	400	400	0	0	0
B. Annual Requirements	3366	3676	3491	3730	3636	3375	3167	3230
B1. Gross Consumption Requirement	2177	2487	2411	2334	2266	2355	2247	2250
B2. Normal Strategic Reserve	700	700	600	936	900	500	500	500
B3. Millers Minimum Operating Stocks	29	29	0	0	0	0	0	0
B4. Livestock, other uses and losses	460	460	480	460	470	520	420	480
C. Domestic Balance (A - B)	-1034	-338	-334	-1375	313	-479	-2542	-765
D. Imports/Export Requirements	-1034	-338	-534	-1575	113	-479	-2542	-765
E. Imports Received	768	127	172	482	245	421	1845	200
F. Exports Moved	-380	-288	-298	-66	-583	0	0	-209
G. Uncovered Import/Exports	-646	-499	-660	-1159	-225	-58	-697	-774
H. Unbalanced Cereals		290	738	293	695	958	895	481
I. Closing Stocks (March 31)	54	491	678	70	1370	1400	698	207
J. Population	12495	12119	11750	11397	11054	10722	10400	10078
Annual Status Quo Consumption	2660	2686	2353	2701	2241	1917	1772	2249

Source: NEWU/FEWS

Note *(H) Unbalanced stocks arise from the difference between the official opening and closing stocks of the preceding year. The grain could have been consumed or sometimes can not be accounted for because of data problems.*

Stocks: The formal or monitored stocks are comprised of the GMB stocks where the SGR is kept, while the un-monitored stocks are an estimate of what farmers, private traders, and millers have in store at the beginning of the marketing year. The formal opening stocks available (amount of cereals physically available in official stores) for the current consumption period are less than those of the previous year by about 44 percent, and only 149 tonnes more than the formal opening stocks of the 1992/93 year which followed the worst drought ever. Because of an exceptionally good harvest in 1996/97, the unmonitored stocks are higher (about four times) than

last year's but not as high as in the 1995/96 and 1994/95 marketing years (see Table 4 above). With market liberalization, an operating millers stocks of 29 MT became possible.

Imports/Exports (Cereal Imports and Exports): Zimbabwe is often a net exporter of maize and a net importer of wheat and rice. Trade in other grains is usually limited. Over a million tonnes of cereals need to be imported in order to meet the 1998/99 consumption period requirements, if the SGR is to be built to required levels this year. The current marketing year has very high import requirements compared to previous years, except in comparison with the 1992/93 and 1995/96 marketing years. During the 1998/99 period, Zimbabwe through the GMB plans to import 6 times the amount imported in 1997/98. In most years Zimbabwe does not import enough cereals to cover the deficit as indicated by the high figures of uncovered imports. This could be a result of large volumes of unaccounted for cereals on an annual basis, which is indicated, by the unbalanced cereals.

Consumption Requirements: The time-series of status quo per capita cereal consumption shows a decline from earlier levels between 1991/92 and 1994/95, a relatively static period from 1994/95 to 1996/97, and then a decline in 1997/98. The trend of reduced cereal consumption could be attributed not only to increased costs of cereals, but also a substitution of cereals for other foods like potatoes, due to changing diet patterns, especially in urban areas.

II-D. Sub-National Cereal Availability

Since the liberalization of grain trade in the early 1990s, there has been generally increasing movement of grain from surplus areas to deficit areas by private traders,. This is especially apparent between the usually surplus areas such as Gokwe, Nkayi, Shurugwi, and Gweru Districts and the deficit areas of Matebeleland South, Manicaland (southern districts), and Masvingo (southern districts) Provinces. However, this year some of these traditionally surplus grain-producing areas either have a deficit or little surplus, potentially creating more acute food availability problems in those areas. Problems due to relatively poor market development are likely to surface in areas such as Matsai, Ndanga, Matibi 1 and 2, Sangwe, Sengwe, and Nayajena communal lands in Masvingo Province, Mazvihwa, Ungova and Mberengwa communal areas in Midlands Province, Pfungwe in Mashonaland East Province, Omay, Gatshe Gatshe, and Sanyati communal lands in Mashonaland West Province and most of Matebeleland North and South Provinces. For all of the reasons cited above, there is thus a need to more closely monitor food availability conditions in Beitbridge, Chiredzi, and Kariba Districts.

II-E: Summary of National and Sub-National Cereal Availability

The total amount of cereals available for the 1998/99 marketing year is about 2.33 million tons. This is comprised of the estimated gross harvest production of 1.84 million tons, and carry over stocks of 0.491 million tons from the 1997/98 marketing year. The annual cereal requirement in the 1998/99 marketing year is estimated at 3.364 million tons, based on a mid-marketing year population figure of 12.5 million people. The country is expected to have closing grain stocks of about 54,000 tons at the end of March 1999. These closing stocks will only be available if the country imports about 768,000 tons, does not exceed 380,000 tons in exports, and completely draws down the Strategic Grain Reserve. With these assumptions, and all factors considered, Zimbabwe has sufficient maize to last until 18 April 1999.

SECTION III: SUB-NATIONAL FOOD ACCESS

Section Objectives:

- *Document and compare the performance of each income source, compared to the 1990s average and last year.*
- *Assess people's ability to meet their annual food requirements through all measurable income-generating strategies (own production, market purchases, gifts, and other transfers)*
- *Define information gaps that make these assessments less reliable.*

III-A. Retained Stocks: Performance and Trends

Estimated Retained Stocks: As of April 1, 1998, the national un-monitored carryover stocks were estimated at 163,879 MT of grain, of which 155,000 MT were maize. Of this, only 52,149 MT (32 percent) were in the communal sector (see Table 5 below and Appendix B). Most of the carryover stocks in the communal sector were maize, which makes up 82 percent of the retained stocks. On a per capita basis, carryover stocks will contribute 8 kgs to the total amount of grain available this year to the communal-sector populations. This represents about a quarter of the stocks available last year. Additionally, the stocks are poorly spread among the communal areas -- 131 of the 173 communal areas are judged to have almost no carryover stocks (especially in Matebeleland North and South, Midlands, Masvingo and Mashonaland East provinces).

Table 5: Communal Area Carryover Stocks (MT), by Province

Province	Maize ton	Sorghum ton	Rapoko ton	Mhunga Ton	Total ton	Carryover kgs/capita
Manicaland	13447	1625	569	2688	18329	17.2
Mashonaland Central	7863	348	27	76	8313	11.6
Mashonaland East	4488	0	0	0	4488	5.1
Mashonaland West	1675	0	12	0	1687	3.6
Masvingo	1925	429	132	185	2670	2.6
Matabeleland North	10069	862	0	1655	12586	21.4
Matabeleland South	353	38	0	0	392	0.8
Midlands	2725	365	273	313	3675	2.8
National	42545	3667	1011	4916	52139	8.0

Source: the NEWU (AGRITEX)

III-B. Staple Crops: Performance and Trends

***Staple Crops - Context*:** Maize is the country's major staple crop, even in the marginal areas where it cannot be produced successfully. The secondary staple crops are sorghum, finger millet, and pearl millet, produced mainly in the low rainfall areas of the south, west, and north of the country. For various economic and social reasons, sorghum and millets are generally only consumed when maize is scarce.

Wheat is a high-value cash crop, grown generally on a commercial basis under irrigation, and mainly in the large-scale commercial farming areas. This crop does not play an important direct role in the diet of the majority of consumers in Zimbabwe. Most of the wheat produced is baked into bread and is available to mostly urban consumers as a relatively luxurious commodity that is highly-priced. The analysis will not consider it in assessing food security at communal area level.

The area planted to staple crops in communal areas in 1997/98 was estimated at 1,345,100 ha, a decrease of 11 percent from the 1990s average. The 1998 communal grain harvest was estimated at 1,174,575 MT, equivalent to 194.4 kgs per capita for the communal sector, well below the 1990s average of 318 kgs.

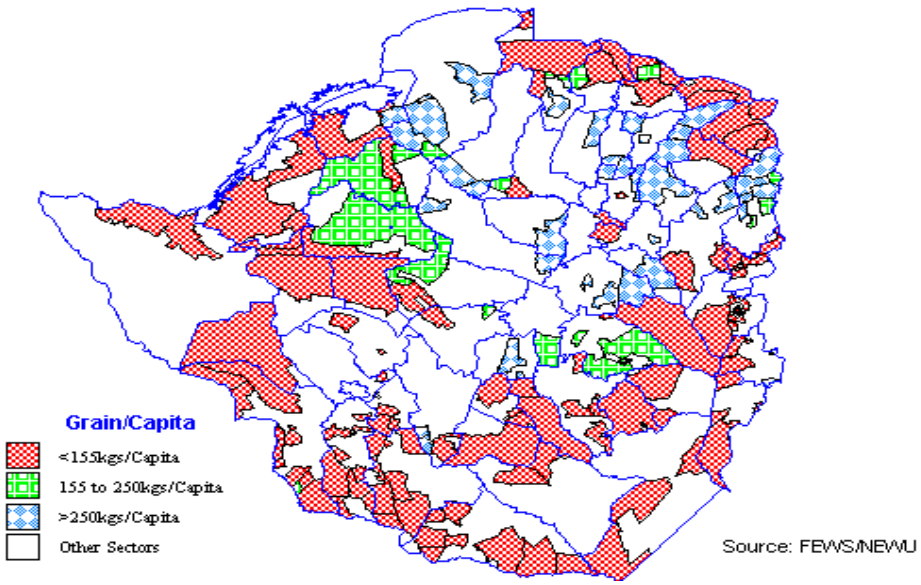
Maize: In the 1997/98 season, approximately 78.6 percent (1,057,000 ha) of the planted area in the communal-sector was covered by maize. Per capita maize production for the sector equaled 165.1 kgs, well below the 1990s average harvest of 231 kgs. Out of the 174 communal areas, only 53 communal lands, mainly in Mashonaland East, Central and West provinces saw an increase in per capita maize production this year. About 121 communal areas (66.5 percent of the total) saw maize harvests which were less than the 1990s average, and of these, 68 of the communal areas (39 percent) saw their maize harvest reduced by more than 50 percent of average, particularly in the southern-half of the country (see Appendix E and Maps 2 and 3).

Irrigated Maize: Irrigation accounts for less than 10 percent of the total cropped area in communal areas and directly benefits only about 1 percent of the communal population. The national contribution of irrigated grain crops to food security was about 3 kgs per capita in 1998, lower than the 1990s average of 6 kgs per capita. A total of 61 communal areas have access to some amount of irrigated land, and a few receive up to 50 kgs per capita from irrigated perimeters (see Appendix C).

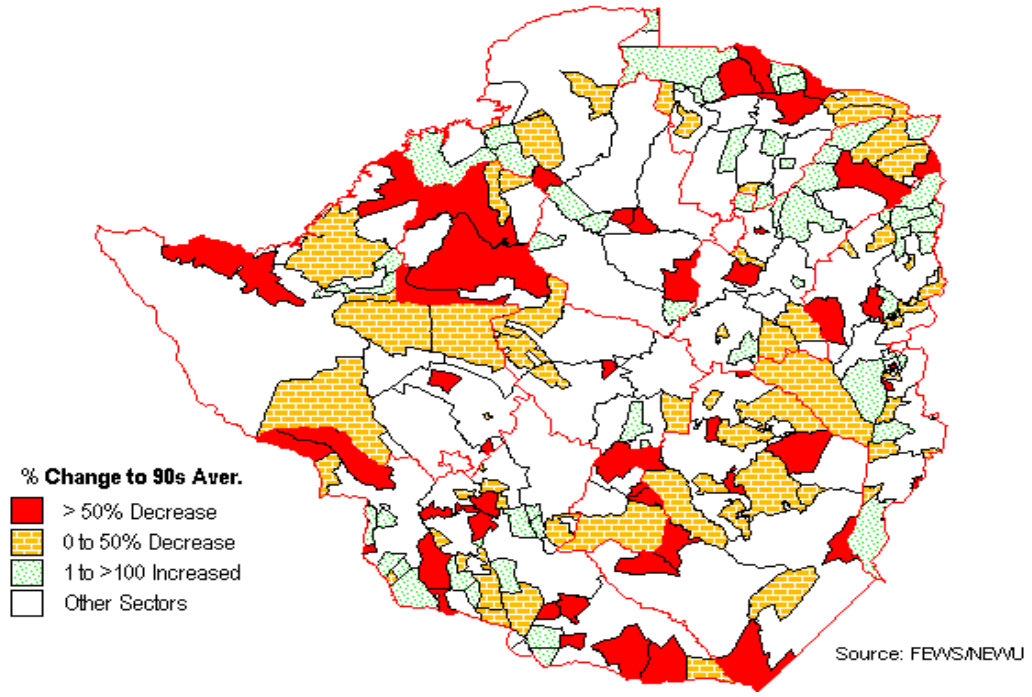
***Millets and Sorghum*:** Sorghum and millet production in 1998 decreased by 61 percent compared to that of 1997, and by 41 percent compared to the 1990s average. The 1998 harvest of 18 kgs per capita compares poorly with 46 kgs in 1997 and 31 kgs per capita for the 1990s average. The loss in production is attributable to poor rains and quelea bird damage in the southern districts of the country where most of the millets and sorghum are grown (see Appendix E).

Food Access from Grain Crop Production: At least 48 communal areas can meet the minimum threshold of 250 kgs per capita from grain production and carryover stocks. Most of these communal areas are in Mashonaland East, West, and Central Provinces. Grain production contributes the least to food access in Matebeleland South (see Appendix C and Map 2), but a total of 81 communal areas received less than 100 kgs per capita from grain crops in 1998.

Map 2: Communal Areas Per Capita Grain Production in 1997/98



Map 3: Comparison of 1998 Per Capita Grain Production to the 1990s Average



III-C. Income from Cash Crops: Performance and Trends

Cash Crops - Context: The main cash crops in Zimbabwe are tobacco, coffee, cotton, sunflower, groundnuts, and edible beans. The first two crops are mainly grown in large commercial areas and do not directly contribute much to food security in the communal sector, except through wages in some areas. A total of 483,060 hectares (26 percent of the total area cultivated) of cash crops were planted in communal areas in 1997/98. Of the total communal cash crops area, 49.5 percent was planted to cotton, 38 percent to groundnuts, and the remainder (12.5 percent) to sunflower and other cash crops. The area planted to cotton and groundnuts increased by 7.5 percent and 2 percent respectively compared to last year, while that planted to sunflower and other crops decreased (see Appendix L).

Almost all cash crops will provide less maize-equivalent income (MEI) in 1998 compared to the 1990s average due to the substantial price increases recorded for maize. Increases in producer prices for almost all cash crops did not generally match those for maize.

Cotton: The communal areas contributed 60 percent of the nation's cotton production from all sectors in 1998. The 1998 harvest was 272,850 MT and is one of the highest in history, surpassed only in 3 years since 1980. The 1998 harvest was almost equal to that of 1997, despite a below normal season in many communal areas (see Appendix D). Even with increased production, the contribution of cotton to per capita maize-equivalent income (MEI) in the communal sector declined tremendously to 91 kgs in 1998, compared to 152 kgs in 1997 and the 1990s average of 106 kgs (see Appendix E), due to maize price hikes. Cotton contributes to more than 100 kgs of per capita MEI to about 32 communal areas, and about half of these can derive the entire minimum cereal requirement of 250 kgs of maize equivalent from that crop (see Appendix D). This is particularly true for some communal areas in Mashonaland Central province, Gokwe North and South, UMP and Kwekwe districts. A total of 56 communal areas saw their per capita maize-equivalent income from cotton increase in 1998, compared to the 1990s average. Out of this group, 43 communal areas gained more than 50 percent compared to their 1990s average (see Appendix E). At least 67 communal areas, mostly in Matabeleland South and Manicaland provinces, do not produce any cotton.

Groundnuts: Communal groundnut production in 1998 decreased to 59,700 MT, from 1996's record harvest of 152,970 MT, to poor rainfall (see Appendix L). Groundnuts are the most widely grown cash crop in communal areas, with only 16 communal areas, mostly in Matabeleland South, not producing the crop. In 1998, groundnuts contributed 19 kgs of per capita of maize-equivalent income to the sector as a whole. This is far less than the 27 kgs/capita in 1997, due again to steep increase in the price of maize purchases. At least 18 communal areas will receive more than 50 kgs of per capita maize equivalent from groundnut production (see Appendix D).

Table 6: Summary of Per Capita Maize-Equivalent Income from Cash Crops (kgs/capita)

Rank	Province	District	Communal Area	Cotton	G/nuts	Other Crops	Irrigated Cash Crops	All Cash Crops
	The 20 Communal Areas with the Highest Per capita Food Access from Cash Crops							
1	Mashonaland Central	Mount Darwin	Chiswiti CL	1020	50	0	0	1070
2	Mashonaland Central	Centenary	Gutsa CL	856	13	1	0	870
3	Mashonaland West	Kadoma	Sanyati CL	861	7	1	0	869
4	Mashonaland West	Hurungwe	Piriwiri CL	500	6	63	0	569
5	Midlands	Gokwe North	Chireya/Chirisa	530	13	0	0	543
6	Mashonaland Central	Guruve	Dande South CL	490	1	0	0	492
7	Midlands	Gokwe North	Gandavaroyi CL	326	20	19	0	364
8	Mashonaland East	UMP	Maramba CL	241	96	10	0	347
9	Mashonaland Central	Shamva	Bushu CL	324	11	4	0	339
10	Manicaland	Nyanga	Sawunyama CL	306	12	17	0	336
11	Mashonaland West	Hurungwe	Rengwe CL	284	3	40	0	326
12	Midlands	Gokwe North	Sebungwe CL	298	17	5	0	319
13	Mashonaland West	Chegutu	Mhondoro CL	1	227	29	56	312
14	Midlands	Gokwe South	Gokwe (new) CL	265	23	2	0	291
15	Mashonaland West	Kariba	Kanyati CL	235	4	17	0	256
16	Mashonaland East	UMP	Pfungwe CL	172	65	2	0	240
17	Midlands	Gokwe North	Goredema CL	217	8	1	0	226
18	Mashonaland West	Hurungwe	Mukwichi CL	140	15	64	0	220
19	Mashonaland East	UMP	Uzumba CL	136	64	6	0	206
20	Mashonaland Central	Mount Darwin	Mukumbura East CL	191	7	0	0	198
Rank	Province	District	Communal Area	Cotton	G/nuts	Other Crops	Irrigated Cash Crops	All Cash Crops
The 20 Communal Areas with the Lowest Per capita Food Access from Cash Crops								
1	Mashonaland East	Marondera	Chiota CL	0	2	1	0	2
2	Matabeleland South	Bulilimamangwe	Sansukwe CL	0	2	0	0	2
3	Matabeleland North	Bubi	Inkosikazi CL	0	0	2	0	2
4	Matabeleland South	Matobo	Kumalo CL	0	2	0	0	2
5	Midlands	Zvishavane	Mazvihwa CL	1	1	0	0	2
6	Matabeleland South	Bulilimamangwe	Mpande CL	0	2	0	0	2
7	Matabeleland South	Bulilimamangwe	Ramakwebane CL	0	1	0	0	1
8	Matabeleland North	Hwange	Hwange CL	0	0	0	0	1
9	Matabeleland South	Gwanda	Gwaranyemba CL	0	0	1	0	1
10	Manicaland	Chipinge	Tamandayi CL	0	1	0	0	1
11	Matabeleland North	Binga	Manjolo CL	0	0	0	0	0
12	Matabeleland North	Bubi	Inyathi CL	0	0	0	0	0
13	Matabeleland North	Umguza	Ntabazinduna CL	0	0	0	0	0
14	Matabeleland South	Beitbridge	Dendele CL	0	0	0	0	0
15	Manicaland	Chimanimani	Chikukwa CL	0	0	0	0	0
16	Mashonaland West	Kariba	Gatshe Gatshe CL	0	0	0	0	0
17	Matabeleland South	Beitbridge	Diti CL	0	0	0	0	0
18	Matabeleland South	Beitbridge	Masera CL	0	0	0	0	0
19	Matabeleland South	Beitbridge	Mtetengwe CL	0	0	0	0	0
20	Matabeleland South	Beitbridge	Siyoka CL	0	0	0	0	0

Sunflowers: Sunflowers made up about 11 percent of the total cash crop area in communal areas in 1997/98. But the area put under sunflowers is generally decreasing over time, and is now less than half of the 1990s average area of 115,568 ha. Sunflower production in the communal areas in 1998 decreased to 19,850 MT from

the 1997 harvest of 29,970 MT (see Appendix L). The contribution of sunflower sales to food access is very limited in all but 7 communal areas found mainly in Nyanga District where sunflower production and sales amounts to 10 kgs of per capita ME income (see Appendix D).

Other Cash Crops: The contribution of soybeans, tobacco, and edible beans to income and food access in communal areas is limited. These crops are grown on only about 1.5 percent of the total area under cash crops, a decrease from the 1996 figure of 5 percent of the total area planted. Tobacco's contribution to food access is high in the districts of Hurungwe, Mazowe (especially Chiweshe), and Guruve (Bakasa), where it contributes up to 111 kgs per capita of maize-equivalent income. Edible beans contribute above 10 kgs of per capita ME income in only in a few communal areas in Mutasa, Matobo, and Insiza districts (see Appendix D).

Summary Cash Crops Performance: A total of 15 communal areas will meet their minimum 250 kgs per capita maize-equivalent income from cash crop production. Most of these communal areas are in the cotton growing areas of Mashonaland East, West, and Central Provinces (see Table 6 above). At least 60 communal areas will receive more than 50 kgs of their maize-equivalent income from cash crops and out of this, 46 access more than 100 kgs per capita (see Appendix D). Only 46 communal areas will receive less than 10 kgs of per capita MEI from cash crops.

III-D. Food Aid: Performance and Trends

***Food Relief Distributed (April to June 1998)*:** The Government has already responded to requests for drought relief in 40 districts where it is distributing grain loans and free food, starting in April 1998 (see Table 7 below). From that date, a total of 42,701 MT of maize has been distributed to 1,293,471 people under these programmes. This represents about 20 percent of the population of those areas. Of the total number of people fed, 68 percent received the grain under the Grain Loan Programme. The highest percentage of people receiving relief is in Matebeleland South (86 percent of the population), and the least in Mashonaland East. Both programs have cost the country Z$17 million in 3 months. It is not certain what plans and capabilities (financial, logistic) Government will make available to these programmes to continue feeding these, or more, people.

Table 7: Food Relief Allocated for Distribution by Government, by District (kgs/capita)

Rank	Province	District	Per capita Free Food	Per Capita Grain Loan	Per capita Relief	Percent of population Fed
1	Mat South	Insiza	10	98	108	25
2	Masvingo	Chiredzi	5	83	88	12
3	Mat South	Beitbridge	9	73	83	24
4	Mat South	Gwanda	9	73	82	23
5	Mat North	Bubi	6	70	76	16
6	Mash Central	Shamva	10	62	71	24
9	Mat North	Umguza	29	41	70	72
7	Mash Central	Mazowe	4	64	68	10
8	Mash Central	Rushinga	9	58	67	23
10	Mat South	Kezi	6	53	59	15
11	Masvingo	Mwenezi	1	52	53	3
12	Mat South	Umzingwane	8	42	51	21
13	Mash Central	Bindura	6	33	38	14
14	Mash Central	Centenary	3	33	36	8
15	Mat South	Bulilimamangwe	4	28	32	9
16	Mash Central	Mt. Darwin	4	27	31	11
17	Mat North	Binga	5	22	27	13
18	Mat North	Hwange	4	18	22	9
19	Mat North	Lupane	2	14	17	6
20	Mat North	Tsholotsho	3	14	16	7
21	Mash West	Kariba	1	14	15	3
22	Mash Central	Guruve	6	8	14	15
23	Mat North	Nkayi	4	9	13	11
24	Midlands	Mvuma	4	0	4	10
25	Midlands	Gweru	3	0	3	9
26	Midlands	Mberengwa	3	0	3	8
27	Mash West	Makonde	3	0	3	8
28	Midlands	Gokwe	3	0	3	7
29	Manicaland	Mutasa	3	0	3	7
30	Manicaland	Mutare	3	0	3	7
31	Midlands	Kwekwe	2	0	2	6
32	Manicaland	Buhera	2	0	2	5
33	Manicaland	Chimanimani	2	0	2	5
34	Masvingo	Chivi	2	0	2	5
35	Manicaland	Chipinge	2	0	2	4
36	Manicaland	Nyanga	1	0	1	3
37	Midlands	Zvishavane	1	0	1	2
38	Masvingo	Masvingo	1	0	1	2
39	Masvingo	Gutu	1	0	1	1
40	Mash West	Kadoma	0	0	0	0

Source: Department of Social Welfare (Ministry of Public Service Labour and Social Welfare)

III-E. Livestock Off-Take Income: Performance and Trends

Livestock Off-take – Context: Livestock off-take and sales play an important role in providing access to food in some communal areas in the south, north, and west of the country (see Table 8 below). Small stock such as goats, sheep, fowls, and pigs are regularly sold to acquire income and food. Cattle are more rarely sold, being seen primarily as security and an asset. But when they are sold, they yield a large income to the owner. In the areas dependent on livestock for food, most farmers own small livestock, and many fewer own cattle. To capture these different behaviors and income streams, the present assessment will divide communal populations into two groups, cattle owners (estimated to include 55 percent of all households, on average, in each communal area) and non-cattle owners (45 percent of all households).

Table 8: Estimated Communal Area Livestock Numbers in 1997

Province	Cattle		Sheep	Goats	Goats and Sheep		Pigs		Donkeys	
	Number	percent of Total	Number	Number	Number	percent of Total	Number	percent of Total	Number	percent of Total
Manicaland	390,772	14	43,397	359,389	402,786	14	11,011	8	23,317	6
Mash Central	331,693	12	17,345	98,118	115,463	4	13,677	10	3,149	1
Mash East	390,894	14	10,207	138,265	148,472	5	23,948	18	2,878	1
Mash West	307,053	11	40,935	129,452	170,387	6	30,946	24	6,319	2
Masvingo	365,551	13	46,259	487,126	533,385	19	25,039	19	48,247	12
Mat North	345,831	12	40,306	267,700	308,006	11	6,209	5	145,683	36
Mat South	268,103	9	136,591	596,888	733,479	26	3,725	3	118,150	29
Midlands	435,198	15	37,384	403,502	440,886	15	17,026	13	61,748	15
Communal Total	2,835,095	59	372,424	2,480,440	2,852,864	89	131,581	48	409,491	94
National (est)	4,807,938	100	491,287	2,721,044	3,212,331	100	272,707	100	434,519	100

Source: Department of Veterinary Services (Ministry of Agriculture)

Cattle: The number of cattle in Zimbabwe is currently estimated at 4,807,938 of which 59 percent are in the communal sector. The number of cattle in the communal sector decreased from about 3,091,900 in 1996/97 to 2,835,000 animals in 1997/98, probably in response to relatively good prices due to an inability to meet national and international demand. Cattle numbers are almost evenly distributed among all provinces (ranging from 9 to 15 percent of total), but cattle ownership is highly skewed within the communal populations. Ownership rates vary from 13 percent to 98 percent of the households in a communal land. Chegutu, Makonde, Beitbridge, Kwekwe, Chirumanzu, Wedza, Marondera, Chikomba, and Nkayi districts have the highest per capita cattle holdings in communal areas, while Murehwa and Gokwe South districts have the lowest (see Appendix F).

The annual cattle off-take rate for most communal areas is approximately 1.5 percent, but can be higher than 15 percent in some areas, and in bad years. The off-take rates used in this analysis are 2.5 percent in some districts, 5 percent in others, and 10 percent in the livestock-dependent areas in the south. These average rates are based upon data provided by the Department of Veterinary Services.

At least 64 communal areas will obtain more than 50 kgs of per capita maize-equivalent income from cattle off-take. Of these, 32 will receive more than 100 kgs per capita. These are found mainly in Matebeleland South Province (see Table 9 below). Masvingo Province will benefit the least from cattle off-take income (see Appendix G).

Small Livestock: Most of the communal-sector's goats and sheep are found in Matebeleland South and North, Midlands and Masvingo provinces, and especially in the dry Natural Regions IV and V. Matebeleland South accounts for the highest number of goats and sheep (26 percent of the total), followed by Masvingo with 19 percent (see Table 8 above). Most of the goats and sheep in Masvingo, Manicaland and Midlands are found in the dry southern areas of the provinces.

Goats: The national goat herd is estimated to have slightly increased from 2,519,000 in 1996 to 2,721,044 in 1997/98. Of this, 91 percent is in the communal sector. The average national goat holding in communal areas is

0.3 per capita. The highest per capita goat holdings are in Gwanda and Beitbridge districts at 1.7 goats/capita, followed by Bulilimamangwe, Chiredzi, Makonde, and Matobo districts with about 1 goat/capita (see Appendix G).

Based again on Veterinary Services information, the average goat off-take rate is estimated at 25 percent in Beitbridge and Gwanda, and 16 percent for the rest of the country. The average off-take rate used in the analysis is 16 percent due to the increased off-take from last year in Beitbridge and Gwanda as a result of two consecutive years of below normal rainfall. On average, the contribution of goats to maize-equivalent income in the communal-sector will be 5 kgs per capita, down from the 1990s average of 8 kgs, and from the 1997 average of 9 kgs per capita. Only 7 communal areas will have more than 50 kgs per capita of MEI from their goat off-take. These are mainly in Matebeleland South Province. Matobo Communal Land will have the highest per capita maize-equivalent income of 93.5 kgs (see Table 11 below). Most districts experienced a decrease in the per capita income derived from goat sales due to the steep maize price increases, except Tsholotsho, Chipinge, Zaka, and Bikita districts. Beitbridge District, which had the highest (51 kgs) maize-equivalent income from goats in1997/98, will decrease to 22 kgs per capita this year (see Appendix I).

Sheep: The national total sheep herd in 1997/98 was estimated at 491,287. Of this, 76 percent was in the communal sector. The number of sheep has declined from 552,859 in 1996/97. Sheep numbers vary widely over time and the decrease in 1997/98 is perhaps not too significant. The average communal area per capita sheep holding has remained stagnant at 0.06. The highest per capita sheep holdings are in Matebeleland South Province at 0.3 per person (see Appendix F and G).

The average sheep off-take rate used here is 10 percent for all districts with sheep. The current contribution of sheep to communal income at the national level is only about 1 kg per capita, similar to the 1990s average. Matabeleland South and Mashonaland West Provinces have the highest per capita sheep-related income of about 3 kgs per capita. Only 2 communal areas (Shashi in Bulilimamangwe district and Mpande in Gwanda district) will receive over 50 kgs of per capita MEI from their sheep off-take (see Table 10 below and Appendix G).

Pigs: The total number of pigs in Zimbabwe is estimated at 272,707 of which about half are in the communal sector. Ownership of pigs in the communal sector is not very widespread. Most of the communal pig herd (24 percent) is found in Mashonaland West Province, equivalent to 0.1 pigs per capita, compared to a national average of 0.02 (see Appendix G). Pig numbers have steadily decreased in the 1990s. The average pig off-take rate is estimated at 25 percent for all districts. Pigs contribute 1.7 kgs of per capita MEI at the national level and most of it is received in Mashonaland West, at 6 kgs per capita. The highest contribution of pigs to MEI (22.8 kgs/capita) is in Chikwaka communal area, in Goromonzi District, near Harare. At least 39 communal areas, mainly in Matebeleland South Province, and Mutare and Kariba districts do not have pigs at all. The reasons for low rates of pig ownership is the high cost of maize-based feed, and religious beliefs in some of these areas.

Other livestock: Donkey numbers have almost doubled, from 289,712 in 1996/97 to 409,490 in 1997/98. The large rise in ownership of donkeys is attributed to an increase in the number of farmers acquiring donkeys for draft power instead of cattle, as cattle prices continue rising. Donkeys and horses do not provide much direct income from sale, although their value is considerable in other important respects. Therefore maize–equivalent income from the sale of donkeys and horses has not been computed for this CVA.

Livestock Off-take Income Summary -- Non Cattle Owners: The average maize-equivalent off-take income for non-cattle livestock owners is 9 kgs per capita, much lower compared to that of cattle owners (48 kgs per capita) (see Table 10 and Appendix G). This has decreased due to the significant rises in the price of maize over the last year.

Cattle Owners:. Normal cattle off-take contributes significantly to the cattle owner's maize-equivalent income. A total of 42 communal areas derive more than 100 kgs of per capita MEI from average cattle off-take rates and sales. Of these, 10 communal areas, mainly in Matebeleland South, derive the entire minimum food security requirement of 250 kgs of per capita MEI from cattle sales alone. Manicaland cattle-owners derive the least income from their cattle holdings (see table 10 and Appendix G).

Table 9: Per Capita Maize-Equivalent Income from Cattle Sales

Rank	Province	District	Communal Area	Pop98	percent cattle Owners	Cattle Owners	Cattle MEI	Small Stock MEI	Total MEI
	The 20 Communal Areas with the Highest per capita Food Access from Cattle Sales								
1	Mat South	Beitbridge	Masera CL	2149	50	1074	533	98	631
2	Mat South	Beitbridge	Machuchuta CL	3945	18	722	502	61	563
3	Mat South	Gwanda	Shashi CL	5892	33	1936	435	105	540
4	Mash West	Chegutu	Mhondoro CL	9218	50	4609	447	16	463
5	Midlands	Gokwe North	Sebungwe CL	61944	23	14360	297	19	316
6	Mat South	Matobo	Mambali CL	4865	48	2332	259	120	380
7	Mat South	Beitbridge	Siyoka CL	14245	24	3367	254	20	273
8	Midlands	Zvishavane	Mazvihwa CL	3459	76	2643	208	102	311
9	Mat South	Beitbridge	Chipise CL	4864	40	1946	159	63	222
10	Mat South	Matobo	Seear Block CL	4202	33	1407	206	54	260
11	Mat South	Gwanda	Wenlock CL	12700	38	4828	222	26	249
12	Mat North	Binga	Busi CL	9079	50	4539	210	33	243
13	Mat South	Bulilimamangwe	Ngulube CL	2000	98	1960	109	99	209
14	Mat South	Gwanda	Gwanda CL	19870	15	2968	152	31	182
15	Mat South	Beitbridge	Dendele CL	5976	78	4631	92	47	139
16	Mat North	Lupane	Dandanda CL	10798	39	4211	121	7	128
17	Mat North	Lupane	Mzola CL	10704	45	4817	114	11	125
18	Mash West	Hurungwe	Nyaodza CL	7437	50	3718	142	25	166
19	Mat South	Bulilimamangwe	Mpande CL	4751	60	2851	80	74	154
20	Mat North	Nkayi	Nkayi CL	122824	37	45445	107	11	118
Rank	Province	District	Communal Area	Pop98	percent cattle Owners	Cattle Owners	Cattle MEI	Small Stock MEI	Total MEI
	The 20 Communal Areas with the Lowest per capita Food Access from Cattle Sales								
1	Manicaland	Chipinge	Musikavanhu CL	31450	38	12080	8	6	14
2	Mash East	Murehwa	Mangwende CL	140611	35	48815	11	1	12
3	Manicaland	Mutare	Dora CL	11725	81	9480	9	2	11
4	Manicaland	Mutare	Chinyauhera CL	13221	96	12680	9	2	11
5	Masvingo	Masvingo	Nyajena CL	49640	56	27725	4	5	9
6	Manicaland	Mutare	Rowa CL	18054	98	17693	3	0	3
7	Manicaland	Mutasa	Holdenby CL	61681	14	8327	5	3	7
8	Mash East	Mudzi	Mkota CL	79812	98	78216	5	2	7
9	Manicaland	Mutare	Zimunya CL	22244	98	21799	5	1	6
10	Manicaland	Chipinge	Tamandayi CL	7222	65	4710	3	3	6
11	Mash West	Kariba	Omay CL	41837	50	20919	3	0	3
12	Manicaland	Chimanimani	Ngorima CL/Chikukwa	27161	45	12100	2	0	2
13	Midlands	Zvishavane	Ungova CL	16060	55	8833	1	0	1
14	Mash West	Kariba	Gatshe Gatshe CL	3534	50	1767	0	0	0
15	Mash Central	Centenary	Mukumbura West	21631	50	10816	0	0	0
16	Mash Central	Mount Darwin	Masoso West CL	25715	50	12858	0	0	0
17	Mat South	Gwanda	Makwe CL	2936	35	1016	0	0	0
18	Mat South	Matobo	Semukwe CL	29777	30	8786	0	0	0
19	Midlands	Gokwe North	Goredema CL	36258	54	19579	0	0	0
20	Midlands	Shurugwi	Mashava North CL	3858	40	1543	0	0	0

Table 10: Per Capita Maize-Equivalent Income from Small Livestock Sales

Rank	Province	District	Communal Area	Pop98	Pop Without	Sheep MEI Kgs	Goats MEI Kgs	Pigs MEI Kgs	Total MEI Kgs
	The 20 Communal Areas with the Highest MEI from Small Livestock Sales								
1	Mat South	Matobo	Mambali CL	4865	2533	22	94	5	120
2	Mat South	Gwanda	Shashi CL	5892	3956	42	59	3	105
3	Midlands	Zvishavane	Mazvihwa CL	3459	816	8	93	1	102
4	Mat South	Bulilimamangwe	Ngulube CL	2000	40	8	91	0	99
5	Mat South	Beitbridge	Masera CL	2149	1074	11	85	2	98
6	Mat South	Matobo	Maribeha CL	5958	3821	15	79	2	96
7	Mat South	Bulilimamangwe	Mpande CL	4751	1901	40	35	0	74
8	Mat South	Beitbridge	Machuchuta CL	3945	3223	15	46	0	61
9	Mat South	Beitbridge	Chipise CL	4864	2919	8	55	0	63
10	Mat South	Matobo	Seear Block CL	4202	2796	17	37	0	54
11	Mat South	Beitbridge	Dendele CL	5976	1344	14	29	4	47
12	Mat South	Gwanda	Dibilishaba CL	25141	503	13	32	1	46
13	Mat South	Bulilimamangwe	Radtladi CL	4516	90	27	5	0	32
14	Mat South	Bulilimamangwe	Maitengwe CL	4896	1469	1	37	0	38
15	Masvingo	Chiredzi	Sengwe CL	25051	9531	2	26	7	36
16	Mat South	Beitbridge	Maramani CL	4234	85	7	26	0	34
17	Mat North	Binga	Busi CL	9079	4539	6	24	2	33
18	Mat South	Gwanda	Gwanda CL	19870	16902	7	23	1	31
19	Mash West	Makonde	Mupfure CL	20692	10346	6	21	3	31
20	Mat South	Bulilimamangwe	Mphoengs CL	13643	4093	10	18	0	28

Rank	Province	District	Communal Area	Pop98	Pop Without	Sheep MEI	Goats MEI	Pigs MEI	Total MEI
	The 20 Communal Areas with the Lowest MEI from Small Livestock Sales								
1	Mash East	Chikomba	Save North CL	56203	1124	0	1	0	1
2	Mash West	Zvimba	Zvimba CL	37905	18953	0	1	0	1
3	Mat North	Hwange	Hwange CL	67819	37301	0	1	0	1
4	Manicaland	Mutare	Rowa CL	18054	361	0	0	0	0
5	Manicaland	Mutare	Zimunya CL	22244	445	0	1	0	1
6	Masvingo	Gutu	Serima CL	15165	303	0	1	0	1
7	Mash East	Murehwa	Mangwende CL	140611	91796	0	0	0	1
8	Manicaland	Chimanimani	Chikukwa CL	3401	2351	0	1	0	1
9	Mash East	Chikomba	Nharira CL	31268	10568	0	0	0	1
10	Mash Central	Shamva	Madziwa CL	48237	14471	0	1	0	1
11	Manicaland	Chimanimani	Ngorima CL/Chikukwa	27161	15061	0	0	0	0
12	Mash Central	Centenary	Mukumbura West	21631	10816	0	0	0	0
13	Mash Central	Mount Darwin	Masoso West CL	25715	12858	0	0	0	0
14	Mash West	Kariba	Gatshe Gatshe CL	3534	1767	0	0	0	0
15	Mash West	Kariba	Omay CL	41837	20919	0	0	0	0
16	Mat South	Gwanda	Makwe CL	2936	1920	0	0	0	0
17	Mat South	Matobo	Semukwe CL	29777	20991	0	0	0	0
18	Midlands	Gokwe North	Goredema CL	36258	16679	0	0	0	0
19	Midlands	Shurugwi	Mashava North CL	3858	2315	0	0	0	0
20	Midlands	Zvishavane	Ungova CL	16060	7227	0	0	0	0

Source: Veterinary Services and FEWS

III-F. Wages, Remittances, and Off-Farm Income: Performance and Trends

Wages: Wage income from formal employment is higher in communal areas adjacent to the major cities, mining, and commercial farming areas (e.g. Seke, Rowa, Zimunya, Goromonzi, Manyame, Zimuto, and Umguza communal areas). Day wages for temporary paid labour, and particularly for agricultural fieldwork in other farmers' fields, are also key sources of income in some areas. Wages from paid agricultural work may decline substantially in poor agricultural years.

Table 11: Other Income Sources, by Province (kgs of MEI/capita

Province	Percent of Total Income from:		
	Wages	Remittances	Non-Farm
Manicaland	16.4	11.8	7.9
Mash Central	11.8	7	8.7
Mash East	13.3	8.1	14.4
Mash West	10	5.8	18.5
Masvingo	11.6	12	14.4
Mat North	12.3	8.8	22.4
Mat South	12.5	5.2	33.3
Midlands	10.7	9	11.1

Source: Income, Consumption, and Expenditure Survey, 1990/91, CSO

Remittances: Remittances, from either urban areas, or from outside Zimbabwe, are a considerable source of income in most communal areas. They may take the form of cash, agricultural inputs and implements, groceries, and clothing. In Beitbridge, Chiredzi, Mwenezi, Gwanda, Bulilimamangwe, and Matobo districts it is estimated that large numbers of residents are working in South Africa or Botswana. Similarly remittances are higher in communal areas adjacent to cities and towns.

***Off-Farm Income*:** Non-farm activities (crafts, firewood, beer sales, etc.) are an additional substantial source of income. These income sources also greatly decline in years of poor agricultural output.

An Income, Consumption, and Expenditure Survey, carried out by the Central Statistical Office in 1990/91 provides the only countrywide objective measurement, province-by-province, of the amounts of income which may be expected from these sources. More regular assessments of these sources of income, at a finer resolution (at least district-by-district) are urgently required. These income data, by province, are summarized in Table 12 (see also Appendix H).

III-G: Other Income Sources: Performance and Trends

Gatshe Gatshe and Holdenby communal areas have never met their food requirements from the sources of income so far measured. They rely primarily on income from fisheries, and commercial sales of fruit and vegetables. Gatshe Gatshe income levels average Z$14,000 per household per year from fishing. Converting this income to maize equivalent classifies Gatshe Gatshe as a food secure communal land. No similar estimates are available for Holdenby, but field assessments have been used to estimate income levels well above the 250 kgs/capita of MEI.

III-H: Information Gaps:

In a general sense, this Assessment of food availability and access among communal populations in Zimbabwe faces the following information and data weaknesses:

a) Data on wages, remittances, income from fruits and vegetables, craft, beer brewing, and firewood sales are scant, and only available at the provincial or national level. This may lead to an overestimation and/or underestimation of food access in some communal areas.

b) The distribution of agriculture and livestock holdings at the communal area level is not well documented and requires more recent study.

c) The contribution of fruits, vegetables, pulses, and various other home or semi-commercial market gardening is not documented by any objective data source.

d) Variations in livestock off-take rates are not regularly documented and only cattle ownership for 1997 is available in the analysis.

e) Data on intensifying the use of coping mechanisms is not well documented and is used as an observable indicator.

f) The field visits revealed that the overestimation of yields in the 1997/98 crop forecast data was due to the early termination of the season in most areas; hence the need to increase the threshold level

SECTION IV: SUMMARY OF CURRENT FOOD SECURITY

Section Objectives:.

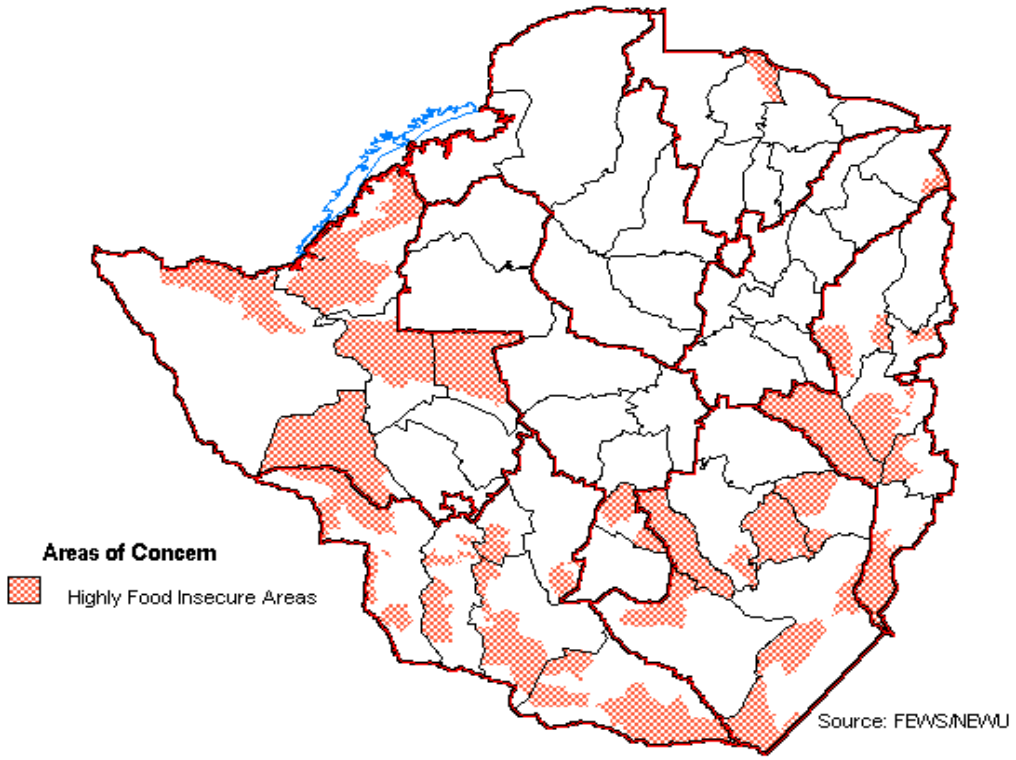
- *Aggregate all income sources documented in Section III, to determine which communal areas fall under the highly food insecure category (can not meet the minimum food security threshold of 250kgs per capita maize-equivalent income) and which under the moderate food insecure category (can meet the 250kgs per capita but do not exceed a threshold of 320kgs per capita).*
- *Provide insight on the degree to which prevailing food availability and access conditions are normal or exceptional.*
- *Discuss the primary reasons for the changes in current food security levels.*

IV-A. Current Food Security Levels

Most of the communal areas ranked as highly food insecure and moderately food insecure on table 12 below and on Map 4 lost 50 percent of their crop production in maize-equivalent income compared to the 1990s average. The rankings of current maize-equivalent income shown below in Table 13 and Appendix H indicate that more than half of all the communal areas (96 of 174) do not meet the minimum current food security threshold for both non-cattle owners and cattle owners. Of these, 45 percent (78) are classified as **'highly food insecure'** (have less than 250 kgs per capita MEI) and the remainder as **moderately food insecure** (have between 250 and 320 kgs per capita MEI) for the 1998/99 consumption period (see Map 4 and Table 12 below).

The CVA estimates there are 1.4 million people reside in areas that fall in the highly food insecure category and about 1.8 million people reside in areas that fall in the moderately food insecure category. Not all of the people in these areas are food insecure due to individual differences in access to food. Rather, these are the areas in which there is the highest probability of finding households and communities that are short of the minimum amount of food access required for the 1998/99-consumption period. In-depth local needs assessments are required for better targeting of any assistance.

Map 4: Most Food Insecure Communal Areas (MEI < 250 kgs/capita)



Communal areas from Matabeleland South (33 out of 41), Manicaland (16), and Masvingo (16) dominate the 96 lowest ranked communal areas. In 66 of the 96 cases where the minimum standard has not been attained, both the cattle owners and the non-cattle owners in the communal area are below the threshold. As would be expected, cattle owners appear more food secure than non-cattle owners -- 20 non-cattle-owner populations have per capita ME incomes of less than 100 kgs, while only 6 cattle-owner populations do.

Despite the low MEI, the bolded communal areas found in Table 12 are probably there because of a lack of good data on their income sources. The small communal areas of Rowa, Dora, Denhere, Inkosikazi, and Ndabazinduna are likely to be in this group. Rowa, Dora, Inkosikazi, Ndabazinduna, Seke, and Inyati are benefiting from their proximity to neighbouring towns and cities that provide job opportunities and markets. Holdenby, Manyame, Chikukwa, Mutoko, Chinyika, Mutirikwi, Zimuto, Zvimba, and Chihota rely on fruits and vegetables and other un-measured agricultural income. Masoso West suffers from poor data collection because it is sometimes counted as part of Masoso East or Kandeya and sometimes not. Whether these areas are vulnerable needs further investigations. Discounting these areas, only 80 communal areas will be of concern in 1998/99 consumption period.

Table 12: Most Food Insecure Communal Areas (ranked by per capita MEI)

				NON CATTLE OWNERS		CATTLE OWNERS	
Province	District	Communal Area	CAPop98	Population	MEI	Population	MEI
Highly Food Insecure					Kgs		Kgs
Matabeleland North	Hwange	Hwange CL	67819	37301	21	30519	83
Matabeleland South	Beitbridge	Diti CL	12646	2403	34	10243	112
Matabeleland South	Umzingwane	Mzinyatini CL	18761	9380	34	9380	140
Matabeleland South	Matobo	Kumalo CL	12926	6743	42	6183	195
Midlands	Zvishavane	Ungova CL	16060	7227	43	8833	44
Matabeleland South	Beitbridge	Mtetengwe CL	23292	11646	47	11646	240
Matabeleland South	Beitbridge	Siyoka CL	14245	10878	48		
Matabeleland South	Matobo	Semukwe CL	29777	20991	52	8786	52
Matabeleland South	Bulilimamangwe	Ramakwebane CL	15111	7314	53	7797	271
Matabeleland North	Binga	Manjolo CL	76284	38142	54	38142	112
Matabeleland South	Bulilimamangwe	Nata CL	60904	20281	68	40623	306
Manicaland	Chipinge	Tamandayi CL	7222	2512	70	4710	75
Matabeleland North	Binga	Siabuwa CL	26910	13455	74	13455	112
Mashonaland East	*Marondera*	*Chiota CL*	*49366*	*8096*	*74*	*41270*	*126*
Matabeleland South	Umzingwane	Matopo CL	18931	12589	76	6342	316
Mashonaland Central	*Mount Darwin*	*Masoso West CL*	*25715*	*31465*	*80*	*31465*	*97*
Manicaland	Makoni	Chiduku CL	89549	39299	81	50250	128
Masvingo	Mwenezi	Maranda CL	34682	16747	86	17935	109
Masvingo	Bikita	Matsai CL	25554	11874	93	13680	116
Matabeleland South	Gwanda	Makwe CL	2936	1920	93	1016	93
Masvingo	Mwenezi	Matibi I CL	58751	41606	104	17145	133
Masvingo	Chiredzi	Sangwe CL	28929	19764	105	9165	136
Masvingo	Chiredzi	Sengwe CL	25051	9531	108	15520	152
Midlands	Zvishavane	Runde CL	43500	19471	108	24029	201
Manicaland	Mutare	Chinyauhera CL	13221	541	109	12680	123
Masvingo	Bikita	Bikita CL	127153	2543	110	124610	123
Matabeleland South	Bulilimamangwe	Ingwezi CL	1584	132	112		
Masvingo	Masvingo	Nyajena CL	49640	473	113	23198	130
Masvingo	*Masvingo*	*Zimutu CL*	*15007*	*300*	*114*	*14707*	*158*
Matabeleland South	Beitbridge	Dendele CL	5976	1344	115	4631	303
Matabeleland South	Gwanda	Wenlock CL	12700	7872	115		
Midlands	*Gweru*	*Manyame CL*	*44615*	*22307*	*118*	*22307*	*222*
Matabeleland South	Matobo	Tshatshani CL	8855	6285	120		
Manicaland	Mutare	Muromo CL	8046	2581	122	5465	141
Matabeleland North	Lupane	Lupane CL	93245	1865	123	91380	177
Matabeleland South	Gwanda	Gwaranyemba CL	14434	7068	131		
Masvingo	Chiredzi	Matibi II CL	50120	32300	135	17820	193
Manicaland	Mutasa	Manga CL	8806	5666	140	3140	205
Matabeleland South	Bulilimamangwe	Mpimbila CL	16507	330	141	16177	256
Manicaland	Makoni	Makoni CL	32455	14840	144	17615	168
Manicaland	*Mutasa*	*Holdenby CL*	*61681*	*53354*	*147*	*8327*	*154*
Matabeleland South	Gwanda	Gwanda CL	19870	16902	147		
Manicaland	Chimanimani	Muwushu CL	36950	21680	149	15270	182

				NON CATTLE OWNERS			CATTLE OWNERS	
Province	District	Communal Area	CAPop98	Population	MEI		Population	MEI
Matabeleland South	Umzingwane	Nswazi CL	11650	5825	151		5825	259
Matabeleland South	Gwanda	Dibilishaba CL	25141	503	156		24638	210
Matabeleland South	Bulilimamangwe	Radtladi CL	4516	90	158		4426	222
Matabeleland South	Bulilimamangwe	Mphoengs CL	13643	4093	161		9550	234
Matabeleland North	*Bubi*	*Inkosikazi CL*	*16412*	*103*	*161*		*5068*	*190*
Masvingo	*Masvingo*	*Mtirikwi CL*	*23672*	*671*	*161*		*32879*	*183*
Matabeleland North	Tsholotsho	Tsholotsho CL	131478	6555	163		5052	222
Manicaland	*Mutare*	*Rowa CL*	*18054*	*361*	*167*		*17693*	*171*
Manicaland	*Mutare*	*Dora CL*	*11725*	*2245*	*170*		*9480*	*184*
Matabeleland South	Bulilimamangwe	Brunapeg CL	5241	2349	171			
Mashonaland East	Mudzi	Chikwizo CL	10788	91796	181		48815	198
Matabeleland South	Beitbridge	Chipise CL	4864	2919	185			
Manicaland	Buhera	Save CL	227077	130377	186		96700	253
Manicaland	Chimanimani	Mutambara CL	27093	9483	188		17610	216
Manicaland	Mutare	Zimunya CL	22244	445	190		21799	198
Manicaland	Mutasa	Mutasa North CL	29960	23775	191		6185	223
Mashonaland West	*Zvimba*	*Zvimba CL*	*37905*	*18953*	*192*		*18953*	*214*
Manicaland	Mutare	Marange CL	99983	3843	192		96140	213
Matabeleland South	Beitbridge	Masera CL	2149	1074	199			
Midlands	Zvishavane	Mazvihwa CL	3459	816	203			
Matabeleland North	*Bubi*	*Inyathi CL*	*5171*	*9026*	*206*			
Matabeleland South	Beitbridge	Machuchuta CL	3945	3223	209			
Masvingo	Zaka	Ndanga CL	218754	185119	209		33635	290
Matabeleland North	Lupane	Mzola CL	10704	5887	210			
Manicaland	Chipinge	Ndowoyo CL	113072	71292	211		41780	239
Matabeleland South	Matobo	Gulati CL	5550	2775	212			
Mashonaland East	*Mutoko*	*Mutoko CL*	*94189*	*20501*	*214*		*20501*	*240*
Mashonaland Central	Centenary	Mukumbura West CL	21631	51013	223		51013	248
Manicaland	Chipinge	Musikavanhu CL	31450	19370	227		12080	240
Mashonaland East	*Seke*	*Seke CL*	*41003*	*10571*	*234*		*10571*	*283*
Matabeleland South	Insiza	Godlwayo CL	25178	12589	235			
Matabeleland North	*Umguza*	*Ntabazinduna CL*	*11608*	*85461*	*243*			
Matabeleland North	Nkayi	Nkayi CL	122824	77379	244			
Masvingo	*Gutu*	*Denhere CL*	*3964*	*79*	*245*		*3885*	*300*
Moderate Food Insecure								
Masvingo	Chivi	Chivi CL	161512	100992	250		60520	301
Matabeleland South	Gwanda	Matshetshe CL	19798	7727	256			
Midlands	Mberengwa	Mberengwa CL	188586	52804	259		135782	310
Mashonaland East	Mudzi	Mudzi CL	64800	38880	260		25920	304
Midlands	Kwekwe	Silobela CL	40900	16074	262			
Mashonaland Central	Rushinga	Chimanda CL	30740	15370	269		15370	313
Matabeleland South	Matobo	Mambali CL	4865	2533	273			
Matabeleland South	Matobo	Mbongolo CL	8828	5672	282			
Masvingo	*Gutu*	*Serima CL*	*15165*	*303*	*285*			
Manicaland	Chipinge	Mutema CL	44971	32341	287		12630	313
Midlands	*Gokwe South*	*Kana CL*	*57692*	*25039*	*289*			
Mashonaland East	Mudzi	Mkota CL	79812	1596	294		78216	301
Masvingo	Masvingo	Masvingo CL	33550	21915	295		27725	302
Midlands	Chirumhanzu	Chirumanzu CL	50479	25240	295			
Manicaland	Mutasa	Manyika CL	23611	4931	304			
Matabeleland South	Bulilimamangwe	Maitengwe CL	4896	1469	309			
Matabeleland South	Beitbridge	Maramani CL	4234	85	313			
Matabeleland South	Gwanda	Shashi CL	5892	3956	314			

Source: FEWS/NEWU

Note: *Areas in italics may not be food insecure as they may meet their food requirements from other sources*

IV– B: Confirmation of Vulnerable Areas

A participatory approach outside the CVA was carried out in September to determine the vulnerable areas. The CVA authors carried out field assessments and discussed with the Provincial Drought Mitigation Task Forces

(PDMTFs) in all provinces[1]. Additional areas which were described by the PDMTF as vulnerable and not captured by the CVA are Pfungwe CL in UMP District; Mberengwa CL- Mberengwa; some wards in Goredema, Sebungwe, and Chireya/Chirisa – Gokwe North; Dande South CL – Guruve; Mukumbura East – Mt. Darwin; isolated areas in Manyika and Mutasa South – Mutasa; and isolated areas of Nyamaropa, Zimbiti, and Inyanga North communal areas in Nyanga district. The areas not captured by the CVA are vulnerable as indicated by the PDMTF. Capturing of the areas using the CVA has not been possible because of data problems (overestimation of production), small areas within the large communal area being overshadowed by performance of the good areas in the communal land. The extent of vulnerability in these areas cannot be quantified as the data used indicate that they are food secure. Mberengwa and Pfungwe communal areas were described as highly food insecure whilst the remaining communal areas can be categorized as moderate food insecure. The rapid rural appraisal and the CVA can summarize the areas of concern as in Table 13 below, with some of the areas being ranked moderately food insecure.

Table 13: Communal areas Identified as of Concern

Province	District	Communal Areas Affected	Communal areas
Manicaland	Buhera	1 of 1	**Save (south)**
	Chipinge	3 of 4	Ndowoyo, Tamandayi and Musikavanhu
	Mutare	4 of 6	**Marange South**, Chinyauhera, Muromo and parts of Zimunya
	Makoni South	1 of 2	Chiduku
	Makoni North	Some wards	Tanda (Chiyendambuya area)
	Mutasa	Some wards	Manyika and Mutasa South
	Nyanga	Some wards	Nyamaropa (Katerere Area)
Mashonaland Central	Rushinga	2 of 2	**Chimhanda and Masoso East (Mukosa ward)**
	Guruve	Some wards	Dande and Dande South
	Mt. Darwin	Some wards	Mukumbura East and Chiswiti
	Centenary	Some wards	Mukumbura West
Mashonaland East	UMP	1 of 3	**Pfungwe**
	Mudzi	Some wards	Chikwizo (Chikwizo A) and Mkota (Goronga B)
	Chikomba	Some wards	Save North (Isolated areas)
Mashonaland West	Kariba	1 of 3	**Omay**
	Makonde	1 of 2	Magondi
	Chegutu	Some wards	Mhondoro (North)
Masvingo	Chiredzi	3 of 3	**Matibi 2, Sangwe and Sengwe**
	Mwenezi	2 of 2	**Matibi 1 and Maranda**
	Zaka	1 of 1	Ndanga (South and Central)
	Bikita	2 of 2	Bikita (Central and South), Matsai and Devure Resettlement
	Chivi	1 of 2	Chivi North (Takavarasha area)
	Gutu	Some wards	Gutu East (Munyikwa area)
Matebeleland North	Hwange	1 large	**Hwange (except Dete Belt)**
	Binga	2 of 4	**Manjolo and Siabuwa**
	Tsholotsho	I of 1	Thsholotsho Central and Western
Matebeleland South	Beitbridge	8 of 8	**All**
	Bulilimamangwe	7 of 11	**All** except Maitengwe, Mpande, Ngulube and Sansukwe
	Gwanda	5 of 7	**All** ,Shashi to be included because of grazing problems
	Matobo	4 of 8	Gulati, Kumalo, Semukwe and Tshatshani
Midlands	Zvishavane	3 of 3	**Mazvihwa, Ungova and Runde**
	Mberengwa	1 large	**Mberengwa**
	Gokwe North	Some wards	Some areas in Goredema, Chireya/Chirisa and Sebungwe

Note: *Shaded and bolded areas were identified as Highly Food Insecure*

[1] *PDMTF is made up of AGRITEX, Ministry of Health, Social Welfare, Local Government, Water and the Grain Marketing Board. It is responsible for monitoring food situation in the province and deciding on technical ground in which areas relief should be distributed.*

IV-C: Food Access Trends Over Time

How do the current food security levels compare with the 1990s average and 1997/98 consumption period? Table 14 provides a comparison of per capita MEI for this year, last year, and for the 1990's average for the communal sector as a whole. Looking back in recent history, the majority of these most food insecure communal areas have never in recent times been able to meet the minimum threshold food security level. The vulnerability of these communal areas is exceptionally high this year as most of them lost between 1 and 90 percent of the MEI from all sources compared to the 1990s average. Only 46 communal areas gained in MEI from all sources, of which most of those gained more than 50 percent are in Matebeleland South (see Appendix M). This is expected as farmers dispose some of the productive assets and intensify their copying mechanisms.

Table 14: Comparisons of Food Access Levels Over Time for the Communal-Sector (kgs of MEI/capita)

Income Source	1998/99	1997/98	1990s Avg
Grain Stocks	8	28	10
Staple Crops	186	290	231
Cash Crops	119	423	283
Livestock Off-Take	48	68	27
Relief	7	0	25
Other Income	209	440	276
Total	577	1249	825

From Table 14, it is clear that there has been a huge fall in total per capita food access compared with last year, from 1,249 kgs/capita to 577 kgs this year, a difference of 672 kgs. Looking at the 1990s average, it is clear that last year (1997/98) was an exceptionally good year (51 percent above average) compared to most recent years.

It is when comparing the current year's food access total (577 kgs/capita) with the 1990s average (825 kgs/capita) that it becomes clear how poorly this year compares with most recent years (30 percent below average). This is due somewhat to a fall in grain crop production (from 231 kgs/capita to 186 kgs/capita), reflecting the relatively poor year experienced by most communal areas in the south and west of the country.

The largest factor in the decreased food security is the fall in the income/food access gained from cash crops[2] and not due to a decrease in cash crop production. The increase in total tonnage of cash crop production is only 3 percent compared to the 1990s average. It is rather in the steeply climbing price of maize, and the worsening terms of trade between cash crops and maize, that we find the biggest contributor to a fall in food security this year. Maize prices have more than doubled those of 1997/98 marketing year, and are continuing to rise steeply in many areas. Producer prices of most cash crops, on the other hand, have seen much more moderate increases over the last year to two. Therefore, cash crop production and sales are providing much less income than they did in previous years.

IV-D: Source of MEI and Food Access, by Food Security Status

What sources of production, income, and transfers are associated with this year's food security and food insecurity? Table 15 shows the average amount of maize-equivalent income coming from all sources, by food security status, for both cattle owners and non-cattle owners.

[2] *One smaller factor which accounts for some of the fall in total food access this year is internal to this assessment. In adjusting the off take rate for cattle from an average of about 5 percent for most communal areas to a rate of 2.5 percent in many, the contribution of livestock to total food access rose slower than it would have otherwise, due to firm prices and generally good conditions in 1998.*

Table 15: Sources of MEI in 1997/98, by Secure/Insecure (kgs/capita)

		Grain Crops	Cash Crops	Irrigated Crops	All Livestock	Carryover Stocks	Other Income	Total Income
Food secure	Cattle Owners	294	118	6	100	11	326	878
	Non-Owners	385	161	4	12	13	326	932
Moderately Insecure	Cattle Owners	71	25	6	62	5	119	293
	Non-Owners	99	25	12	23	8	115	287
Highly Insecure	Cattle Owners	44	15	5	32	3	65	167
	Non-Owners	45	13	5	13	3	58	139

Highly Food Insecure, Moderately Food Insecure vs Food Secure: As can be seen, the factors that have separated the food secure from the food insecure this year are grain and cash crop production, and non-agricultural income. While there are differences between the food secure and the food insecure in the amount of income coming from stocks, irrigated production, livestock, and food relief, these are still relatively minor compared to crop production and non-farm income sources. Non agricultural income and grain crops separate the moderately insecure from the highly insecure.

Cattle Owners vs Non-Cattle Owners: By the picture presented here, it is clear that simply being a cattle-owner does not insure food security.

SECTION V: RISK

Section Objectives:

Evaluate the vulnerability of these populations in terms of the potential for shocks to food access conditions during the consumption period. What is their capacity to cope with such shocks?

V-A. Risk Factors

Reduced Pastures and Livestock Prices: Pastures in some of the southern-most communal areas of Beitbridge, southern Gwanda, and central Chiredzi began seriously deteriorating in mid-rainy season, and are now exceptionally sparse, compared even to post 1982 and 1992 drought levels. As farmers have begun de-stocking animals because there is not enough grass, the supply of animals has risen beyond the demand, and prices paid for the animals have dropped by almost 50 percent per animal (decreasing from about Z$3,500 to Z$1,000 per steer) since January 1998. The reduced revenues from off-take is having a negative effect immediately on income levels of the cattle-owners, and the worsening terms of trade (decrease in value of the animals, rising maize prices) have immediate and medium-term implications for the food security of these areas.

Re-Imposition of Grain Price Controls: Government's re-imposition of informal price control on maize meal may provide a short-term benefit to urban and a few communal populations with good road infrastructure. But for the more remote areas that rely on the purchase of maize meal for their food security, the restrictions may adversely affect the ability of rural shops to supply maize meal for purchase at an appropriate profit. The supply of maize to these areas may then diminish.

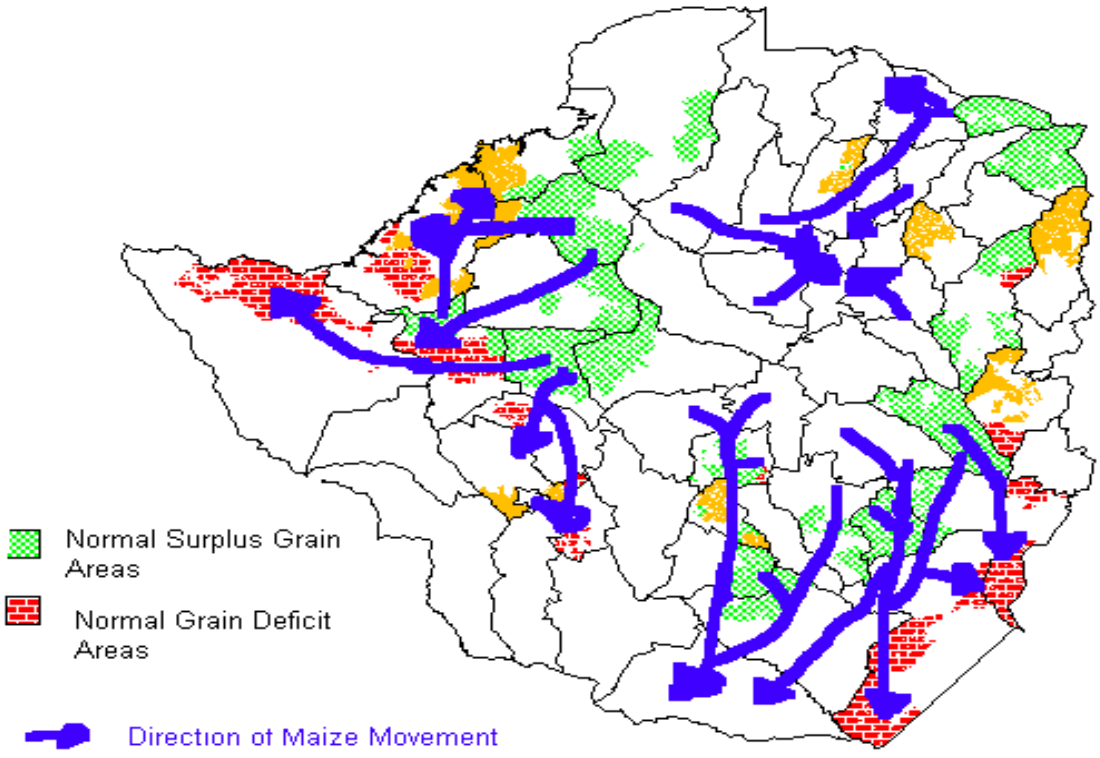
Increasing Grain Prices: If maize prices continue rising as they have over the previous 12 months, then all of the food access found in this assessment will be reduced. In some areas, this may be the difference between minimal food security and insecurity. An increase in grain prices by 20 percent would reduce the MEI for cash crops by between 2 to 214 kgs per capita with an average loss of 16 kgs per capita (17 percent). A total of 135 communal areas will loose up to 20kgs per capita of MEI. This entails a big loss to those households which depend on cash crop income for their food requirements.

Macro Grain Market Policy Environment: Government still maintains a monopoly on maize exports and imports. This, plus the large amount of grain held in its Strategic Grain Reserve, are considerable disincentives to an active participation of the private-sector in the national grain market. This shifts all responsibility for meeting national grain requirements, as well as potential trading gains and losses, onto the Government and its fiscus. Government policies up until last year appeared to be moving away from greater Government control of the market, for reasons it identified as important in the early 1990s. The wavering in policy direction on this matter has far-reaching consequences for national grain production and supply. An uncertain policy environment does not help to build food security over the medium to long-term.

Erratic Food Relief: Government food aid programs such as the Grain Loan Scheme and Free Food Programme are noted to be erratic in their operations in most years. In good years, this may be fortunate as their lack of incisive targeting leads often to the provision of grain to those who do not need it. In a year in which there may be some populations that require food assistance, the erratic deliveries become more problematic. The consumption requirements gap normally met by traders will not be filled as relief becomes a disincentive to traders to move adequate grain to those areas.

***Disruption of Normal Internal Movement of Surplus Grain*:** Traditionally the chronic grain production shortfalls of Matebeleland South Province, southern districts of Masvingo province and the northern and north west districts of Matebeleland North province have been filled by trader movements from certain areas in Midlands and Masvingo (see Map 5 below). Some usually surplus areas like Shurugwi, Masvingo, and Zaka do not have a surplus this year. For these areas, as well as those that are usually supplied by them, the disrupted trade patterns will have to be replaced by others. There is an increased possibility of food availability problems if the market does not, or can not, respond well to the new patterns of supply and unfilled demand.

Map 5: Normal Grain movement and trade in communal areas



IV-B. Potential Coping Resources

The good 1997 harvest assured a larger than normal amount of carryover stocks into 1998 in many communal areas. In June, some households were still selling grain harvested in 1997. However, none of the 80 communal areas identified as food insecure had carryover stocks; they are already relying on other income sources for their food.

The coping mechanisms already available in the communal sector include intensification of gardening, buying and selling of vegetables, fruits and second hand clothes, providing casual labor to the households with a large asset base, working for relatives, and selling crafts and wild fruits. Some of the communal areas are likely to meet the shortfalls from these sources (that are difficult to measure because of a lack of data and information)

IV-C. Confirmatory Indicators

Falling School Attendance: Field visits to Zvishavane and Beitbridge districts have indicated a rise in the number of children leaving school and have documented the suspension of afternoon sporting activities in some areas as teachers fear children could faint. Some school teachers interviewed have indicated a reduction in school children carrying food to school which may be a sign of lack of food within the households in some of the areas identified as food insecure in this analysis.

Nutrition and Health Data: Data on malnutrition in children under five years and in the primary school-going age bracket is being collected by the Ministry of Health. It is too early yet to see any patterns.

Population Movements: There are no reports of abnormal population movements within the country and to South Africa or Botswana which can be attributed to food security problems. Such movements will be monitored.

SECTION VI: ACTIONS REQUIRED

Section Objectives:

- *Suggest where a more focused assessment is most required, either now, or after the next harvest. Suggest the types of interventions consistent with the CVA findings. Indicate which areas should be targeted for more intense follow-up assessments.*
- *Provide an objective basis for setting an initial planning figure for potential food aid requirements.*

If the 1998/99 MEI income we have measured in each communal area were evenly split among all households, then this assessment would accurately indicate how much additional food (perhaps in the form of food aid) would be required in each communal area to meet the minimum annual food access requirements. But there is a great deal of variation in income levels among households in the communal areas, and a communal-level assessment can only indicate where there is the strongest likelihood of finding substantial numbers of people below the presumed annual requirement.

Emergency Food Aid May Be Required in Some Areas: Table 12 in Chapter IV indicates which communal areas are apparently the most food insecure, and thereby provides a targeted listing of where further assessments should be carried out to determine if, and in what quantity, food aid is required. Based upon the low amount of food access found in the most food insecure communal areas, it is our view that food aid may be required in some areas to maintain acceptable levels of nutrition.

What Level of Food Aid Might Be Required? If we were to try to bring each of the 80 communal areas that are not currently meeting the minimum threshold of food access up to the threshold, we would require a maximum of 234,900 MT. But because we may not wish to intervene with food aid in the case of some communal areas (and households) where the deficit from the liberal quantity of 250 kgs/capita of maize-equivalent income is relatively slight, the total amount required may only be about half of the 234,900 MT. An initial planning figure of between 130,000 MT and 234,900 MT would be consistent with the findings of this assessment.

District-level Disaster Declarations? Where most of the communal areas are vulnerable per district, Government may declare that particular district a disaster area. District-level declarations of disaster may be better for administration purposes than declaring the entire province as occurred in the past. District level declaration with targeted communal areas and an intense household-level assessments are required in those districts. This could be a requirement of unlocking potential funding from Government, NGO, and international organizations, and to begin responding to the problems identified on the ground. They might also be useful in avoiding the more general, and more costly blanket declaration that would dilute the limited resources available to address the most crucial food security issues. If district declarations are required, then the following districts on Table 15 should be considered of priority:

Table 15: Districts of Priority for Further Food Security Assessments (based on MEI and PDMTF)

Province	District	Communal Areas Affected	Communal areas
Manicaland	Buhera	1 of 1	Save
	Chipinge	3 of 4	Ndowoyo, Tamandayi and Musikavanhu
	Mutare	4 of 6	Marange South, Chinyauhera, Muromo and parts of Zimunya
Mashonaland Central	Rushinga	2 of 2	Chimhanda and Masoso East (Mukosa ward)
Mashonaland East	Nil		
Mashonaland West	Nil		
Masvingo	Chiredzi	3 of 3	Matibi 2, Sangwe and Sengwe
	Mwenezi	2 of 2	Matibi 1 and Maranda
	Zaka	1of 1	Ndanga (South and Central)
	Bikita	2 of 2	Bikita (Central and South), Matsai and Devure Resettlement
Matebeleland North	Hwange	1 of 1	Hwange (except Dete Belt)
	Binga	2 of 4	Manjolo and Siabuwa
	Tsholotsho	I of 1	Tsholotsho Central and Western
Matebeleland South	Beitbridge	8 of 8	All
	Bulilimamangwe	7 of 11	All except Maitengwe, Mpande, Ngulube and Sansukwe
	Gwanda	5 of 7	All ,Shashi to be included because of grazing problems
	Matobo	4 of 8	Gulati, Kumalo, Semukwe and Tshatshani
Midlands	Zvishavane	3 of 3	Mazvihwa, Ungova and Runde
	Mberengwa	1 large	Mberengwa

Household Targeting Mechanisms Need to be Re-Established: Note that the MEI for cattle-owners is far above the minimum threshold of 250 kgs/capita in several of these most food insecure districts. This re-iterates the on-going need for a nationally defined and practical vetting criteria for identifying which households should receive food aid, and which should not.

Critical Need for Livestock Protection Identified in Beitbridge, Gwanda, and Chiredzi: Post-harvest assessments of food security that have been carried out in several areas of the country have identified a special concern for the condition of livestock in the southern-most communal areas in Beitbridge and Gwanda, as well as in Matibi I in Chiredzi. Medium-term food security is under threat from very poor rains, and an almost exhausted pasturage in these areas. In order to maintain current levels of food security, and to avoid dealing with a more pervasive and serious food security situation next year, the sale prices for cattle being de-stocked need to be supported, and additional fodder, even for commercial sale, needs to be made available in this area. Price support for de-stocked cattle can be improved by encouraging farmers who are granted restocking finance to buy their animals from these areas.

SECTION VI: TECHNICAL APPENDICES

Appendix A: Approach to Food Security and Vulnerability Assessment: Methodology

Measurement of Income Sources: The CVA analysis is founded on a model of household income, or more specifically, strategies households use to acquire food (whether acquiring food directly through production, or through earning cash and purchasing food, or through barter). It assumes that household income is composed of production for home consumption, income-generating activities, ability to access transfers (both public and private), and assets (both current stocks and ability to acquire new assets).

The analysis based at communal area level uses the most reliable and objective data. The analysis focuses on regularly collected production data on dryland and irrigated grain (staple) crops, cash crops, livestock (normal sales), food relief (distributed at time of analysis) and carryover grain stocks from 1996/97 harvest year. Less reliable and disaggregated data on remittances, income from craft, wage earnings, and beer brewing are factored in the analysis. These strategies which a household uses to acquire food will be termed "the income" in this analysis.

Other sources of income and production such as home business, fisheries, gardens and fruits, and trade in such things as second hand clothes will not be objectively factored into the income sources, as no data are available and they are difficult to measure. For communal areas not meeting the minimum threshold food access, these income sources will be subjectively assessed if they are an important income source for the specific area.

The Base for Assessment*:* To be able to compare all of these income sources which are expressed in various measuring units (tons, value in Zimbabwe dollars, heads of livestock, etc.), against a standard of how much income/production is required to be food secure, all the income and production sources will be converted into "*maize equivalents."* This means that in the case of cash income received (e.g. cotton or livestock off-take income), the cash amount received from sale will be "spent" to purchase a quantity of maize at prevailing retail maize prices. In the case of goods produced or received (cash crops, food relief, etc.), the good will be converted into income by theoretically "selling" it for the prevailing average producer price, and then "spending" all the proceeds to "buy" an amount of maize at the prevailing retail maize price.

The Unit of Analysis: The conceptual framework is based on the household, but the analysis does not encompass all household characteristics. The CVA of Zimbabwe is based on the 4th administrative level unit (the communal area) and measures food access and availability per person per year for each of the 173 communal areas in Zimbabwe. The analysis is done at this level for four reasons;

- disaggregated data are available at this level,
- the traditional administration is usually at this level,
- resource allocation and planning is sometimes done at this level, and
- government food relief programs (grain loans) were targeted below this level, but with repayment arrangements done at this level.

The analysis has treated all income sources on per capita basis on an assumption that the income will be shared equally among the populace in the communal areas. An exception to this is the treatment of cattle in each communal area. The population in each communal area is divided into cattle owners and non-cattle owners, because of five reasons: cattle are an important asset which roughly measures self esteem and wealth in a society, provide manure which is used to increase crop production, provide milk for the family, is a source of draft power in crop production, and is a hedge against risk. These contributions are not directly captured in this analysis, but segregating the two groups ensures that income arising from cattle off-take is not wrongly distributed to the non-cattle owners.

Assessment Based Primarily on Secondary Data*:* This analysis is based on both quantitative data sets compiled by the National Early Warning Unit (NEWU), the Department of Veterinary Services, and the Ministry of Labour and Social Welfare. A description of the data sets used is in Section VI. Qualitative information (on

important income sources for some areas) is incorporated into the analysis to avoid overruling the importance of this source of income in some of the communal areas. Thus the results provide here are an accounting of all the "more certain" sources of production, income, and entitlement in "maize equivalents", supplemented by an accounting of other "likely" sources of production, income, and entitlements for those areas which have not met their minimum food security standard with "more certain" sources.

Relatively speaking, Zimbabwe benefits from a large food security database, which covers a period running between 1980 and the present. When data sets were not available to describe important aspects of income in Zimbabwe, best judgement has been used. Efforts continue to fill in important data gaps, to substantiate further some weakly-documented data, and to re-discover and digitize old data.

Principal sources of income which are poorly documented include:

a) wages and remittance income— data available for this source of income only describes the provincial level;
b) fishing income (especially for Manjolo and Gatshe-Gatshe communal lands);
c) craft income (especially along major transport routes—e.g., in Matibi 1, Manjolo, Hwange, Chivi, and Ndowoyo communal lands);
d) fruit and vegetable income (especially for Mutema, Chikukwa, and Holdenby communal lands).

This assessment of food security conditions in Zimbabwe looks only at the communal areas. Other sectors and the urban populations can not yet be considered using this analytic method, due to a lack of objective data. Efforts to remedy this problem are underway by FEWS and other governmental and non-governmental organizations.

Target Audience : The target audience or the Current Vulnerability Assessment is the community concerned with early warning and food security development for Zimbabwe. These users include National and International Donors and NGOs, Universities, and International Organizations. The CVA for Zimbabwe is aimed at the group of people concerned with the question of whether there will be a food emergency in this country within the current consumption year (April 1998 to March 1999) and, if so, what should be done about it.