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Zimbabwe Household Livelihood Security Assessment. CARE.

John Mazzeo, *DePaul University*



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Household Livelihood Security Assessment



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Table of Contents

List of Tables	iii
List of Figures	v
Executive Summary	vii
1. Introduction	1
1.1 Background	1
1.2 CARE in Zimbabwe	3
1.3 CARE's Household Livelihood Security Assessments (HLSAs)	4
1.4 Objectives of this report	5
2. Methodology	5
3. Current household livelihood security situation and its recent evolution.....	9
3.1 Livelihood Context.....	9
3.1.1 Household characteristics	9
3.1.2 Livelihood strategies.....	13
3.1.3 Cash income, expenditures and borrowing.....	22
3.1.4 Household Assets	26
3.1.5 Agricultural production	28
3.1.6 Health environment and behaviors	40
3.1.7 Social support and participation in community safety nets	54
3.2 Livelihood security and components.....	56
3.2.1. Food security	57
3.2.2 Health security	60
3.2.3 Education security	62
3.2.4 Income security.....	64
3.2.5 Livelihood security	67
3.2.6 Changes in livelihood security between 2007 and 2009	68
4. Impact of CARE interventions.....	71
4.1 Participation in CARE interventions.....	71
4.2 Impact of interventions.....	74
5. Conclusions and recommendations.....	91

Annex 1. 2009 HLSA questionnaire.....	95
Annex 2. CARE-Zimbabwe Targeting Guide	106
Annex 3. Calculating the Coping Strategies Index.....	108
Annex 4. Calculation of Factor Analysis Indices	110

List of Tables

Table 1. Districts, wards and households included in the 2009 HLS sample	8
Table 2. Household demographic characteristics, by survey year	10
Table 3. Access to education, by year.....	13
Table 4. Participation in agricultural production and livestock rearing, by year and district	14
Table 5. Percentage of households engaged in various income generating activities, by year.....	16
Table 6. Percentage of households engaged in various trading and self-employment activities (2009)	18
Table 7. Sources of cereals during the lean period (January-April), by district	19
Table 8. Percentage of households reporting major expenditure categories ^a , by year	23
Table 9. Percentage of households borrowing money in past four months, by district and survey year	24
Table 10. Reasons for borrowing, by year	25
Table 11. Sources of loans, by year	26
Table 12. Percent of households owning, purchasing and selling selected assets in the previous year (2009)	27
Table 13. Reasons for sale of productive assets.....	27
Table 14. Land ownership, size of land owned, percent of land cultivated (2009), by district	28
Table 15. Reasons for leaving land uncultivated (% of households), by survey year	30
Table 16. Percentage of farming households growing major field crops (2009), by district.....	33
Table 17. Percentage of cultivated area planted to major field crops (2009), by district.....	34
Table 18. Average household production of major field crops (2009), by district	37
Table 19. Median yields by crop (2009)	38
Table 20. Availability and sources of seed for maize and groundnuts (2009).....	39
Table 21. Percentage of households with access to garden (2009), by district.....	40
Table 22. Sources of water for gardening, by year	40
Table 23. Water sources, storage and collection, and type of latrine used, by year	41
Table 24. Hand washing and soap use, by year	45
Table 25. Treatment of illness, by survey year	46
Table 26. Knowledge of HIV and AIDs, by year	49
Table 27. Discrimination based on HIV and AIDS infection (2009), by district	52
Table 28. Information about chronically ill, by year	53
Table 29. Social support provided by community members, by year.....	56
Table 30. Average food security index and index components, by district	58

Table 31. Average health security index and index components, by district.....	61
Table 32. Average education security index and index components, by district	63
Table 33. Means of income security index and index components, by district	66
Table 34. Comparison of livelihood security index and component means across the years	69
Table 35. Participation in CARE interventions, 2005 to 2009	72
Table 36. Sample descriptive statistics for independent variables controlled for in regression analysis....	78
Table 37. Sample descriptive statistics for livelihood security index and index components used for regression analysis.....	79
Table 38. Regression analysis of the relationship between the number of CARE interventions in which households participated in 2009 and food security.....	80
Table 39. Regression analysis of the impact of participation in ANR, SEAD and TFA interventions in 2009	83
Table 40. Regression analysis of the relationship between the number of CARE interventions in which households participated in 2009 and health, education, income and livelihood security	84
Table 41. Regression analysis of the impact of participation in ANR interventions (since 2005) on agricultural yields	87
Table 42. Interventions falling into CARE's program components: food security, livelihood promotion and social protection.....	89
Table 43. Regression analysis of the impact of participation in CARE program component interventions in 2009	90

List of Figures

Figure 1. Districts within Masvingo Province	6
Figure 2. Districts within Midlands Province	7
Figure 3. Percentage of households caring for an orphan (2009), by district	11
Figure 4. Percentage of female household heads, by district.....	12
Figure 5. Percentage of household participation in agricultural production and livestock rearing (2009), by district	15
Figure 6. Area of cultivable land planted, % of households	15
Figure 7. Percent of households that earn cash income, by district	16
Figure 8. Primary source of cash income (2009)	17
Figure 9. Most important sources of cereals during the lean period, by survey year.....	21
Figure 10. Most important sources of vegetables during the lean period (2009).....	21
Figure 11. Cash income received per capita in last month (2009), by district.....	22
Figure 12. Percent of cash expenditures spent on various categories in last month (2009).....	23
Figure 13. Percent of households borrowing money in past four months (2009), by district.....	25
Figure 14. Area of cultivable land per household (acres), by year	29
Figure 15. Percentage of arable land cultivated (2007 and 2009), by District.....	29
Figure 16. Percent of households growing major field crops, by survey year	32
Figure 17. Average percent of total land area planted to major field crops (2009),	35
Figure 18. Average household production of major field crops, by survey year	36
Figure 19. Percentage of households using an unsafe water source, by district	42
Figure 20. Time to fetch water (minutes) (2009), by district.....	43
Figure 21. Percent of households having no latrine available, by district	44
Figure 22. Percentage of households in which bednets were used the previous night, by district	47
Figure 23. Percent of households employing various coping strategies in order to access food more than 2 days a week (2009)	59
Figure 24. Mean food security index, by district	60
Figure 25. Mean health security index, by district.....	62
Figure 26. Mean education security index, by district.....	64
Figure 27. Mean income security index (rural areas only), by district	67
Figure 28. Mean livelihood security index, by district	67
Figure 29. Percent of households employing various coping strategies in order to access food more than 2 days a week, by survey year	70

Figure 30. Comparison of livelihood security index and component means across the years.....	71
Figure 31. Percent of households participating in any CARE intervention in 2009, by District.....	73
Figure 32. Percent of households participating in ANR, SEAD and TFA interventions in 2009, by District	74
Figure 33. Means of food, health, education and income security indexes for no, single, and multiple intervention household groups.....	75
Figure 34. Livelihood security index mean for groups of households participating in no, single, and multiple CARE interventions.....	75
Figure 35. Percent of households cultivating crops by participation in selected ANR interventions (2005- 09).....	86
Figure 36. Maize, sorghum and ground nut yields by participation in selected ANR interventions (2005- 09).....	87

Executive Summary

Hyperinflation and failed land reform, coupled with political instability, drought, and one of the highest incidences of HIV and AIDS in the world have created a protracted humanitarian crisis in Zimbabwe. The crisis has eroded the livelihoods of millions of households country-wide. To address the needs of the population under these conditions, CARE International in Zimbabwe provides food aid, agricultural inputs and other resources and services to communal populations across 10 districts in Masvingo and Midlands provinces. In order to address current acute needs while also addressing underlying vulnerabilities, CARE uses an integrated programming approach combining interventions in the areas of food security, livelihoods promotion and social protection.

CARE conducts annual Household Livelihood Security Assessments (HLSAs) to update its understanding of the household and community situations in the districts in which it operates, highlight needs, and generate new programmatic ideas. This report presents the findings from the most recent HLSA, conducted in April 2009. In order to track how the livelihood security status of households has changed over time, data from the 2006 and 2007 HLSAs are also used. No HLSA was conducted in 2008 due to the timing of the government ban on NGO activities in Zimbabwe in that year.

The objectives of the report are to use the HLSA data to provide insight into:

- The current livelihood security status of households;
- How households' livelihood security status has changed over time;
- The impact of CARE's interventions on households, including the impact of
 - different types of interventions, in particular Agricultural and Natural Resources (ANR), Small Economic Activity Development (SEAD), and Targeted Food Assistance (TFA) interventions;
 - interventions falling under CARE's three program components, that is, food security, livelihoods promotion and social protection;
 - household participation in multiple intervention types (e.g., both ANR and TFA); and
 - household participation in interventions that fall within multiple program components (e.g., food security and livelihoods promotion).

Livelihood context

The context in which households live and manage resources—including their living environment, livelihood strategies, assets, and social support—has a fundamental influence on their livelihood security. The survey data show that this context has been shifting in many ways over the last four years.

The population of CARE's operational area is getting younger, and there has been an increase in household dependency ratios. This means that households are supporting a larger number of members who are generally not as productive as adult workers or are otherwise unable to contribute to household livelihood security. This demographic shift is likely due in part to the dramatic increase in the number of children living in households who are orphans. The percent

of households with female heads, who tend to be more vulnerable than those headed by males, is also rising. Notably, half of all female household heads are widows while only 8 percent of male household heads are.

While the adult population of Zimbabwe is highly educated, the survey revealed the impact of constraints to educational access associated with the crisis on the current generation of school-aged children. In 2009, only a quarter of respondents claimed that their children attend school every day. By far the most common reason cited for not enrolling children in school was the inability to pay school fees. Most of the children who do attend school do not have access to a full set of supplies (stationary and text books).

The vast majority of households in CARE's operational area continue to pursue agricultural production and/or livestock rearing as part of their livelihood strategy. Thus, limited access to land constitutes a serious constraint to livelihood security. While most households rely on their own agricultural production to meet some of their food needs, over 80 percent also earn cash income. The most common sources of cash income are on-farm casual labor, crop and livestock sales, off-farm casual labor, and trading and self-employment. Twelve percent of households rely on remittances as their primary source of income. Since 2006, crop and livestock sales have been replaced by on-farm casual labor as the most common income generating activity. There has been a drastic drop in the percentage of households earning income from crop and livestock sales, from near 90 percent in 2006 to 32 percent in 2009.

A sure sign of the negative effect that the crisis has had on households, a full 70 percent reported that they had relied on food aid as their primary source of food during the lean period in 2009 (January to April), up from only 22 percent in 2007. Reliance on own production, *maraicho* (payments for casual labor), and market purchases have all declined. The vegetable crops grown in gardens provide a source of food or livelihood for a large proportion of households, with two thirds having household gardens and 40 percent reporting access to community gardens.

The 2009 survey found access to cash income to be quite limited, which limits households' ability to pay for essential items, including food, which remained the biggest expense for the great majority of households across survey years, followed by education. While debt levels have decreased, they are still quite high, and decreases in borrowing may be a reflection of the country-wide economic crisis: the lack of funds to lend as well as limited access to lending institutions.

Information collected on households' ownership of assets reveals the severity of poverty within CARE's operational area. Only 21 percent of households own a TV or radio and less than half own at least one bed. Ownership of productive assets that increase agricultural productivity and livestock are also quite low. For many important productive assets, the percentage of households that sold them was far higher than the percent that purchased them, and the most common reasons given for productive assets sales were to enable food purchases and pay school fees. Between 2007 and 2009 there has been a substantial decrease in the average value of livestock owned and in the ownership of some productive assets, an indication that poverty is deepening.

With respect to agricultural production, in 2009 maize remained by far the most commonly grown crop, followed by ground nuts and sorghum. Cash crops (cotton and sunflower) are not very important to households' livelihoods. The area planted to maize and sorghum using

conservation farming techniques accounts for approximately 15 percent of all area planted. The percent of households cultivating maize has remained stable over 2007-2009. The percent cultivating sorghum has increased substantially while that cultivating ground nuts and cotton have both declined.

There has been a large increase in the average amounts of maize and sorghum produced by households growing these crops. This is likely related to the fact that more farmers are producing them using conservation farming practices, which gives considerably higher yields. The data show that the median yield for maize under conservation farming is over 30 percent higher than under traditional practices.

Since 2007 there has been a slight decrease in the amount of arable land available to the average household, and in some districts there has been a decline in the percent of arable land that is cultivated. The most commonly cited reason given for leaving land uncultivated was lack of seed on the market. While only 29 percent of households cited this constraint in 2006, 70 percent did so in 2009. Lack of access to seeds has clearly become a major constraint to agricultural production among households in CARE's operational area.

In terms of households' health environments, the data from the 2009 HLSA reveal that near 40 percent of households are using unsafe water sources and there has been an increase in the amount of time it takes to fetch water. The average amount of time taken to fetch water is now far above World Health Organization standards. The amount of water collected is also below recommended levels for maintaining adequate health and hygiene. The low quality of the health environment for many households in CARE's operational area is also revealed by the fact that 63 percent of households do not have access to a latrine, up from 56 percent in 2007. Despite the fact that malaria is endemic throughout Zimbabwe and the use of mosquito nets a key malaria prevention measure, less than 20 percent of households reporting members having slept under a mosquito net the previous night.

With respect to illness treatment, the percentage of households seeking treatment when someone was ill decreased from 75 percent in 2007 to 65 percent in 2009. A sign of the deepening economic crisis, in the 2007 survey 43 percent of households cited financial constraints as the main reason for not seeking treatment while 56 percent did so in the 2009 survey. Notably, reporting of poor quality of service for not seeking treatment has risen from substantially.

A highly worrying finding for HIV prevention efforts is that respondents' knowledge of means of avoidance of contracting HIV decreased substantially from 2007 to 2009 and similarly, respondents reported decreased practice of these techniques. Decreases of more than 20 percentage points were found in both knowledge and practice of the following HIV avoidance behaviors: avoiding sex with persons who have many partners, avoiding sex with sex workers, avoiding sex with homosexuals, avoiding sex with persons who inject drugs intravenously, avoiding sharing razors and blades, and limiting the number of sexual partners.

Across the three survey years, there was not much change in the percent of households with a chronically ill family member: the highest was about 13 percent in 2007, the lowest was about 8 percent in 2009. The percentage of chronically ill who were tested for HIV increased dramatically across the three survey years, rising from just under 40 percent in 2006 to near 70

percent in 2009. Among those tested who were willing to reveal the results, 77 percent tested positive for HIV, suggesting that the large majority of chronic illness is due to HIV and AIDs.

Finally, with respect to social support, the main sources of support relied on by households are extended family and community members. The survey data reveal that since 2006 the percent of households receiving community support for a wide variety of needs has decreased, including health expenses, groceries, labor for farming, cash loans, school fees, and small farm tools. The declining prevalence of support received may be explained by the recent political turmoil and economic collapse experienced by Zimbabweans.

Livelihood security and its recent evolution

In addition to livelihood security itself, the HLSA looks at four important sub-components of livelihood security: food security, health security, education security and income security. In both the 2007 and 2009 surveys, data were collected on a number of indicators that are used to assess how households are doing in each of these areas. For an overall assessment of how households are faring currently and over time, the indicators are combined into an index with weights chosen using factor analysis.

Food Security

At the time of the 2009 survey, the average number of months for which households had adequate food for all of their members in the last year was very low, at just under three. With respect to dietary quality, the average dietary diversity score was 3.5 out of seven food groups, indicating that the majority of households have a low quality diet. A number of coping strategies in response to food insecurity were being used by over half of households, including limiting portion sizes at meal times and reducing the number of meals eaten. Over 15 percent of households reported going entire days without eating more than 2 times per week. Food insecurity is clearly very high in CARE's operational area.

Health Security

Health security is measured using indicators of illness, sanitation of water sources and toilet facilities, and household possession of soap. Examination of all of these indicators shows that health security is also quite low in the area. The health security index values suggest that health security is considerably higher in urban than in rural districts. Again, key contributing factors likely include greater access to infrastructure in urban areas (both sanitation and water facilities). It may also be that urban households have greater access to health education messages designed to prevent illness and greater access to soap and other hygiene supplies in local markets.

Education Security

Education security is measured using indicators of both adult and children's educational attainment and of school-aged children's access to education. The education gap of school-aged children is negative on average, which means that the average child is not achieving the level of education that she or he is supposed to. The indicator of access to education of school-age children shows it to be quite low. In fact only approximately 28 percent of children regularly attend school every day.

Income Security

Household ownership of various types of assets is used to assess income security, including consumption assets and productive assets. The consumption asset information portrays a population in deep poverty. Ownership of productive assets is also quite low. There is wide variation across the districts in the percent of households owning each asset as well as in the value of livestock owned.

Changes in Livelihood Security between 2007 and 2009

The livelihood security index calculated for the program population declined by 25 percent between 2007 and 2009. Very little change was found in health security, education security and income security over the two-year period. These results indicate that the large deterioration in livelihood security of households in CARE's operational area is a result of a substantial erosion of household food security, and that it is in the area of food security that households have felt the impact of Zimbabwe's current crisis the most.

Impact of CARE's Interventions

CARE's current portfolio of activities includes 21 different kinds of interventions. From 2005 to 2009 the percent of households participating in almost all types of interventions has steadily increased.

Analysis of the 2009 HLSA data shows that the greater the number of CARE interventions a household participates in, the greater is the number of months the household has sufficient access to food *and* the better is the quality of its diet. These results suggest that CARE's interventions are having a positive influence on household food security, both in terms of the quantity of food households have access to as well as the quality of that food. In addition, the data show that the more CARE interventions a household participates in, the more health secure, education secure, income secure and livelihood secure it is.

With respect to specific types of interventions, participation in at least one of the ANR interventions appears to lead to a strongly statistically significant improvement in households' livelihood security. This is brought about by improvements in all component security areas: food security, health security, education security and income security. Thus, we can conclude that by having wide-ranging impacts on households--across key areas in which poor households typically face sharp resource trade offs--CARE's ANR interventions have helped those households participating in them become more livelihood secure.

With regards to CARE's SEAD interventions, which consist of the development and support of savings and lending groups, again we see that they have a wide reach in terms of improving households' livelihoods.

In contrast to ANR and SEAD interventions, TFA interventions are focused mainly on addressing current acute needs rather than long standing underlying vulnerabilities. This focus is reflected in the impact results for TFA interventions: a positive impact only shows up for food security and not livelihood security itself or the other security areas.

Given the method of data collection, it was not possible to fully determine whether household participation in multiple types of interventions has any additional benefit. The data do show, however, that participation in both ANR and TFA interventions yields added benefits to health security. Additionally, combining ANR and SEAD interventions yields added benefits to food security.

When considered individually, participation of households in the three types of interventions making up the triad of CARE's program components—food security, livelihoods promotion and social protection—each leads to improvements in households' food security and livelihood security. Only interventions falling within CARE's livelihoods promotion component lead to improvements in all of the security areas. This result is in line with the aim of CARE's livelihoods promotion interventions: to address underlying vulnerabilities that affect all of the security areas. It is not possible to draw any strong conclusions regarding participation in interventions falling into multiple program components with the exception of instances in which social protection and livelihood promotion interventions are combined. In this case, there are added benefits to health security.

To summarize the results, CARE's activities are without doubt helping households in its operational area to improve their livelihoods by having wide-ranging impacts on households across key areas in which poor households typically face sharp resource trade offs. Further, the more involved households are in CARE's activities--the greater the number of interventions they participate in--the more they benefit.

Conclusions and Recommendations

Analysis of 2009 HLSA data clearly show that CARE programs have had a direct and beneficial impact on targeted households, particularly for those that participate in multiple interventions. This finding underscores the need for CARE to continue to promote integrated programming and participation of beneficiary households in multiple interventions spanning across its intervention types (ANR, SEAD and TFA). Both ANR and SEAD interventions seem to have wide-ranging impacts on households, addressing vulnerabilities in many areas. Accordingly, these types of interventions should be expanded to those areas that have yet to participate in them. CARE should continue to meet current acute food needs through its TFA interventions, especially in light of the fact that it is in the area of food security that households have felt the negative impact of the current crisis the most.

Based on the analysis, the following recommendations in the areas of food security, health security, education security, income security and program monitoring and evaluation are proposed.

Food security

- In light of declining food availability, the increase in crop yields brought about by conservation farming techniques is promising. Accordingly, CARE should seek ways of expanding CF activities among participating households. Uptake of CF techniques for maize production is relatively low in Mberengwa and Mwenezi districts suggesting they might be possible areas for expanded CF interventions.

- Lack of seed (especially for maize and groundnuts), lack of draught power, and lack of money to purchase inputs were each commonly cited by households as a reason for not cultivating available land. CARE should design and target interventions to address each of these specific constraints.
- More than three quarters of households rely on home gardens or community gardens as the most important source of vegetables. In order to support adequate nutrition, CARE should seek ways of improving access to seed and water for vegetable gardening.

Health security

- Per capita water collection among the survey is below internationally recognized standards for maintaining adequate health and hygiene. CARE can address the need for greater access to potable water by supporting construction and rehabilitation of protected water sources.
- Nearly two-thirds of households surveyed do not have access to a latrine. Given recent outbreaks of cholera and the threat of other water-borne diseases, CARE can help to improve the health of beneficiary households by providing materials and training for construction of sanitary toilet facilities.
- Data show that community members are among the primary sources of support for chronically ill. Accordingly, CARE should continue to strengthen the capacity of home-based care volunteers to support HIV-positive individuals through proper nutrition and treatment of symptoms.
- Given that fewer respondents reported knowledge and/or practice of preventative measures for avoidance of HIV transmission than in 2007, CARE should seek way of strengthening HIV awareness campaigns.

Education Security

- In light of a significant increase in the percentage of households caring for orphans, and the inability of households to meet educational expenses, CARE should increase provision of block grants to schools for fee-waivers for orphans and vulnerable children
- According to 2009 HLSA data, only 12 percent of 17 year olds are currently engaged in or have the skills to pursue their self-selected trade. CARE should expand vocational skills training to out-of-school youth in support of their longer-term livelihood security.

Access to income

- In the wake of rising unemployment and hyper-inflation, informal trade/self-employment has become an increasingly important source of cash income for vulnerable households. CARE could support these families by expanding support for seeds and other inputs for home and community gardens, improving access to markets, and providing training in micro-enterprise skills.
- Within the faltering Zimbabwean economy, less than 4 percent of households currently have access to credit through informal moneylenders, saving groups, or micro-finance

organizations. CARE could help meet the demand for credit among beneficiary households by offering targeted support for community-based savings and loan schemes.

- In order to meet household expenses (especially food and education) a significant percentage of households have chosen to sell productive assets, including livestock. CARE can strengthen a critical safety net for vulnerable households by helping them acquire and care for livestock.

Program Monitoring and Evaluation

- CARE should adhere to the sampling strategy developed specifically for the HLSA survey by technical consultants and agreed upon prior to data collection. Deviation from this sampling strategy caused some confusion and led to delay in the data analysis process.
- If CARE is planning to repeat the HLSA in subsequent years, it should design a longitudinal study to track the livelihood trajectory over time. This would increase the efficiency of data collection in that it would involve a smaller sample of households. Repeating cross-section surveys (as opposed to longitudinal survey) limits CARE's ability to perform an in-depth analysis of changes in livelihood security over time.
- Given the distinct livelihood contexts of urban and rural areas, it is recommended that CARE design HLSA surveys in a way that allows results to be disaggregated between urban and rural areas.

1. Introduction

1.1 Background

Extreme hyperinflation, failed land reform and economic policies, erratic rainfall and drought, and one of the highest incidences of HIV and AIDS in the world,¹ have created a protracted humanitarian crisis in Zimbabwe. Food insecurity and poverty are both chronic and severe, with vulnerabilities ever increasing, especially among the poorest and among mobile and migrant populations. The country experienced significant economic instability, with a devalued currency, a 40% drop in GDP over the past ten years,² and an annual inflation rate that by November 2008 was the highest in the world, at 89.7 sextillion (10²¹) percent.³

The population has felt these effects in terms of drastically reduced government services, price inflation rendering food, medicines and basic goods less affordable, limited credit, and high unemployment. The value of wage income has deteriorated, compelling many to leave their occupations for the informal sector or to migrate. In 2008, over 80% of the population was estimated to be living below the poverty line – more than twice as many as in the mid-1990s.⁴ At the start of 2009, unemployment in Zimbabwe was estimated to be above 80 percent. These rapid, country-wide changes have undoubtedly eroded the livelihood security of a large proportion of Zimbabwe's population.

Early in this decade, Zimbabwe was frequently referred to as the breadbasket of southern Africa, producing abundant quantities of maize and other staples for export. The year 2000 marked the beginning of often-violent land seizures which contributed to the inability of the agricultural sector to produce enough food for the country's population. Zimbabwe has become a net importer of food, but due to foreign exchange shortages is thus far unable to import sufficient foodstocks to satisfy domestic requirements.⁵ Exacerbating these deficiencies, the 2006/07 agricultural season was plagued by drought, lack of irrigation, and shortages of seeds, inputs, spare parts and fuel. Combined, these problems caused an extremely poor harvest which provided only 45 percent of the country's cereal needs. In addition, government-imposed price controls restrained production and marketing of vital food items like maize meal.⁶ By the first quarter of 2008, an estimated 4.1 million people faced food insecurity,⁷ and the 2008 harvest was a record low.⁸ Good rainfall in 2009 led to a projected increase of 130 percent for maize production, but expectations for the winter season wheat production are dire.

¹ http://www.usaid.gov/our_work/global_health/aids/Countries/africa/zimbabwe_profile.pdf

² Ibid.

³ <http://www.cato.org/zimbabwe>

⁴ Coltart, David. 2008. A decade of suffering in Zimbabwe: Economic collapse and political repression under Robert Mugabe.

CATO Institute. <http://www.cato.org/pubs/dpa/dpa5.pdf>

⁵ <http://ochaonline.un.org/humanitarianappeal/webpage.asp?Page=1634>

⁶ <http://www.fews.net/docs/Publications/1001436.pdf>

⁷ <http://ochaonline.un.org/humanitarianappeal/webpage.asp?Page=1634>

⁸ UN Office for the Coordination of Humanitarian Affairs (OCHA), 29th January 2009.

The economic and political crisis and subsequent deepened poverty and food insecurity have had negative consequences for the health of the Zimbabwean population, exacerbating existing vulnerabilities. The effect of hyperinflation on medical sector salaries and the lack of supplies and equipment have been catastrophic to the health care system, severely limiting both availability of and access to health care. Drought, lack of access to clean water, and lack of functioning sanitation infrastructure have also sorely affected health security. These circumstances are particularly damaging in a country already suffering from an HIV and AIDS pandemic. In 2007, there were approximately 140,000 deaths due to AIDS in the country, and about one million living orphans.⁹ ¹⁰ Approximately 1.3 million people in Zimbabwe were estimated to be living with HIV in 2008, and the HIV prevalence rate among adults age 15-49 was about 15%.¹¹ It is estimated that the combined effects of HIV and AIDS, poverty and malnutrition cause nearly 3,500 Zimbabweans to die every week.¹²

Zimbabwe's education system is also in a precarious state. In a country that once had the highest literacy rate (97%) in southern Africa,¹³ school dropout rates have risen dramatically and a large portion of the population now lacks access to education. Following political violence estimated to have displaced over 10,000 children, thousands of children did not return to school at the start of classes in April 2008.¹⁴ UNICEF data indicate that by early 2009, school attendance had plunged from 80 to 20 percent.¹⁵ The decrease in school attendance is attributable to the population's increased displacement and mobility, parents' removing their children from school to help produce food or generate income, the inability to pay school fees, and teacher shortages.¹⁶

In the context of the grand scale of challenges facing Zimbabwe and limited internal resources with which to address them, significant international assistance has been provided to the country. In June 2008, Zimbabwe's government banned all humanitarian aid groups from providing all support to the impoverished nation. The ban, which took place just prior to the second round of presidential voting, cited anti-government bias among NGOs as the motivation for the decree. Organizations prohibited from carrying out their operations included CARE International, Save the Children, and ADRA, among others. It is estimated that over two million people were deprived of food aid and other basic assistance. The prohibition was relaxed somewhat shortly

⁹ Orphans are defined as children under age 17 who have lost their mother or father or both parents to AIDS.

¹⁰ Ibid.

¹¹ WHO/UNAIDS/UNICEF. October 2008. Epidemiological Fact Sheet on HIV and AIDS. Zimbabwe 2008 Update.

http://apps.who.int/globalatlas/predefinedReports/EFS2008/full/EFS2008_ZW.pdf

¹² Coltart, David. 24 March 2008. A Decade of Suffering in Zimbabwe. CATO Institute. <http://www.cato.org/pubs/dpa/dpa5.pdf>

¹³ Zimbabwe Ministry of Education, Sport and Culture. Report on the Development and State of the Art of Adult Learning and Education in Zimbabwe, 1997-2007. http://www.unesco.org/fileadmin/MULTIMEDIA/INSTITUTES/UII/confintea/pdf/National_Reports/Africa/Africa/Zimbabwe.pdf

¹⁴ UNICEF. 28 May 2008. Violence in Zimbabwe affecting children and relief effort.

http://www.unicef.org/infobycountry/media_44183.html

¹⁵ UNICEF. 10 February 2009. Zimbabwe education crisis worsens. http://www.unicef.org/media/media_47915.html

¹⁶ Ibid.

after its announcement, allowing aid to chronically ill people and to schoolchildren to continue amidst the ban.¹⁷ Three months later, President Mugabe lifted the ban, following considerable international pressure.

1.2 CARE in Zimbabwe

CARE began working in Zimbabwe in 1992 in response to Southern Africa's severe regional drought. After establishing a drought mitigation program, it began longer-term development programs that address the underlying causes of livelihood insecurity. It now provides food aid, agricultural inputs and other resources and services to communal populations across 10 districts in Masvingo and Midlands provinces located in the central and southern areas of the country.

CARE trains farmers in conservation agriculture techniques, promotes cultivation of more drought tolerant small grains and tuber crops, and promotes sustainable harvesting and use of forest products. Water and sanitation projects include rehabilitation of small dams for irrigating gardens and watering livestock, repair of boreholes installation of hand-pumps, and construction of latrines. To help households generate income to combat inflation, CARE revived and expanded the asset based savings methodology, training women's groups in internal savings and lending. Further, CARE provides community home based care to the chronically ill. HIV and AIDS and gender are mainstreamed across activities.

CARE has an integrated programming approach made up of three key components: food security, livelihoods promotion and social protection. Its interventions are aimed at protecting and promoting sustainable livelihoods, ensuring food security, creating and building on existing social safety nets, and consolidating disaster prevention. This combination of activities addresses current acute needs while also addressing underlying vulnerabilities. It is intended to boost people's productive capacities and assets so that they are better placed to mitigate shocks, cope with them when they occur, and recover from them as quickly as possible.

The types of interventions carried out by CARE under each of the three program components are as follows.

Food Security: Food security interventions increase vulnerable household access to nutritious food throughout the year. Key interventions include:

- Providing targeted food aid to poor urban and rural households
- Providing hot meals for school children
- Providing food for assets/livelihoods
- Expanding food production, diversifying crops in community and homestead gardens (maize, small grains, vegetables, roots and tubers, non-timber forest products, and small livestock)
- Promoting conservation farming and drought-tolerant crop varieties

¹⁷ <http://www.humanitarianchronicle.com/2008/08/zimbabwe-ban-on-ngos-lifted/>

- Promoting adoption of healthy nutrition practices, especially by chronically ill people.

Livelihoods Promotion: This program component focuses on capacity building of community-based groups managing community systems, as well as facilitating linkages to markets and increasing income generating activities. Key interventions include:

- Installing/rehabilitating community gardens
- Establishing and/or rehabilitating water points and sanitation systems
- Supporting community committees managing water and sanitation systems
- Establishing/strengthening linkages to markets
- Promoting adoption of good hygiene practices
- Extending income generating activities among mobile vulnerable populations
- Promoting formation and capacity building of savings and lending groups
- Supporting community-based groups processing and marketing cash crops, small livestock.

Social Protection: The social protection component of CARE's programs reduces people's long-term vulnerability and addresses short to medium-term food and livelihood needs as well as specific vulnerabilities that expose people to risk (e.g. age, HIV status, or unemployment). CARE's social protection program targets the most vulnerable based on need, using established and verified criteria, and provides long-term and predictable support. Key interventions include:

- Distributing food aid and agricultural inputs
- Providing block grants to schools for fee-waivers for orphans and vulnerable children
- Enhancing home-based care for the chronically ill
- Promoting and supporting quality facility-based healthcare
- Creating social funds through internal savings and lending.

1.3 CARE's Household Livelihood Security Assessments (HLSAs)

CARE's annual HLSAs are designed to capture information at the household level regarding key household livelihood and food security indicators. Its design is based on the Household Livelihood Security framework. Over the past five years the survey has been used to provide CARE with an updated picture of the household and community situations in the districts in which it operates, to highlight needs, and to generate new programmatic ideas. Due to the government's 2008 ban on NGO activities in the country, CARE operations ceased in April of that year and were officially suspended from May to September. By the time NGOs were permitted to operate again, seasonal factors prevented CARE from conducting a large-scale

HLSA in 2008.¹⁸ Thus the current 2009 HSLA on which this report is based comes two years after the previous one, undertaken in 2007. Given the rapid changes that have occurred since then, it is particularly important that CARE get an updated picture of the status of households in its operational area and how its interventions have impacted them.

1.4 Objectives of this report

This report is based on survey data collected in April 2009 as well as two previous HLSAs, conducted in 2006 and 2007. The surveys covered CARE's entire operational area located within Masvingo and Midlands provinces.

The main objectives of the report are to analyze the HLSA data to provide insight into:

- The current livelihood security status of households;
- How households' livelihood security status has changed over time;
- The impact of CARE's interventions on households, including the impact of
 - different types of interventions, in particular Agricultural and Natural Resources (ANR), Small Economic Activity Development (SEAD), and Targeted Food Assistance (TFA) interventions;
 - interventions falling under CARE's three program components, that is, food security, livelihoods promotion and social protection;
 - household participation in multiple intervention types (e.g., both ANR and TFA); and
 - household participation in interventions that fall within overlapping (multiple) program components.

The report is organized as follows. First the methodology is described, including that used for data collection and data analysis. Following, an analysis of the current livelihood security status of households and its recent evolution is presented. Next the impact of CARE's interventions is evaluated. The final section presents recommendations for future surveys and CARE's programming.

2. Methodology

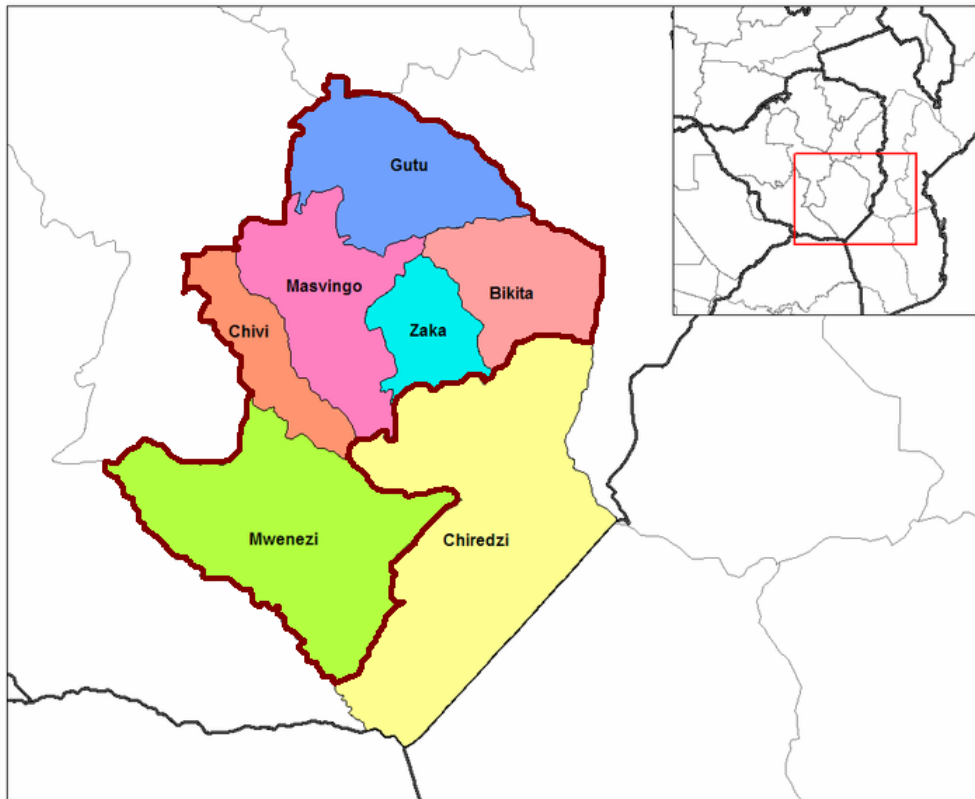
Data collection

The 2009 Household Livelihood Security (HLS) survey covered CARE's entire operational area, which is contained within Masvingo and Midlands provinces (see Figures 1 and 2). Sampling took place using a stratified random design. The area was first stratified into CARE's 213 operational wards, which are contained within 11 larger geographic areas (listed in Table 1).

¹⁸ As an alternative, CARE conducted a rapid vulnerability assessment in October 2008 (see TANGO International. December 2008. Zimbabwe Rapid Vulnerability Assessment.)

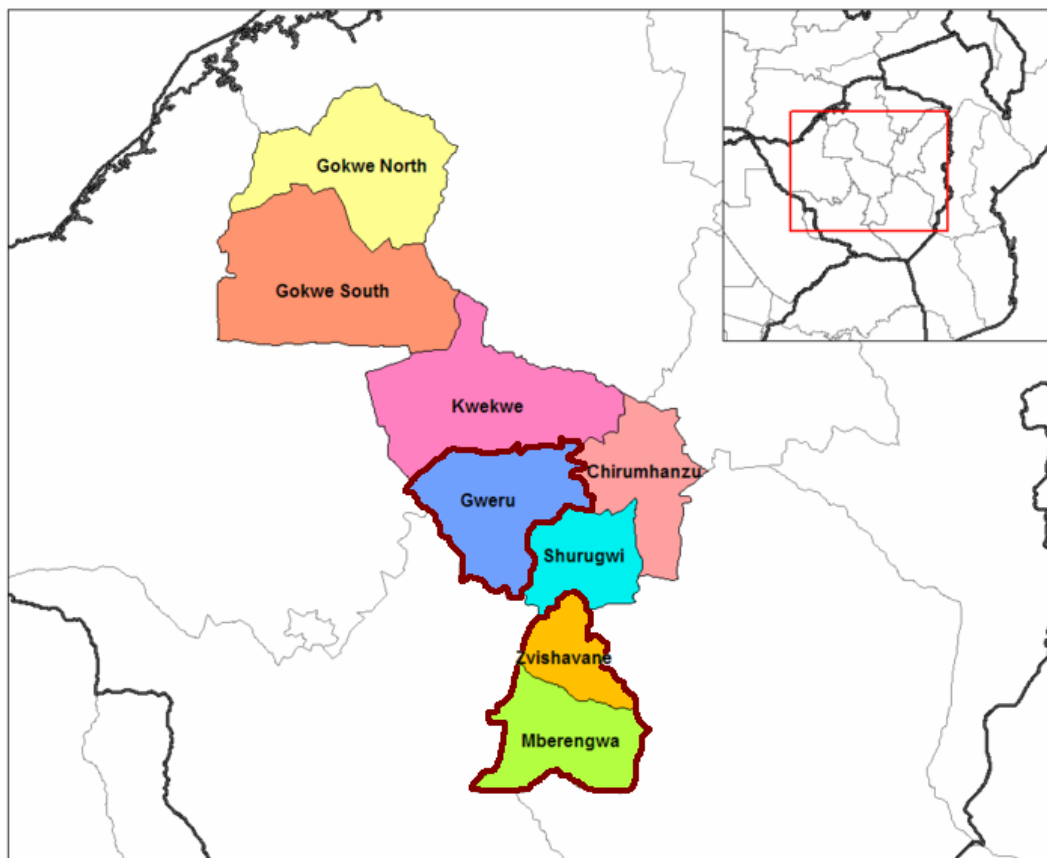
The geographic areas are made up of 10 districts, two of which are divided into urban and rural areas. The 11 areas will be referred to in the report as “districts”.

Figure 1. Districts within Masvingo Province



http://en.wikipedia.org/wiki/File:Masvingo_districts.png

Figure 2. Districts within Midlands Province



http://en.wikipedia.org/wiki/File:Midlands_districts.png

Sampling from the rural and urban wards took place differently. In rural wards, two-stage random sampling was employed whereby two villages were first selected at random, followed by 30 households within each chosen ward. In urban areas, 30 households were randomly selected in each ward. The number of wards and households sampled in each district are given in Table 1. A total of 6,393 households were included in the survey. The sample size was chosen based on the standard sample size formula (with a 95 percent level of significance and 90 percent power) that was applied to previous HLS surveys undertaken in Zimbabwe.¹⁹

¹⁹ See CARE, Zimbabwe, 2007. "Summary of findings from CARE's 2007 Household Livelihood Security Assessment". Harare, Zimbabwe.

Table 1. Districts, wards and households included in the 2009 HLS sample

District/Area	Number of CARE operational wards	Number of households sampled	Sampling weight
Chivi	19	570	0.969
Bikita	24	720	1.067
Masvingo Rural	22	660	1.049
Mberengwa	32	960	0.945
Mwenezi	13	390	1.008
Zaka	34	1,021	1.077
Gutu	32	961	1.069
Gweru Rural	10	301	0.410
Zvishavane	19	570	0.761
Gweru Urban	4	120	1.600
Masvingo Urban	4	120	1.690
Total	213	6,393	

When simple random sampling is employed for choosing survey households, each household in the population has the same chance of being selected, and each sample household represents the same number of households in the population.²⁰ For instance, each sample household may represent 1,000 households in the population. However, when a complex sampling design is used, as was done for the 2009 HLS survey, households residing in each stratum represent a different number of households in the population. Calculations using the data (for example of the mean value of a variable) will not represent the population unless the data are weighted appropriately. Given the available information, it was not possible to weight the data at the ward level (the strata level). Weights could be applied at the district level, however.²¹ They are reported in the last column of Table 1. Note that households were substantially undersampled in the urban areas; they were substantially oversampled in Gweru (rural) and Zvishavane. These differences are accounted for by applying the weights to the data prior to all sample-level calculations.

Data analysis

Throughout the report descriptive analysis is undertaken in which summary statistics of variables (e.g., mean, percentage) are compared across districts and over time. Inter-temporal comparisons are undertaken for the three years in which HLS surveys have been conducted: 2006, 2007 and 2009. To do so, summary statistics from the 2006 HLS survey are taken directly from the survey report. Because the questionnaire differs greatly from the 2009 questionnaire, it was possible to do this only for a few variables. The 2007 and 2009 questionnaires are largely

²⁰ Another method that ensures that each household represents the same number of households in the population is household selection based on “probability proportional to size (PPS)” sampling.

²¹ The weights were calculated by comparing the relative proportion of the population in each district to the relative proportion of the sample in each district.

the same, allowing comparison of many more variables. To ensure comparability across the years, the 2007 data were re-analyzed using the same calculation methods and applying the same sampling weights at the district level. Further, one district that was included in the 2007 survey but not the 2009 survey, Chirumanzu, was dropped from the analysis. Where appropriate, t-tests were used to test for the statistical significance of differences in means and proportions across groups of households.

In order to evaluate the impact of CARE's interventions, focus is placed on the impact on measureable outcomes representing the well-being of households that are key CARE objectives: food security and livelihood security. To deepen understanding of the impact on livelihood security, three other livelihood components are examined as well. These are health security, education security and income security. To measure these outcomes, relevant variables calculated from the data were compiled into indexes using factor analysis. The details of how the indexes were constructed are given in Section 3.2. Both descriptive and regression analysis are used to assess the impact of CARE's interventions, as described in Section 4.2. All analysis is undertaken using SPSS Version 15.0 and Microsoft Office Excel.

3. Current household livelihood security situation and its recent evolution

In this section the current livelihood security status of households in CARE's operational area, as well as how it has changed between 2007 and 2009, is looked at. The context in which households live and manage resources—including their living environment, livelihood strategies, assets, and social support—has a fundamental influence on their livelihood security. This context is first described in section 3.1, followed by an analysis of livelihood security outcomes in section 3.2.

3.1 Livelihood Context

3.1.1 Household characteristics

Table 2 presents data on the demographic characteristics of sampled households, showing how they have changed in recent years. It demonstrates that while households had, on average, six members in all survey years, household size decreased slightly between 2006 and 2009. Meanwhile, the average age of household members decreased slightly from 2007 to 2009 and, subsequently, the percentage of household members under 15 years of age increased over the same period.

Table 2. Household demographic characteristics, by survey year

	2006	2007	2009
General			
Household size (mean)	6.3	6.0	5.7
Age of household members (mean)	--	23.0	22.4
Percent of members less than 15 years	--	42.5	44.4
Dependency ratio of population	--	91.6	97.3
Percent of children (0-17) who are orphans a/			
Both parents alive (percent)	86	62.9	59.8
Father dead, mother alive	--	19.5	20.6
Mother dead, father alive	--	4.4	4.7
Both parents dead	--	13.2	15.0
Percent of households caring for an orphan a/	50.0	46.2	47.4
Characteristics of household heads			
Percent of households headed by a female	38.0	46.1	48.9
Percent of household heads widowed			
Female	--	53.5	50.0
Male	--	5.6	7.7
Mean age of household heads	60.0		
Female	--	49.1	48.5
Male	--	48.9	47.4
Education of adults			
No formal education (percent)	--	10.3	8.5
Some primary education	--	37.6	30.9
Some secondary education	--	51.5	58.5
Tertiary education	--	0.6	2.1

a/ An orphan is defined here as a child for whom either one or two parents have died.

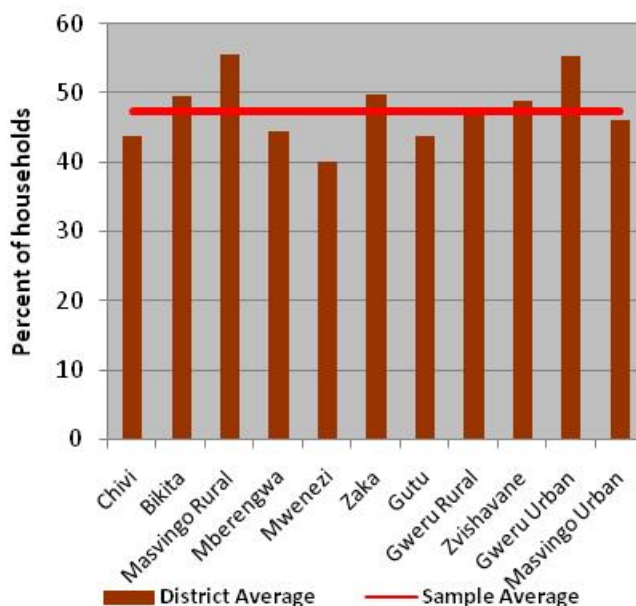
Consistent with these changes in the age structure of households, the dependency ratio has increased in the last two years (from 91.6 to 97.3).²² This suggests that on average, households support a larger number of individuals who are generally not as productive as adult workers or are otherwise unable to contribute to household livelihood security. The increase in the dependency ratio is likely due in part to a dramatic increase in the percentage of children who are orphans, which has jumped from 14 percent in 2006, to 37 percent in 2007 and 40 percent in 2009.²³ Note that the data show that among children under 18 years of age, death of the father is much more common than that of the mother. This finding is consistent with data on the gender breakdown of widowed household heads (discussed below).

²² Dependency ratio = (# of members age 0-14 + # of members 65 and over / # of members age 15-64). A dependency ratio of more than 1 means each household member of working age supports more than one person that is not of working age. High dependency ratios have a direct and negative impact on household livelihood security.

²³ The 14 percent for 2006 is comparable to, but still much lower than, the percents reported in the 2005-06 Demographic and Health Survey report of 20.8 for Midlands province and 17.3 for Masvingo.

Despite the large increases in the percent of children who are orphans, the percent of households caring for an orphan as remained fairly stable over the three survey years. Just under 50 percent of households were caring for an orphan in 2009. Figure 3 shows how the percent of households caring for an orphan varies across the districts. It is highest in Gweru Urban district (55.8 percent) and lowest in Mwenezi district (40.0 percent).

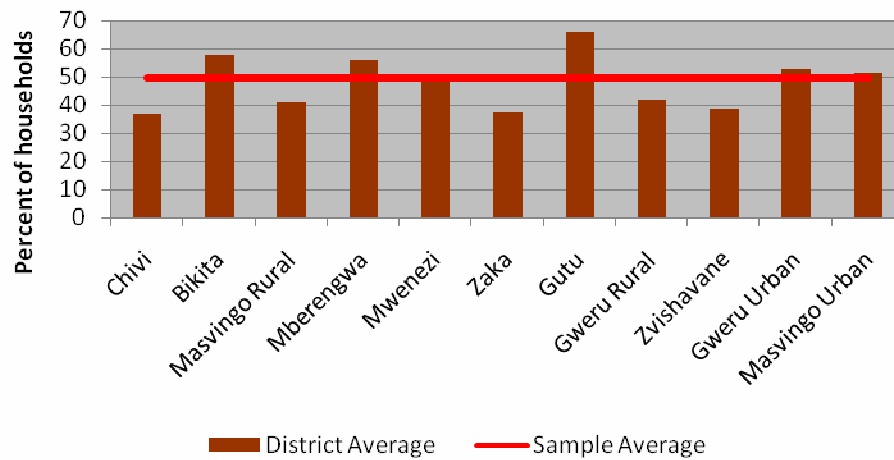
Figure 3. Percentage of households caring for an orphan (2009), by district



2009 HLS data show an increase in the percentage of sample households headed by females (from 46.1 percent in 2007 to 48.9 percent in 2009, Table 2). This finding is especially significant given the relatively high level of vulnerability among female-headed households given women's limited access to employment, land and other productive assets relative to men.²⁴ Notably, the percent of female household heads that are widowed, at 50 percent in 2009, is far higher than that of male household heads (8 percent). On average female household heads tend to be slightly older than their male counterparts. Figure 4 shows that among the districts included in the sample, female-headed households were most common in Gutu and Bikita districts and lowest in Chivi and Zaka districts.

²⁴ TANGO. (2008). CARE-Zimbabwe Rapid Vulnerability Assessment. December 2008

Figure 4. Percentage of female household heads, by district



Findings were mixed regarding educational attainment by adult household members (see bottom section of Table 2). The percentage of adult members who reportedly have no formal education has decreased slightly since 2007, and the percentage of adults who have some primary education also declined over the same period. Nevertheless, more than half (58.5 percent) of all adults in the sample reportedly have some secondary education as of 2009, and the rate has increased by nearly 15 percent over the two years. While the percentage of adults with tertiary education has also increased, this group continues to represent a minimal percentage of the adult population (2.1 percent).

Serious constraints to school access – in the form of political violence, forced relocation of families, continued economic deterioration, and abandonment of schools – has compromised what was once one of the best educational systems in Africa.²⁵ With regard to the access to education of the current generation of school-aged children, as shown in Table 3 only a quarter of sample households (in 2009) report that their children attend school every day while over 40 percent claim that children attend school only “some days”. The percent that attend everyday has declined substantially since 2007; this is offset by a large increase in those that attend school only some days. Thus, even though the percentage of children that are not enrolled at all has declined slightly, a larger percentage of those attending do not do so full time.

²⁵ <http://ochaonline.un.org/HUMANITARIANAPPEAL/webpage.asp?Page=1634>

Table 3. Access to education, by year

	2007	2009
	(Percent of 3-24 year olds)	
School attendance		
Every day	34.5	24.3
Some days	25.0	40.2
Not enrolled	40.5	35.5
Reasons for not being enrolled a/		
Cannot pay	72.0	68.1
Child is working for food or money	0.8	2.6
Child is performing unpaid work for the		
.....household or caring for an ill person	0.7	2.5
Child is sick	2.7	1.8
Hunger prevents child from attending school	0.0	0.3
Refused	8.9	7.3
No birth certificate	1.2	2.5
Failed exams	13.8	14.9
Percent of children attending school who have access to a full set of supplies b/	19.7	15.4
Reasons for not having a full set of supplies		
Cannot afford	98.2	99.1
Other	1.8	0.9

a/ The reasons given do not include those who replied that the child had completed their exams or was too young to attend school

b/ A full set of supplies includes a full set of stationery and scholastic materials.

Among households with children not currently enrolled, the inability to pay school fees is the most commonly cited reason (68.1 percent). Meanwhile, just over 15 percent of children attending school at the time of the household survey reportedly have a full set of school supplies.²⁶ This percent has declined from near 20 percent in 2007. In all, the results give evidence that there has been a decline in access to education.

3.1.2 Livelihood strategies

Participation in agricultural production

Despite the enormous social, economic and environmental challenges to smallholder agriculture in Zimbabwe, the vast majority of sample households continue to pursue agricultural production and/or livestock rearing as part of their household livelihood strategy. Overall, 92 percent of all households in the 2009 sample engage in agricultural production and 80 percent engage in livestock rearing. Data in Table 4 show that while the percentages of all households engaged in agricultural production and livestock rearing have both decreased slightly over the past two years, the decline in the percentage of

²⁶ Stationery and scholastic materials (text books).

households engaged in livestock rearing has been slightly greater. One noteworthy trend is the significant increase in both agricultural production and livestock rearing in both urban districts. Increases in both agricultural production and livestock rearing were particularly dramatic Gweru Urban district, from 13 to 59 percent in agricultural production and from 5 to 66 percent in livestock rearing.

Table 4. Participation in agricultural production and livestock rearing, by year and district

	Agricultural production		Livestock rearing	
	2007	2009	2007	2009
	(Percent of households)			
Chivi	98.7	98.4	93.6	85.4
Bikiti	99.5	98.9	91.3	79.1
Masvingo Rural	98.7	94.7	89.1	77.7
Mberengwa	98.5	98.9	94.2	93.7
Mwenezi	99.1	99.5	95.8	87.8
Zaka	99.1	97.4	91.8	81.1
Gutu	94.9	97.4	92.0	82.7
Gweru Rural	99.2	97.5	95.3	83.1
Zvishavane	98.8	97.1	93.0	81.7
Gweru Urban	12.9	59.3	4.9	66.0
Masvingo Urban	6.7	25.5	12.4	18.0
Total Sample	93.5	91.9	88.0	79.9

Figure 5 shows percentages of households engaged in agricultural production and livestock rearing in each of the districts surveyed. Not surprisingly, the two urban districts report significantly smaller percentages of households engaged in agricultural production. Among all districts, livestock rearing at the household level was found to be most common in Mberengwa district (93.7 percent) and least common in Masvingo Urban district (18.0 percent).

Figure 5. Percentage of household participation in agricultural production and livestock rearing (2009), by district

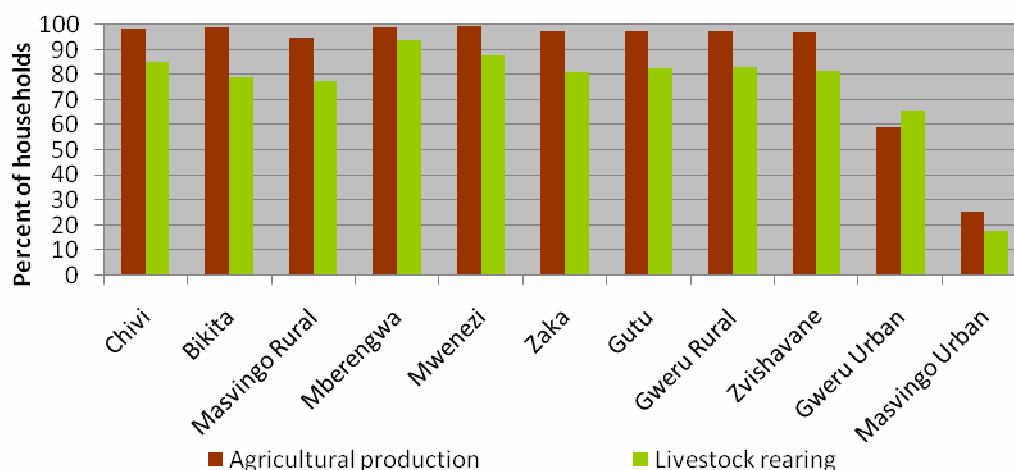
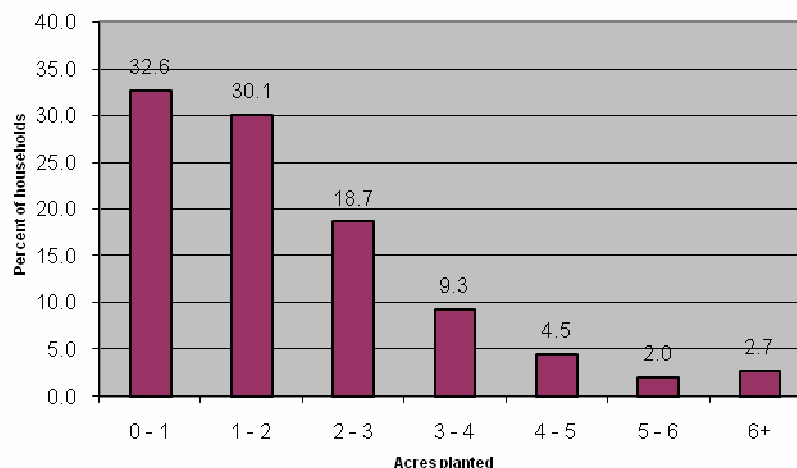


Figure 6 shows that among all households, the majority (62.7 percent) have cultivated less than two acres of land and nearly one third (32.6 percent) have cultivated an acre of land or less. Given household dependence on agriculture and livestock rearing, limited access to land poses serious constraints to livelihood security throughout the sample area. A very small minority of households (4.7 percent) has planted five acres of land or more.

Figure 6. Area of cultivable land planted, % of households



Sources of cash income

While the vast majority of sample households rely on agricultural production for at least part of their subsistence, Figure 7 confirms that most (81.4 percent) also earn cash income. Households earning cash income were found to be most common in Gutu district (95.3 percent) and least common in Gweru Rural district (40.4 percent). Table 5 shows that crop and livestock sales have been replaced by on-farm casual labor as the most common income generating activity. Over the three-year period from 2006-2009, there has been a drastic decrease in the percentage of households earning income from crop and livestock sales, from 89.1 percent in 2006 to 31.6 percent in 2009. While trading and self-employment increased between 2006 and 2007, the percentage earning income from these sources had declined below previous levels by 2009. The data show that the percentage of households receiving remittances has similarly declined between 2006 and 2009 (see bottom row of table).

Figure 7. Percent of households that earn cash income, by district

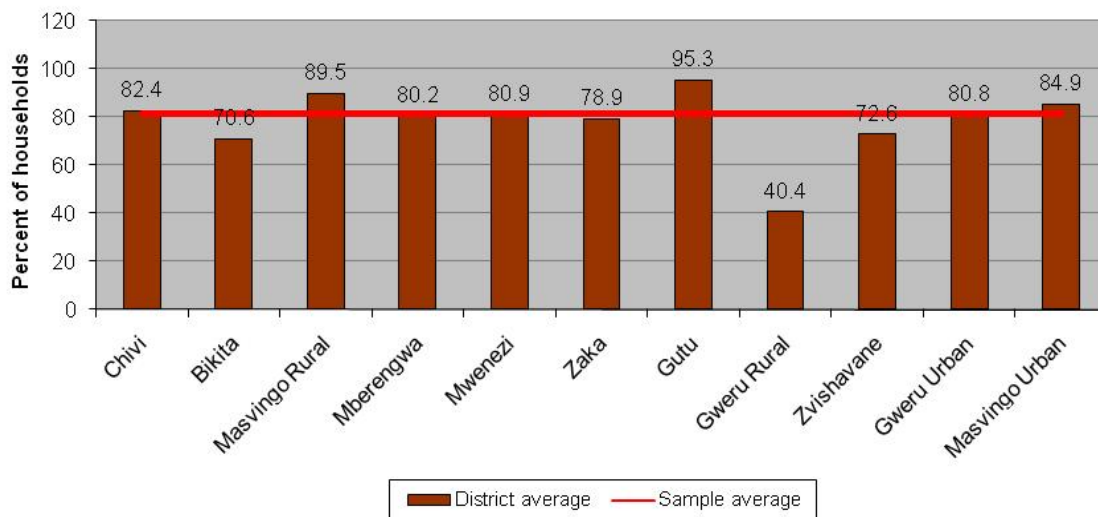


Table 5. Percentage of households engaged in various income generating activities, by year

	2006	2007	2009
Formal employment	9.2	7.7	8.5
Crop and livestock sales	89.1	33.4	31.6
Trading and self employment	29.9	39.8	25.0
On-farm casual labour	51.1	38.0	34.7
Off-farm casual labour	37.0	22.6	25.7
Other	26.4	3.5	7.5
Percent of households receiving remittances	29.3	23.3	25.4

In addition to identifying the range of income-generating activities, the survey also sought information on the *primary* source of income among sample households. Figure 8 shows that at the time of the 2009 survey, nearly half of all households (47 percent) were engaged in either on-farm casual labor or trading/self-employment as their primary source of income. Crop and livestock sales are the primary source of income for 18 percent of households. The survey found that a significant portion of sampled households (12 percent) rely on remittances as their primary source of income.

Figure 8. Primary source of cash income (2009)

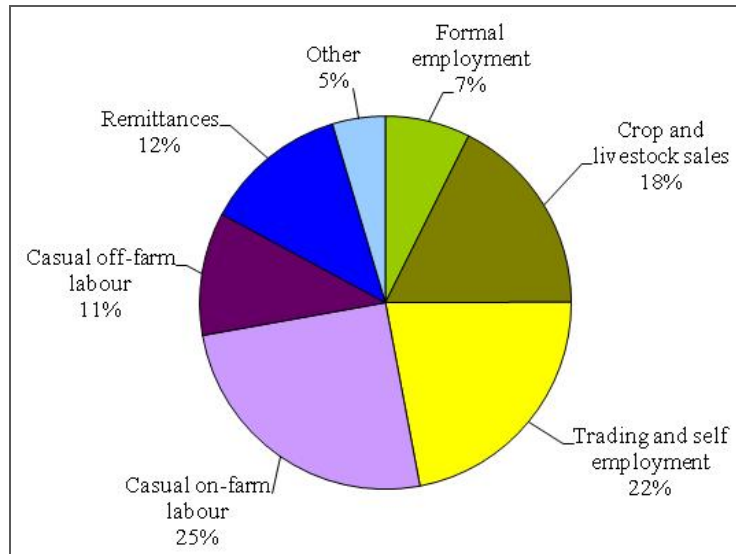


Table 6 provides data on a number of trading and self-employment activities practiced by sample households. Selling of fruit and vegetables is by far the most common type of trading or self-employment activity. The next most common trading and self-employment activities are building, basket and mat weaving, and buying and selling fuel and other goods, however these activities are still practiced by a very low percentage of households (under 11 percent). Together, these figures illustrate the dependence of many households on agricultural production and the scarcity of off-farm income generating opportunities in the districts surveyed. The 2009 survey also found that only 12.3 percent of 17 year olds are engaged in or have the skills to practice their self-selected trade, suggesting further constraints to earning cash income.

Table 6. Percentage of households engaged in various trading and self-employment activities (2009)

	2007	2009
Fruit and vegetable selling	63.2	59.4
Knitting	1.9	1.9
Garment making	0.7	0.8
Cross border trade	1.2	2.1
Crochet	0.7	1.1
Carpentry	1.9	2.0
Tailoring	1.7	1.6
Poultry	3.1	1.3
Basket and mat weaving	6.1	4.3
Stone sculpture and wood carving	1	1.5
Brick molding	2.7	0.7
Non-timber forest produce	1	1.3
Buying and selling (fuel, etc)	3.7	3.6
Building	--	10.5
Metal work	--	2.0
Other	15.8	0.7

Notes: Results reported only for the 25 percent of households engaged in any trading and self-employment activity.

Sources of food

In examining livelihood strategies in CARE's operational areas, the survey also collected information on the sources from which households obtain food. In Zimbabwe, cereals (maize, sorghum, etc.) make up a substantial portion of the typical household diet. Table 7 shows sources of cereals in each of the survey districts during the lean period (January – April) in 2009. Data show that relatively few households (10 percent) can rely on their own harvest as a source of cereals during the lean season. Acquiring cereals from the households' own harvest was most common in Mberengwa district (23.9 percent) and least common in Zaka district (3.8 percent).

Table 7. Sources of cereals during the lean period (January-April), by district

		Market purchases		Food aid				Other sources		
	From own harvest									
		Grain Marketing Board (GMB)	Local market	Free food aid	HBC	School feeding	Food for work	Maricho ²⁷	Borrowed	Gifts
(Percentage of households)										
Chivi	7.4	11.6	30.2	68.1	0.4	0.4	0.9	27.2	13.2	13.5
Bikita	5.4	0.7	13.8	69.7	0.1	2.8	0.8	42.9	39.3	43.3
Masvingo Rural	5.3	0.8	34.1	75.6	0.2	1.8	4.2	37.9	17.1	17.5
Mberengwa	23.9	4.8	19.1	91.5	0.2	10.5	0.5	33.1	19.0	9.9
Mwenezi	6.4	4.1	22.3	80.3	0.5	0.8	4.6	27.9	21.8	13.8
Zaka	3.8	1.4	15.6	89.2	1.0	1.2	0.3	39.2	28.6	37.9
Gutu	14.4	4.6	26.1	79.2	0.1	19.1	0.7	27.8	20.4	18.3
Gweru Rural	8.3	2.0	16.3	89.4	0.0	0.3	0.0	23.9	19.3	10.3
Zvishavane	11.9	4.0	26.5	82.6	0.4	1.1	2.1	16.1	10.0	10.2
Gweru Urban	7.5	2.5	70.0	66.7	0.0	0.0	0.0	8.3	68.3	33.3
Masvingo Urban	5.0	2.5	59.7	72.3	0.8	0.0	0.8	12.6	21.0	19.3
Total Sample	10.0	3.5	25.0	80.1	0.4	5.5	1.3	31.5	23.7	22.5

Note: Results are combined for the three most important sources.

²⁷In Zimbabwe, the term “maricho” refers to short-term piece work and/or casual labor.

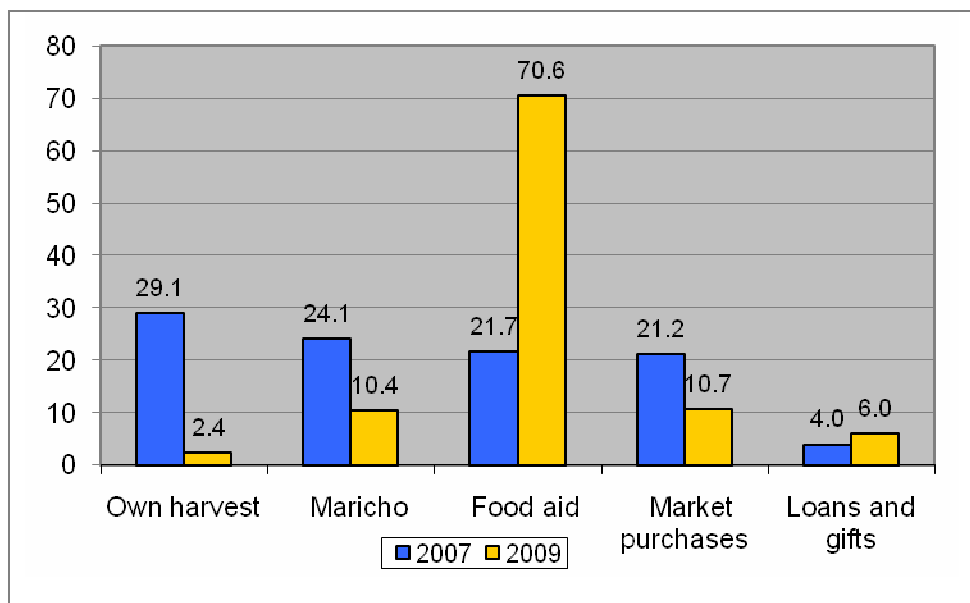
Interestingly, households in Chivi district were much more likely than households in any other district to make cereal purchases from the Grain Marketing Board (GMB). As expected, market purchases of cereal was found to be much more common in the urban areas of Gweru and Masvingo districts (70.0 percent and 59.7 percent, respectively). Among rural districts, market purchase of cereals was found to be most common in Masvingo Rural, Chivi and Zvishavane.

The data show a clear dependence on external food assistance given that over 80 percent of sampled households identified food aid as an important source of cereals during the lean season. Receipt of food aid was most common in Mberengwa district (91.5 percent of households) and least common in Gweru Urban district (66.7 percent).

Maricho (casual labour) is another important source of cereal during the lean season in each of the districts surveyed. It was most common in Bikita district (42.9 percent) and least common in Gweru Urban district (8.3 percent). Borrowed food and gifts are also important sources of cereal for surveyed households during the lean period (23.7 percent and 22.5 percent, respectively). In fact, over one third of all households in Bikita, Zaka, and Gweru Urban districts identified gifts as source of cereals for household consumption during the lean period.

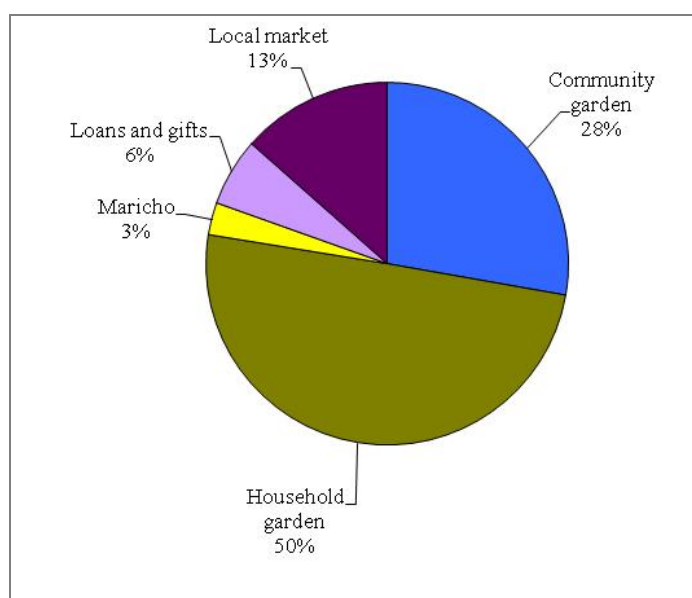
Turning to changes over time, Figure 9 shows a substantial change in reported *most important* source of cereal during the lean period from 2007 to 2009. Note that both surveys were conducted in April, at the end of the lean season. Own harvest, *maricho*, and market purchases were each considerably less common primary sources of cereal during the lean period in 2009 than they were in 2007. On the other hand there has been a dramatic increase in the percentage of households that identify food aid as the most important source of cereal during the lean period (from 21.7 percent in 2007 to 70.6 percent in 2009). While loans and gifts also became more common over the two-year period, they are the most important source of cereal for relatively few households.

Figure 9. Most important sources of cereals during the lean period, by survey year



Although the data are not available for 2007, in the 2009 survey respondents were asked about the most important sources of vegetables for household consumption during the lean period. Figure 10 shows that half of all households acquire vegetables from their own home garden during the lean season. Community gardens and local markets are also important sources (28 percent and 13 percent, respectively). Relatively few households reported acquiring vegetables via *maricho* or through loans and gifts.

Figure 10. Most important sources of vegetables during the lean period (2009)

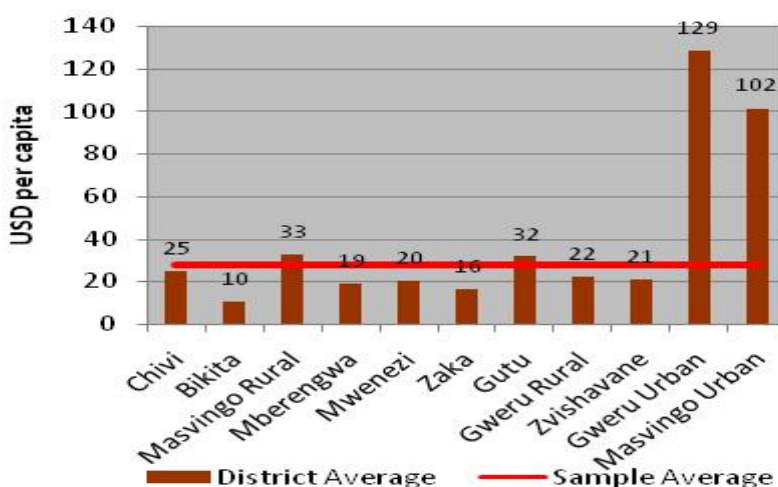


3.1.3 Cash income, expenditures and borrowing

The 2009 HLSA collected detailed information on household income, expenditures, and borrowing. Cash income is a vital component of livelihood security in that it allows households to purchase food when their own production is not sufficient and helps cover expenses for transportation, health care, education and other essential household items. In Zimbabwe, access to cash income has been repeatedly constrained by widespread crop failure resulting from drought, extremely limited off-farm employment opportunities, political instability, and hyperinflation within the Zimbabwean economy.²⁸

Figure 11 provides information on per capita income in the month prior to the 2009 survey by district. On average, per capita income throughout the survey area was just \$US 28 in the month preceding the survey. As expected, Gweru Urban and Masvingo Urban districts had by far the highest per capita cash income (\$US 129 and \$US 102, respectively). The lowest per capita income was found in Bikita and Zaka districts (\$US 10 and \$US 16, respectively).

Figure 11. Cash income received per capita in last month (2009), by district



Note: per capita income is presented in U.S. dollars

Despite the lack of reliable and/or adequate sources of cash income, households throughout the survey area continue to face a variety of expenses. Table 8 provides detail on the most common types of expenditures households face and how they have changed over time. The data show that for all survey years, food was a major expense for the great majority of households. The modest decline in the percentage of households who report

²⁸ By November 2008, Zimbabwe's annual inflation rate was the highest in the world at 89.7 sextillion (10^{21}) percent.
<http://www.cato.org/zimbabwe>

food as a major expense in 2009 may be due to a relatively good harvest and increasing dependence on food aid. The next most common ‘major’ expense among sampled households is education, followed by health care and travel (transportation). Interestingly, trends in these categories have been divergent, with the importance of education in households’ budgets increasing and that on health decreasing over the same period. Table 8 also shows a decline in the percentage of households reporting farm inputs as a major expense over the last two years.

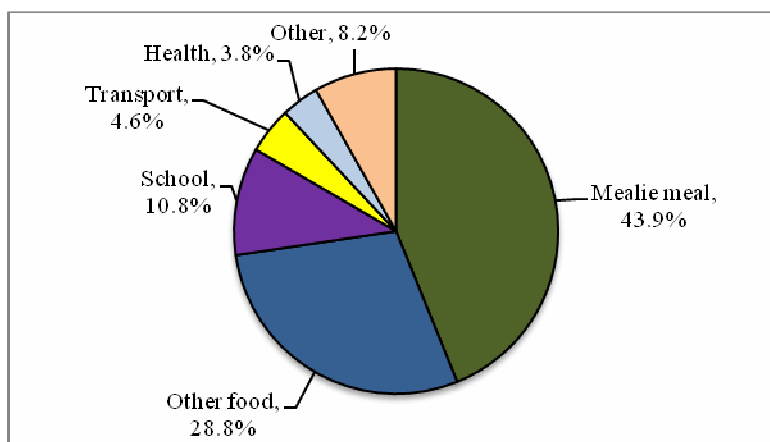
Table 8. Percentage of households reporting major expenditure categories^a, by year

Expenditure Category	2006	2007	2009
School	68.4	44.4	83.7
Food	93.2	94.4	79.5
Health	21.1	14.7	10.9
Transport	7.9	9.7	8.1
Funeral	3.9	6.9	3.6
Agricultural inputs	10.3	2.9	3.3

a Major expenditure categories: Identified by households as one of the three largest expenditure categories

Information collected from households on the estimated amount spent in different expenditure categories tends to confirm that presented in Table 8 above. Figure 12 shows that in the entire sample, nearly three quarters of household expenditures were for the purchase of ‘mealie meal’ (white corn meal) and other food. The next biggest expenditure category is schooling expenses, followed by health and transportation.

Figure 12. Percent of cash expenditures spent on various categories in last month (2009)



Other category includes: Utilities (2.3%), social expenditures (2.0%), loan repayment (1.8%), clothing (1.0%), and agricultural inputs (1.0%)

Borrowing of cash

The combination of limited income earning opportunities and recurring household expenses often leads to increasing levels of debt. When compared with data from previous years, HLSA 2009 data show a general *decline* in the percentage of households reporting recent borrowing. Table 9 shows that as of 2009, 42 percent of all households in the sample had borrowed money in the previous four months, compared to 52 percent in 2006 – both fairly high levels of household borrowing. The decline is most likely due to the fact that almost all households have been negatively affected by the country-wide economic crisis, leaving fewer with extra cash reserves that they are able to lend out. And it is other households--friends and relatives--that are by far the most common source of loans (see below).

Table 9. Percentage of households borrowing money in past four months, by district and survey year

District	2006	2007	2009
Chivi	53.9	44.6	40.2
Bikita	53.2	49.8	37.6
Masvingo Rural	46.2	54.8	49.8
Mberengwa	53.4	46.8	37.0
Mwenezi	45.6	50.0	40.8
Zaka	56.7	60.7	39.8
Gutu	56.3	54.2	47.3
Gweru Rural	39.1	43.1	28.6
Zvishavane	46.4	49.6	41.4
Gweru Urban		38.7	54.2
Masvingo Urban		66.7	47.1
Total Sample	51.6	50.8	42.1

Among all districts, recent borrowing was most common in Gweru Urban district (54.2 percent) and least common in Gweru Rural district (28.6 percent) in 2009 (see Figure 13). The relatively higher rate of borrowing among households in both urban districts is likely due to greater access to both formal and non-formal lenders. Gweru Urban district was the only district with an *increase* in the percentage of households reporting recent borrowing (an increase of 15.5 percentage points from 2007 to 2009).

Figure 13. Percent of households borrowing money in past four months (2009), by district

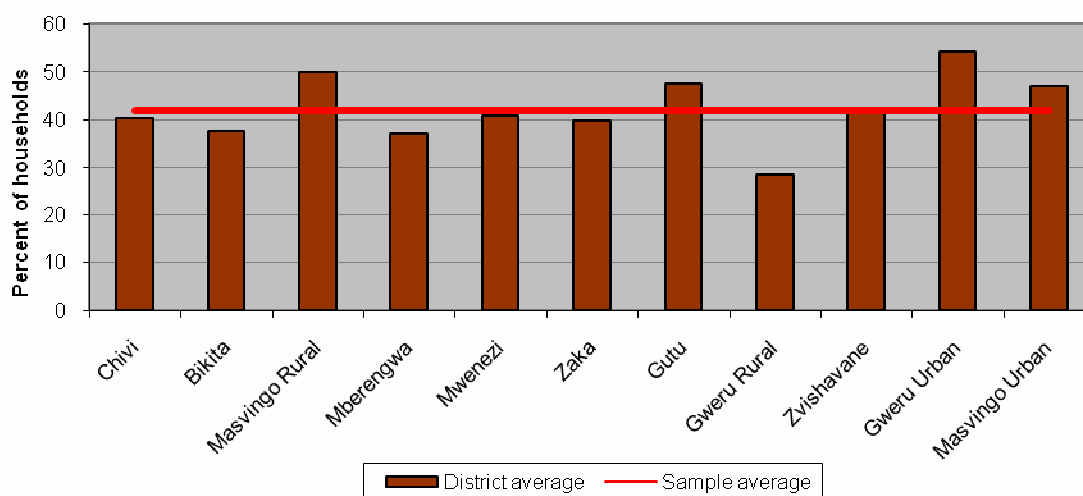


Table 10 provides information on the reasons for borrowing over each of the previous HLSA survey years. Food and school expenses remain the most common reasons for borrowing. Reported borrowing for the purchase of food increased by ten percentage points, another reflection of sharply deteriorating economic conditions. Conversely, between 2006 and 2009, reported borrowing for schooling expenses *decreased* by nearly 35 percentage points over the same period. This dramatic decrease in borrowing related to education may be due in part to wide-scale closure of schools during periods of civil unrest and the unwillingness or inability of families to borrow for children's education given the uncertain and deteriorating economic climate in Zimbabwe.

Table 10. Reasons for borrowing, by year

	Year		
	2006	2007	2009
Food	67.0	63.9	77.2
Health	19.4	15.8	14.9
Funeral	5.7	5.1	4.1
Social	7.8	9.6	7.3
Avoid selling	4.8	3.8	4.7
Agriculture	4.0	1.8	1.4
School	53.9	32.4	19.0
Pay debt	2.8	3.8	3.7

Table 11 shows that among households that borrowed money in the four months preceding the survey, friends and/or relatives are by far the most common source of loans, with over 80 percent of borrowers borrowing from friends and/or relatives in all years. Neighbors served as the next most important source of loans for sample

households in 2009 (data was unavailable for previous years), though still a significantly less common source of loans than friends and relatives. The extremely limited use of other sources of credit is evidence of limited access to formal lending institutions, the limited reach of micro-finance and savings groups, and the continually worsening economic situation for millions of Zimbabwean households.

Table 11. Sources of loans, by year

	Year		
	2006	2007	2009
	(Percent of households)		
Friend/Relative	85.5	85.2	81.7
Moneylender	0.9	0.9	1.1
Savings Group	9.7	8	2.4
Microfinance	0.7	1.1	0.7
Bank	0.3	0.2	0.1
Burial Society	--	3.7	1.0
Neighbor	--	--	13.9

3.1.4 Household Assets

Table 12 provides information on the ownership, purchase and sale of assets among sample households. Among productive assets, the most commonly owned agricultural implements are ploughs (42 percent of households) and wheelbarrows (35 percent). The most commonly owned livestock are small animals: poultry, followed by sheep and goats. Just over forty percent of households own cattle. As expected, asset holdings again reveal the reliance on agriculture as the primary livelihood strategy among sample households. The ownership of assets for consumption reveals just how poor the population of CARE's operational area is. Only 21 percent own a TV or radio. Further, less than half of households own at least one bed.

Productive assets (including livestock) are essential components of a household livelihood strategy. Divestment of productive assets may be an effective coping strategy in the short term but can have a negative impact on household livelihood security over the long term. The data in the last two columns of Table 12 reveal that for many important productive assets the percentage of households that sold them was far higher than the percent that purchased them. For example, while only 4 percent of households purchased poultry, near 20 percent sold them. A similar pattern is observed for cattle, sheep/goats and ploughs. This pattern of divestment confirms that the crisis in Zimbabwe is undermining households' long-term livelihoods.

Table 12. Percent of households owning, purchasing and selling selected assets in the previous year (2009)

	Own	Purchase	Sell
	(percentage of households)		
Productive assets			
Agricultural implements			
Plough	41.9	0.3	0.7
Oxcart	18.9	0.2	0.2
Wheelbarrow	35.4	0.5	0.3
Livestock			
Cattle	40.6	1.1	5.9
Donkey	11.3	0.2	0.5
Sheep/Goat	42.3	2.3	11.1
Pig	2.1	9.0	0.4
Poultry	62.2	3.8	18.4
Rabbit	2.3	8.1	0.3
Assets for consumption			
Bicycle	11.2	0.3	0.4
Radio/TV	21.2	0.6	0.7
Bed	48.9	0.1	0.3

Table 13 provides insight into households' reasons for selling productive assets. The most common reasons were to enable food purchases and to pay school fees, a reflection of the continued primary importance of both food and children's education to households in Zimbabwe.

Table 13. Reasons for sale of productive assets

	Agricultural implements	Livestock
	(percentage of households)	
No longer needed	11.6	0.8
Transport expenses	6.7	1.0
Buy food	31.9	86.5
Pay debt	1.0	1.1
Pay medical expenses	1.1	2.5
Other emergency	0.9	2.1
Pay social event	0.0	0.7
Pay funeral	1.5	0.4
Pay school fees	20.2	4.9

3.1.5 Agricultural production

Land ownership and use

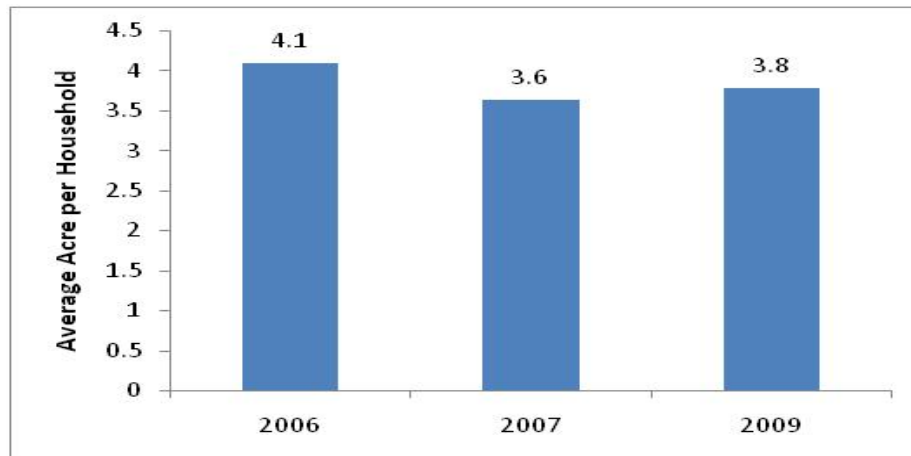
Table 14 reports details about access to arable land and land cultivated by households. The first column demonstrates that essentially all households in rural areas have access to arable land. Even in Masvingo Rural district, which has the lowest percentage of households with arable land, almost 95 percent of households have access to land. Even in the urban areas, a significant proportion of households have access to arable land: over one half of all households in Gweru Urban and over one quarter in Masvingo Urban. The amount of arable land per household in rural areas ranges from 3.5 acres in Bikiti, Masvingo Rural, Zaka, and Gutu, to five or more acres in Chivi, Zvishavane, and Gweru Rural. The average amount of arable land per household is approximately one-half acre in the urban districts. As shown in Figure 14, arable land access has decreased slightly, from 4.1 acres in 2006 to 3.8 in the current round, a decrease of 7 percent.

Table 14. Land ownership, size of land owned, percent of land cultivated (2009), by district

	% of HH with Access to Arable Land	Arable Land Per HH (acres)	% HH with uncultivated land	Cultivated Land per HH (acres)	% arable land cultivated ^a
Chivi	99.5	5.3	70.4	3.0	67.0
Bikiti	99.6	3.6	55.4	2.6	77.6
Masvingo Rural	94.8	3.6	61.2	2.6	81.1
Mberengwa	99.4	4.3	67.5	2.7	69.2
Mwenezi	100.0	3.8	54.4	2.8	78.2
Zaka	98.8	3.5	65.7	2.4	71.5
Gutu	99.6	3.4	62.4	2.1	69.0
Gweru Rural	99.3	6.5	60.5	3.0	67.9
Zvishavane	99.3	5.0	62.5	3.4	68.6
Gweru Urban	53.3	0.7	15.0	0.6	100.4
Masvingo Urban	25.8	0.5	9.3	0.5	85.4
All	95.2	3.8	59.8	2.5	72.9

^a of HH with arable land

Figure 14. Area of cultivable land per household (acres), by year



Overall, almost 60 percent of surveyed households reported that they had left land uncultivated that they would normally cultivate, ranging from 54 percent in Mwenezi to 70 percent in Chivi among the rural districts. In the urban districts the percentage of households reporting leaving land uncultivated was much lower: 15 percent in Gweru Urban and less than 10 percent in Masvingo Urban. However, total access to arable land is also much lower in the urban districts. The average percent of total arable land cultivated was approximately 73 percent for the entire sample. The average percentage was higher in the urban districts, from 85 to 100 percent, compared with 67 to 81 percent in rural districts. The percentage of total arable land cultivated did not change much from 2007 to 2009, decreasing by less than two percentage points. Figure 15 shows that seven of the eleven districts recorded decreases in the percent of arable land cultivated from 2007 to 2009, and the remaining four districts exhibited small increases.

Figure 15. Percentage of arable land cultivated (2007 and 2009), by District

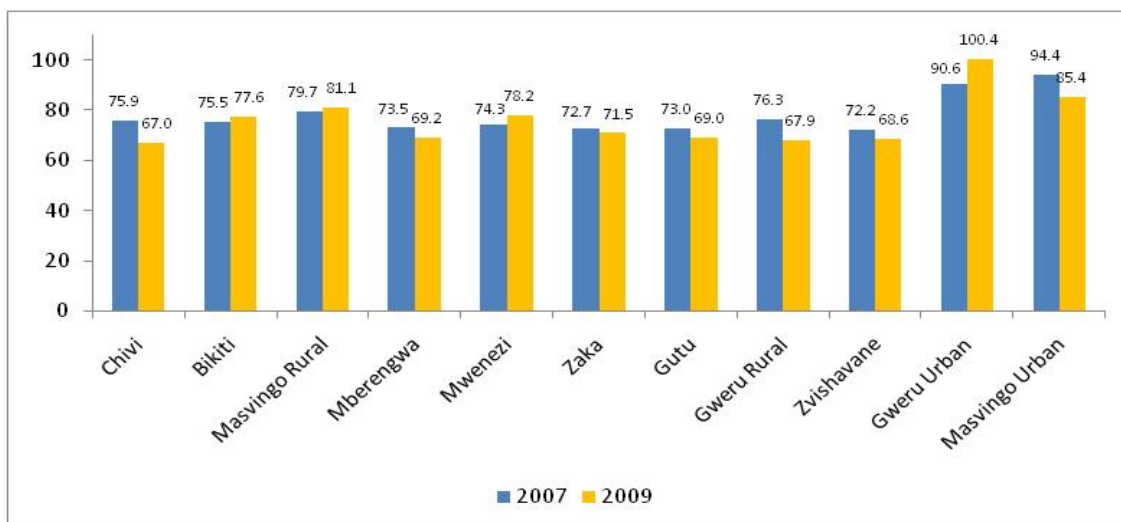


Table 15 provides a breakdown of the reasons given by households for leaving land uncultivated in the 2009 survey, as well as the findings of previous survey rounds. Lack of access to seed was by far the most frequently cited reason, with over 70 percent of all surveyed households in that year indicating this constraint. Around half of all households surveyed in 2009 cited lack of draught power and lack of money to buy inputs. Lack of labour was not indicated as frequently (only about 20 percent of households), and less than 15 percent of households reported lack of fertilizer as a constraint.

Table 15. Reasons for leaving land uncultivated (% of households), by survey year

	2006	2007	2009
Lack of seed on the market	29	57.8	71.3
Lack of draught power	34	65.7	50.9
Lack of money to buy inputs			48.5
Lack of labor	15	18.7	20.8
Lack of fertilizer in the market	15	14.4	14.0
Lack of rain	4	43.4	3.6
Fallow	3	1.5	1.0

Note: The percents reported in this table refer only to households that left land uncultivated.

The findings from earlier survey rounds regarding reported reasons for not cultivating more land are not directly comparable, since the questionnaires in the earlier rounds did not include lack of money to buy inputs as a possible response category. However even without this option, the general pattern is similar across the three rounds, with lack of seeds and lack of draught power as the most frequently cited reasons, lack of labor in the 15-20 percent range, and lack of fertilizer reported by about 15 percent of all households. Fallow as a reason for not cultivating more land was reported by a very small proportion of households in all three rounds. These results suggest that land owned was not cultivated because of constraints in access to necessary inputs rather than as part of a long-term land management strategy.

Two reasons given for not cultivating more land stand out as exhibiting wide variation across the survey years. First, the percent of households citing lack of seed on the market has risen from 29 in 2006 to 58 in 2007, and a huge 71 percent in 2009. Lack of access to seeds has clearly become a major constraint to agricultural production among households in CARE's operational area. The percent of households citing lack of rain as a reason was about four percent in 2006 and 2009, compared with over 43 percent in 2007. This was obviously due to the especially poor and erratic rainfall in the area throughout 2007.²⁹

²⁹ <http://ochaonline.un.org/humanitarianappeal/webpage.asp?Page=1634>

Table 16 provides information about the percentage of all farming households (those that grew at least one crop) that planted selected major field crops during the cropping year coincident with the 2009 survey. Maize and sorghum are broken down according to whether or not they are cropped using conservation farming (CF) techniques. Maize is the the most widespread crop, with three quarters of farming households growing non-CF maize, and one quarter growing CF maize. The percentage of farming households growing CF maize varies greatly by district: the two urban districts had the highest proportions of households growing CF maize, at 65-75 percent of farming households. Over half of households in Masvingo Rural grew CF maize, while less than five percent of households in Mberengwa and Mwenezi districts grew maize using CF techniques. Over 45 percent of all farming households planted groundnuts, with over half the farming households in Chivi, Mberengwa, and Zaka growing this crop. On the other hand, only a very small proportion (less than five percent) of households in the urban districts grew groundnuts. The cash crops of cotton and sunflower were grown by less than five percent of all surveyed households. Over four percent of households in Mwenezi and Zaka districts grew cotton, and Bikita and Masvingo Rural had the highest percentage of households (four percent or more) that grew sunflower. The average number of crops grown per household is only about two in rural areas and one in urban areas.

Figure 16 shows how the importance of the field crops to farming households' livelihoods has changed over the two years from 2007 to 2009. Because the CF-non CF distinction was not made in the 2007 survey, information is given for both types of maize and sorghum together, rather than separately. Maize cultivation has remained almost universal in 2009, declining only slightly across the two years. The percent of farming households that cultivate sorghum has increased substantially, from 20 to 35 percent. There were also increases in the percent of farming households that cultivate millet and rapoko. The percent that cultivate ground nuts has declined from 61 to 46 percent, the percent cultivating cotton from 7 to 3 percent.

Figure 16. Percent of households growing major field crops, by survey year

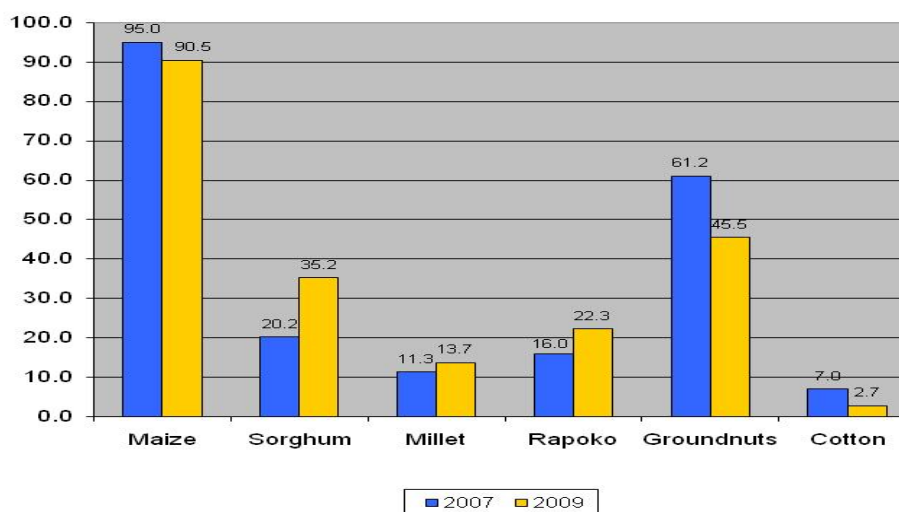


Table 17 and Figure 17 show the distribution of cultivated land planted to the major field crops. Maize dominates area planted, accounting for over 55 percent of all land (12 percent CF and 43 percent non-CF). Groundnuts and sorghum each represent 14-15 percent of all cultivated land, followed by millet and rapoko. The cash crops, cotton and sunflower, are not very important to households' livelihoods, each accounting for approximately one percent of all cultivated land. The area planted in maize and sorghum using conservation farming techniques accounts for approximately 15 percent of all area planted.

Table 16. Percentage of farming households growing major field crops (2009), by district

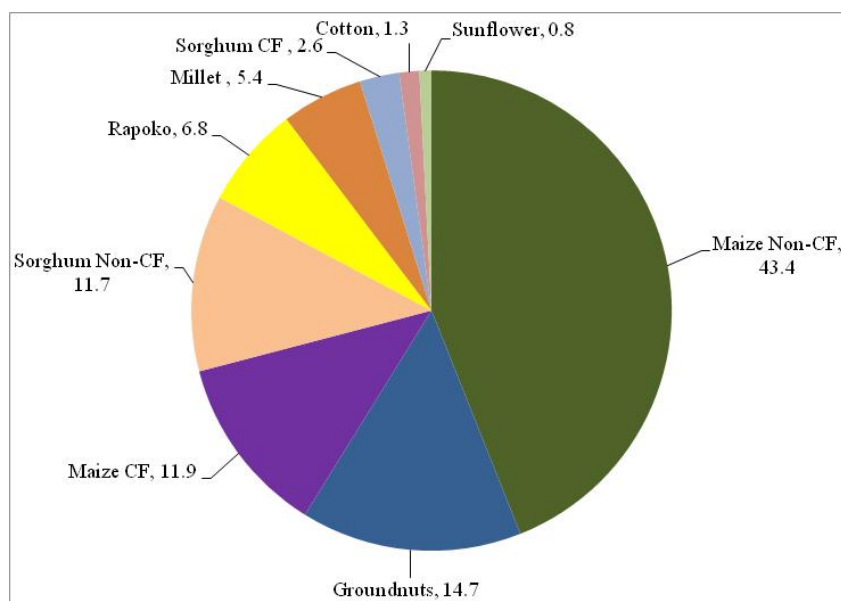
District	Maize (CF practice)	Maize (Non-CF practice)	Sorghum (CF practice)	Sorghum (Non-CF practice)	Millet	Rapoko	Groundnuts	Cotton	Sunflower	Average Number Crops cultivated ^a
-----Percent of households-----										
Chivi	23.2	70.7	10.4	46.8	13.8	15.5	54.8	2.9	2.3	2.3
Bikiti	18.1	78.3	3.9	36.2	14.8	26.9	42.9	2.5	4.1	2.2
Masvingo Rural	52.7	70.2	5.2	8.1	8.1	13.7	49.0	3.7	6.4	1.9
Mberengwa	4.3	87.5	6.2	47.5	16.8	19.8	53.0	2.7	1.2	2.4
Mwenezi	2.6	64.3	10.5	57.7	42.8	6.6	45.7	4.7	0.3	2.3
Zaka	36.6	76.4	3.2	20.6	4.3	30.7	53.0	4.5	3.7	2.2
Gutu	21.4	76.3	7.6	14.2	15.2	37.5	38.5	1.0	1.2	2.0
Gweru Rural	28.1	79.5	1.0	6.6	3.1	9.7	19.4	0.0	0.7	1.4
Zvishavane	27.7	70.5	11.6	37.9	15.2	9.1	35.1	0.9	1.4	2.1
Gweru Urban	65.5	36.2	1.7	1.7	0.0	0.0	8.6	0.0	0.0	1.1
Masvingo Urban	73.3	33.3	0.0	3.3	0.0	3.3	6.7	0.0	0.0	1.1
All	25.2	75.0	6.3	29.4	13.7	22.3	45.5	2.7	2.6	2.1

^aAmong households with any agricultural production

Table 17. Percentage of cultivated area planted to major field crops (2009), by district

District	Maize (CF practice)	Maize (Non-CF practice)	Sorghum (CF practice)	Sorghum (Non-CF practice)	Millet	Rapoko	Groundnuts	Cotton	Sunflower
-----Percent of Cultivated Area-----									
Chivi	9.4	38.7	4.5	19.0	4.7	4.1	18.1	2.7	0.7
Bikiti	7.2	44.0	1.4	13.9	5.7	9.7	15.0	1.5	1.0
Masvingo Rural	26.2	42.6	3.0	2.3	2.7	3.1	13.9	1.6	1.2
Mberengwa	2.1	50.5	2.8	17.8	6.5	6.6	17.9	1.0	0.3
Mwenezi	1.3	31.7	3.2	27.3	22.5	1.3	11.9	1.2	0.1
Zaka	18.9	43.5	1.1	6.7	1.3	9.6	18.3	2.3	2.1
Gutu	9.6	49.4	3.2	5.8	5.7	13.7	13.1	0.4	0.3
Gweru Rural	17.6	61.0	0.3	1.3	0.8	2.3	4.5	0.0	0.3
Zvishavane	12.9	37.0	4.1	12.3	4.0	1.7	9.2	0.3	0.3
Gweru Urban	65.4	37.0	1.5	0.7	0.0	0.0	3.1	0.0	0.0
Masvingo Urban	45.0	31.8	0.0	9.6	0.0	0.3	2.4	0.0	0.0
All	11.9	43.4	2.6	11.7	5.4	6.8	14.7	1.3	0.8

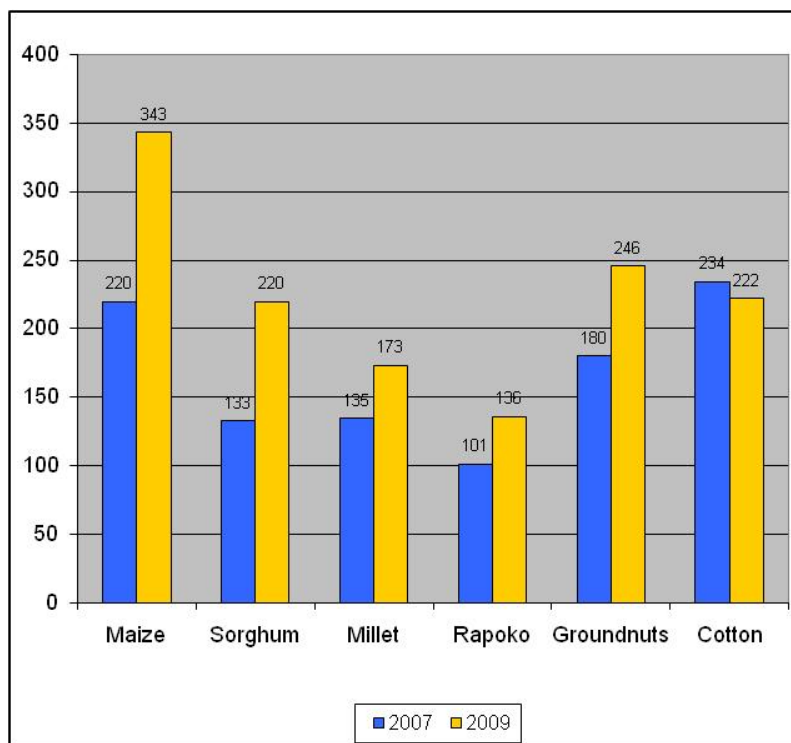
Figure 17. Average percent of total land area planted to major field crops (2009),



Agricultural Production

Average production of the major field crops is reported in Table 18 by district. These averages are calculated only for households that produced the specified crops. Figure 18 illustrates how production has changed between the 2007 and 2009 surveys. The average maize farmer's production has increased by over 50 percent. This is likely related to the fact that more farmers are producing maize using conservation farming practices, which gives considerably higher yields (see below). The large increase in the average sorghum farmer's production may be related to the same trend. Average production of all other crop types except cotton have seen moderate increases. Data are not reported for sunflower as they were not collected in the 2007 survey.

Figure 18. Average household production of major field crops, by survey year



Note: The averages are only calculated for households that produce at least some of each crop

Total production of a crop is influenced by, among other factors, area planted to the crop and the yield of the crop, that is, the amount produced per unit of land cultivated. Table 18 reports *median* yields by crop. Median yields are reported rather than mean (average) values, because mean values can be strongly influenced by extreme values.³⁰

³⁰ Using mean values is less preferable, given their susceptibility to extreme values, because the frequency distributions of crop yields are often highly skewed.

Table 18. Average household production of major field crops (2009), by district

District	Maize (CF practice)	Maize (Non-CF practice)	Sorghum (CF practice)	Sorghum (Non-CF practice)	Millet	Rapoko	Groundnuts	Cotton	Sunflower
-----Kilograms per Household-----									
Chivi	228	287	211	202	142	119	263	208	130
Bikiti	171	230	118	185	151	118	116	173	83
Masvingo Rural	306	278	163	116	110	87	195	161	97
Mberengwa	285	359	195	277	284	167	379	335	130
Mwenezi	196	416	191	344	179	203	262	235	300
Zaka	400	402	200	183	170	178	263	234	159
Gutu	184	219	114	103	81	107	150	114	72
Gweru Rural	326	456	38	73	708	66	197	0	513
Zvishavane	258	421	277	210	196	81	337	175	150
Gweru Urban	191	216	50	0	0	0	83	0	0
Masvingo Urban	300	465	0	1000	0	50	150	0	0
All	285	322	183	224	173	136	246	222	119

Note: The averages are only calculated for households that produce at least some of each crop.

Table 19 reports yields for maize and sorghum grown under conservation farming conditions and under traditional practices (non-CF), as well as for other crops. The median yield for maize under conservation farming is over 30 percent higher than under traditional practices. This difference is statistically significant at the 10% level. The computed median yield for CF sorghum is actually lower than non-CF, but this difference is not statistically significant at the 10% level. It should be noted that comparison of yields across these two production technologies in a single year is not very meaningful. Comparison of average yields over several years is more appropriate, since this controls for the impacts of weather. In particular, there will not be much difference between CF and non-CF in years of very good rainfall (even non-CF will receive adequate moisture) and in years of extreme drought (even CF will not provide sufficient moisture to the plants). Thus, only examination of yields under different rainfall conditions over several years will provide an accurate measure of the difference in performance of these two techniques.

Table 19. Median yields by crop (2009)

Crop	Number of producer households	Median
Maize CF*	1,330	494.2
Maize non-CF	4,108	370.7
Sorghum CF	343	247.1
Sorghum non-CF	1,641	370.7
Millet	331	308.9
Rapoko	686	329.5
Groundnut	2,510	494.2
Cotton	77	304.0
Sunflower	86	370.7

* Median Value different from maize non-CF at .10% significance level

The results in Table 20 confirm the earlier findings that difficulty in access to seed is a major constraint to agricultural production. It is a very widely reported problem for maize and groundnuts, with approximately 90 percent of all farmers reporting difficulties in access to maize seed, and 80 percent reporting shortages of access to groundnut seed. The main source of seed for both crops was previous on-farm production. For maize-CF, CARE was the second most common source of seed, whereas for groundnut, gifts was the second most important source. Gifts accounted for over 13 percent of all seed for both maize and groundnut.

Table 20. Availability and sources of seed for maize and groundnuts (2009)

Seed availability and sources	Maize (CF practice)	Maize (Non-CF practice)	Groundnuts
Percent of households reporting insufficient seed	89.5	89.5	78.8
Main source of seed			
Retain unplanted seed	4.0	5.1	2.5
Retain home grown seed	31.3	32.4	56.0
Government	5.0	5.1	0.9
CARE	19.4	6.1	2.7
Other NGO	3.6	3.9	1.4
Purchase	13.8	19.9	12.2
Borrow	9.5	11.5	10.6
Contract growing	0.2	0.3	0.1
Gift	13.2	15.7	13.5

The vegetable crops grown in gardens provide a source of food or livelihood for a large proportion of households, as shown in Table 21. About two thirds of all sampled households have household gardens, and gardens are especially widespread in the urban districts, where 70-80 percent of all households reported having home gardens. Community gardens are also quite common, with over 40 percent of surveyed households reporting access to community gardens. Community gardens are much less widespread in urban areas, with only 12 percent of households in Gweru Urban and 6 percent in Masvingo Urban reporting access to community gardens. By contrast, from approximately 30 to over 60 percent of households in the rural districts reported access to community gardens.

Table 21. Percentage of households with access to garden (2009), by district

District	% of HH have access to community garden	% of HH have access to household garden
Chivi	62.8	58.5
Bikiti	28.7	74.5
Masvingo Rural	49.3	65.5
Mberengwa	34.8	64.7
Mwenezi	38.7	52.9
Zaka	51.8	58.8
Gutu	32.0	80.0
Gweru Rural	29.9	59.8
Zvishavane	53.0	53.4
Gweru Urban	11.9	80.6
Masvingo Urban	6.1	70.1
All	41.1	65.9

Table 22 reports sources of water for gardens from the 2007 and 2009 survey rounds. Approximately two thirds of gardens received water from rivers or dams, 20 percent from shallow wells, and about 15 percent from deep wells (borehole/pump) or piped water. There was little change in the source of water for gardens from 2007 to 2009.

Table 22. Sources of water for gardening, by year

Water sources	2007	2009
Piped water	10.1	8.2
Public/Communal tap	0.7	0.8
Shallow well	18.5	20.2
River/Stream/Dam	64.8	63.7
Borehole/Pump	5.6	5.7
Other	0.4	1.4

3.1.6 Health environment and behaviors

Health environment

Access to clean water and sanitation infrastructure are critical components of public health. Data regarding the health environment were collected to assess respondents' experiences of these aspects of the health environment in the surveyed areas. As shown in Table 23, in all three survey years the most common water source for drinking and cooking was boreholes and pumps, with 44% (2006), 36% (2007), and 38% (2009) of surveyed households utilizing boreholes and pumps as their primary water source. A recent vulnerability assessment indicated that maintenance of boreholes is difficult and in

some communities, boreholes have not functioned for over a year.³¹ This fact may help explain the slight decline in their use since 2006. Unprotected wells were the second most common water source in 2007 and 2009 (26.8% and 26.4%, respectively). There was a marked drop in the use of protected wells between 2006, when it was the second most common water source (26% of households), and 2009, when they were used by only 16.2% of households. Piped water outside of dwellings and public or communal taps are used only minimally as primary water sources.

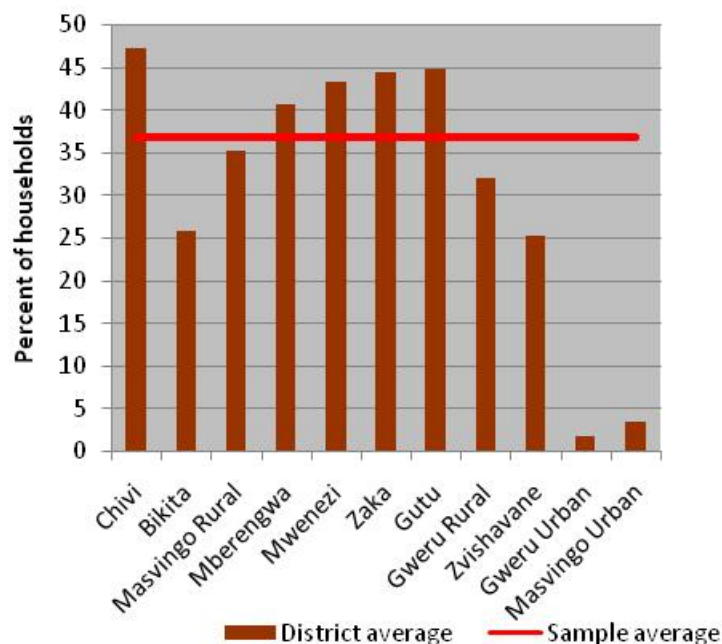
Table 23. Water sources, storage and collection, and type of latrine used, by year

	2006	2007	2009
Source of water for drinking and cooking (% of households)			
Piped water inside of dwelling		5.0	5.2
Piped water outside of dwelling		2.3	1.9
Public/communal tap	2	0.9	1.0
Protected well	26	14.5	16.2
Unprotected well	10	26.8	26.4
Surface water (river, stream or dam)	13	14.1	10.5
Borehole/pump	44	36.1	38.2
Other	5	0.3	0.6
Time to fetch water (average minutes)			
Walking to and from water source	--	27.6	26.2
Filling water containers	--	16.3	13.5
Queuing	--	8.8	5.0
Total	--	52.4	44.8
Containers used to fetch water (% of households)			
Plastic or metal container with a lid	--	67.6	70.0
Plastic or metal container without a lid	--	30.1	29.9
Containers used to store water			
Plastic or metal container with a lid	--	70.4	74.9
Plastic or metal container without a lid	--	29.1	23.6
Amount of water collected per day per capita (liters)			
	--	11.9	11.1
Type of latrine (% of households)			
No latrine available	58	56.4	62.5
Single blair latrine with hand washing facility	8	4.8	4.1
Single blair latrine, no hand washing facility	22	23.3	21.3
Double blair latrine with hand washing facility	2	1.5	1.9
Double blair latrine, no hand washing facility	8	7.6	5.5
Other latrine	2	6.3	4.7

³¹ TANGO International. December 2008. CARE Zimbabwe Rapid Vulnerability Assessment.

Data in Figure 19 indicate that on average, about 37% of households used unsafe water sources in 2009³², a practice most prevalent in Chivi (47% of households using unsafe water sources), Gutu (45%), Zaka (45%), Mwenzi (43%), and Mberengwa (41%).

Figure 19. Percentage of households using an unsafe water source, by district

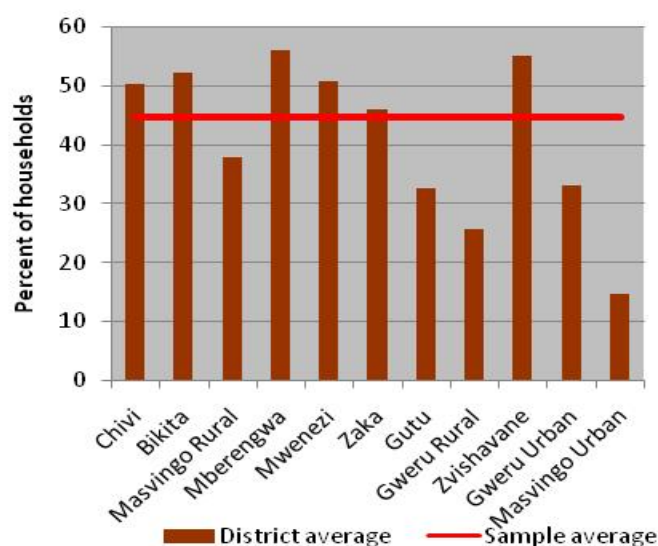


Data regarding the time needed to fetch water from a water source were available for 2007 and 2009 and are reported in Figure 20. Fetching water includes walking to and from the water source, queuing, and filling water containers. In 2009 it took a household member approximately 45 minutes to complete this process, and in 2007, about 52 minutes. The decrease in minutes was primarily due to slight reductions in queuing and filling time; the time for the walk varied by only a minute across the two years. Data from 2009 indicate above-average reported water-fetching times in Mberengwa, Zvishavane, Bikita, Mwenezi, Chivi, and Zaka (see Figure 20). These data are cause for attention when we take into consideration World Health Organization (WHO) standards for water collection times: WHO concludes that when it takes people more than 30 minutes to fetch water, the amount collected is reduced.³³

³² An unsafe water source is either surface water or an unprotected well.

³³ World Health Organization. 07 January 2005. WHO Technical Note for Emergencies No. 9. Minimum water quantity needed for domestic use.

Figure 20. Time to fetch water (minutes) (2009), by district

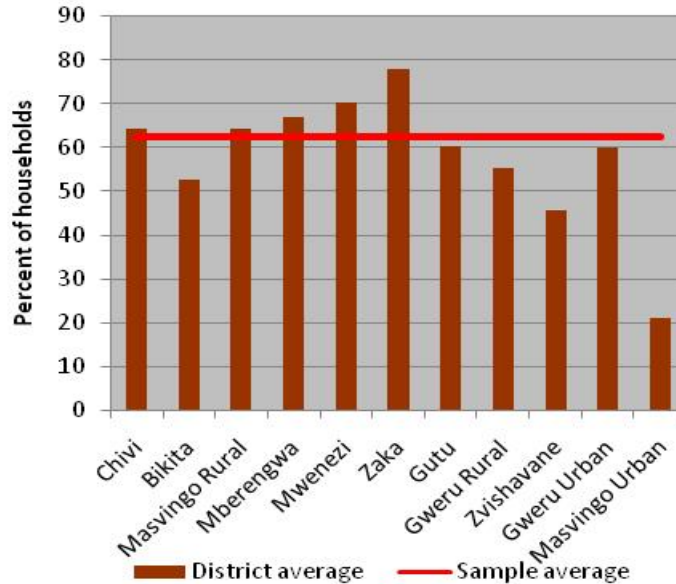


Further data shown in Table 23 indicate that the large majority of households in both 2007 and 2009 used plastic or metal containers with a lid to fetch water (67.6% and 70.0%, respectively). Lidded containers were also used for water storage in both years in the majority of households. The amount of water collected per capita was 11.9 liters in 2007 and 11.1 liters in 2009. Standard average water use for drinking, cooking and personal hygiene in any household is at least 15 litres per person per day³⁴. This suggests that on average, per capita use of water is below recommended levels for maintaining adequate health and hygiene.

Turning to the type of latrine used by households, Figure 21 shows that in all three survey years, at least half of households had no latrine available: 58% in 2006 had no latrine, 56.4% in 2007 and 62.5% in 2009. The districts with the highest percentage of households reporting that they had no latrine available in 2009 were Zaka, Mwenezi, Mberengwa, Chivi, and Masvingo Rural. It is interesting to note that while the large majority of households in Masvingo urban use a latrine, only 40% do in Gweru urban. For the population as a whole, of those households that reported using a latrine, a single blair latrine with no hand washing facility was the most commonly used type, used by about 20 percent of households in all three survey years.

³⁴ Humanitarian Charter and Minimum Standards in Disaster Response, The Sphere Project, 2004

Figure 21. Percent of households having no latrine available, by district



Very few households in any year reported hand washing facilities at latrines; in fact, the percentage of reports of hand washing facilities decreased from 2006 to 2009, from 8.0% to 4.1% in the case of single blair latrines.

Health behaviors

In 2007 and 2009, the surveys assessed aspects of respondents' health behaviors regarding hand washing, treatment for illness, and use of mosquito nets (see Table 24). It is important to note the potential bias introduced to the data due to self-reporting of behaviors.

Regarding hand washing, respondents were asked on which occasions they washed their hands: before eating, before food preparation, and/or after coming from the toilet.³⁵ A majority of respondents reported hand washing in all three scenarios, with nearly all indicating that they wash their hands before eating (99% in 2007 and 98% in 2009). Hand washing before food preparation was less common among respondents (77% in 2007 and dropping to 64% in 2009). Nearly 80 percent reported hand washing after coming from the toilet. In 2009 an additional selection was added: before feeding children; only 39.1% reported this practice.

³⁵ Data regarding hand washing and soap use were not available for 2006.

Table 24. Hand washing and soap use, by year

	2007	2009
Occasions when respondents report washing their hands (% of respondents)		
Before eating	98.9	97.5
Before food preparation	77.0	64.2
After coming from the toilet	82.7	81.5
Before feeding children	--	39.1
Percent of households possessing any soap	61.4	74.2
Soap use during various daily activities (% of respondents)		
After visiting toilet	--	20.8
When bathing	--	96.4
After removing soiled nappies/clothes	--	11.1
When washing clothes/utensils	--	98.3
Before eating	--	5.8
After eating	--	1.3
Before preparing food	--	4.9

According to 2009 data³⁶, the percentage of respondents indicating that they used soap varied depending on the activity, with very high percentages reporting soap use when washing clothes and utensils (98%) and when bathing (96%). Lower percentages were reported for soap use after visiting the toilet (21%) and after removing soiled nappies and clothes (11%). Soap use before preparing food and before and after eating was minimal (less than 6% for these activities).

The 2007 and 2009 surveys both explored the frequency with which households sought treatment for illness and reasons for not seeking treatment. Data are shown in Table 25. Respondents were asked to reply with reference to the two months before the time of the survey. The percentage of households seeking treatment when someone was ill decreased from 75% in 2007 to 65% in 2009. However, the percentage of households that sought treatment for a child under five years old with sudden fever increased from 48% to 59%.

Financial constraints factored significantly as reasons that households did not seek treatment for illness. In 2009 “Cannot afford” or “Not having money to pay for treatment” were cited by 56% of households with incidences of illness as the primary reasons for not seeking treatment, up markedly from 43% in 2007. In both 2007 and 2009, over 22% of households claimed that they preferred not to seek medical treatment for an illness due to “religious or cultural reasons”.

³⁶ Data were not available for previous years.

Table 25. Treatment of illness, by survey year

	2007	2009
Percent of illness incidences in the last 2 months for which treatment was sought	75.2	64.7
Reasons given for not seeking treatment (% of households) a/		
Cannot afford	19.4	25.9
No money to pay for treatment	23.3	29.6
No transport, too far, or transport too expensive	14.6	7.0
Poor quality of service/lack of confidence in service	5.3	8.3
Prefer not to go for religious or cultural reasons	22.2	16.1
Other	15.3	13.1
Whether treatment was sought for child under five with sudden fever in the last 2 months	47.5	59.3
Reasons given for not seeking treatment (percent of households) a/		
Cannot afford	11.2	16.2
No money to pay for treatment	29.5	28.2
No transport, too far, or transport too expensive	15.5	9.2
Poor quality of service/lack of confidence in service	2.5	10.9
Prefer not to go for religious or cultural reasons	20.7	17.9
Other	20.5	17.7

In both years financial constraints (the inability to afford treatment or having no money to pay for treatment) were also commonly reported as reasons for not seeking treatment for children under five with sudden fever. As was the case regarding treatment of illness, another common reason for households not seeking treatment for children under five with fever in both years was “prefer not to go for religious or cultural reasons” (21% in 2007 and 18% in 2009).

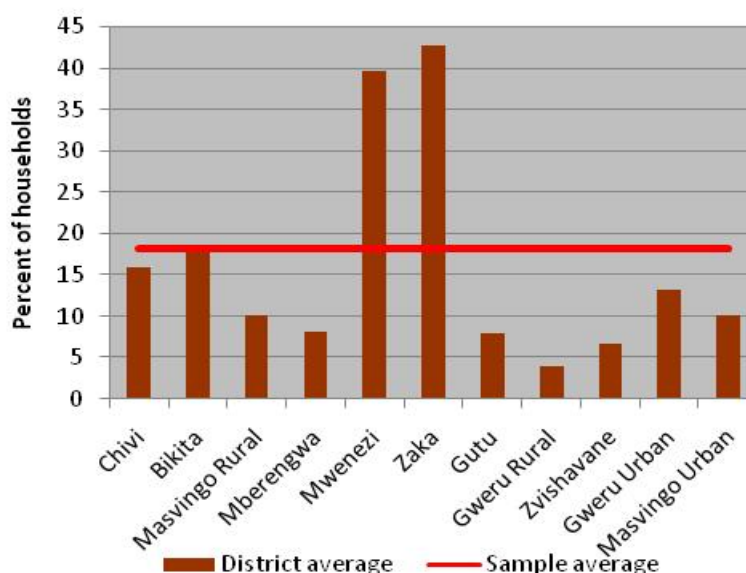
While a relatively low percentage of households responded that “poor quality of service/lack of confidence in service” was a reason for not seeking treatment for illness as well as for children under five with a sudden fever, it is worth noting that from 2007 to 2009 this percentage increased in both cases. The percentage of households stating that they did not seek treatment for illness because of poor quality of service increased from 5% to 12%; the corresponding percentage in cases of households with children under five with sudden fever increased from 2.5% to 13%.

Malaria is endemic throughout Zimbabwe and the use of mosquito nets a key malaria prevention measure. The Zimbabwe Demographic and Health Survey 2005-2006[1] found a full 8 percent of children under five years old had had a fever in the previous two weeks, a major manifestation of malaria. It found that just 20% of households owned a mosquito net; ownership was more common in urban areas as compared to rural ones, and households in the highest wealth quintile were five times as likely as the poorest

households to own a net. Of note, mosquito net usage was markedly low for young children and pregnant women, who are particularly vulnerable to malaria.

Figure 22 shows data on mosquito net usage within CARE’s operational area from the 2009 survey. Consistent with the national results, there was fairly low usage of mosquito nets across districts in 2009, with an average of only 18% of households reporting having slept under a mosquito net the previous night. However mosquito net usage was substantially higher in Zaka (43%) and Mwenezi (40%). It was lowest in Mberengwa (8%), Gutu (8%), Zvishavane (7%), and Gweru Rural (4%).

Figure 22. Percentage of households in which bednets were used the previous night, by district



Knowledge, attitudes and practices concerning HIV and AIDS

A rapid assessment conducted in late 2008 in CARE’s operational area concluded that as more and more people, especially youth, engage in transactional sex for food and money, the incidence of new HIV infections and sexually transmitted diseases is likely to increase.³⁷ Continuing education, prevention and care of the HIV and AIDS affected thus remain essential.

The 2007 and 2009 surveys queried respondents about their knowledge of HIV and AIDS and HIV avoidance practices, as shown in Table 26. The percentage of respondents reporting having heard of HIV or AIDS was very high in both years: 98.5% in 2007 and only slightly lower in 2009, at 97.0%. The percentage of respondents who stated that AIDS is different from HIV increased from 35% in 2007 to 43% in 2009.

³⁷ TANGO International. December 2008. CARE Zimbabwe Rapid Vulnerability Assessment.

The percentage of households in 2009 reporting that issues pertaining to HIV and AIDS were openly discussed in the household was 75.0%, a slight decrease from 2007 (79.7%).

Respondents in the 2009 survey were asked whether they thought that if a mother has HIV, the virus would always be passed on to the baby. The majority of respondents (58%) responded yes. The second most common response was “don’t know,” at 15%. These figures are especially important to keep in mind in targeting education and prevention interventions given that perinatal transmission is the second-most common means of HIV transmission in Zimbabwe.³⁸

A very high majority of respondents (no lower than 75% and as high as 96%) correctly identified various means of HIV transmission. The percentage of respondents naming correct answers was highest for “having unprotected sexual relations,” followed by “having sex with prostitutes,” “sharing needles and syringes,” “mother to baby during birth,” and “mother to baby while breastfeeding.” Overall there was no substantial change in knowledge across years, however, the percentage of those identifying “supernatural means” as a means of HIV transmission increased almost five percentage points from 2007 to 2009. The most common misconceptions about means of HIV transmission were “mosquito bites” (more than 30% held this perception in both years) and “kissing” (more than 25% in both years).

A highly worrying finding for HIV prevention efforts was that respondents’ knowledge of means of avoidance of contracting HIV decreased substantially from 2007 to 2009 and similarly, respondents reported decreased practice of these techniques, i.e. a lower percentage of people were able to identify proper HIV avoidance techniques and practiced these behaviors. Decreases of more than 20 percentage points were found in both knowledge and practice of the following HIV avoidance behaviors: avoiding sex with persons who have many partners, avoiding sex with sex workers, avoiding sex with homosexuals, avoiding sex with persons who inject drugs intravenously, avoiding sharing razors and blades, and limiting the number of sexual partners. On a more promising note, there was a decrease in respondents holding misconceptions about means of HIV transmission, which suggests an improved understanding of HIV in at least some areas: many fewer respondents in 2009 indicated that HIV could be contracted through kissing and mosquito bites compared to 2007.

³⁸ Central Statistical Office (CSO) [Zimbabwe] and Macro International Inc. 2007. *Zimbabwe Demographic and Health Survey 2005-2006*. Calverton, Maryland: CSO and Macro International Inc.

Table 26. Knowledge of HIV and AIDs, by year

	2007	2009
Percent of respondents who have heard of HIV & AIDS	98.5	97.0
Percent of respondents who know the difference between HIV & AIDS	34.5	43.4
Respondents' opinion on mother-baby transmission of HIV & AIDS (% of respondents) (Answer to question: "In your opinion, if a mother have HIV, would the virus always be passed on to the baby?")		
No	--	10.0
Yes	--	58.4
Sometimes/rarely	--	5.1
Depends	--	11.5
Don't know	--	15.0
"How can a person get HIV, the virus that causes AIDS?" (Percent answering "yes" to various transmission means)		
Kissing	28.3	25.7
Shaking hands	10.1	8.4
Having unprotected sexual relations	96.7	95.8
Receiving a blood transfusion	65.4	69.0
Sharing needles and syringes	85.3	87.6
Mosquito bites	34.0	30.2
Supernatural means	10.6	15.3
Having sex with prostitutes	94.3	90.8
Mother to baby during birth	80.0	76.3
Mother to baby while breastfeeding	75.5	75.6
Other	8.1	8.5
"What can a person do to avoid getting HIV?" (Percent naming type of avoidance means)		
Abstain from sex	81.8	75.4
Use condoms correctly and consistently	82.8	80.1
Limit sex to one partner/stay faithful to one partner	93.5	79.8
Limit number of sexual partners	71.6	48.5
Avoid sex with sex workers	90.9	58.7
Avoid sex with persons who have many partners	82.2	48.9
Avoid sex with homosexuals	62.6	35.2
Avoid sex with persons who inject drugs intravenously	60.0	33.1
Avoid blood transfusions	54.3	34.5
Avoid injections	48.0	33.2
Avoid sharing razors/blades	83.5	59.9
Avoid kissing	33.8	15.8
Avoid mosquito bites	28.2	12.7
Seek protection from traditional practitioner	9.0	4.8

Table 26 (cont.). Knowledge of HIV and AIDs, by year

"Behaviours that are currently employed by the HH members to avoid getting HIV/ reinfection."		
(Percent answering "yes" to various avoidance means)		
Abstain from sex	35.7	40.2
Use condoms correctly and consistently	30.8	36.0
Limit sex to one partner/stay faithful to one partner	71.9	63.0
Limit number of sexual partners	46.0	25.8
Avoid sex with sex workers	57.8	29.2
Avoid sex with persons who have many partners	52.9	25.6
Avoid sex with homosexuals	44.0	19.0
Avoid sex with persons who inject drugs intravenously	42.2	17.8
Avoid blood transfusions	39.2	20.3
Avoid injections	34.8	20.7
Avoid sharing razors/blades	65.0	38.9
Avoid kissing	24.5	8.8
Avoid mosquito bites	17.3	5.7
Seek protection from traditional practitioner	6.1	2.4

These findings suggest that ramped-up HIV prevention education efforts are called for in this area. At the same time, the findings suggest that knowledge often does not translate into practice: for example, while 80% of the 2009 respondents indicated knowing that using condoms can help to avoid HIV infection, only 36% practiced this method. Similarly, while 59% reportedly know that avoiding sex with sex workers helps to prevent the spread of HIV, only 29% reported actually avoiding sex with sex workers. In interpreting findings regarding HIV and AIDS in particular, because the survey requests information regarding one's own or others' risk behaviors, it is important to keep in mind that reporting bias may enter into responses. There were also some limitations to the survey due to the limited detail of some of the questions and responses. For example, a relevant question that was *not* asked was whether respondents who had multiple partners or who had sex with sex workers used condoms.

As shown in Table 27, the 2009 survey asked respondents for information about stigmatization and discrimination against people living with HIV and AIDS. Survey respondents were asked whether they knew someone in their community who in the twelve months prior to the survey experienced discrimination because the person was "known to have, or suspected of having, HIV/AIDS." Respondents were asked to select applicable responses from a pre-established list (see table). The most common forms of discrimination, were being excluded or treated differently at social gatherings; being abandoned by a spouse, partner, or family member or being sent away from the family; and being teased, insulted or sworn at. Data suggest that discrimination against chronically ill individuals is especially low in Zaka and Mwenezi districts. Data from Mberengwa district were also lower than average for all forms of discrimination against

chronically ill community members. Alternatively, discrimination against chronically ill individuals appears to be relatively high in urban areas included in the survey. Respondents in Gweru Urban district reported an exceptionally high incidence of chronically ill individuals being treated differently in social gatherings and being abandoned by a spouse. An important consideration in terms of livelihood security is the fact that chronically ill individuals in Gweru Urban district are much more likely than those in any other district to lose customers or lose a job due to their health status. Discrimination against chronically ill individuals is also relatively common in Masvingo Urban district.

Information about chronically ill people

Information about the chronically ill is shown by survey year in Table 28. Across the three survey years, there was not much change in the percent of households with a chronically ill family member: the highest was about 13% in 2007, the lowest was about 8% in 2009. The percentage of households in which someone died of a chronic illness in the last twelve months was 9.1%. Among households in which a family member died as a result of chronic illness, 39% lost the household breadwinner.

In all three years, between 43-44% of the chronically ill in the surveyed households were heads of household, 16-20% were spouses, and 20-23% were sons and daughters. In all survey years, the chronically ill person had been ill from 4-5 years.

The percentage of chronically ill who were tested for HIV increased dramatically across the three survey years, rising from just under 40 percent in 2006 to near 70 percent in 2009. Of those tested and willing to reveal their HIV status, the percent who tested positive was very high and about the same in all years. It was 77% in 2009, suggesting that the large majority of chronic illness is due to HIV and AIDs.

Communities played a consistently strong care-giving role in all survey years. About half of respondents in 2009 reported that community members provided some kind of service to the chronically ill. Emotional comfort and prayer were by far the most common kind of community care in all years, with over 80% of respondents reporting this type of contribution. Cooking, providing accompaniment to the hospital, fetching firewood or water, administering medicine, cleaning and helping the sick person get around were all very common and consistent ways that communities aided in the care of the chronically ill. Notably, cooking for the sick and accompanying them to the clinic/hospital became considerably more common between 2006 and 2009 whereas providing emotional comfort and prayer became slightly less common.

Table 27. Discrimination based on HIV and AIDS infection (2009), by district

Types of discrimination occurring in the last year	Districts											
	Chivi	Bikita	Masvingo Rural	Masvingo Urban	Gweru Rural	Gweru Urban	Mberengwa	Mwenezi	Zaka	Gutu	Zvishavane	All
Excluded/ treated differently in social gathering	9.3	11.4	12.4	22.7	7.0	30.0	5.0	3.6	4.4	6.8	6.8	8.5
Abandoned by spouse/partner	11.4	7.9	8.5	13.4	6.3	41.7	4.2	3.9	5.9	8.2	8.6	8.4
Teased/ insulted or sworn at	11.8	9.6	10.5	16.0	5.6	14.2	5.8	3.9	4.5	13.3	6.8	8.8
Lost customers or lost job	13.0	5.1	5.5	9.2	2.3	30.8	2.1	3.1	0.9	8.4	0.9	5.7
Lost access to housing	3.0	1.4	1.2	3.4	2.0	1.7	1.3	1.3	0.8	4.5	0.7	1.9
Received poorer quality of health services	7.2	3.6	6.4	8.4	1.7	1.7	2.1	2.1	0.3	1.6	2.5	3.0
Denied religious rights	6.3	1.8	3.2	4.2	1.0	0.8	1.3	1.5	0.6	0.8	1.6	1.9

Table 28. Information about chronically ill, by year

	2006	2007	2009
General information on chronic illness			
Percent of households with a chronically ill member	10.3	12.8	7.9
Percent of households in which someone has died of a chronic illness in the last year	--	--	9.1
Percent of households with a chronic illness death in which the death was of the breadwinner	--	--	39.3
Number of years since chronically ill person fell ill	3.9	4.9	4.6
Relationship of chronically ill to the household head			
Household Head	44.8	44.3	43.4
Spouse	20.4	16.3	19.1
Son/Daughter	20.4	23.0	21.9
Grandchild	4.0	8.5	4.8
Brother/Sister	5.1	3.3	3.7
Parent	2.4	2.0	2.0
Grandparent	0.7	1.8	2.5
Other	2.2	0.8	2.6
HIV and chronic illness			
Percent of chronically ill people who have tested for HIV	39.0	40.4	66.5
HIV status of the chronically ill that have had an HIV test			
Positive	74.6	76.1	76.6
Negative	25.4	23.9	23.4
Percent of households with a chronically ill member for which care is provided from the community	57.8	43.3	49.5
Services offered by community members to chronically ill			
Hand Feeding	11.8	18.4	19.8
Bed Bathing	18.1	22.2	25.4
Treating wounds	18.4	24.1	32.9
Fetch firewood or water	54.7	41.7	56.3
Cook for the sick	39.8	48.3	61.7
Provide emotional comforting & prayer	87.9	82.8	81.6
Administer medicine	42.3	54.9	46.4
Accompany to clinic/hospital	31.0	47.0	58.4
Clean up their living area	45.8	47.1	53.4
Help them get around	43.1	40.4	48.9
Indicators of stigma and discrimination against the chronically ill			
Percent of respondents reporting that:			
members share eating utensils with the sick	80.3	--	56.7
leftover food of the sick is eaten by other members	73.6	--	49.0
non household members regularly visit the sick	77.2	--	56.5
relationship with others deteriorated because of the sickness	25.2	--	13.9
community is willing to include the sick in activities	--	--	58.6

Data on stigma or discrimination against the chronically ill are available from the 2006 and 2009 surveys only. They show that the percent of respondents reporting key behaviors that indicate no discrimination was quite high in 2006 but had substantially declined by 2009. The percent who reported that in their home eating utensils are shared

with the sick, leftover food of the sick is eaten by other members, and there are regular visits to the sick by non-household members was near or greater than 75% in 2006 compared to under 60 in 2009. These changes suggest that discrimination against the chronically ill is increasing. In contrast, while in 2006 about a quarter of households stated that sickness caused a change for the worse in relations with others, in 2009 only 13.9% reported this, indicating that relations were in fact not deteriorating due to sickness as much as three years before.

These findings may be interpreted in conjunction with those of the 2008 rapid assessment which found that the social stigma of people living with HIV was "...rising as providing care and food has become more difficult."³⁹ The assessment noted that AIDS patients formerly cared for at hospitals are now discharged from hospital, and that many Home-Based Care (HBC) workers in rural areas had not visited that year. This information has significant implications for the community care being provided, in terms of both the level of acceptance required on the part of communities, as well as the supplies needed to safely provide care (such as protective gloves).

3.1.7 Social support and participation in community safety nets

The ability of communities to cushion the poor from shocks is dependent on social cohesion, social stability, and available goods. Table 29 shows how the dynamics of social support have changed over time. Since 2006, the percent of households receiving community support for a wide variety of needs has decreased. This decrease has been steady for health expenses, groceries, labor for farming, cash loans, school fees, and small farm tools. The declining prevalence of support received may be explained by the recent political turmoil and economic collapse experienced by Zimbabweans. Eroded resources, rampant unemployment, and hyperinflation will severely limit the ability of households and associations to provide support to those in need.

Similar to 2006 data, 2009 data in Table 29 show the most prevalent forms of social support to be cereal (57.5 percent), draught power (44.2 percent) and agricultural inputs (40.2 percent). The data indicate that the percentage of households receiving social support in the form of agricultural inputs rose between 2007 and 2009 from 29.0 to 40.2 percent, as did support in the form of cereal (from 34.4 percent to 57.5 percent in the same period). The results may be explained by the extremely poor harvest that the country experienced in 2007. However, the percentage of respondents reported relying on either of these two forms of support in 2009 declined a fair amount since 2006 (decreasing by 28.8 and 23.6 percentage points, respectively).

Draught power is one form of social support that increased slightly from 2006 (57.3 percent) to 2007 (63.7 percent) and then decreased in 2009 (to 44.2 percent). According

³⁹ TANGO International. December 2008. CARE Zimbabwe Rapid Vulnerability Assessment.

to a 2008 Rapid Vulnerability Assessment (RVA),⁴⁰ livestock have recently been afflicted by black leg disease, which has left them too weak to be used as draught power. This, in addition to distress sales of livestock reported in the RVA, may explain why fewer households are receiving support in this form.

The percentage of households that received funeral support in 2009 (21 percent) has also increased since 2007 (to 17 percent). This could be due to a greater need for funeral support due to the rise in mortality noted in the 2008 RVA.⁴¹

As Table 29 shows, there has been a marked drop in the number of households that received social support in the form of school fees. In 2006, nearly one fourth of households reported relying on assistance for school fees; in 2009 this percentage had decreased to about seven percent. In addition to the struggles that all communities are having with hyperinflation and rising costs of school fees, it is likely that this decrease is driven by the impact of the political crisis on the formal education system that has resulted in plummeting school attendance rates and numerous abandoned schools.⁴²

It appears that Zimbabwe's protracted humanitarian crisis and the constraints resulting from it (i.e. erosion of productive assets, large-scale migration, chronic illness⁴³) are impacting the ability of extended family members to assist poor households, and that these households are turning to a variety of other sources for support. Most of the surveyed households that reported receiving social support in 2009 obtain it from extended family (65.0 percent) or community members (24.5 percent), however the data indicate that support from extended family has decreased since 2007⁴⁴ (from 73.1 to 65.0 percent) and has increased slightly across most other sources, though even with these increases, the percentages of households receiving support from other sources are quite minimal (three percent and lower).

⁴⁰ TANGO International. 2008. CARE Zimbabwe Rapid Vulnerability Assessment.

⁴¹ Ibid.

⁴² UNICEF. 2009. Zimbabwean Education Crisis Worsens. February 10, 2009. Accessed at http://www.unicef.org/infobycountry/media_47915.html

⁴³ ODI. Kate Bird and Stefanie Busse. 2007. Rethinking aid policy in response to Zimbabwe's protracted crisis: A discussion paper. Overseas Development Institute.

⁴⁴ Data was not available for 2006.

Table 29. Social support provided by community members, by year

	2006	2007	2009
Types of social support			
Agricultural inputs	69.0	29.0	40.2
Cereal	81.1	34.4	57.5
Health expenses	17.7	9.9	8.0
Clothing	17.7	20.9	11.1
Draught power	57.3	63.7	44.2
Funeral support	23.0	17.3	20.8
Groceries (except mealie meal)	24.9	18.2	14.6
Labor for farming	33.6	19.1	16.6
Cash loan	38.2	30.4	24.1
School fees	24.3	12.4	7.4
Small farm tools	25.2	14.7	14.6
Plough	33.8	41.2	25.8
Care of the ill member	--	--	9.2
Care of the children	--	--	6.7
Main source of support			
Burial society	--	1.9	2.5
Savings clubs	--	1.3	0.5
Zunde raMambo	--	0.2	1.0
Cooperatives	--	0.6	0.7
Extended family	--	73.1	65.0
Community based organisation	--	1.6	2.7
Church support group	--	2.1	3.1
Community members	--	19.3	24.5

3.2 Livelihood security and components

Two of the primary objectives of this report are to 1) assess the current livelihood security status of households in CARE's operational area; and 2) examine how livelihood security has changed over time. In this section the data from the 2007 and 2009 HLSAs are used to undertake these tasks.

In addition to livelihood security overall, the HLSA looks at four important sub-components of livelihood security: food security, health security, education security and income security.⁴⁵ In both the 2007 and 2009 surveys, data were collected on a number of indicators that are used to assess how households are doing in each of these areas. For an overall assessment of how households are faring currently, the indicators are combined into an index with weights chosen using factor analysis. Factor analysis is a statistical procedure that chooses index weights based on how indicators relate to one another, that is, on the intercorrelations among the indicators. The result is an index that optimally weights each

⁴⁵ Other important security areas, which could not be measured using the data collected, are nutrition, shelter, community participation and personal safety.

indicator based on the strength of its association with the overall index. To create an index of livelihood security, the indices calculated for its four sub-components are combined, again using factor analysis.

It is important to note that the actual numerical value of each index has no meaning (although the values of its component indicators do). However, *differences* in the index values across geographical areas and time *do* have meaning. This is the primary purpose of the indices: to examine differences in order to gain an understanding of how the districts CARE works in compare with one another and whether, in the context of rapid, country-wide political and economic change, there have been any changes in livelihood security over the last two years. As will be seen in the next section, the indices will also be used to assess the impact of CARE's interventions.⁴⁶

3.2.1. Food security

The following four indicators are used to assess households' food security:

1. Number of months in the past year that the household had access to adequate food for its members;
2. Number of meals eaten by adults on the previous day;
3. Dietary diversity score, defined as the number of nutritionally important food groups, out of seven, from which food was consumed on the previous day (the groups are: cereals, roots, and tubers; pulses and legumes; dairy; meat, fish, seafood, and eggs; oils and fats; fruits; and vegetables); and
4. Coping strategies index, an index based on the frequency and severity of the use of 10 coping strategies in response to food insecurity (see Annex 3 for details on computation of this index).

The first two indicators are measures of the quantity of household food consumption: one to measure access to quantities over the year, and the other to measure consumption at a fixed point in time. The third indicator measures the quality of household diet, and the last indicator measures how household food consumption patterns adjust in times of stress. SPSS output from the factor analysis index of food security, including "factor loadings" that show the relative weight placed on each indicator, is given in Annex 4. The highest weight is placed on the coping strategies index and the lowest on the dietary diversity score.

Table 30 reports the mean values for each of the indicators and the food security index, broken down by district, for 2009. For the population as a whole, the average number of months for which households have adequate food for all of their members (from all sources, including home production and purchases) is very low, at just under three (out of twelve months). The district with the lowest number of months of adequate food is

⁴⁶ To facilitate comparisons over time, the indices are created using combined data from both 2007 and 2009. The indices calculated separately for the years and that using combined data all give similar relative weights to the underlying indicators.

Gweru, for which the typical household in both rural and urban areas only had enough food for 2 months between April 2008 and April 2009, the month the survey took place. The district with the highest number of months of sufficient food is Gutu, at still only 3.7 months. Another indication that households are struggling to have enough food for their members is that the average number of meals per day is only 2.1. Thus the typical household was not eating three meals a day. This indicator varies little across the districts.

Table 30. Average food security index and index components, by district

	Number of months with sufficient food	Number of meals in the previous day	Dietary diversity score	Coping strategies index	Food security index
Chivi	2.9	2.1	3.8	109.6	50.7
Bikiti	2.5	1.9	3.1	83.1	39.2
Masvingo Rural	2.5	2.2	3.5	95.2	44.3
Mberengwa	2.4	2.2	3.7	87.9	39.9
Mwenezi	3.4	2.2	3.5	106.1	52.1
Zaka	2.8	2.0	3.5	86.8	40.4
Gutu	3.7	2.0	3.7	105.8	51.7
Gweru Rural	2.1	2.1	3.3	94.4	42.6
Zvishavane	2.8	2.2	3.6	99.3	47.1
Gweru Urban	2.0	2.3	3.3	100.0	45.5
Masvingo Urban	2.2	2.0	3.2	100.0	45.7
All	2.8	2.1	3.5	95.4	44.8

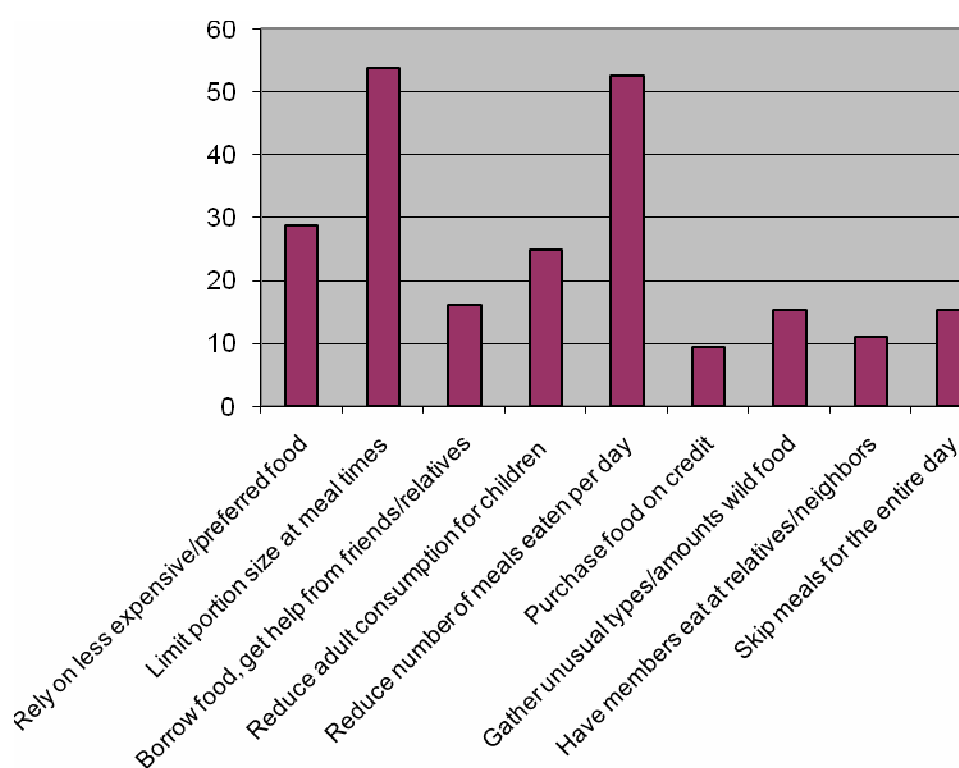
With respect to dietary quality, the average dietary diversity score is 3.5 out of the seven food groups. Being less than 4, this indicates that the majority of households have a low quality diet.⁴⁷ Further examination of the data shows that the large majority of households have a diet that contains no dairy products, animal protein or fruit, and only 50 percent consume legumes. On a positive note, over 80 percent consume vegetables daily.

While there is little variation across the districts in the dietary diversity score, Bikiti stands out as having a particularly low one, at 3.1. The coping strategies index also varies little across the districts. However Bikiti, again has the lowest index value.

⁴⁷ See Smith, Lisa C., Harold Alderman, and Dede Aduayom, 2006. *Food security in Sub-Saharan Africa: New estimates from household expenditure surveys*. Research Report No. 146. International Food Policy Research Institute, Washington D.C.

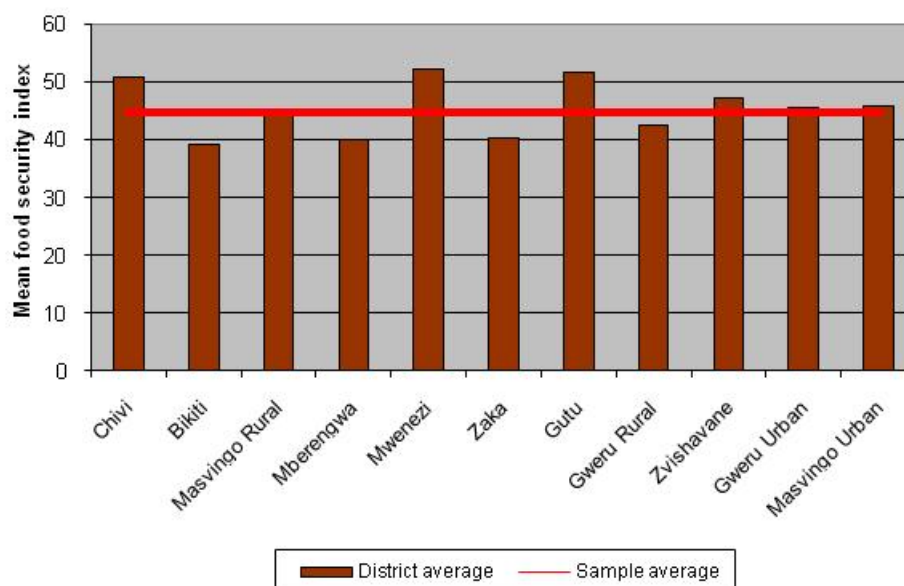
Figure 23 shows the percentage of households that had employed the 10 coping strategies more than 2 times per week in the month before the 2009 survey. The strategies are listed from least to most severe (left to right). Those employed the most are limiting portion sizes at meal times and reducing the number of meals eaten per day, both practiced by over 50 percent of households. The most severe strategies are used the least, but still by near or over 10 percent of households. Indeed over 15 percent of households reported having resorted to skipping meals for the entire day more than 2 times in a week during the previous month.

Figure 23. Percent of households employing various coping strategies in order to access food more than 2 days a week (2009)



Overall, this examination of the four food security indicators suggests that food insecurity is very high in CARE's operational area. Figure 24 shows the food security index for each district compared with the overall sample mean. Consistent with the indicators that make up the index, Chivi, Mwenezi and Gutu are doing the best. Bikiti is doing the worst, followed by Zaka and Mberengwa.

Figure 24. Mean food security index, by district



3.2.2 Health security

Households' health security is assessed using the following indicators:

1. Percentage of households with no illness of members in the last two months;
2. Sanitation of latrine score. Households are assigned scores as follows:
 - No latrine (0)
 - Non-blair latrine (1.5)⁴⁸
 - Blair latrine without hand washing facility (2)
 - Blair latrine with hand washing facility (3);
3. Percent of households possessing soap;
4. Sanitation of water source score. Households are assigned scores as follows:
 - River, stream or dam (0)
 - Unprotected well (1)
 - Protected well (2)
 - Borehole or pump (3)

⁴⁸ For the "other latrine" category it is not clear whether these latrines are improved or not. DHS data indicate that in rural areas ½ of non-Blair latrines are improved and ½ are not. Thus a score of 1.5 has been assigned to these responses.

- Public/communal tap (4)
- Piped water inside or piped water outside of home (5).

The first indicator is a direct measure of the health of household members. The last three represent households' health environment. The percentage of households falling into each of the sanitation of latrine and water source categories are given in Table 23.

Table 31. Average health security index and index components, by district

	Percent of households with no illnesses in the last 2 months	Sanitation of toilet facility score	Percent of households that possess soap	Sanitation of water source score	Health security index
Chivi	72.6	0.4	83.4	1.8	36.5
Bikiti	64.9	0.6	54.1	2.2	41.0
Masvingo Rural	67.9	0.4	77.0	2.1	39.5
Mberengwa	73.4	0.4	74.5	2.0	37.5
Mwenezi	57.4	0.4	70.3	1.9	36.6
Zaka	55.7	0.2	75.4	2.0	36.0
Gutu	70.9	0.4	73.9	1.7	35.5
Gweru Rural	77.4	0.5	78.6	1.9	38.5
Zvishavane	56.1	0.6	83.0	2.3	45.5
Gweru Urban	58.3	0.6	90.0	4.7	68.2
Masvingo Urban	69.2	1.2	80.7	4.3	72.8
All	65.6	0.5	74.2	2.1	39.9

As seen in Table 31 two-thirds (66 percent) of all households reportedly had no illnesses among household members within the last two months. Data show that in the two months preceding the survey, illness of household members was least common in Gweru Rural and Mberengwa districts and most common in Zaka and Zvishavane districts.

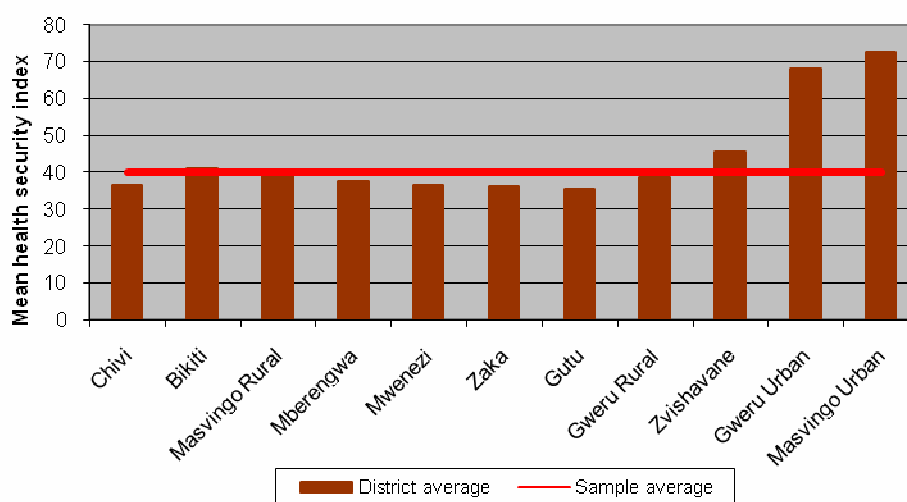
Interestingly, data show that on average, households in Masvingo Urban district have more than twice the average index value for sanitation of latrines. Access to sanitary latrines is apparently lowest in Zaka district. All other districts showed minimal variation from the mean in terms of sanitation of latrine facilities.

Nearly three-quarters of all households possess soap for washing hands. There is however, considerable difference in this indicator in some districts. For instance, possession of soap was highest in Gweru Urban district (90 percent) and lowest in Bikiti district (54.1 percent). Possession of soap was also well above average in Chivi and Zvishavane districts (both at 83 percent). Households in both Gweru Urban and Masvingo Urban districts were much more likely to have access to sanitary water sources

than their counterparts in rural districts. This is not surprising given the difference in access to all forms of infrastructure between urban and rural communities. Among all districts, households in Gutu district have the lowest access to sanitary water sources.

Overall health security index values suggest that health security is considerably higher in urban than in rural districts (see Figure 25). Again, key contributing factors likely include greater access to infrastructure in urban areas (both sanitation and water facilities). It may also be that urban households have greater access to health education messages designed to prevent illness and greater access to soap and other hygiene supplies in local markets. Across the entire sample, the health security index was highest for Masvingo Urban district (72.8) and lowest for Gweru Rural district (35.5). Together, these findings demonstrate considerable variation across districts in terms of key determinants of health security.

Figure 25. Mean health security index, by district



3.2.3 Education security

The following indicators are used to assess the state of education security:

1. The average of the highest level of education completed by adult household members (18 and older). Each member is assigned a score, as follows:
 - No education (1)
 - Grades 1-4 (2)
 - Grades 5-7 (3)
 - Form 1-2 (4)
 - Form 3-4 (5)
 - Form 5-6 (6)

- Tertiary (7).
2. Average education gap of school-age household members, defined as the number of years of education achieved minus the number of years that should have been achieved at a person's age, averaged across all household members 5-17 years old.⁴⁹
 3. Access to education of school-age household members. Members 5-17 years old are assigned scores as follows:
 - Not enrolled (0)
 - Attends "some days" with insufficient school supplies (1)
 - Attends "some days" with sufficient supplies (2)
 - Attends "all days" with insufficient supplies (3)
 - Attends "all days" with sufficient supplies (4).

The scores reported in the tables below represent the average of all adult or school-age members in individual households.

The first two indicators represent the level of educational attainment by adults and school-age individuals, respectively. The third indicator measures the current level of participation in schooling by school-age children. For those who do attend, it also takes into account whether they have sufficient supplies ("a full set of stationary and scholastic materials").

Table 32. Average education security index and index components, by district

	Highest level of education completed by adults score	Education gap of school-age household member	Access to education of school-aged children score (0-4)	Education Security index
Chivi	3.9	-0.41	1.4	60.5
Bikiti	3.8	-0.45	1.5	60.0
Masvingo Rural	4.1	-0.42	1.6	61.8
Mberengwa	3.7	-0.48	2.4	63.6
Mwenezi	3.3	-0.60	2.3	60.1
Zaka	3.9	-0.44	1.1	58.5
Gutu	3.9	-0.34	1.9	63.5
Gweru Rural	3.6	-0.51	1.3	58.0
Zvishavane	3.7	-0.40	1.6	60.6
Gweru Urban	3.8	-0.30	1.3	60.9
Masvingo Urban	4.1	-0.42	1.5	61.6

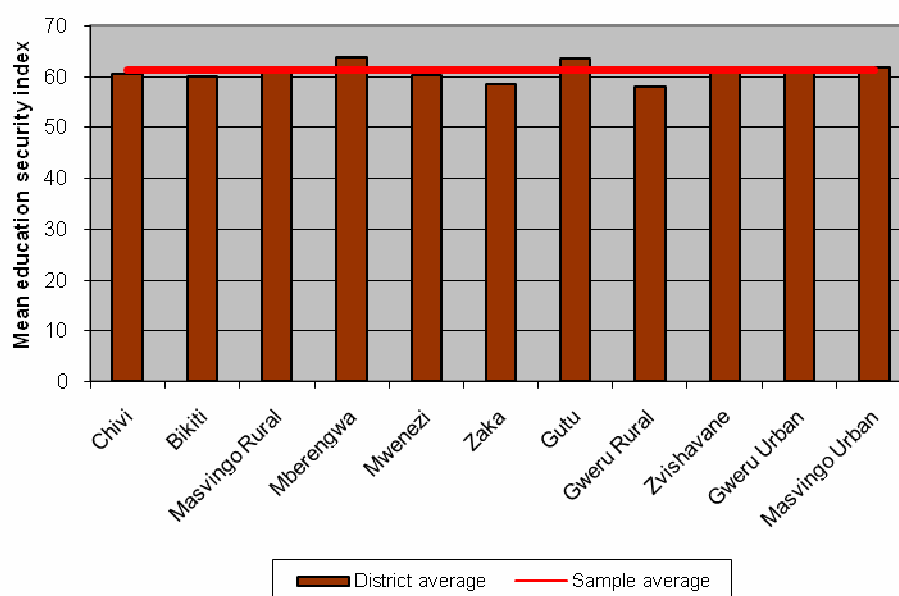
⁴⁹ For both this indicator and the next, data were collected for 3-24 year olds but those too old or too young to be in school were not included in the calculations. Households not having any school-age children (approximately 14 percent) were assigned the ward mean score, which represents the situation they would be in if they did have school age children.

All	3.8	-0.43	1.7	61.1
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Table 32 shows that the average adult has at least attended high school, reflecting the historically high education levels of Zimbabwe's population. The adult education score varies little across districts. The education gap of school-aged children is negative on average, which means that the average child is not achieving the level of education that she or he is supposed to. In this case there is some variation across the districts, with the gap being highest for Mwenezi and Gweru Rural and the lowest for Gweru Urban.

The access to education of school-age children score is 1.7 out of 4 for the sample as a whole, which is quite low. In fact only approximately 28 percent of children regularly attend school every day. The score is highest by far for Mberengwa and Mwenezi. Perhaps these districts have been shielded from some of the recent instability in Zimbabwe's education system. The score is lowest in Zaka. The education security index varies very little across the districts (see Figure 26).

Figure 26. Mean education security index, by district



3.2.4 Income security

Household ownership of various types of assets is used to assess income security, including consumption assets and productive assets. The three consumption assets are: radio or TV, bicycle, and bed. The three productive assets are plough, oxcart and

wheelbarrow. A final indicator is the value of livestock owned, including cattle, sheeps/goats, and poultry.⁵⁰

Ownership of assets is an indicator of income security for two reasons. First, assets can be sold in times of economic stress to meet household needs: households with more assets are thus less vulnerable to economic shocks. Second, ownership of assets is a cumulative measure of households' past incomes. Households that have been able to accumulate many assets have experienced sustained periods of incomes above their consumption requirements. Conversely, households with few assets have incomes that are only sufficient to meet their consumption requirements, or have experienced economic shocks that have forced them to sell off their assets to meet consumption needs. Thus, asset ownership provides information about the long-term trend of household income relative to the consumption requirements of the household.

Note that the assets used to compute the income security index include agricultural assets. Since urban households are less engaged in agriculture, agricultural assets are not as relevant markers of urban incomes as they are of rural incomes. Nevertheless, the agricultural assets are included in the calculation of the income security index because there are too few non-agricultural assets to construct a meaningful index. Note that the urban households represent only six percent of the sample, so the sample-wide results are not greatly distorted by their inclusion in the index calculation. It should be kept in mind, however, that comparisons across the urban and rural areas using the index are not representative of the true relative income security of the populations. For this reason, the index results for the urban areas are not reported.

As described in Section 3.1.4, the consumption asset information portrays a population in deep poverty. Ownership of productive assets is also quite low. Table 33 shows wide variation across the districts in the percent of households owning each asset as well as in the value of livestock owned. This leads to substantial variation across the rural districts in the income security index (see Figure 27). Bikiti has the lowest income security, followed by Masvingo Rural and Zaka. The rural districts that are most income secure are Mberengwa and Gweru Rural.

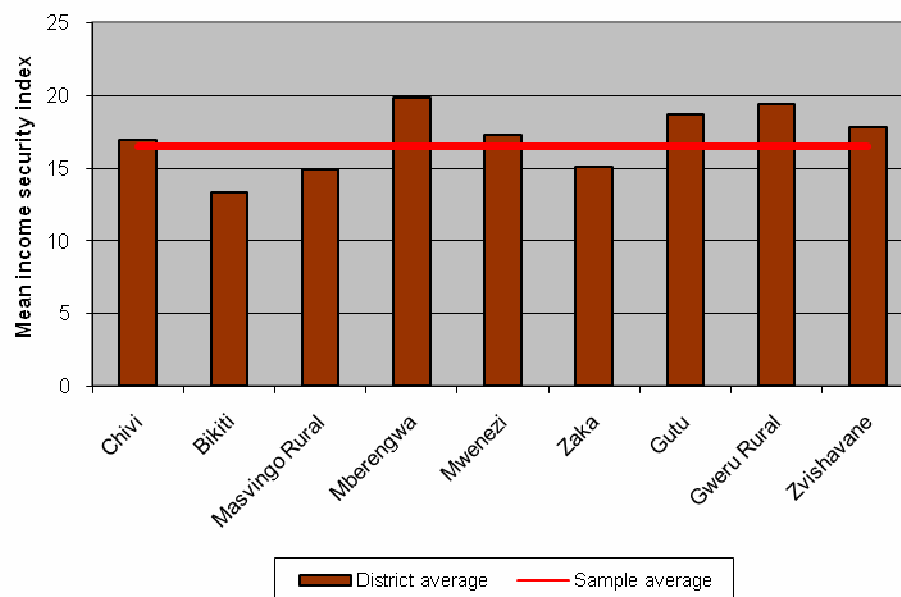
⁵⁰ The prices used are in Rand and are calculated as the average of prices for three districts in Masvingo Province (Masvingo, Bikita and Mwenezi) and one district in Midlands Province (Mberengwa). The prices were provided by Care/Zimbabwe. They are (in parentheses): cattle (2300), sheeps/goats (362.5), poultry (52.5).

Table 33. Means of income security index and index components, by district

	Percent of households owning a radio or TV	Percent of households owning a bicycle	Percent of households owning a bed	Percent of households owning a plough	Percent of households owning an oxcart	Percent of households owning a wheelbarrow	Value of livestock owned	Income security index
Chivi	18.1	11.5	48.9	47.7	20.7	36.7	3,230.3	16.9
Bikiti	6.6	5.1	31.2	32.3	7.8	23.1	1,666.3	13.3
Masvingo Rural	23.3	6.7	47.0	31.5	17.2	33.2	2,923.1	14.9
Mberengwa	23.2	15.8	61.1	59.1	27.2	45.0	5,141.2	19.8
Mwenezi	25.6	16.2	33.6	52.8	17.7	31.3	5,137.9	17.3
Zaka	19.1	9.1	39.3	37.5	14.0	32.5	3,086.6	15.0
Gutu	17.5	12.1	52.2	48.2	26.1	46.3	3,983.0	18.6
Gweru Rural	25.5	23.0	67.2	55.4	32.3	45.2	3,793.8	19.3
Zvishavane	22.0	9.7	54.4	47.3	28.9	40.0	3,494.0	17.8
Gweru Urban	72.3	21.0	94.2	3.4	1.7	19.3	1,706.3	a/
Masvingo Urban	41.7	12.4	65.5	7.6	3.4	10.2	565.7	a/
All	21.2	11.2	48.9	41.9	18.9	35.4	3449.6	16.5

a/ The income index value is not reported for the urban areas as it is not comparable to that of the rural areas (see text).

Figure 27. Mean income security index (rural areas only), by district



3.2.5 Livelihood security

Figure 28. Mean livelihood security index, by district

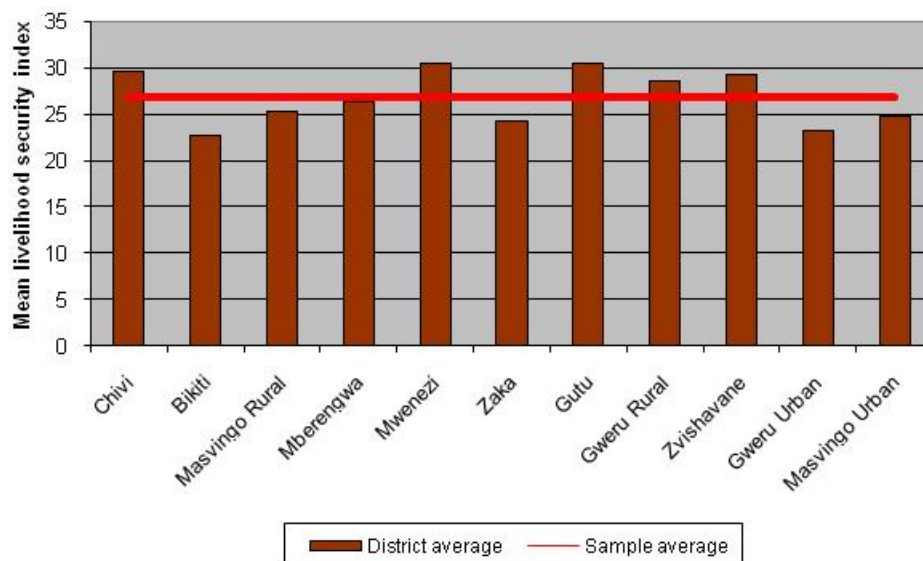


Figure 28 shows the mean value of the livelihood security index for each district. Among the rural areas, the most livelihood insecure district is Bikiti, followed by Zaka. These districts are the most livelihood insecure because they have the lowest food and income

security (see Figures 24 and 27). Chivi, Mwenezi and Gutu are the most livelihood secure.

3.2.6 Changes in livelihood security between 2007 and 2009

Table 34 reports on the changes in food, health, education, income and livelihood security that have taken place from 2007 to 2009. All of the changes are found to be strongly statistically significant (significant at the 1% level).

The food security index fell by almost 30 percent. The decline is associated with a sharp drop in the number of months with adequate food along with a decline in the coping strategies index. The other food security indicators changed very little over the two years. The poor state of food security in 2007, with the typical household still not having access to sufficient food year-round, eating only two meals a day and having a low quality diet, can be partly explained by the drought conditions in that year and consequent poor harvest. That the situation has deteriorated even further—the number of months with adequate food declined by over 4 months—is likely linked to the record low harvest in 2008⁵¹, continuously deteriorating economic conditions, and the temporary suspension of international food aid.

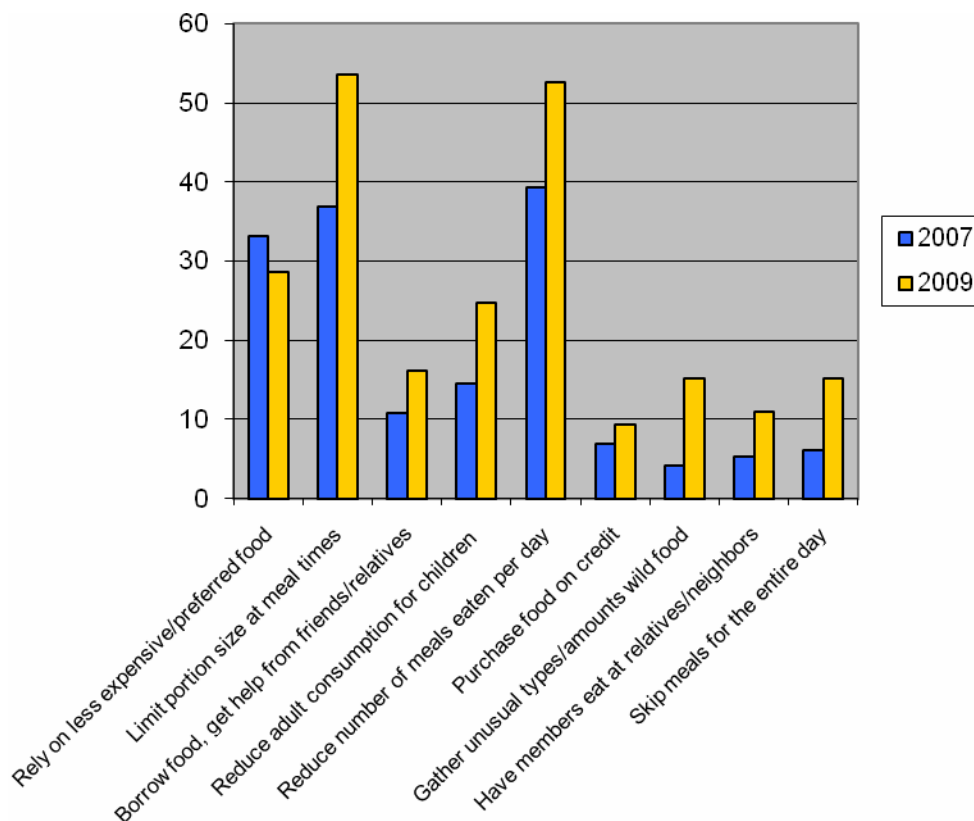
Figure 29 takes a closer look at the decline in the coping strategies index, showing that there have been large increases in the percentage of households employing almost all of the coping strategies frequently (more than 2 days a week) since 2007. The percent of households that reported limiting portion sizes at meal times rose from 37 percent in 2007 to over 50 percent in 2009. The percent that borrowed food or relied on the help of friends and relatives to eat rose from 11 to 16 percent. Similarly, those that reduced adult consumption so children can eat and reduced the number of meals eaten per day rose precipitously. A sure sign of an escalation in food insecurity is when households increase their borrowing in order to purchase food. While a small percent of households do this, that percent has increased from 6.9 to 9.3. The incidence of the other coping strategies that households use in response to situations of severe food insecurity—increased reliance on wild foods, having household members eat elsewhere, and skipping meals for the entire day—have more than doubled over the two-year period.

⁵¹ UN Office for the Coordination of Humanitarian Affairs (OCHA), 29th January 2009.

Table 34. Comparison of livelihood security index and component means across the years

	2007	2009	Difference (2009- 2007)	p-value for difference
Food security				
Number of months with sufficient food	7.1	2.8	-4.3	0.000
Number of meals in the previous day	2.1	2.1	0.0	0.030
Dietary diversity score	3.2	3.5	0.3	0.000
Coping strategies index	103.5	95.4	-8.1	0.000
Food security index	63.2	44.8	-18.3	0.000
Health security				
Percent of households with no illnesses in the last 2 months	55.0	65.6	10.6	0.000
Sanitation of toilet facility index	0.5	0.5	-0.1	0.000
Percent of households that possess soap	61.4	74.2	12.8	0.000
Sanitation of water source index	2.0	2.1	0.1	0.000
Health security index	38.9	39.9	1.0	0.003
Education security				
Number of years of education for adult members	3.5	3.8	0.3	0.000
Number of years of education for child members	-0.5	-0.4	0.0	0.000
Access to education of school-aged children	1.9	1.7	-0.2	0.000
Education security index	60.6	61.1	0.5	0.005
Income security				
Whether own plough	48.6	41.9	-6.7	0.000
Whether own wheelbarrow	40.3	35.4	-4.9	0.000
Whether own radio and or tv	19.1	21.2	2.1	0.003
Whether own bicycle	12.7	11.2	-1.5	0.009
Whether own bed	43.2	48.9	5.6	0.000
Value of livestock owned	4299.6	3449.6	-850.1	0.000
Income security index	17.9	16.5	-1.4	0.000
Livelihood security				
Livelihood security index	35.8	26.9	-8.9	0.000

Figure 29. Percent of households employing various coping strategies in order to access food more than 2 days a week, by survey year



In contrast to food security, health security and education security did not decline over the two years. The percent of households with no illnesses in the previous 2 months in fact increased by 10.6 percentage points. The percent of households that possess soap increased as well. The health security index itself showed virtually no change at all. With respect to education, the data reveal no change in the access to education of school-aged children despite the sharp drops in school attendance nationally that were reported in 2008.⁵²

In terms of income security, there was a substantial decrease in the average value of livestock owned (a decrease in value of almost 20 percent), and also decreases in the percentage of households owning ploughs and wheelbarrows. The income security index declined only slightly, by about eight percent from 2007 to 2009.

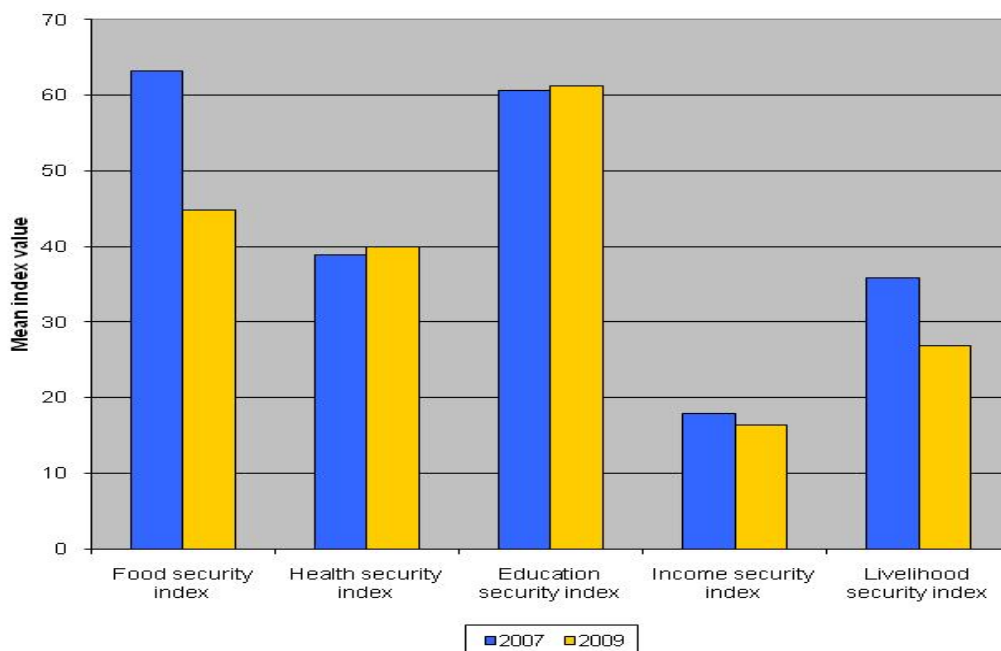
The livelihood security index declined by 25 percent between 2007 and 2009.

Figure 30 shows graphically that this large deterioration in livelihood security of households in CARE's operational area is a result of a substantial erosion of household

⁵² UNICEF. 10 February 2009. Zimbabwe education crisis worsens. http://www.unicef.org/media/media_47915.html

food security and that it is in the area of food security that households have felt the impact of Zimbabwe's current crisis the most.

Figure 30. Comparison of livelihood security index and component means across the years



4. Impact of CARE interventions

4.1 Participation in CARE interventions

Respondents were asked to note all CARE project interventions in which they had participated, in any year since 2005. The data in Table 35 give evidence that from 2005 to 2009 the percent of people participating in all forms of CARE activities steadily increased and in many cases the percentages doubled. There were marked increases in years 2008 and 2009 in the percent of beneficiaries partaking in CARE's conservation farming activities (14% in 2009 versus 4% in 2007), and targeted food assistance (79% in 2009 versus 45% in 2007) suggesting an appropriate response on the part of CARE to the dramatic shortfall of cereal production in 2007. Conservation farming (17%), agricultural input distribution (13%), and community gardens (12%) comprise the ANR interventions most frequently cited by participants. The most mentioned TFA interventions for all combined years were vulnerable group feeding (VGF) (80%) and school feeding (33%).

Table 35. Participation in CARE interventions, 2005 to 2009

	CARE projects						Current participation through other NGOs
	Any year from 2005-09	2005	2006	2007	2008	2009	
		(Percent of households)					
Any CARE intervention	89.6	43.1	47.3	55.5	79.6	84.0	
Agriculture and natural resources (ANR)							
Community gardens	12.1	5.9	6.5	7.8	9.7	10.5	4.6
Household gardens	7.1	2.6	2.7	3.6	4.5	5.7	3.1
Conservation farming	16.5	1.1	2.1	4.4	12.8	14.4	1.9
Seed production and storage	1.5	0.4	0.5	0.7	0.9	1.0	0.6
Agricultural inputs distribution	12.5	4.3	4.6	5.6	5.1	4.6	5.4
Sweet potatoes	4.0	1.1	1.6	2.0	2.8	2.7	0.2
Harvesting of natural resources	3.0	0.9	0.6	1.0	2.6	2.6	0.3
Agro-forestry	1.5	0.4	0.4	0.5	0.7	1.0	0.6
Cassava	1.1	0.1	0.1	0.1	0.8	0.8	0.1
AGENT (farmer groups)	1.3	0.6	0.5	0.7	1.0	1.1	0.3
Small livestock	0.3	0.0	0.2	0.1	0.1	0.1	0.6
Any ANR intervention	38.4	14.5	15.7	20.1	28.2	30.7	
Small economic activity development (SEAD)							
Internal savings and lending groups	12.4	3.8	4.4	5.5	7.2	8.5	0.7
Targeted food assistance (TFA)							
Feeding (VGF, Safety net)	80.2	29.4	32.4	37.4	65.5	73.3	6.1
Feeding (CI, Institutional)	6.1	1.1	1.6	2.5	4.7	4.6	1.9
School feeding	32.7	8.8	10.7	14.6	26.1	26.5	6.8
CHBC (ECHO food support)	2.5	0.5	0.6	1.4	2.1	1.9	0.7
Any TFA intervention	84.5	33.4	37.9	45.4	73.2	78.7	
Other							
Rehabilitation of water points	2.7	0.8	0.6	1.2	1.6	1.6	1.5
Construction of toilets	2.9	1.3	0.9	1.1	0.7	0.5	1.4
Food for work/assets	5.8	2.5	1.9	2.0	1.4	1.0	0.9
OVC	1.9	0.4	0.5	0.8	1.2	1.3	1.8
CHBC (No food support)	1.9	0.2	0.3	0.6	1.4	1.6	0.6

The data in Table 35 show how the percent of households in CARE's programs has changed over time, and compares the percentages of households who have participated in specific activities. Aggregate data for the entire range of interventions within the five year period indicate that the vast majority (85%) of those surveyed have received targeted food assistance (TFA), over one-third (38%) of households participated in some form of agriculture and natural resource (ANR) program, and 12 percent of households participated in small enterprise development (SEAD). As the data in Table 35 indicate, during the five year period between 2005 and 2009, only a small number of (16%) of households were the

recipients of TFA or SEAD through activities implemented by other NGOs. With respect to ANR interventions, only 18 percent of households in the survey mentioned receiving assistance through other NGOs compared to the 31 percent that took part in CARE's ARN activities.

Figure 31 compares the percentage of households participating in any CARE project activity, by district for the year 2009. Findings indicate that overall participation was highest in Mberengwa, Zaka, Mwenezi, and Rural Masvingo districts, and lowest in Chivi district.

Figure 31. Percent of households participating in any CARE intervention in 2009, by District

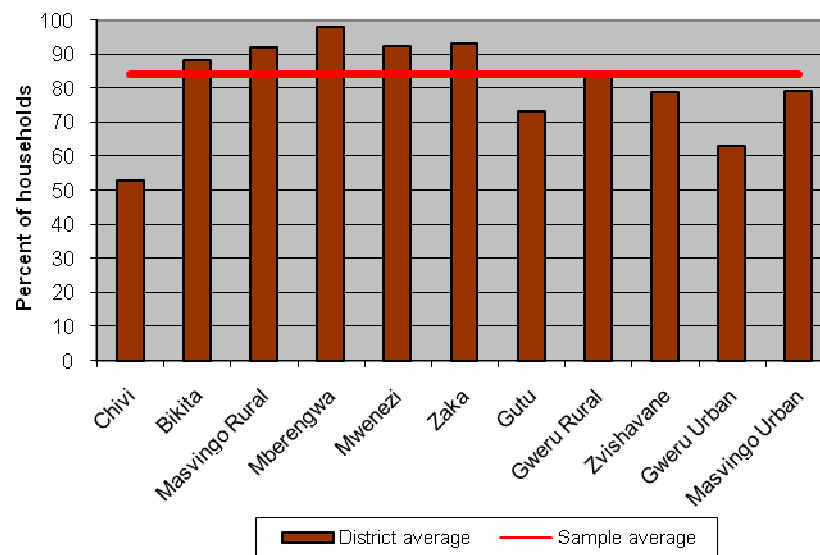
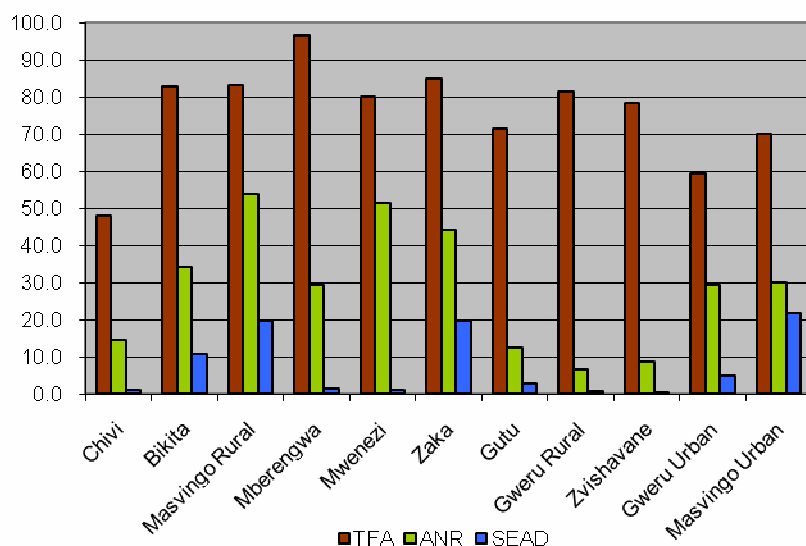


Figure 32 provides data on participation in various activities disaggregated by district. The data give evidence that TFA support was sizeable across all districts. Targeted food assistance was reported by virtually all (97%) respondents in Mberengwa district, and by the vast majority of surveyed households in Zaka(85%), rural Masvingo (83%), Bikita (83%) rural Gweru(81%) and Mwenezi (80%) districts. This finding is notable, considering the severe problems in both food access and availability that have plagued Zimbabweans. Targeted food assistance was reported by fewer than half (48%) of the respondents in Chivi district.

The next major forms of assistance mentioned by respondents were CARE's ANR interventions. This result is significant as agriculture is the primary livelihood strategy for the majority of sampled households (see section 3.1.1). Over half of the surveyed households in rural Masvingo and Mwenezi districts participated in ANR activities, and close to half (44%) of households in Zaka report partaking in this form of aid. Participation in ANR activities was not as common in rural Gweru or Zvishavane district.

Close to 20 percent of surveyed households in rural Masvingo and Zaka districts participated in SEAD activities; in contrast, less than 1 percent of households in Zvishavane, rural Gweru, and Chivi districts were involved in similar interventions.

Figure 32. Percent of households participating in ANR, SEAD and TFA interventions in 2009, by District



4.2 Impact of interventions

This section examines the impact of CARE’s interventions on beneficiary households. The focus is on using data collected during the 2009 HLS survey to measure the impact of CARE’S interventions with regard to intended outcomes. These intended outcomes include food security, health security, education security, income security, and livelihood security. The section begins with an explanation of the analysis methods used then moves on to a regression analysis of the overall impact of CARE’s interventions. This is followed by an analysis of the impact of CARE’S ANR, SEAD and TFA interventions. Finally, the impact of interventions contained within CARE’s three program components--food security, livelihoods promotion and social protection--is examined. In accordance with the Terms of Reference, emphasis is placed on determining whether participation in combinations of interventions have any added benefit over participation in single interventions.

Descriptive versus regression analysis of the impact of CARE’s programs

To begin to answer the question of whether combinations of interventions have any added benefit to households over single interventions, Figures 33 and 34 show how the livelihood index and its component indices differ across households in various intervention groups. The groups are:

- participation in no CARE intervention (16% of households);

- participation in one single CARE intervention (35.6%);
- participation in both ANR and TFA interventions (21.7%);
- participation in both SEAD and TFA interventions (7.1%); and
- participation in other multiple interventions (19.7%).

Figure 33. Means of food, health, education and income security indexes for no, single, and multiple intervention household groups

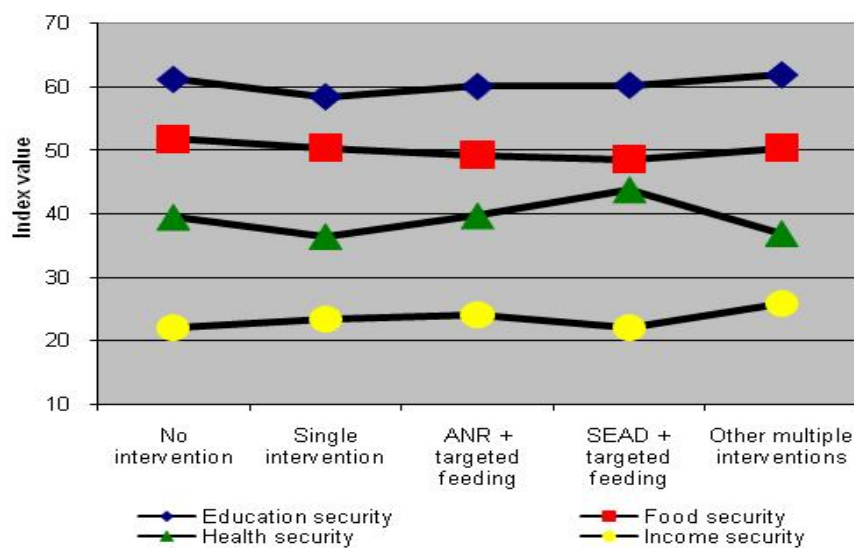
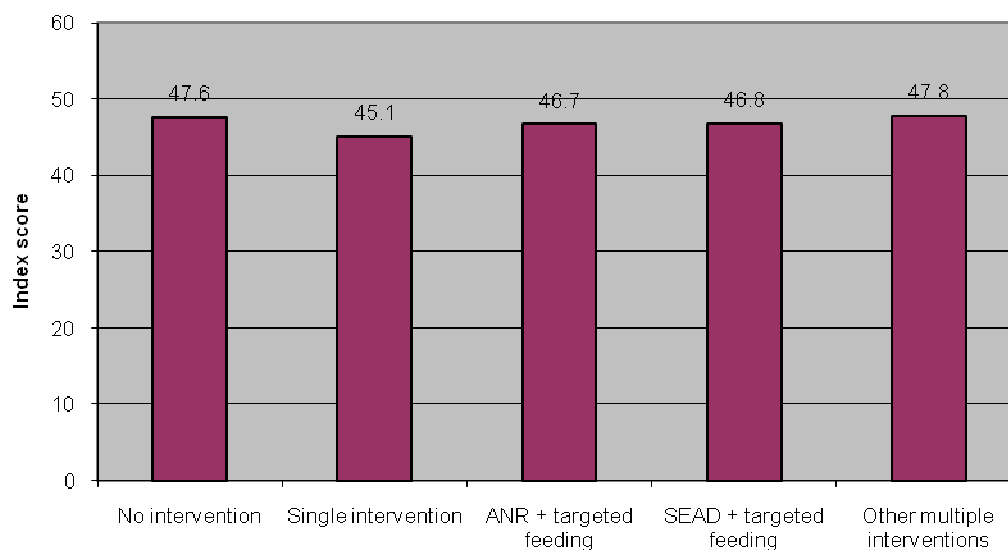


Figure 34. Livelihood security index mean for groups of households participating in no, single, and multiple CARE interventions



One would expect that compared to households participating in no interventions, those participating in at least one intervention would have higher values for all of the indices. Further, one would expect that those participating in more than one intervention, say both an ANR and TFA intervention, would have even higher index values, especially for food security. As can be seen in Figure 34 however, none of the component indices appear to increase across the “no”, “single” and “multiple” intervention groups. In fact the food security index declines across the groups. The same is found for the livelihood security index (Figure 28). This result, taken at face value, leads to the conclusion that CARE’s interventions have had no impact and, furthermore, that multiple interventions combined have no added benefit over single interventions.

In fact, a descriptive impact analysis such as this suffers from a major drawback: it fails to account for the fact that it is indeed the most poor and vulnerable households that have been purposefully targeted for participation in CARE’s interventions. Intervention participants are thus likely from the start to be more livelihood insecure than non participants. Further, if the interventions are well targeted, the poorest and most vulnerable households are also likely to be participating in a greater number of interventions. Given this “selection bias”, it is not surprising to find that households participating in CARE interventions are not doing any better than those that do not. However, it does not mean that CARE’s interventions have made participating households worse off.

In this report, regression analysis is used to evaluate impact because it allows us to statistically control for household characteristics, including some that were originally used for targeting households. It thus allows a more accurate evaluation of whether CARE’s interventions have had a positive effect.

CARE employs a participatory, three-step process for beneficiary selection. At each step, certain targeting criteria are employed to make sure that only the most vulnerable households are included in its interventions (see Targeting Guide in Annex 2). First, community members rank households and provide a list of potential beneficiaries based on targeting criteria determined by CARE. Second, CARE holds a public verification meeting with the community. Finally, CARE visits 5 percent of households to verify that beneficiaries meet targeting criteria. The following are the targeting criteria:

- Household has no major means of self-support (including assets, cash income, and remittances);
- Household has a chronically ill member;
- Household is headed by a child;
- Household is headed by an elderly person;
- Household is headed by a widowed single parent;

- Household is headed by a disabled person;
- Household has a mentally or physically disabled member;
- Household is hosting one or more orphans;
- Household has a high dependency ratio (greater than 7 members); or
- Household is considered to be destitute (with a vulnerable pregnant lactating mother or malnourished children).

By controlling for some of these criteria, regression analysis is able to overcome some of the selection bias inherent in descriptive analysis. It is only partially able to do so because not all of the criteria are measureable using the HLS 2009 data set. Additionally, some other factors entering into the participation choice are not represented here. Because of this, the regression coefficients on intervention variables will not be an accurate reflection of the *strength* of impact of CARE's programs.⁵³ They can give some evidence, however, of whether or not there is any positive impact.

In interpreting the regression results, it is important to note that due to the presence of selection bias, in the event that a coefficient is statistically insignificant or even negative and significant, we can come to no conclusions about impact. It should also be kept in mind that because we are only partially able to control for the fact that the very poorest households are targeted, the regression analysis will *underestimate* the benefits of CARE's interventions.

Table 36 lists the variables that are controlled for in the regressions, along with sample descriptive statistics, starting with those that help control for CARE's targeting criteria.

The household size variable helps to identify households with large numbers of members (a proxy for a high dependency ratio). The next four variables identify households with specific types of vulnerabilities that are purposely selected to participate in CARE's interventions. Finally, by controlling for households' income using the income index, we are able to identify households that have been selected as participants because they have no major means of self support.⁵⁴

⁵³ The positive or negative sign and statistical significance of regression coefficients are used to evaluate impact.

⁵⁴ Another reason why the exact magnitude of coefficients is not focused on is that we have not been able to account for issues of endogeneity, such as the endogeneity of income and many other variables that are jointly determined with the outcome variables.

Table 36. Sample descriptive statistics for independent variables controlled for in regression analysis

	Mean	Minimum	Maximum	Standard deviation
Variables that help control for targeting criteria				
Household size	5.7	1.0	15.0	2.2
Child headed household	0.0	0.0	1.0	0.1
Elderly headed household	0.3	0.0	1.0	0.4
HH caring for an orphan	0.5	0.0	1.0	0.5
HH member is chronically ill	0.1	0.0	1.0	0.3
Income index	23.7	0.1	100.0	14.9
Other variables				
Female household head (HHH)	0.5	0.0	1.0	0.5
HHH no education a/	0.1	0.0	1.0	0.3
HHH completed some primary	0.4	0.0	1.0	0.5
HHH completed some secondary	0.4	0.0	1.0	0.5
Percent females 0-15 a/	20.9	0.0	83.3	17.7
Percent females 15-64	27.9	0.0	100.0	16.5
Percent females 64+	3.6	0.0	100.0	10.6
Percent males 0-15	20.4	0.0	100.0	17.6
Percent males 15-64	22.8	0.0	100.0	17.5
Percent males 64+	2.5	0.0	100.0	8.0
Land ownership (acreage groups)	2.5	1.0	7.0	1.5
Primary source of cash income				
None	0.187	0	1	0.390
Formal employment	0.058	0	1	0.233
Sales of livestock	0.119	0	1	0.323
Trading and self employment	0.215	0	1	0.411
Government public works	0.002	0	1	0.042
Sales of agricultural products	0.050	0	1	0.218
On-farm casual labour	0.216	0	1	0.412
Off-farm casual labour	0.091	0	1	0.288
Remittances	0.104	0	1	0.305
Currency trading	0.002	0	1	0.040
District of residence				
Chivi	0.089	0	1	0.285
Bikiti	0.113	0	1	0.316
Masvingo Rural	0.103	0	1	0.304
Mberengwa	0.150	0	1	0.357
Mwenezi	0.061	0	1	0.239
Zaka	0.160	0	1	0.366
Gutu	0.150	0	1	0.357
Gweru Rural	0.047	0	1	0.212
Zvishavane	0.089	0	1	0.285
Gweru Urban	0.019	0	1	0.136
Masvingo Urban	0.019	0	1	0.136

On a final note, the indices used in this analysis are based on factor analyses undertaken using only the 2009 HLS data. This was necessary because using both the 2007 *and* 2009 data together (as was done for the analysis of Section 3.2) reduces the range and variation of

some of the indices, especially the food and livelihood security indices. This diminishes the ability to detect impact using regression analysis. Descriptive statistics for the indices used are given in Table 37.

Table 37. Sample descriptive statistics for livelihood security index and index components used for regression analysis

	Mean	Minimum	Maximum	Standard deviation
Food security index	50.1	0.0	100.1	15.0
Health security index	38.1	0.1	100.1	19.5
Education security index	60.0	0.0	100.0	10.8
Income security index	23.7	0.1	100.0	14.9
Livelihood security index	46.5	0.0	100.0	13.7

Note: The means of these indexes differ from those presented in Section 3.2 because only the 2009 data were used to undertake the factor analysis on which they are based (see text).

The overall impact of CARE's interventions

To measure the overall impact of CARE's interventions, the study examines the influence of the *number* of individual interventions a household participates in out of the 21 listed in Table 42.

Starting with food security, the results in Table 38 show that the greater the number of CARE interventions a household participates in, the more food secure a household is (the regression coefficient is positive). This result is strongly statistically significant (significant at the 1% level). To get an idea of the dimensions of food security that are impacted, the results for each of the sub-components of the food security index are also shown. The greater the number of interventions a household participates in, the greater is the number of months the household has sufficient access to food *and* the quality of its diet, as shown by a positive coefficient on the dietary diversity score. These results suggest that CARE's interventions are having a positive influence on both the quantity of food households have access to as well as the quality of that food.

Table 38. Regression analysis of the relationship between the number of CARE interventions in which households participated in 2009 and food security

	Food security index			Number of months sufficient food accessed (of 12)			Number of meals in the previous day			Dietary diversity score			Coping strategies index		
	Coefficient	t-stat	b/	Coefficient	t-stat	b/	Coefficient	t-stat	b/	Coefficient	t-stat	b/	Coefficient	t-stat	b/
Number of interventions in which households participated in 2009	0.68	4.41	***	0.06	2.75	***	0.01	1.34		0.09	7.77	***	-0.29	-1.25	
Household size	-0.26	-2.75	***	-0.01	-1.12		-0.01	-2.79	***	0.00	0.44		-0.35	-2.50	**
Child headed household	0.70	0.24		-0.69	-1.81	*	-0.02	-0.17		0.19	0.87		4.75	1.10	
Elderly headed household	1.14	2.05	**	0.03	0.40		0.02	0.91		0.05	1.19		1.64	1.97	**
HH caring for an orphan	-0.35	-0.92		0.00	-0.04		0.01	0.73		-0.03	-1.06		-0.97	-1.67	*
HH member is chronically ill	-0.66	-1.00		0.02	0.20		0.01	0.48		-0.01	-0.25		-2.49	-2.48	**
Income index	0.09	6.64	***	0.00	1.95	*	0.00	3.15	***	0.01	5.66	***	0.09	4.01	***
Female household head (HHH)	0.01	0.03		0.01	0.24		0.01	0.38		0.07	2.09	**	-1.55	-2.44	**
HHH no education a/															
HHH completed some primary	1.70	2.85	***	0.14	1.77	*	0.06	2.24	**	0.06	1.24		1.15	1.28	
HHH completed some secondary	3.25	5.01	***	0.13	1.46		0.10	3.48	***	0.15	3.11	***	2.91	2.97	***
Percent females 0-15 a/															
Percent females 15-64	0.02	1.41		0.00	-0.59		0.00	-0.58		0.00	2.23	**	0.04	1.90	*
Percent females 64+	-0.03	-1.53		0.00	-0.14		0.00	-2.35	**	0.00	0.07		-0.02	-0.72	
Percent males 0-15	-0.02	-1.81	*	0.00	-0.86		0.00	-1.94	*	0.00	-0.17		-0.02	-1.02	
Percent males 15-64	0.00	0.09		0.00	-0.61		0.00	-2.16	**	0.00	1.76	*	0.02	1.22	
Percent males 64+	-0.03	-0.94		0.00	-0.78		0.00	-2.08	**	0.00	0.08		0.03	0.66	
Land ownership (acreage groups)	0.71	5.38	***	0.03	1.49		0.02	4.08	***	0.04	3.82	***	0.49	2.47	**
Primary source of cash income															
None a/															
Formal employment	5.46	6.68	***	0.05	0.42		0.21	5.74	***	0.42	6.79	***	1.74	1.42	
Sales of livestock	3.61	6.12	***	0.12	1.55		0.09	3.49	***	0.23	5.11	***	2.98	3.36	***
Trading and self employment	2.03	4.10	***	0.00	-0.01		0.07	3.31	***	0.11	2.84	***	1.87	2.50	**
Government public works	-2.31	-0.52		-1.41	-2.37	**	0.04	0.20		0.20	0.58		-1.43	-0.21	
Sales of agricultural products	3.34	4.00	***	-0.02	-0.21		0.08	2.28	**	0.14	2.23	**	5.12	4.07	***
On-farm casual labour	-1.68	-3.46	***	-0.16	-2.44	**	-0.01	-0.31		0.02	0.48		-4.17	-5.72	***
Off-farm casual labour	-0.59	-0.92		0.14	1.65		-0.02	-0.67		0.02	0.47		-2.69	-2.79	***
Remittances	2.97	4.77	***	0.20	2.44	**	0.07	2.49	**	0.18	3.71	***	2.15	2.29	**
Currency trading	1.50	0.33		-0.89	-1.49		0.12	0.59		0.28	0.80		2.36	0.35	
District of residence															

	Food security index			Number of months sufficient food accessed (of 12)			Number of meals in the previous day			Dietary diversity score			Coping strategies index		
	Coefficient	t-stat	b/	Coefficient	t-stat	b/	Coefficient	t-stat	b/	Coefficient	t-stat	b/	Coefficient	t-stat	b/
Chivi a/															
Bikiti	-15.82	-19.33	***	-0.38	-3.48	***	-0.24	-6.66	***	-0.77	-12.29	***	-24.29	-19.70	***
Masvingo Rural	-7.19	-8.38	***	-0.44	-3.85	***	0.05	1.19		-0.43	-6.57	***	-12.96	-10.01	***
Mberengwa	-9.74	-12.15	***	-0.64	-5.95	***	0.01	0.37		-0.29	-4.75	***	-20.93	-17.33	***
Mwenezi	-1.48	-1.56		0.44	3.45	***	0.07	1.61		-0.44	-6.10	***	-2.27	-1.59	
Zaka	-11.20	-14.69	***	-0.18	-1.74	*	-0.16	-4.70	***	-0.35	-6.06	***	-21.87	-19.03	***
Gutu	-1.84	-2.40	**	0.76	7.39	***	-0.12	-3.47	***	-0.19	-3.25	***	-3.95	-3.41	***
Gweru Rural	-9.35	-6.46	***	-0.74	-3.84	***	0.00	0.04		-0.47	-4.23	***	-15.27	-7.00	***
Zvishavane	-4.06	-4.44	***	-0.12	-1.01		0.10	2.47	**	-0.27	-3.92	***	-10.32	-7.49	***
Gweru Urban	-4.20	-3.28	***	-0.88	-5.04	***	0.19	3.39	***	-0.33	-3.38	***	-7.51	-3.89	***
Masvingo Urban	-6.63	-5.19	***	-0.56	-3.28	***	-0.03	-0.62		-0.60	-6.10	***	-4.41	-2.29	**
R-squared	0.179			0.078			0.057			0.082			0.197		
Number of observations	6,085			6,065			6,084			6,085			6,080		

a/ Reference category to which other categories are compared.

b/ Stars represent that the coefficient is statistically significant at the 1% (***), 5%(**) or 10%(*) levels.

While the other independent variables in the regression equation for food security are of secondary interest to us, several results are interesting to note. For instance, the greater the household size, the lower the food security, presumably because larger households have more dependent members. Elderly headed households are likely to have greater food security, possibly due to greater knowledge and ability to manage assets. As would be expected, both income and education have a strong positive influence on food security, and the more land a household owns the more food secure it is. Households engaged in formal employment, sales of livestock and agricultural products, trading and self employment, and those receiving remittances are likely to be more food secure than those who have no cash income. On the other hand, those engaged in on-farm casual labour are likely to be less food secure than those who engage in no cash income generating activity at all. Finally, after controlling for these other factors, households residing in all other districts except Mwenezi are likely to be more food insecure than those in Chivi district.

Table 40 presents the same results for the livelihood security index and the other index components. It shows that the more CARE interventions a household participates in, the more health secure, education secure, income secure and livelihood secure it is. Again, these results are strongly statistically significant.⁵⁵

We can conclude from these findings that CARE's activities are without doubt helping households in its operational area to improve their livelihoods. Further, they show that the more involved households are in CARE's activities--the greater the number of interventions they participate in--the more they benefit.

The impact of ANR, SEAD and TFA interventions

Tables 39 and 40 focus on the impact of specific types of interventions, starting with Agriculture and Natural Resources (ANR), Small Economic Activities Development (SEAD), and Targeted Food Assistance (TFA). For ease of presentation, only the regression results for the independent variables representing CARE's interventions are shown.

⁵⁵ For the education security regressions, the education of the household head was omitted as it was used to construct the index. Similarly, for the income security regressions the income index was omitted. Finally, both the education and income variables were excluded from the livelihood security regressions.

Table 39. Regression analysis of the impact of participation in ANR, SEAD and TFA interventions in 2009

	Food security			Health security			Education security			Income security			Livelihood security		
	Coefficient	t-stat	a/	Coefficient	t-stat	a/	Coefficient	t-stat	a/	Coefficient	t-stat	a/	Coefficient	t-stat	a/
Agriculture and natural resources (ANR)	0.79	1.93	*	2.50	4.99	***	0.61	2.04	**	0.66	1.79	*	1.79	4.88	***
Small economic activity development (SEAD)	1.16	1.73	*	4.95	6.03	***	1.02	2.06	**	0.17	0.28		2.72	4.51	***
Targeted food assistance (TFA)	1.26	2.74	**	0.03	0.06		-0.56	-1.64		0.26	0.61		0.42	1.01	
<hr/>															
ANR and TFA combined															
ANR	2.21	2.23		0.01	0.01		0.64	0.88		0.31	0.35		1.44	1.61	
TFA	1.62	3.08		-0.87	-1.35		-0.62	-1.59		0.11	0.23		0.18	0.38	
ANR-TFA interaction	-1.76	-1.66	*	2.93	2.25	**	0.01	0.02		0.39	0.41		0.40	0.42	
SEAD and TFA combined															
SEAD	2.18	1.35		7.63	3.83	***	2.41	2.03	**	-0.12	-0.08		4.36	2.97	***
TFA	1.34	2.80	***	0.21	0.36		-0.45	-1.27		0.23	0.53		0.53	1.23	
SEAD-TFA interaction	-1.24	-0.71		-3.17	-1.47		-1.64	-1.28		0.34	0.21		-1.94	-1.23	
ANR and SEAD combined															
ANR	0.40	0.93		2.38	4.45	***	0.78	2.45	**	0.73	1.84	*	1.71	4.37	***
SEAD	-0.84	-0.76		6.56	4.83	***	2.56	3.14		0.40	0.40		3.31	3.31	***
ANR-SEAD interaction	2.82	2.06	**	-3.42	-2.04	**	-2.64	-2.62	***	-0.65	-0.53		-1.61	-1.30	

a/ Stars represent that the coefficient is statistically significant at the 1% (***), 5%(**) or 10%(*) levels.

Table 40. Regression analysis of the relationship between the number of CARE interventions in which households participated in 2009 and health, education, income and livelihood security

	Health security			Education security			Income security			Livelihood security		
	Coefficient	t-stat	b/	Coefficient	t-stat	b/	Coefficient	t-stat	b/	Coefficient	t-stat	b/
Number of interventions in which households participated in 2009	1.07	5.64	***	0.39	3.39	***	0.48	3.40	***	1.09	7.86	***
Household size	0.51	4.43	***	-0.24	-3.50	***	1.09	13.0	5	0.47	5.71	***
Child headed household	0.50	0.14		-2.25	-1.07		1.26	0.48		0.67	0.26	
Elderly headed household	2.55	3.75	***	-1.77	-4.54	***	4.53	9.07	***	2.04	4.32	***
HH caring for an orphan	0.36	0.77		-3.33	-11.78	***	1.06	3.04	***	0.56	0.94	
HH member is chronically ill	3.14	3.85	***	0.23	0.47		-0.45	-0.75		-1.20	-3.48	***
Income index	0.21	12.04	***	0.04	3.99	***	--	--		--	--	
Female household head (HHH)	1.51	2.91	***	-0.69	-2.28	**	0.40	1.04		-0.11	-0.30	
HHH no education a/												
HHH completed some primary	2.64	3.61	***	--	--		1.48	2.74	***	--	--	
HHH completed some secondary	5.81	7.28	***	--	--		0.55	0.92		--	--	
Percent females 0-15 a/												
Percent females 15-64	0.06	3.67	***	-0.09	-9.28	***	0.12	9.82	***	0.04	3.67	***
Percent females 64+	0.05	1.67	*	-0.18	-11.27	***	0.08	3.83	***	-0.06	-2.99	***
Percent males 0-15	0.02	1.52		0.00	-0.28		0.02	1.53		0.01	0.50	
Percent males 15-64	0.03	1.66	*	-0.10	-10.84	***	0.09	8.26	***	0.01	0.69	
Percent males 64+	0.07	2.08	**	-0.13	-6.24	***	0.28	11.0	2	0.09	3.73	***
Land ownership (acreage groups)	-0.34	-2.07	**	0.08	0.85		2.71	23.4	2	1.69	14.83	***
Primary source of cash income												
None a/												
Formal employment	5.82	5.79	***	5.24	8.72	***	3.91	5.27	***	9.16	12.51	***
Sales of livestock	0.50	0.68		0.18	0.41		3.08	5.75	***	3.61	6.81	***
Trading and self employment	2.29	3.75	***	1.62	4.42	***	0.10	0.23		2.55	5.70	***
Government public works	5.39	0.98		3.01	0.92		-4.06	-1.00		0.09	0.02	
Sales of agricultural products	-0.93	-0.90		0.68	1.10		0.52	0.69		1.90	2.52	**
On-farm casual labour	-1.65	-2.77	***	-0.16	-0.45		-1.41	-3.20	***	-2.07	-4.75	***
Off-farm casual labour	-0.97	-1.23		-0.44	-0.94		-2.14	-3.67	***	-2.04	-3.54	***

	Health security			Education security			Income security			Livelihood security		
	Coefficient	t-stat	b/	Coefficient	t-stat	b/	Coefficient	t-stat	b/	Coefficient	t-stat	b/
Remittances	2.59	3.38	***	1.63	3.55	***	2.98	5.28	***	4.60	8.23	***
Currency trading	-0.59	-0.11		5.87	1.78	*	-0.05	-0.01		3.76	0.93	
District of residence												
Chivi a/												
Bikiti	6.56	6.52	***	-0.57	-0.95		-4.52	-6.10	***	-7.86	10.70	***
Masvingo Rural	1.36	1.29		1.23	1.94	*	-2.65	-3.40	***	-3.65	-4.72	***
Mberengwa	-1.38	-1.40		2.39	4.06	***	3.94	5.42	***	-1.68	-2.34	**
Mwenezi	-0.55	-0.47		-1.65	-2.37	**	0.71	0.83		-1.66	-1.95	*
Zaka	-0.62	-0.66		-2.43	-4.34	***	-2.22	-3.20	***	-7.74	11.29	***
Gutu	-2.96	-3.13	***	2.59	4.58	***	4.11	5.90	***	1.94	2.82	***
Gweru Rural	1.44	0.81		-1.75	-1.64		3.54	2.69	***	-2.69	-2.07	**
Zvishavane	7.72	6.87	***	-0.22	-0.33		1.25	1.51		0.96	1.17	
Gweru Urban	32.70	20.78	***	1.04	1.11		-9.69	-8.37	***	3.54	3.10	***
Masvingo Urban	36.16	23.03	***	1.42	1.52		-7.87	-6.80	***	4.99	4.36	***
R-squared	0.231			0.136			0.307			0.203		
Number of observations	6,078			6,092			6,085			6,085		

a/ Reference category to which other categories are compared.

b/ Stars represent that the coefficient is statistically significant at the 1% (***), 5%(**) or 10%(*) levels.

Participation in at least one of the ANR interventions appears to lead to a strongly statistically significant improvement in households' livelihood security. This is brought about by improvements in all component security areas: food security, health security, education security and income security. Thus, we can conclude that by having wide-ranging impacts on households--across key areas in which poor households typically face sharp resource trade offs--CARE's ANR interventions have helped those households participating in them become more livelihood secure.

One of the reasons ANR interventions have led to improvements in food security is because they increase crop diversity and have a strong impact on crop yields. To show this, we look at three types of ANR interventions--conservation farming, seed production and storage, and agricultural inputs distribution. Figure 35 shows that a higher percentage of farmers receiving ANR support in this form than those who did not planted all types of crops except non-CF maize and sorghum. As a result they had somewhat greater crop diversity. The number of crops planted for those not receiving this support was 1.9 compared to 2.2 for those receiving it (the difference is significant at the 1% level).

Figure 35. Percent of households cultivating crops by participation in selected ANR interventions (2005-09)

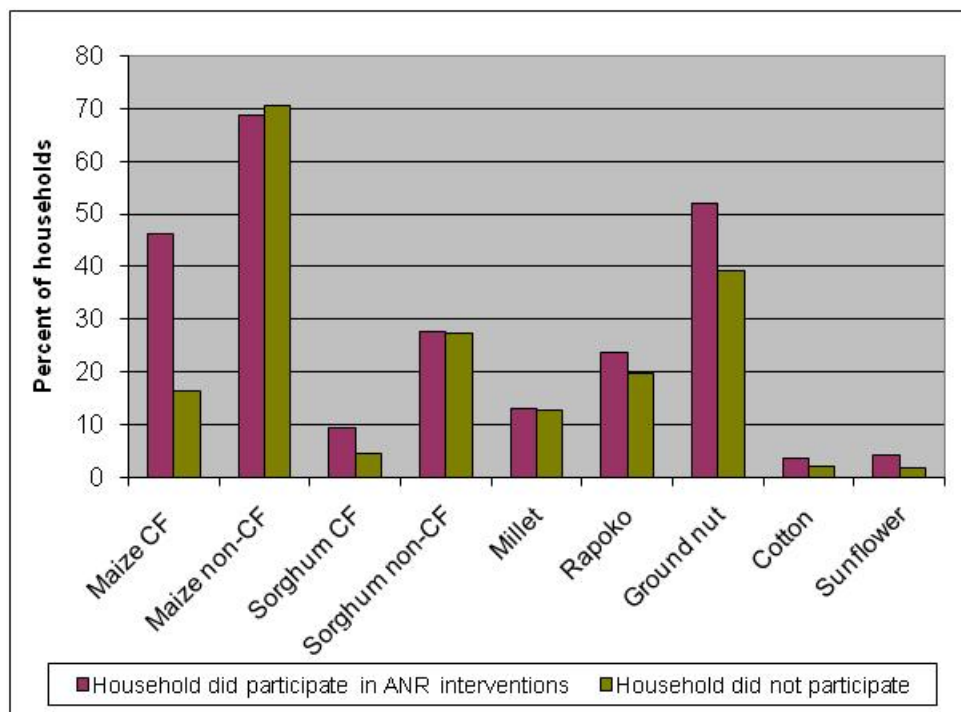
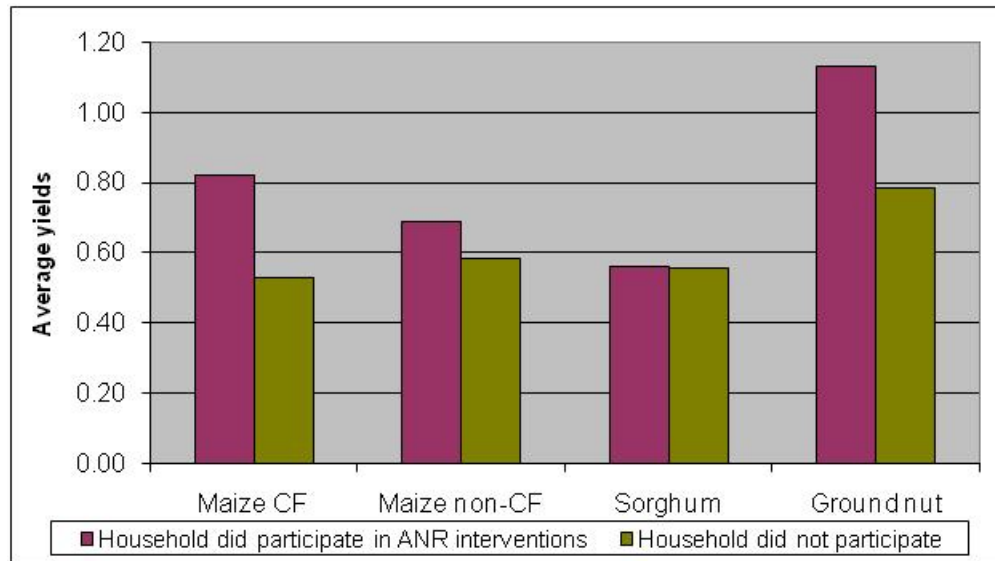


Figure 36 shows the difference in yields for participant and non-participant households for the three ANR interventions with regard to conservation-farming (CF) maize, non-CF maize, sorghum, and groundnut. While the difference in yields is negligible for both non-CF maize and sorghum, it is quite large for CF maize, increasing a full 55 percent for participants in the

interventions versus producers that do not. Similarly, the increase for groundnuts is quite large, at 44 percent.

Figure 36. Maize, sorghum and ground nut yields by participation in selected ANR interventions (2005-09)



The regression results in Table 41 confirm that CARE's interventions are the driving the differences between the participant and non-participant groups. The regression coefficients for participation in at least one of the three interventions are positive and significant (at the 5% level) for both CF maize and groundnut.

Table 41. Regression analysis of the impact of participation in ANR interventions (since 2005) on agricultural yields

	Coefficient	t-stat	a/	Number of observations
Maize CF	0.12	2.17	**	1,278
Maize non-CF	0.05	1.07		3,968
Sorghum	0.01	0.19		1,887
Ground nut	0.39	2.06	**	2,446

a/ Stars represent that the coefficient is statistically significant at the 1% (***), 5%(**) or 10%(*) levels.

Note: The independent variables controlled for are those listed in Table 40.

Moving on to CARE's SEAD interventions, which consist of the development and support of savings and lending groups, again we see that they have a wide reach in terms of improving households' livelihoods. Interestingly, the only security area for which the SEAD intervention does not exhibit a positive influence is income security. This result may simply be due to the fact that it is the very poorest households that are selected to participate in savings and lending groups (the selection bias issue).

In contrast to ANR and SEAD interventions, TFA interventions are focused mainly on addressing current acute needs rather than long standing underlying vulnerabilities. This focus is reflected in the impact results for TFA interventions: a positive impact only shows up for food security and not livelihood security itself or the other security areas. Note that the majority of households participating in TFA interventions do not simultaneously participate in ANR and SEAD interventions.⁵⁶

Next we take a look at whether participation in ANR, SEAD and TFA interventions combined has any added benefit for households. This can be investigated by adding interaction terms to the regression equations and examining whether their coefficients are statistically significant (see bottom panel of Table 39). It is important to note that if households are involved in multiple interventions, they were probably worse off than those involved in single interventions at the time of beneficiary selection, satisfying more of the targeting criteria (e.g., poor and having a chronically ill member). Thus, detecting whether multiple interventions have a positive impact is even harder to do because of the more severe selection bias problem.

Nevertheless, the regression results point to two areas in which combinations of the interventions lead to added benefits. First, combining ANR and TFA interventions leads to added benefits to health security. Second, combining ANR and SEAD interventions leads to added benefits to food security. In fact the results suggest that it is only when these interventions are combined that they lead to better food security for households. The regression results imply that some combinations actually make households worse off (i.e., ANR and TFA for food security and ANR and SEAD for health and education security). However, as explained in the introduction to this section, we can make no such conclusion as the result may be linked to the manner in which households are chosen to participate in both interventions at the same time (i.e., selection bias may explain the result).

The impact of interventions falling within CARE's program components

Table 42 lists the interventions falling within each of CARE's three program components: food security, livelihoods promotion and social protection. When considered individually, participation of households in the three types of interventions making up the triad of CARE's program components—food security, livelihoods promotion and social protection—each leads to improvements in households' food security and livelihood security. This is evident from statistically significant (at the 1% level) and positive coefficients on the variables indicating household participation in the components (see Table 40). Only interventions falling within CARE's livelihoods promotion component lead to improvements in all of the security areas. This result is in line with the aim of CARE's livelihoods promotion interventions: to address underlying vulnerabilities that affect all of the security areas.

⁵⁶ Of those participating in TFA interventions, only 32 percent are also participating in ANR interventions and 8.1 percent in SEAD interventions.

Table 42. Interventions falling into CARE's program components: food security, livelihood promotion and social protection

		Food security	Livelihood promotion	Social protection
Agricultural and natural resources	Community gardens			
	Household gardens			
	Conservation farming			
	Seed production and storage			
	Agricultural inputs distribution			
	Sweet potatoes			
	Harvesting of natural resources			
	Agro-forestry			
	Cassava			
	AGENT (farmer groups)			
	Small livestock			
	Internal savings and lending groups			
SEAD Targeted food assistance	Feeding (VGF, Safety net)			
	Feeding (CI, Institutional)			
	School feeding			
	CHBC (ECHO food support)			
Other	Rehabilitation of water points			
	Construction of toilets			
	Food for work/assets			
	OVC			
	CHBC (No food support)			

Note: Shaded cells indicate which interventions fall within program components.

This table was created using the figure on the first page of the Terms of reference.

It is not possible to draw any strong conclusions regarding participation in interventions falling into multiple program components with the exception of instances in which social protection and livelihood promotion interventions are combined. In this case, as can be seen from the bottom panel of Table 39, there are added benefits to health security as shown by a strongly statistically significant and positive coefficient on the interaction term between the variables indicating participation in these components. Presumably due to the positive added benefits to health security, there are also positive added benefits of combining these two types of interventions to households' livelihood security. The implied negative effect of combining social protection and food security interventions is most likely due to the fact that the most livelihood insecure households would be selected to participate in both.

Table 43. Regression analysis of the impact of participation in CARE program component interventions in 2009

	Food security			Health security			Education security			Income security		Livelihood security			
	Coefficient	t-stat	a/	Coefficient	t-stat	a/	Coefficient	t-stat	a/	Coefficient	t-stat	a/	Coefficient	t-stat	a/
Food security (FS)	1.89	3.89	***	-0.30	-0.48		-0.40	-1.06		0.36	0.77		0.73	1.57	
Livelihoods promotion (LP)	1.57	4.00	***	2.63	5.45	***	1.09	3.79	***	0.93	2.60	***	2.56	7.25	***
Social protection (SP)	1.52	3.16	***	0.61	1.02		-0.37	-1.05		0.19	0.43		0.76	1.74	*

FS and LP combined															
FS	1.48	2.62	***	-1.48	-2.14	**	-1.05	-2.52	**	-0.05	-0.09		-0.37	-0.74	
LP	3.82	1.59		8.07	2.68	***	1.28	0.72		1.68	0.76		5.70	2.58	***
FS-LP interaction	-2.70	-1.10		-5.10	-1.67	*	0.10	0.06		-0.75	-0.34		-3.05	-1.37	
SP and FS combined															
SP	3.11	1.34		6.60	2.28	**	1.48	0.87		1.48	0.70		4.98	2.35	**
FS	2.58	2.35	**	-2.39	-1.80	*	0.14	0.17		1.10	1.11		1.01	1.11	
SP-FS interaction	-3.70	-1.46		-4.11	-1.31		-1.98	-1.06		1.48	0.70		-5.14	-2.23	**
SP and LP combined															
SP	1.47	2.61	***	-1.49	-2.15	**	-1.02	-2.45	**	-0.02	-0.04		-0.35	-0.68	
LP	2.73	2.50	**	-2.10	-1.57		0.25	0.32		1.28	1.28		1.40	1.43	
SP-LP interaction	-1.59	-1.37		5.47	3.84	***	1.14	1.34		-0.38	-0.36		1.34	1.28	**

b/ Stars represent that the coefficient is statistically significant at the 1% (***), 5%(**) or 10%(*) levels.

5. Conclusions and recommendations

Over the past decade, urban and rural households throughout Zimbabwe have been repeatedly affected by drought, political turmoil, land appropriation, widespread unemployment and hyper-inflation. As a result, food and livelihood insecurity have become entrenched problems throughout CARE's programming areas in Masvingo and Midland Provinces.

In an effort to address widespread vulnerability, CARE has implemented a wide range of activities including: support for community gardens; seeds provision; training in conservation farming; distribution of agricultural inputs; crop diversification; expansion of marketing skills and opportunities; distribution of small livestock; training and support on home-based care of individuals with chronic illness; awareness-raising on prevention and treatment of HIV and AIDS; food, educational and community support to OVCs; nutrition and hygiene; and improved access to water and sanitation.

Analysis of 2009 HLSA data clearly show that CARE programs have had a direct and beneficial impact on targeted households, particularly for those that participate in multiple interventions. This finding underscores the need for CARE to continue to promote integrated programming and participation of beneficiary households in multiple interventions spanning across its intervention types (ANR, SEAD and TFA). Both ANR and SEAD interventions seem to have wide-ranging impacts on households, addressing vulnerabilities in many areas. Accordingly, these types of interventions should be expanded to those areas that have yet to participate in them. Data shows that to date, participation in ANR interventions has been lowest in Gweru and Zvishavane districts. Participation in SEAD interventions is low in all districts. CARE should continue to meet current acute food needs through its TFA interventions, especially in light of the fact that it is in the area of food security that households have felt the negative impact of the current crisis the most.

Specific recommendations in the areas of food security, health security, education security, income security and program monitoring and evaluation follow.

Food security

Severe and persistent drought, limited access to agricultural inputs and infrastructure, and counter-productive land and economic policies have each had a negative effect on food production in Zimbabwe. As a result of these constraints fewer households are engaged in agriculture, livestock rearing, and on-farm casual labor than in 2007. 2009 HLSA data confirm that increasing vulnerability to food security is affecting households in both urban and rural areas. For instance, far fewer households are able to rely on either their own production or market purchases of food to see their families through the lean season (January – April) than was the case in 2007. 2009 data show that 80 percent of households now rely on food aid to meet

their consumption needs during the lean period. Increasingly, households are either borrowing money or selling productive assets in order to purchase food.

Recommendations:

- In light of declining food availability, the increase in crop yields brought about by conservation farming techniques is promising. Accordingly, CARE should seek ways of expanding CF activities among participating households. Uptake of CF techniques for maize production is relatively low in Mberengwa and Mwenezi districts suggesting they might be possible areas for expanded CF interventions.
- Lack of seed (especially for maize and groundnuts), lack of draught power, and lack of money to purchase inputs were each commonly cited by households as a reason for not cultivating available land. CARE should design and target interventions to address each of these specific constraints.
- More than three quarters of households rely on home gardens or community gardens as the most important source of vegetables. In order to support adequate nutrition, CARE should seek ways of improving access to seed and water for vegetable gardening.

Health Security

Despite a reported decrease in the frequency of illness among households, respondents to the survey continue to face a number of challenges in ensuring the health of all members. Since 2007, there has been a decrease in the percentage of households seeking treatment for illnesses, primarily due to an inability to pay for services.

Recommendations:

- Per capital water collection among the survey is below internationally recognized standards for maintaining adequate health and hygiene. CARE can address the need for greater access to potable water by supporting construction and rehabilitation of protected water sources.
- Nearly two-thirds of households surveyed do not have access to a latrine. Given recent outbreaks of cholera and the threat of other water-borne diseases, CARE can help to improve the health of beneficiary households by providing materials and training for construction of sanitary toilet facilities.
- Data show that community members are among the primary sources of support for chronically ill. Accordingly, CARE should continue to strengthen the capacity of home-based care volunteers to support HIV-positive individuals through proper nutrition and treatment of symptoms.
- Given that fewer respondents reported knowledge and/or practice of preventative measures for avoidance of HIV transmission than in 2007, CARE should seek way of strengthening HIV awareness campaigns.

Access to education

In recent years political unrest, forced relocation families, and the inability to pay school fees has led to a decline in school attendance rates. Meanwhile, a growing number of unemployed adults have relatively few options for acquiring the skills they need to achieve livelihoods security over the long term.

Recommendations:

- In light of a significant increase in the percentage of households caring for orphans, and the inability of households to meet educational expenses, CARE should increase provision of block grants to schools for fee-waivers for orphans and vulnerable children
- According to 2009 HLSA data, only 12 percent of 17 year olds are currently engaged in or have the skills to pursue their self-selected trade. CARE should expand vocational skills training to out-of-school youth in support of their longer-term livelihood security.

Access to income

In Zimbabwe, access to cash income has been repeatedly constrained by widespread crop failure resulting from drought, extremely limited off-farm employment opportunities, political instability, and hyperinflation within the Zimbabwean economy. In fact, 2009 HLSA data suggest that engagement in all forms of income generating activities has declined since 2007. Twelve percent of surveyed households reportedly rely on remittances as their primary source of cash income. The lack of access to income presents a severe constraint to households as they struggle to meet major household expenses, most notably for food and education of children. The pattern of divestment of productive assets (including livestock) continues to undermine long-term livelihood security among beneficiary households.

Recommendations:

- In the wake of rising unemployment and hyper-inflation, informal trade/self-employment has become an increasingly important source of cash income for vulnerable households. CARE could support these families by expanding support for seeds and other inputs for home and community gardens, improving access to markets, and providing training in micro-enterprise skills.
- Within the faltering Zimbabwean economy, less than 4 percent of households currently have access to credit through informal moneylenders, saving groups, or micro-finance organizations. CARE could help meet the demand for credit among beneficiary households by offering targeted support for community-based savings and loan schemes.

- In order to meet household expenses (especially food and education) a significant percentage of households have chosen to sell productive assets, including livestock. CARE can strengthen a critical safety net for vulnerable households by helping them acquire and care for livestock.

Program Monitoring and Evaluation

In conducting HLSA surveys in three of last five years, CARE has demonstrated its commitment to program monitoring and evaluation. There are however, a number of key areas in which data collection and analysis could be improved.

Recommendations:

- CARE should adhere to the sampling strategy developed specifically for the HLSA survey by technical consultants and agreed upon prior to data collection. Deviation from this sampling strategy caused some confusion and led to delay in the data analysis process.
- If CARE is planning to repeat the HLSA in subsequent years, it should design a longitudinal study to track the livelihood trajectory over time. This would increase the efficiency of data collection in that it would involve a smaller sample of households. Repeating cross-section surveys (as opposed to longitudinal survey) limits CARE's ability to perform an in-depth analysis of changes in livelihood security over time.
- Given the distinct livelihood contexts of urban and rural areas, it is recommended that CARE design HLSA surveys in a way that allows results to be disaggregated between urban and rural areas.

Annex 1. 2009 HLSA questionnaire

Questionnaire ID (7-digit)	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	Date of Interview	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	
	District / Ward # / Village / Household #		Day / Month / Year	
Province	District	Ward #	Village	
Enumerator's Name	Supervisor's Name			
Location	<div style="border: 1px solid black; width: 30px; height: 20px; display: inline-block;"></div> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> 1 = Communal 4 = New Resettlement (A2) </div> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> 2 = Old resettlement 5 = Commercial Farm </div> <div style="display: inline-block; vertical-align: top; margin-left: 10px;"> 3 = New resettlement (A1) 6 = Urban </div>			

Guidance for introducing yourself and the purpose of the interview:

- ☐ Good morning/afternoon. My name is _____ and I work for CARE
 - ☐ Your household has been chosen at random from a list of all beneficiaries for this interview. The purpose of this interview is to obtain information about the programs we are implementing. It helps us understand whether we are implementing our program properly & whether we are meeting our objectives or not.
 - ☐ The survey is voluntary and you can choose not to take part. The information that you give will be confidential. The information will be used to prepare reports, but will not include any specific names. There will be no way to identify that you gave this information.
 - ☐ Could you please spare some time (around 60 minutes) for the interview?
- NB to enumerator:* This survey is NOT part of the registration exercise and will have no influence on your status as a beneficiary/non beneficiary.

Name of Respondent (Breadwinner/Spouse/Household Head) _____



Household Livelihood Security Assessment Survey 2009

A .Participation in CARE Project/Program Interventions															
		A		B		C		D		E		F		G	
Project Intervention (READ EACH ONE)		CARE Project any year from 2005		Current participation in Other NGOs activity		If yes to A, indicate which year(s)									
		Yes (1) , No (0)		Yes (1) , No (0)		Yes (1) , No (0)	2005	2006	2007	2008	2009				
Q1	Community Garden														
Q2	Household Garden														
Q3	Conservation Farming														
Q4	Seed Production and Storage														
Q5	Agric Inputs Distribution														
Q6	Sweet potatoes														
Q7	Internal Savings & Lending														
Q8	AGENT(Farmer Groups)														
Q9	Feeding(VGF,Safety Net)														
Q10	Feeding(CI,Institutional)														
Q11	School Feeding														
Q12	Harvesting of Natural Resources														
Q13	Agro-forestry														
Q14	Rehabilitation of water points														
Q15	Construction of toilets														
Q16	Food for Work/Asset														
Q17	OVC														
Q18	CHBC(including ECHO food support)														
Q19	CHBC(without ECHO food support)														
Q20	Cassava														
Q21	Small livestock														

B. Household Demographics										
	A	B	C	D	E	F	G	H	I	
	Name of each HH member (Start with the household head)	Person #	Is NAME male or female 1 = Male 2 = Female	How old is NAME in years?	Marital Status 1 = Married 2 = Widowed 3 = Divorced 4 = Single 5 = Other	0 to 17 years only What is NAME's birth parental status?	Is NAME mentally physically Challenged? 0 = No 1 = Yes	Highest Level of education completed (See codes below)	Health Status (See codes below)	
Q22										
Q23										
Q24										
Q25										
Q26										
Q27										
Q28										
Q29										
Q30										
Q31										
Q32										
Q33										
Q34										
Q35										
Q36										

Codes for Birth Parental Stat 1 = both parents alive 2 = Mother alive father dea 3 = Father alive mother dea 4 = Both parents dea 99=N/A

Highest Level of Education Completed 1 = None, 2 = Grade 1-4, 3 =Grade 5-7, 4 =Form 1-2, 5 =Form 3-4, 6 = Form 5-6, 7 =Tertiary

Codes for Health Status 1= little sickness 2 =some sickness 2-10 weeks in the 12 months
3=sick more than 3 months in the 12 months (chronically ill) 99 =N/A

Deaths in the Household

Q37 Has someone died of chronic illness in the household in the past 12 months? ☐ Yes -1 , No (0)

Has someone died of cholera in the household in the past 12 months? ☐ Yes -1 , No (0)

Q38 If someone died , was the person the breadwinner? ☐ Yes (1) , No (0) 99=N/A

C. Access to Education							
For household members aged 3-24 years							
	A	B	C	D	E	F	G
	Person #	Did NAME attend school last term? (See codes below)	If (NAME) attended some days or not enrolled, what is the main reason (Codes below)	If NAME attended school regularly or some days, did NAME have full set of stationery and scholastic materials 0 = No, 1 = Yes	If not, why (See codes below) 1 = Cannot afford 2 = Other (Specify) 99 =N/A	Does NAME have a birth certificate? 0 = No 1 = Yes	(applicable if NAME is aged 17) Is NAME engaged or have skills to undertake self selected trade? 0 = No 1 = Yes
Q39							
Q40							
Q41							
Q42							
Q43							

Q44																	
Q45																	
Q46																	
Q47																	

Reasons for attending some days or no days 1 = No birth certificate , 2 = Cant pay , 3 = Failed exams , 4 = Completed exams , 5 = Sick , 6 = Work for money/food , 7 = Unpaid work for h/h , 8 = Care for ill person , 9 = Too young , 10 = Hunger , 11 = Refused , 12 = Unavailability of teachers , 13 = Distance 14 = Other _____ 99 = N/A

D. Land Use, Agricultural Inputs and Extension Services

(1 acre = 0.4 ha)

Q48 What estimated amount of **ARABLE** land does your household own/rent/given (combined)? _____ acres

Q49 What was the size of land cultivated this main season(in acres)? _____ acres

Q50 This year, did you leave land uncultivated that is **normally** cultivated? ☐ Yes (1) , No (0) , N/A(99)

Q51 If yes, how many acres were uncultivated? _____ acres

Q52 If land uncultivated, was it more, less or same as compared to last year? ☐ 99 = N/A
 1 = More land this season 2 = The same 3 = Less land this season

Q53 If you left land uncultivated during the main season, what were the reasons?(see codes below)

A-C A.Primary(1st Most) ☐ B.Secondary (2nd Most) ☐ C.Tertiary (3rd Most) ☐
 1 = Lack of labour 2 = Lack of seed on the market 3 = Lack of draught power 4 = Lack of rain
 5 = Fallow 6 = Lack of fertiliser on the market 7 = Lack of money to buy inputs 99 = N/A

Q54 Does the household have access to a community garden? ☐ Yes (1) , No (0) , N/A(99)

Q55 Does the household have access to household garden? ☐ Yes (1) , No (0) , N/A(99)

Q56 Does the household have access to water for gardening all year? ☐ Yes (1) , No (0) 99=N/A

Q57 If yes , what is the source of water?
 1 = Piped water 2 = Public/Communal tap, 3 = Well ,
 4 = River/Stream/Dam , 5 = Borehole/Pump , 6 = Other (Specify)

Current Season (2008/9)

	Crop planted	A Land planted (acres)	B Amount harvested (# 50kg Bags)	C Amount still Standing in the (50kg Bags)	D Amount Expect to Sell (50kg Bags)	E Main Source of seed (see codes)	F Did you have enough seed? Yes (1), No(0), 99=N/A
Q58	Maize(CF Practice)						
Q59	Maize(Non-CF)						
Q60	Sorghum (CF Practice)						
Q61	Sorghum (Non CF)						
Q62	Millet						
Q63	Rapoko						
Q64	Groundnuts(Unshelled)						
Q65	Cotton(Bales)						
Q66	Sunflower						
		<i>Check if yes</i>		<i>Check if yes</i>			
Q67	Covo		NA	NA			
Q68	Onion/shallot		NA	NA			
Q69	Potato(Ordinary)		NA	NA			
Q70	Rape		NA	NA			
Q71	Sugar Beans		NA	NA			
Q72	Tomato		NA	NA			

Q73	Garlic	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q74	Cow peas	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q75	Carrots	<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Main Source of Seeds Codes -if multiple sources, choose the main source 1= Retain unplanted seed(not homegrown)
 2 = Retain home grown seed 3 =Government 4 =CARE 5 = Other NGO 6 = Purchase
 7 = Borrow 8 = Contract growing 9 = Gift 99 =N/A

Q76 Have you received any agricultural advice/training during 2008/9 season? Yes (1) , No (0) 99=N/A

Q77 What type of advice/training did you receive in 2008/9 season?
 1=CF training 2=Micro dosing 3=Pest control 4=Agronomic practices 5=Other

Q78 Who provided this agricultural advice/training? (check **ALL** that apply)

A. AREX ☐ B. CARE ☐ C. Other NGO ☐ D. Neighbor ☐ E. None ☐
 F Lead Farmer ☐

E. Household Food Sources and Stocks

Q79 Does the household have cereal (grain&ground) from last year's harvest in stock now? ☐ Yes (1) , No (0) , N/A(99)

Q80 If no, how many months did last year's harvest last? months

Q81 Estimated amount of cereal the entire household consumes in a month? kg

Q82 Number of months access to adequate food(all foods including non-cereals) in the past 12 months? months

Q83 During the past 4 months (lean period)Jan _April 2009) , what were the most important sources of cereal?(see codes below)

A-C A.Primary(1st Most) ☐ B.Secondary (2nd Most) ☐ C.Tertiary (3rd Most) ☐
 1 = From own harvest 2 =Maricho 3 =Borrowed 4 =Gifts 5 = Free food aid
 6 = HBC 7 = School Feeding 8 = Food For work 9 = Purchased at GMB 10 = Purchased at local market

Q84 During the past 4 months (lean period)Jan _April 2009) , what were the most important sources of vegetables?(see codes below)

A.Primary(1st Most) ☐ B.Secondary (2nd Most) ☐ C.Tertiary (3rd Most) ☐
 1= community garden 2= household/homestead garden 3 =Maricho 4 =Borrowed 5 =Gifts
 6= Local market

Other sources of cereal during the past 12 months? amount in kg			
Q85	On-Farm casual labor (working for food as payment)	_____ kg	<input type="checkbox"/>
Q86	Off-farm casual labour (working or food as payment)	_____ kg	<input type="checkbox"/>
Q87	Remittances and Gifts sent to the household	_____ kg	<input type="checkbox"/>
Q88	Borrowing	_____ kg	<input type="checkbox"/>
Q89	Other sources (including begging)	_____ kg	<input type="checkbox"/>
Q90	How much cereal did you purchase from GMB in the last 12 months ?	_____ kg	<input type="checkbox"/>
Q91	How much cereal did you purchase at local markets during past 12 months?	_____ kg	<input type="checkbox"/>
F. Food Consumption			
Q92	How many meals did the ADULTS eat in your household yesterday?	_____ meals	<input type="checkbox"/>
Q93	How many meals did the CHILDREN under 5 eat in your household yesterday?	_____ meals	<input type="checkbox"/>
Q94	How many meals did the chronically ill members eat in your household yesterday?	_____ meals	<input type="checkbox"/>
		A	B
		Which of the following did somebody eat in your household yesterday? Yes(1) , No(0)	How many times HH members consumed this item yesterday?
Q95	Sadza	<input type="checkbox"/>	<input type="checkbox"/>
Q96	Other cereals (including CSB)	<input type="checkbox"/>	<input type="checkbox"/>
Q97	Cassava /Potato/Other tubers	<input type="checkbox"/>	<input type="checkbox"/>
Q98	Sugar/Sugar Products	<input type="checkbox"/>	<input type="checkbox"/>
Q99	Legumes (beans, peas, groundnuts)	<input type="checkbox"/>	<input type="checkbox"/>
Q100	Vegetables/Leaves(include wild)	<input type="checkbox"/>	<input type="checkbox"/>
Q101	Bread	<input type="checkbox"/>	<input type="checkbox"/>
Q102	Fish	<input type="checkbox"/>	<input type="checkbox"/>
Q103	Cooking Oil/Fat	<input type="checkbox"/>	<input type="checkbox"/>
Q104	Milk	<input type="checkbox"/>	<input type="checkbox"/>
Q105	Meat(include wild)	<input type="checkbox"/>	<input type="checkbox"/>
Q106	Fruits	<input type="checkbox"/>	<input type="checkbox"/>
Q107	Eggs	<input type="checkbox"/>	<input type="checkbox"/>
Q108	Wild Fruits	<input type="checkbox"/>	<input type="checkbox"/>
Q109	Insects (madora, ishwa, majuru) etc	<input type="checkbox"/>	<input type="checkbox"/>
Q110	Mahewu	<input type="checkbox"/>	<input type="checkbox"/>
Q111	RUTF (Ready to Use Therapeutic Feeding)	<input type="checkbox"/>	<input type="checkbox"/>
G. Income , Expenditure & IGAs			
		A	B
	Did the HH participate in the following activities in the past 12 months? (READ EACH ONE)	HH received cash from this source? Yes(1) , No(0)	Rank income sources based on estimated amount (1= most) 99=N/A
Q112	Formal Employment	<input type="checkbox"/>	<input type="checkbox"/>
Q113	Sales of livestock	<input type="checkbox"/>	<input type="checkbox"/>
Q114	Trading & self employment	<input type="checkbox"/>	<input type="checkbox"/>

Q115	Gold panning				
Q116	Government Public Works				
Q117	Cereal & Cash Crop Sales				
Q118	On-farm Casual Labour				
Q119	Off-farm Casual Labour				
Q120	Receives remittances				
Q121	Foreign Currency Dealing				

If the response to **Q114A** is yes, proceed to ask question (**Q122 -Q125**)

	During the last 12 months which of the following enterprise were you engaged in ? (See codes below)	During the last 12 months what changes occurred to the enterprise? (indicate all that apply) (See codes below)					
		A	B	C	D	E	F
			Change 1	Change 2	Change 3	Change 4	Change 5
Q122							
Q123							
Q124							
Q125							
Codes for Enterprise (A) 1= Fruit and vegetable selling(formally/informally) 2= Knitting 3= Garment making 4 = Cross Border trade 5= Crochet 6 =Carpentry 7 =Tailoring 8= Poultry 9 =Baskets and mats weaving 10 =Stone sculpture and wood carving 11 = Brick Moulding 12 =Non-timber forest produce 13=Buying and selling (fuel etc) 14 =Building 15 =Metal work 16= Other 99 =N/A		Codes for changes (B-F) 1= Expanded size of enterprise/business facility 2= Added new products 3 = Hired more workers 4 = Improved quality or desirability of product/added value 5=Increase stock/goods 6 = Developed a new enterprise 7 = Sold in new markets/locations 8 = Increase in customer base 9 = Reduced stock 10 = Reduced customers 11=None 12= Other 99=N/A					

Q126 What is the ESTIMATED cash(earned or remittances received) last month ? \$

Q127 From the total cash available last month ,how much was spent on the following
 (Use counters to represent amount in incurred for each item)(20 counters represent the cash that was available in the household)

A Transport	<input type="text"/>	B Health	<input type="text"/>
C Other household food stuff	<input type="text"/>	D Loan repayment	<input type="text"/>
E Mealie meal (including milling cost)	<input type="text"/>	F Input cost	<input type="text"/>
G School fees & uniform	<input type="text"/>	H Clothes/shoes	<input type="text"/>
I Utility bills (Water, Sewage, and ZESA) apply to urban set up	<input type="text"/>		
J Social occasions/funeral expenses	<input type="text"/>		

Q128 What were the three greatest sources of spending during the past 4 months(Jan-April 2009?
 A. Primary(1st Most) B.Secondary (2nd Most) C.Tertiary (3rd Most)
 1 = Health and medical supplies for the ill(clinical and traditional) , 2 = Food (cereal and groceries) ,
 3 = School Fees , 4 = Funerals , 5 = Travel , 6 = Agriculture inputs , 99=N/A

H. Assets

Type of Asset READ EACH ONE)	A	B	C	D	E	F
	Own Yes(1) No(0)	Borrowed in past 12 months Yes(1) , No(0)	Purchased in past 12 months Yes(1) , No(0)	Sold in past 12 months Yes(1) , No(0)	Reason for selling? (codes below)	Condition of most of the assets (codes below)
Q129 Plough	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Q130	Ox-Cart																
Q131	Wheelbarrow																
Q132	Bicycle																
Q133	Radio/TV																
Q134	Bed																

Codes for Reason for Selling Asset (see E above) 1 =No longer needed 2 = Transport expenses 3 = Buy food 4 = Pay debt
5 =Pay medical expenses 6= Other emergency 7 =Pay social event 8 =Pay funeral 9 =Pay school fees 99 =N/A

Codes for Condition of the Asset (see F above) 1 =Good- In working condition 2 = Average needs attention
3 =Poor - non functioning

I. Livestock

	Type of Asset READ EACH ONE)	A # Own	B # purchased in past 12 months?	C # of deaths in past 12mths	D # sold in in past 12 months?	E Main reason for sale? (codes below)	F Hire in/ Borrow in past 12 month Yes(1) , No(0)	G Hire Out in past 12 months? Yes(1) No(0)
Q135	Cattle(Owned)							
Q136	Cattle(Keeping for others)							
Q137	Of total, # for draught power	99 = N/A						
Q138	Donkeys							
Q139	Sheep&Goats							
Q140	Pigs							
Q141	Poultry							
Q142	Rabbits							

Codes for Reason for Selling Asset (see E above) 1 =No longer needed 2 = Transport expenses 3 = Buy food 4 = Pay debt
5 =Pay medical expenses 6= Other emergency 7 =Pay social event 8 =Pay funeral 9 =Pay school fees 99 =N/A

J. Borrowing

Q143 During the past 4 months , did you or any member of your household borrow money? ☐ Yes (1) , No (0)

Q144 If you borrowed money, what were the reasons for borrowing?(see codes below)

A-C A. Primary(1st Most) ☐ B.Secondary (2nd Most) ☐ C.Tertiary (3rd Most) ☐
1= Food 2 = Health care 3 =Funeral 4 =Social event 5 = Avoid selling assets
6 =Agriculture 7 =School Fees 8 =Pay Debt 99=N/A

Q145 If you borrowed money , from whom did you borrow? (check **ALL** that apply) Yes (1) , No (0)

A-E A. Relative/Friend ☐ B.Money Lender ☐ C.Savings Group ☐
D.Microfinance Inst ☐ E.Bank ☐ F. Burial Society ☐
G. Friend/Neighbour ☐ 99 =N/A

K. Health , Water & Sanitation

	A	B	C	D	E	F	G
Has (NAME) suffered from an of the following illness in the last 60 days? (See codes below)		If someone got ill , did they seek treatment (See codes below)	If no , what was the reason for not seeking treatment (See codes below)	<i>For children < 5 years</i>			
		Did a child under 5 have a sudden fever in the last 60 days	If so , was treatment sought within 24 hrs	If not why not (See codes below)			
	1 =diarrhea 2 = dysentery 3 = malaria 4 = scabies 5 =STI's 6 = bilharzias 7=Cholera 8 = other (specify)	Yes (1) No (0) 99 =N/A		Yes (1) No (0) 99 =N/A	Yes (1) No (0) 99 =N/A		

CARE-Zimbabwe Household Livelihood Security Assessment _2009
DRAFT

L. Social Support & Participation in Community Safety Nets									
		A		B		C			
		What types of support did you rely on from other households or institutions in the past 12 months? Yes (1) , No (0)		What was the main source of support? (see codes below)		What is the nature of involvement? (See codes below)			
Q165	Agric Inputs (seed or fertiliser)								
Q166	Cereal								
Q167	Clinic/Hospital Expenses								
Q168	Clothing								
Q169	Draught power(cattle or donkeys)								
Q170	Funeral Support								
Q171	Groceries(not mealie meal)								
Q172	Labor for farming								
Q173	Loan for cash								
Q174	School fees								
Q175	Hoes and Other Small Farm Tools								
Q176	Plough								
Q177	Care of the ill member								
Q178	Care of the children								
Main source of support codes 1 = Burial Society , 2 = Savings Clubs , 3 = Zunde Ramambo , 4 = Cooperatives , 5 = Extended Family , 6 = Community Based Organisation (CBO) , 7 = Church support group , 8 = Community members 99=N/A Nature of involvement 1 = Ordinary member , 2 = Committee member , 3 = Recipient of support ONLY 99=N/A									
M. Coping Strategies									
Q179	In the past 30 days , how frequently did your household resort to one or more of the following strategies in order to access food?(Indicate the appropriate frequency)			Frequency (see codes below)					
A	Limit portion size at mealtimes								
B	Reduce number of meals eaten per day								
C	Skip meals for the entire day.								
D	Borrow food or rely on help from friends or relatives								
E	Rely on less expensive or less preferred foods								
F	Purchase/borrow food on credit								
G	Gather unusual types or amounts of wild food / hunt								
H	Have household members ate at relatives or neighbors								
I	Reduce adult consumption so children can eat								
J	Rely on casual labor for food								
Codes for frequency 1= Almost every day 2 = Pretty Often(3-6 days/week) 3 =Once in a while (1-2 days a week) 4 = Seldom(<1 day a week never 5 =Never									
N. Knowledge, Attitudes & Practices Concerning HIV/AIDS									
Q180	Have you ever heard of HIV or AIDS?			<input type="checkbox"/> Yes (1) , No (0)					
Q181	Is AIDS different from HIV?			<input type="checkbox"/> 1 = Different 2 =The Same 3 = Don't know					
Q182	Are issues on HIV & AIDS openly discussed in the household?			<input type="checkbox"/> Yes (1) , No (0)					

Q183 In your opinion, if a mother has HIV, would the virus always be passed on to the baby?	<input type="checkbox"/>
0=No 1= Yes 2= Don't know 3= Sometimes/rarely 4=Depends	

Q184 How can a person get HIV, the virus that causes AIDS?		Yes (1) , No (0) , Don't know(2)	
A	Kissing	<input type="checkbox"/>	
B	Shaking hands	<input type="checkbox"/>	
C	Having unprotected sexual relations	<input type="checkbox"/>	
D	Receiving a blood transfusion	<input type="checkbox"/>	
E	Sharing needles and syringes	<input type="checkbox"/>	
F	Mosquito bites	<input type="checkbox"/>	
G	Supernatural means	<input type="checkbox"/>	
H	Having sex with prostitutes	<input type="checkbox"/>	
I	Mother to baby during birth	<input type="checkbox"/>	
J	Mother to baby while breastfeeding	<input type="checkbox"/>	
K	Other	<input type="checkbox"/>	

		Q185		Q186	
		What can a person do to avoid getting HIV? Anything else?		As an individual what are you currently doing to avoid getting HIV/re-infection?	
A	Abstain from sex	<input type="checkbox"/>		<input type="checkbox"/>	
B	Use condoms correctly & consistently	<input type="checkbox"/>		<input type="checkbox"/>	
C	Limit sex to one partner/stay faithful to one partner	<input type="checkbox"/>		<input type="checkbox"/>	
D	Limit number of sexual partners	<input type="checkbox"/>		<input type="checkbox"/>	
E	Avoid sex with prostitutes	<input type="checkbox"/>		<input type="checkbox"/>	
F	Avoid sex with persons who have many partners	<input type="checkbox"/>		<input type="checkbox"/>	
G	Avoid sex with homosexuals	<input type="checkbox"/>		<input type="checkbox"/>	
H	Avoid sex with persons who inject drugs intravenously	<input type="checkbox"/>		<input type="checkbox"/>	
I	Avoid blood transfusions	<input type="checkbox"/>		<input type="checkbox"/>	
J	Avoid injections	<input type="checkbox"/>		<input type="checkbox"/>	
K	Avoid sharing razors/blades	<input type="checkbox"/>		<input type="checkbox"/>	
L	Avoid kissing	<input type="checkbox"/>		<input type="checkbox"/>	
M	Avoid mosquito bites	<input type="checkbox"/>		<input type="checkbox"/>	
N	Seek protection from traditional practitioner	<input type="checkbox"/>		<input type="checkbox"/>	

In your community do you know someone who, in the last 12 months has had the following happen to them because they were known to have, or suspected of having, HIV/AIDS			0=No 1=Yes
Q187	a	Excluded/treated differently at social gathering	<input type="checkbox"/>
	b	Abandoned by spouse/partner, family or sent away from the family	<input type="checkbox"/>
	c	Teased, insulted or sworn at	<input type="checkbox"/>
	d	Lost customers to buy their produce or lost a job or being denied promotion	<input type="checkbox"/>
	e	Lost housing or not been able to rent or had property (land, household goods etc taken away)	<input type="checkbox"/>
	f	Given poorer quality health services eg being passed from provider to provider, not given medicines denied treatment	<input type="checkbox"/>
	g	Denied religious rights/services eg marriage, communion, burial, singing in choir not allowed to go to church	<input type="checkbox"/>

O. Chronically ill(for households with CI members ONLY)									
A	B	C	D	E	F	G	H	I	
	Relationship to the household head (see codes)	# of years since fell seriously ill	Has this person had an HIV test Yes (1) , No (0)	If they are willing to disclose, what is their HIV/AIDS status? Positive(1) Negative(0) 99=N/A 88=Not answered	Does anyone provide care to the sick from the community Yes (1) , No (0)	Is the client on 1 =OI prophylaxis 2 = Anti – retro therapy 3= DOT 99 =N/A Check all that apply			
Q188	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q189	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q190	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Codes for relationship to household head 1 = Household head 2 =Spouse 3 = Son/Daughter 4 =Grandchild 5 = Brother/Sister 6 = Parent 7 =Grandparent 8=Other									

Services Currently being offered by Community member(proceed to Q178 if any of the F above is yes)			
	1	2	
Service	Is service currently being provided Yes (1) , No (0)	How would you rate the service on a scale 1-5 (See codes below)	
A Hand Feeding	<input type="checkbox"/>	<input type="checkbox"/>	
B Bed Bathing	<input type="checkbox"/>	<input type="checkbox"/>	
C Treating wounds	<input type="checkbox"/>	<input type="checkbox"/>	
D Fetch firewood/water	<input type="checkbox"/>	<input type="checkbox"/>	
E Cook for the sick	<input type="checkbox"/>	<input type="checkbox"/>	
F Provide emotional comforting & prayer	<input type="checkbox"/>	<input type="checkbox"/>	
G Administer medicine	<input type="checkbox"/>	<input type="checkbox"/>	
H Accompany to clinic/hospital	<input type="checkbox"/>	<input type="checkbox"/>	
I Clean-up their living area	<input type="checkbox"/>	<input type="checkbox"/>	
J Help them get around	<input type="checkbox"/>	<input type="checkbox"/>	

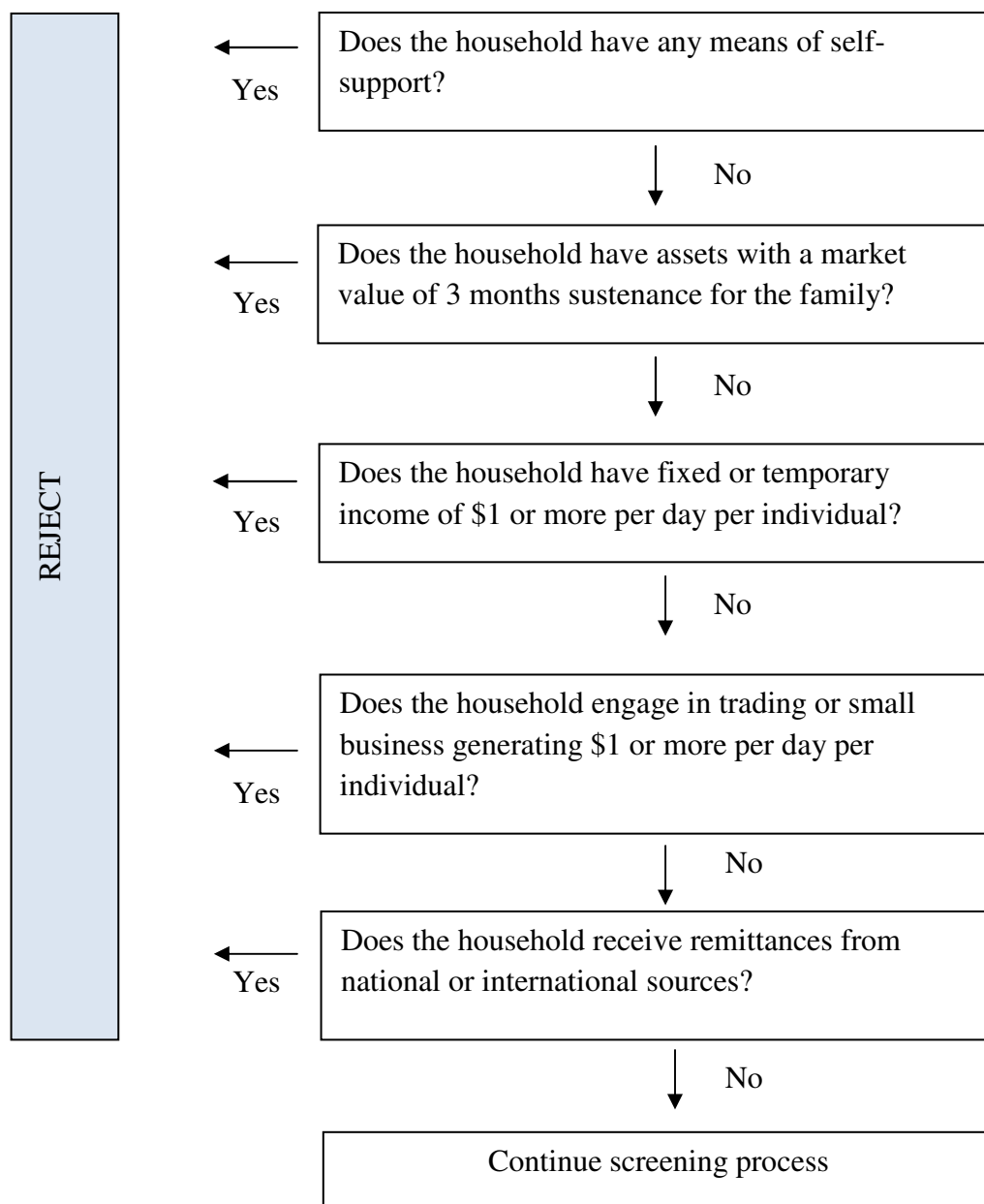
Codes for Service Rating level 1 =Very Dissatisfied 2 =Dissatisfied 3 = Neutral 4 = Satisfied 5 = Very satisfied

Stigma & Discrimination	
Q192 Do you share eating utensils with the sick?	<input type="checkbox"/> Yes (1) , No (0)
Q193 Is leftover food of the sick eaten by someone else?	<input type="checkbox"/> Yes (1) , No (0)
Q194 Does the sick have regular visitors from outside the household? (include relatives)	<input type="checkbox"/> Yes (1) , No (0)
Q195 Has the sickness caused a change for the worse in relations with others?	<input type="checkbox"/> Yes (1) , No (0)
Q196 Is the community willing to include the sick in activities?	<input type="checkbox"/> Yes (1) , No (0)

Quality Control	
Verification/District Supervisor Name _____ (Field)	Date <input type="text"/> / <input type="text"/> / <input type="text"/> Day / Month / Year
Final Quality Assesor Name _____ (M&E Unit)	Date <input type="text"/> / <input type="text"/> / <input type="text"/> Day / Month / Year
Data Entry Clerk _____	Date <input type="text"/> / <input type="text"/> / <input type="text"/> Day / Month / Year
*****End of Survey--express thanks for their time--answer any questions*****	

Annex 2. CARE-Zimbabwe Targeting Guide

1. Only households without major means of self-support are eligible.



2. Vulnerability criteria, and number of vulnerability criteria met, provide the next level of screening should there be more potential beneficiaries than the number allocated to the intervention or program. These include
 - Chronically ill household members (medically certified illnesses or any recurring illness that affects ones' productivity for the 3 previous consecutive months)
 - Child headed (one or both parents deceased and is 17 years of age or below)

- Elderly headed (60 and above years of age)
- Single-parent (widow) headed (spouse is deceased or long-term single parent receiving no support from estranged partner)
- Disabled headed (body and/or mental deformity that affects one's productive ability and consequently needs to be cared for by their family)
- Households with mentally or physically disabled member
- Households with one or more orphans (child with one or both parents deceased)
- Households with high dependency ratios (household with 7 or more members)
- Destitute household or person (able-bodied households without means of self-support, including vulnerable pregnant lactating mothers and households with malnourished children)

Annex 3. Calculating the Coping Strategies Index

The Coping Strategies Index (CSI) is a tool used to measure behavior change in households when they cannot access adequate or preferred foods. It is based on both the *frequency* with which households employ various coping strategies and the *severity* of the strategies. For the 2009 HLSA questionnaire households were asked the question “In the past 30 days, how frequently did your household resort to one or more of the following strategies in order to access food?” The coping strategies, listed in Figure A4, are then read out to respondents. The frequency choices given are: almost every day, 3-6 days per week, 1-2 days per week, less than one day per week, and never.

Severity weights are assigned to each coping strategy, with larger weights indicating greater severity. According to the weights the least severe coping strategy is “rely on less expensive or less preferred foods”. The most severe is “Skip meals for the entire day”. To calculate the index each coping strategy is assigned a score (frequency multiplied by severity) and then these scores are added up. In the example shown in the table, the household’s score is 85.2.

Often, the relative frequency scores used in calculation of the coping strategies index are arranged in *descending* order with the highest frequency (every day) receiving the highest score and lowest frequency (never) receiving the lowest score. For the 2009 HLSA survey, the scoring system was the opposite (*ascending* order). Accordingly, relatively food secure households have the higher CSI scores and food insecure households have lower CSI scores.

Figure A 1. Calculating the coping strategies index

In the past 30 days, how frequently did your household resort to one or more of the following strategies in order to access food?	Almost every day	Pretty often (3–6 days per week)	Once in a while (1-2 days per week)	Seldom (less than one day per week)	Never	Raw score	Severity weight	Score = relative frequency x weight
Relative frequency score *	1	2	3	4	5			
a. Limit portion size at mealtimes?		✓				2	2.3	4.6
b. Reduce number of meals eaten per day?			✓			3	2.7	8.1
c. Skip meals for the entire day?			✓			3	4.6	13.8
d. Borrow food or rely on help from friends or relatives?					✓	5	2.5	12.5
e. Rely on less expensive or less preferred foods?					✓	5	1.8	9
f. Purchase/borrow food on credit?				✓		4	2.9	11.6
g. Gather unusual types or amounts of wild food / hunt?					✓	5	2.9	14.5
h. Have household members eaten at relatives or neighbors?	✓					1	3.3	3.3
i. Reduce adult consumption so children can eat?			✓			3	2.6	7.8
Total household score								85.2

Annex 4. Calculation of Factor Analysis Indices

The factor analysis indices were calculated using Principal Component Analysis (PCA). PCA extracts several possible “components” using the intercorrelations among a set of variables, in this case the indicators chosen for creating each index. Only components with eigenvalues greater than “1” can be used to create an index. In this case, the component satisfying this condition and for which all indicators had positive factor loadings was used (because all indicators should correlate positively with the overall index).

Table A1 reports the factor loadings of each indicator, which determines their weight in the index. The percent of variance accounted for by the indicators is also reported. After calculation of the indexes, all were placed on a scale with zero as the minimum value and 100 as the maximum value. Where only one indicator used to make an index was missing, the index value was predicted using Ordinary Least Squares regression with the remaining indicators as independent variables (predictors).

Table A 1. Factor analysis output for computation of livelihood security index and index sub-components

Indicators	Factor loadings	
	2007 & 2009 data combined	2009 data only
Food security index		
Number of months with sufficient food	0.569	0.427
Number of meals in the previous day	0.633	0.642
Dietary diversity score	0.453	0.588
Coping strategies index	0.728	0.666
Percent of variance accounted for by component	36.5	34.6
Health security index		
Percent of households with no illnesses in last 2 months	0.313	0.258
Sanitation of toilet facility index	0.670	0.703
Percent of households that possess soap	0.530	0.502
Sanitation of water source index	0.579	0.574
Percent of variance accounted for by component	25.6	24.8
Education security index		
Number of years of education for adult members	0.554	0.594
Number of years of education for child members	0.744	0.725
Access to education of school-aged children	0.643	0.601
Percent of variance accounted for by component	42.4	41.3
Income security index		
Whether owns a plough	0.694	0.705
Whether owns oxcart	0.711	0.695
Whether owns wheelbarrow	0.652	0.665
Whether owns radio and or tv	0.527	0.490
Whether owns bicycle	0.452	0.431
Whether owns bed	0.574	0.581
Value of livestock owned	0.739	0.731
Percent of variance accounted for by component	39.5	38.8

Indicators	Factor loadings	
	2007 & 2009 data combined	2009 data only
Livelihood security index		
Food security index	0.639	0.652
Health security index	0.621	0.570
Education security index	0.468	0.485
Income security index	0.618	0.573
Percent of variance accounted for by component	32.6	32.3