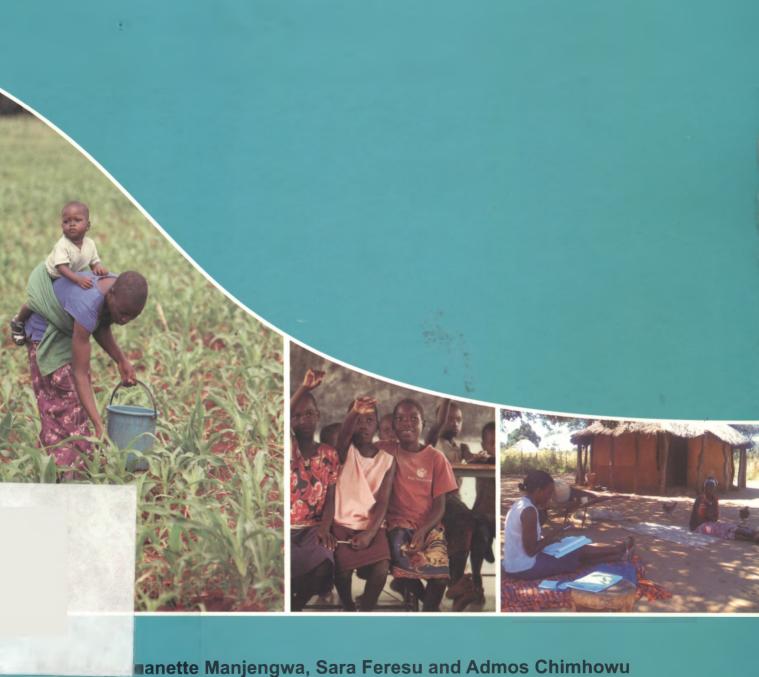
Understanding Poverty, Promoting Wellbeing and Sustainable Development

A sample survey of 16 districts of Zimbabwe



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Chapter Six

Shocks, Vulnerability and Coping

Ngoni Mararike and Admire Nyamwanza

Main messages

- Zimbahwe is characterised by a multiple of economic, social and natural shocks that affect the majority of the population and render them vulnerable and impoverished.
- Major shocks identified were food shortage, inflation, and drought. Illness related shocks were also important.
- The most severe shocks were weather-related.
- People in different wealth categories employed different coping strategies, with the poor and very pour emphasising asset depletion such as selling livestock, as well as engaging in local casual agricultural work.
- The non-poor emphasised strategies of further strengthening their positions against current and future risk and undertaking such activities as seeking better education, cross-border trade and establishing nutrition gardens.

Introduction

This Chapter discusses vulnerability and coping survey findings in 16 sampled districts of Zimbabwe. It is divided into four sections. The first provides a brief conceptual review of vulnerability and coping strategies. The second provides background information on key patterns and trends on vulnerability in the country in the years leading to the survey, thereby presenting the general vulnerability context within which the survey was undertaken. The last two sections examine vulnerability and coping determinants and patterns in the 16 sampled districts.

A conceptual review of vulnerability and coping

Vulnerability

The concept of vulnerability begins with the notion of risk, where risk is the known or unknown probability distribution of hazardous events, which may be natural or man-made (Heitzmann et al., 2002). In essence, a risk may either be a stress or a shock and for livelihoods, stresses and shocks may be categorised into natural risks (for example floods; droughts), social risks (emanating from such factors as demographic changes and health challenges), political risks (for example governance failures, political conflict/violence) and economic risks (for example unemployment, inflation, deterioration of input/output/labour markets)²⁴. From characterising the actual risk itself, vulnerability can result in a number of options and capacity of managing the risk and risk

responses, as well as the likely outcome to be generated by the risks (Heitzmann, et al., 2001). This characterization fits in with Chambers' (1989) more popular definition of the concept, in which vulnerability is taken to mean 'contingencies and stress and means of coping with them'. The implication then is that vulnerability is double-faced, as there should be recognition of an external side of risk or 'external vulnerability' (which is the risk itself and the outcome that it generates) to which a system is exposed, as well as the internal side or 'internal vulnerability' which reflects defencelessness, insecurity and a lack of means to cope with and/or adapt to damaging loss (Chambers, 1989). Risks can also either be idiosyncratic, affecting and experienced in one household and unrelated to other households due to factors such as illness, death of a key household member or crop failure, or they may be covariant, affecting many households in the same locality and caused by factors such as financial crises and natural disasters (Bhattamishra and Barrett, 2008).

There is however, always an idiosyncratic component to risk, even in covariant risks, as households differ in their exposure, sensitivity and capacity to respond to these shocks and stresses.

Poverty essentially links with 'internal vulnerability', as it is characterised as the lack of opportunity for people to meet economic, social and other standards

²⁴A risk becomes a stress when it is typically continuous and cumulative and therefore to some extent predictable (such as declining rainfall, HIV and AIDS, general economic hardships etc.), and a shock when its impacts are typically sudden, unpredictable and traumatic (such as floods and droughts etc.) (after Kratnz, 2001).

of 'wellbeing'. This manifests in the lack of capacity to earn enough income and meet material needs; speak up for oneself and possess rights; maintain health and basic education as well as maintain a sense of social and cultural affiliation (Organisation for Economic Co-operation and Development (OECD), 2001; Eriksen and O'Brien, 2007). Ellis (2000) also points out that the most vulnerable households are those that are both highly prone to adverse external events and lacking in assets or social support systems that could carry them through periods of adversity. There is thus a strong link between vulnerability and poverty, although the two are not synonymous. People in vulnerable conditions may not necessarily be poor, whilst amongst the poor there may be varying levels and patterns of vulnerability, depending on the multitude of dynamic processes through which individuals and households respond to stresses and shocks (Coetzee and Nomdo, 2002). Rising poverty is therefore a contributing factor to increased vulnerability, though poor people may not be vulnerable if they live in relatively stable contexts with good infrastructure, communications and support systems (Drimie and Zyl, 2005).

Coping

Coping has been defined as an array of short-term strategies adopted by households and communities in response to crisis (Berkes and Jolly, 2001). The coping concept became widely used in the 1970s and the 1980s in the wake of famine in the Sahel region and northeast Africa and in the analysis of household responses to this crisis (Rugalema, 2000). Since then, coping has been applied more directly in explaining household and community responses to extreme events such as droughts and floods (e.g. Scoones, 1992; Devereaux, 1993; del Ninno et al., 2001; Belay et al., 2005). This association of coping strategies, with short-term responses to extreme events or shocks, has often led to the concept being differentiated from adaptive strategies, which are taken to be longerterm mechanisms against dynamic adverse processes or stresses. Most adaptive mechanisms are developed over time from coping mechanisms (Berkes and Jolly, 2001). In most communities many response strategies to crisis also serve the dual role of meeting both short-term concerns and long-term goals of managing future risk (Oparinde and Hodge, 2011). Thus in reality the distinction between coping and adaptive strategies may be superficial.

Coping strategies can be conceptualised along a continuum with the increase in frequency and/or severity of the effects of shocks and/or stresses (Adams *et al.*, 1998). Depending on the various opportunities and resources at a household's disposal, this continuum proceeds from a positive end characterised by engaging in strategies that strengthen a household's position against the effects of risk. These include diversifying income, increasing production and investing in different assets. This is followed along the continuum by trade-off strategies that

minimise the effects of risk, such as liquidating savings, selling assets and seeking loans from kin and friends. At the opposite end of the continuum, are strategies that are characterised by 'struggling' with crisis, through, for example, compromising health and nutrition by ignoring illness symptoms or rationing consumption, extensive resort to wild foods in place of cereal, and begging.

Successful coping involves mobilising sufficient resources to overcome the effects of shocks and/or stresses without compromising critical livelihood objectives such as maintaining sound health of household members, optimum household financial sources (e.g. land and livestock in most rural communities) and household social status.

Successful coping, at the positive end of the continuum, also becomes a reflection of resilience—a condition characterised mainly by processes of learning to live with change and uncertainty, through being able to anticipate or forecast the nature and intensity of stresses and shocks; reduce the effects of present vulnerabilities; recover from the effects of past and present vulnerabilities and thrive even in the context of a difficult livelihood environment.

Vulnerability in Zimbabwe

Successive droughts (e.g. 1997/98, 2001/2002, 2004/05 and 2006/07) and unprecedented cyclones (Eline in 2000 and Japhet in 2003); the HIV and AIDS pandemic, and an approximate 50 per cent shrink of the economy in real terms between 2000 and 2008 (FAO/WFP Report, 2009; Government of Zimbabwe, 2010), all combined to create a situation akin to what Drimie (2004) calls 'a web of entangled crises'. This situation led to the collapse of incomes, with high unemployment rates and hyperinflation (FAO/WFP Report, 2009). Poverty levels were also high, reaching an estimated 80 per cent in the same year (UNICEF, 2009). Adequate coping capacity (on the desirable/positive end of the coping continuum) for the majority of Zimbabweans under such conditions was therefore heavily compromised.

The formation of a new inclusive government in February 2009 stabilised the political and economic environment such that by the time the survey was carried out in April/May 2011, there were signs of improvement in the macroeconomic environment. The projections of the Zimbabwe Vulnerability Assessment Committee (ZIMVAC) have also been positive since the consummation of the inclusive government²⁵.

³⁷ZIMVAC is a consortium of government departments, United Nations agencies, non-governmental organisations and other international organizations which has undertaken annual rural (and a few urban) food insecurity and livelihood vulnerability assessments in the country since 2002.

The Committee for example projected that the prevalence of food insecure people in the rural areas had been dropping from 18 per cent of the total population in the 2009/10 consumption year to 12 per cent in the 2011/12 year (ZIMVAC, 2009; 2011).

The economy however remains in a relatively fragile state as investments, employment opportunities and incomes still remain low, with monthly wages in the formal sector for example averaging USD 150 to USD 300.

It is within this context that the MZF Survey component on vulnerability and coping sought to understand the sources, patterns and determinants of vulnerability and coping in the sampled districts by specifically inquiring indepth on the following four areas:

- Natural, socio-economic and other household risks in the 12 months leading to the survey (that is between April 2010 and May 2011), including their frequency and severity as well as the likelihood of them occurring again in the 12 months after the survey.
- Patterns in coping mechanisms against the experienced risks.

- Period of household recovery from the effects of risks.
- · Sources of assistance to household coping.

Sources, patterns and determinants of vulnerability

The MZF questionnaire included questions about the occurrence of different kinds of shocks during the past twelve months and various sources of vulnerability were identified across the 16 districts, ranging from covariant ones (such as droughts and decreasing development assistance from government) to idiosyncratic ones (such as family sickness, lack of domestic water, crop pests and loss of employment). In addition, information was collected on the severity of the shock based on three categories (that is, low-minor, medium-moderate, and high-major) as well as the likelihood of it re-occurring in the next 12 months. Table 6.1 shows the probability that a community had suffered from food shortage, inflation, or drought during the past twelve months was at least 43 per cent. The probability that a household had suffered health related shocks was between 27 and 35 per cent while the probability that the community had suffered from decrease in either government or donor support was 30 per cent. The latter reflects declining public resources available to fund social protection, donor withdrawals associated with sanctions placed on Zimbabwe as well as declining donor

Table 6.1: Probability of experiencing shocks in the community during past 12 months by severity of the shock

Type of Shock	Prob (x)		Severity of sh	Severity of shock (%)		
		Low-	Medium-	High-	Row	
		minor	moderate	major	Total	
Food shortages	0.452	13.9	35.1	51.0	100	
Inflation	0.441	14.3	34.7	51.1	100	
Drought	0.429	9.3	32.1	58.7	100	
Family sickness	0.350	18.0	37.0	45.0	100	
HIV and AIDS	0.332	15.5	34.8	49.7	100	
Decreasing donor						
assistance	0.305	16.5	39.2	44.4	100	
Decreasing govt						
assistance	0.304	13.9	38.1	48.1	100	
Chronic illness	0.269	14.6	33.2	52.2	100	
Crop pests	0.215	12.9	37.6	49.5	100	
Labour shortage	0.127	14.4	46.5	39.2	100	
Floods	0.086	19.2	29.1	51.7	100	
Fire	0.085	23.3	41.1	35.3	100	

²⁵ZIMVAC is a consortium of government departments, United Nations agencies, non-governmental organisations and other international organizations which has undertaken annual rural (and a few urban) food insecurity and livelihood vulnerability assessments in the country since 2002.

funding due to the financial crisis in the Western world. Other important shocks include crop pests and labour shortages—with about 21 and 13 per cent of households reporting these shocks respectively. With regard to severity, Table 6.1 shows that weather-related shocks were most severe (that is, droughts and floods) followed closely by food shortages and spiralling commodity prices.

Table 6.2 investigates the probability of shocks by geographical location, and shows that droughts were more likely to affect rural areas (64 per cent) more severely, while inflation was felt more by urban dwellers (50 per cent). Nonetheless, the probability of food shortages and inflation occurring in rural areas was also very high at 54 per cent and 40 per cent respectively. It is worth noting the high correlations among the specified shocks as food shortages in rural areas are probably related to droughts while they might be related to inflation in urban areas. The relatively high probability of food shortages in urban areas may be due to higher numbers of households from high density suburbs that were included in the sample survey that are characterized by high rates of unemployment.

The survey also inquired about the shocks likely to recur during the next year and the results in Table 6.3 indicate that households in enumeration areas in Agroecological Region IV²⁶ expected that shocks like drought and food shortages were more likely than not to reoccur.

Furthermore, the reponses indicated that the likelihood of droughts and food shortages reoccuring decreased from Agro-ecologial Regions V and IV to Regions III to I with higher average rainfall and agricultural potential. In Region II²⁷, which is characterised by regular rainfall between 750 and 1,000 mm per year, and regarded as suitable for intensive farming and crop production, the likelihood of having food shortages was 67 per cent, while for droughts it was 55 per cent. The comparable figures for food shortages and drought were 95 per cent for Region IV and 75 per cent for Region V²⁸. Consequently, the relatively higher incidence of poverty observed in Table 4.3 and Figure 4.2 in Chapter Four, among households in Region IV may be partly linked to numerous weather and agricultural shocks.

Region IV is characterised by low rainfall of between 450 and 650 mm a year, with frequent droughts and relatively high temperatures. The agricultural potential for this region is semi-intensive farming with livestock and drought tolerant crops (Vincent and Thomas 1961).

Two major interrelated factors — poverty and geographical location, shaped vulnerability patterns across the targeted districts. There were sub-factors particularly under geographical location, such as the agroecological positioning of an area, as well as rural-urban differentiations in the determination of vulnerability

Table 6.2: Probability of experiencing shocks in the last 12 months by location

	Resi	dence	Agro-ecological regions				
	Rural	Urban	1 and 2	3	4	5	
Food shortages	0.54	0.33	0.38	0.49	0.57	0.44	
Inflation	0.40	0.50	0.45	0.51	0.41	0.39	
Drought	0.64	0.14	0.19	0.47	0.73	0.54	
Family sickness	0.38	0.31	0.36	0.37	0.37	0.30	
HIV and AIDS	0.39	0.25	0.31	0.30	0.32	0.41	
Decreasing donor assistance	0.49	0.15	0.21	0.26	0.44	0.39	
Decreasing govt assistance	0.40	0.17	0.25	0.26	0.41	0.35	
Chronic illness	0.33	0.19	0.25	0.27	0.24	0.32	
Crop pests	0.35	0.03	0.06	0.11	0.48	0.37	
Labour shortages	0.19	0.04	0.07	0.06	0.26	0.17	
Floods	0.13	0.02	0.01	0.04	0.36	0.03	
Fire	0.13	0.02	0.08	0.06	0.12	0.09	

²⁶Bulawayo, Gokwe South, Mbire and parts of Mutoko, Gokwe North, and Gwanda Districts are situated in Region IV.

Harare and Mazowe and parts of Hurungwe and Mutoko Districts are situated in Region II.

^{*}Chiredzi, Hwange, Kariba, and parts of Chimanimani, Gokwe North, and Gwanda Districts are situated in Region V.

across the targeted districts. These factors are discussed in detail in the following sections.

Poverty and vulnerability to shocks

As noted earlier, poverty is not synonymous with vulnerability; however the poor are more susceptible to risk than the non-poor because of lack of assets and opportunities to meet socio-economic and other standards of wellbeing. Poverty also interacts with the other determinants (i.e. the rural-urban factor and the agro-ecological factor) in reinforcing conditions of vulnerability.

From MZF survey findings, 44 per cent of the households were very poor, and tended to live in rural areas as well as in the low agricultural potential regions IV and V. They typically had:

- A monthly consumption expenditure of less than
 USD in the urban areas and a monthly consumption expenditure of 25 USD in the rural areas.
- · Less education.
- One or more sick family members (suffering mostly from HIV and AIDS related illnesses).
- · Elderly household heads.

These factors were therefore found to expose the poor and very poor to various risks more than the non-poor. Figure 6.1 shows the distribution of the effects of various shocks and stresses, showing the very poor suffering more risk than the poor and the non-poor across the 16 districts

of the study.

Coping strategies

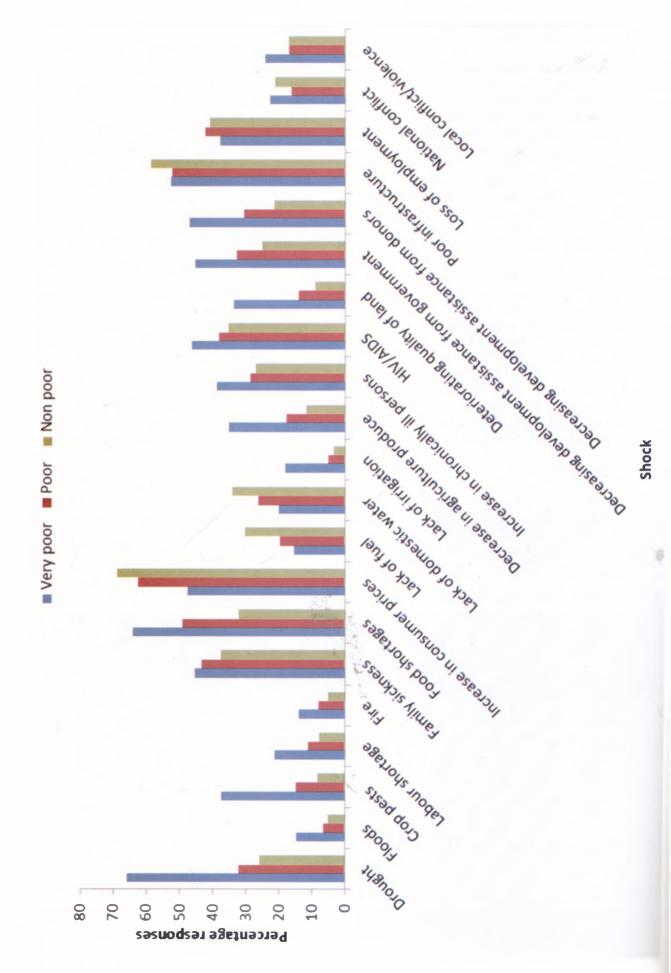
Coping strategies are broadly taken to mean mechanisms strengthening a household's position against risks and minimising the effects of various stresses and shocks. This can be through accumulating assets, diversifying crops and livelihood sources and conducting various trade-offs in responding to risk in ways that do not compromise critical household livelihood objectives. The conceptualisation of coping in the MZF study however also acknowledges that people may be overwhelmed by stresses and shocks and move into 'struggling' with crises, thus coping through extensive foraging, and food aid, for example. Figure 6.2 presents all the coping strategies mentioned by people in the survey while Figure 6.3 summarises the top coping strategies against the main risks mentioned by the poor, the very poor and the non-poor – since people in these categories tended to emphasise different strategies and risks faced.

The main determinants noted as driving vulnerability, namely, poverty and geographical location of an area, are the same influencing various coping mechanisms across the 16 districts. From Figure 6.3 the very poor emphasised strategies that depleted their assets or that used 'struggling' oriented mechanisms such as selling livestock, donor assistance and local casual agricultural work as their top coping strategies. The poor who are at the middle of the coping continuum, balanced trade-off mechanisms between those strategies strengthening their position against risk (for example, formal employment and establishing nutrition gardens) and minimising the effects of risk (for example, local casual agricultural work

Table 6.3: Possibility of shocks occurring in next 12 months

	Regions I and II		Region III		Region IV		Region V	
	Likely	Unlikely	Likely	Unlikely	Likely	Unlikely	Likely	Unlikely
	or very	or never	or very	or never	or very	or never	or very	or never
hocks	likely		likely		likely		likely	
Food shortages	67.0	33.0	81.7	18.3	94.7	5.3	74.5	25.5
Inflation	73.4	26.6	79.9	20.1	95.4	4.6	74.6	25.4
Drought	54.9	45.1	83.1	16.9	92.6	7.4	79.6	20.4
Family sickness	51.7	48.3	56.3	43.8	83.4	16.6	53.1	46.9
HIV and AIDS	66.0	34.1	69.8	30.2	94.2	5.7	73.4	26.6
Decreasing donor								
assistance	67.9	32.1	67.9	32.1	97.1	2.9	71.7	28.3
Decreasing govt	60.5	20.5	60.5	21.5	06.2	2.0	(7.2	20.5
assistance	69.5	30.5	68.5	31.5	96.2	3.8	67.3	32.7
Chronic illness	56.1	43.9	70.4	29.6	83.9	16.2	66.6	33.4
Crop pests	28.3	71.7	46.6	53.4	90.9	9.1	69.3	30.7
Labour shortage	42.0	58.0	38.9	61.1	83.2	16.9	47.3	52.7
Floods	18.8	81.2	23.1	76.9	83.5	16.5	15.6	84.4
Fire	40.8	59.2	38.8	61.2	77.0	23.0	25.6	74.5

Figure 6.1: Effects of risk according to wealth categories for the 16 districts in the MZF survey





Top Risks for the Very Poor Category

- Drought
- · Food shortages
- · Poor infrastracture
- HIV and AIDS
- Decrease in donor assistance and support

Top Risks for the Poor Category

- Increase in consumer prices
- Poor infrastructure
- · Food shortages
- · Family illness
- · Loss of employment

Top Risks for the Non - Poor Category

- Increased consumer prices
- · Poor infrastructure
- · Loss of employment
- Family sickness
- HIV and AIDS







Very poor catergory Top 5 coping stratergies	Poor catergory Top 5 coping stratergies	Non-poor catergory Top 5 coping stratergies
Local casual agriculture work	Local casual agricultural work	Establishing a nutrition garden
 Sale of livestock Seeking assistance from donors/ NGOs 	Sale of livestock Permanent employment	Looking for employment Cross border trade
Establishing a nutrition garden	Establishing a nutritional garden	Casual work
Looking for employment	Selling household assets	Better education

Figure 6.3. Top risks and coping mechanisms for the very-poor, poor and non-poor

and selling livestock). The non-poor on the other hand are seen at the positive end of the continuum, emphasising on strategies to strengthen their positions against current and future risk and undertaking such activities as seeking better education, cross-border trade and establishing nutrition gardens.

From the focus group discussions with communities there are different coping opportunities for households in different areas. For example, people in border districts such as Chimanimani, Chiredzi and Mbire are seen to have extra opportunities for viable coping mechanisms such as cross-border trading and casual work, due to their proximity to neighbouring countries. Gold panning provides a coping livelihood strategy for some households, in Chimanimani and Mazowe, which are areas rich in alluvial gold. Diamond mining was also given as a coping strategy in Chimanimani. People in urban areas have

opportunities to engage in viable coping strategies such as vending small commodities like vegetables, biscuits and eggs in Epworth and Highfield suburbs of Harare, selling curios in Bulawayo and Hwange, and setting up home industries, such as carpentry and welding, in Harare, as opposed to rural communities whose main strategies seem limited mainly to local casual agricultural work, foraging wild fruits and insects and selling livestock. Children dropping out of school was given as a coping strategy by both some rural and urban households, in Mutare Rural and Harare, respectively.

Conclusion

This Chapter has discussed the various sources, patterns and determinants of vulnerability and coping strategies across the 16 districts sampled for the MZF survey. Poverty and geographical location have been shown

to be the main determinants of both vulnerability and coping. The different assets and opportunities available to people of different wealth ranks are shown to influence the various coping mechanisms they undertake, and the idiosyncratic vulnerabilities affecting them. In the same vein, people living in areas in different Agro-ecological Regions are shown to be affected differently by different vulnerabilities; with the rural-urban factor also determining their different risk exposures.

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