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DRAFT

# ZAMBIA

## POVERTY AND VULNERABILITY ASSESSMENT

*Discussion Draft*  
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**Monetary Equivalent**

**As of June 30, 2005**

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*ACRONYMS AND ABBREVIATIONS*

AIDS	Acquired Immune Deficiency Syndrome
ARV	Anti-retroviral drugs for HIV/AIDS
BESSIP	Basic Education Sub-Sector Investment Program
CAS	County Assistance Strategy
CBO	Community-Based Organizations
CCF	Christian Children's Fund
CCPU	Community Crime Prevention Unit
CIF	Community Investment Fund (ZAMSIF)
CSO	Central Statistical Office
CSPR	Civil Society for Poverty Reduction
DACO	District Agriculture Coordinator
DANIDA	Danish International Development Agency
DAO	District Administrative Officer
DCI	Development Corporation Ireland
DDCC	District Development Coordinating Committee
DDP	District Development Program
DFID	Department for International Development
DHMT/B	District Health Management Team / Board
DHS	Demographic and Health Survey
DIF	District Investment Fund (ZAMSIF)
DPO	District Planning Officer
DRC	Democratic Republic of Congo
DSA	District Situation Analysis
DWASHE	District Water and Sanitation Health Education
ECZ	Environmental Council of Zambia
EHT	Environmental Health Technicians
FAO	Food and Agriculture Organization
FBO	Faith-Based Organizations
GDP	Gross Domestic Product
GRZ	Government of the Republic of Zambia
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit - German Agency for Technical Cooperation
HBC	Home Based Care
HIPC	Highly Indebted Poor Countries
HIV	Human Immunodeficiency Virus
HUZA	Human Settlements of Zambia
ILO	International Labor Organization
I-PRSP	Interim Poverty Reduction Strategy Paper

JCTR	Jesuit Center for Theological Reflection
JICA	Japan International Cooperation Agency
LCC	Lusaka City Council
LCMS	Living Conditions Monitoring Survey
LWSC	Lusaka Water and Sewerage Company
MCDSS	Ministry of Community Development and Social Services
MCHP	Maternal and Child Health care Program
MDGs	Millennium Development Goals
MOE	Ministry of Education
MPU	Micro Planning Unit
NGO	Non Governmental Organization
NGOCC	Non-Governmental Organization Coordinating Committee
NHA	National Housing Authorities
NHC	Neighborhood Health Committees
NWASCO	National Water and Sewage Council
OVC	Orphans and Vulnerable Children
PAM	Program Against Malnutrition
PAG	Poverty Assessment Group
PCI	Project Concern International
PDCC	Provincial Development Coordinating Committee
PPAZ	Planned Parenthood Association of Zambia
PRSP	Poverty Reduction Strategy Paper
PSCAP	Public Service Capacity Building Project
PSDA	Private Sector Development Association
PTA	Parents and Teachers Association
PULSE	Program for Urban Livelihood ...
PUSH	Peri-Urban Self Help program
PVA	Poverty and Vulnerability Assessment
PWASHE	Provincial Water and Sanitation Health Education
RDC	Residents Development Committee
RIF	Rural Investment Fund
SADC	Southern Africa Development Community
SAG	Sector Advisory Group
SDP	Senior District Planner
SFH	Society for Family Health
SMEs	Small and Medium Enterprises
SP	Social Protection
SRM	Social Risk Management
STD	Sexually Transmitted Disease
SWAP	Sector Wide Approach
TAZARA	Tanzania Zambia Railway
TBA	Traditional Birth Attendants
UNCHS	United Nations Center for Human Settlements (now the United Nations Human Settlements Program, or UN-Habitat)
UNDP	United Nations Development Program
UNICEF	United Nations International Children Emergency Fund
USAID	United States Agency for International Development
UTH	University Teaching Hospital
VCT	Voluntary Counseling and Testing

VSU	Victim Support Unit
WFP	World Food Program
YMCA	Young Men's Christian Association
YWCA	Young Women's Christian Association
ZAFOD	Zambia Federation of the Disabled
ZAMSIF	Zambia Social Investment Fund
ZANACO	Zambia National Commercial Bank
ZCSA	Zambia Community Schools' Association
ZCCM	Zambia Consolidated Copper Mines
ZDC	Zone Development Committees
ZDHS	Zambia Demographic and Health Survey
ZESCO	Zambia Electricity Supply Corporation
ZMK	Zambian Kwacha
ZNAPH	Zambia National Association for the Physically Handicapped
ZOCS	Zambia Open Community Schools

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## **Zambia Poverty and Vulnerability Assessment**

### **EXECUTIVE SUMMARY**

Rich in human and natural assets, Zambia once appeared to be a pace-setter for Africa's economic and social development. At independence in 1964, Zambia was among the continent's wealthiest nations. However, excessive dependence on copper together with a highly centralized one-party state left the economy vulnerable. The economy contracted beginning in the mid-1970s, when copper prices began to fall and fuel prices rose. Zambia resorted to heavy external borrowing to finance consumption and investment in capital-intensive, import-substitution industries. These industrialization policies were not a success and there was only limited investment in alternative exports.

Zambia's transition to multi-party democracy in 1991 stoked optimism that its dormant economic potential would be awakened and revived economic growth would improve the lot of the nation's poor. The Government introduced an array of reforms in the early-to-mid 1990s, removing exchange rate controls, liberalizing the trade regime, decontrolling food and agriculture prices, liberalizing the banking sector, and privatizing many state-owned enterprises. Although there were initial gains—including a fall in inflation, a sharp increase in non-traditional exports, and some diversification in agriculture—momentum slowed in the mid-1990s and Zambia's hopes for a sustained economic recovery remained largely unrealized. The continued deterioration in the international price of copper, macro instability, the collapse of major manufacturing industries, the scourge of HIV/AIDS, and acute governance and policy failures have conspired to stifle the nation's progress. At the macro level, the disappointments of the decade are reflected in the decline of GDP per capita by an average 1.5 percent per year. Other measures of welfare also deteriorated: life expectancy fell, school enrollments stagnated, child malnutrition increased sharply, and by 1998, 73 percent of the population was estimated to live in poverty.

At the heart of the country's loss of economic momentum is the loss of effectiveness of the state administration. This has led to weak policies and uneven implementation, an investment climate not supportive of private investment and growth, and poor performance in the delivery of social and infrastructure services essential for growth and poverty reduction.

Reversing this loss of dynamism and the impact of that loss on the poor and vulnerable is Zambia's most important challenge. There are early and encouraging signs of economic recovery. During the initial years of the new millennium, Zambia achieved sustained albeit modest growth in GDP per-capita for the first time in several decades, and the country is finally reaping the benefits of economic reforms. But as yet there is no evidence that these economic gains have

resulted in better living conditions for the poor.<sup>1</sup> As one hears frequently in Zambia, growth in aggregate GDP has not been accompanied by GDP-in-the-pockets of the poor.

### The Face of Poverty in Zambia

The report documents poverty along a number of dimensions, including *material deprivation*, *human deprivation*, *vulnerability*, *destitution*, and *social stigmatization*. There must be progress across all dimensions if Zambia is to meet the ambitious development goals reflected in the MDGS and being discussed in the work-up to the Fifth National Development Plan.

Poverty, measured in terms of *material deprivation*, is high in Zambia—according to the poverty analysis done for this report, 56 percent of the population was poor in 2002/03, including 62 percent in rural areas and 45 percent in urban areas. The vast majority of Zambia's poor live in rural areas, with the highest concentrations in Northern and Eastern Province. Urban poverty is also high, and due to their large size Lusaka, and cities and towns in the Copperbelt account for a substantial share of Zambia's poor.

Inequality is an important aspect of poverty in Zambia. Since Independence, there have been high levels of inequality between urban and rural areas, and within urban and rural areas due to the dualistic nature of the economy. Despite structural changes in the economy, inequality has remained high at the national level as well as within urban areas. In contrast, Zambia's rural areas appear remarkably homogeneous, albeit still remarkably poor.

Moreover the long decline in Zambia's economy has created a somewhat unique type of poverty. Many Zambians have as their point of reference the boom period of the 1960s and 70s and the high levels of services and protection that were the result of economic prosperity. An overwhelming majority of Zambians (95 percent of those interviewed for 2002/03 Living Conditions Monitoring Survey, LCMS III) feel that they either are poor or very poor, including many who work in the formal sector and have secure jobs.

This gap between expectations and the reality of life is at the heart of an ongoing debate about the extent of poverty in Zambia. Poverty was estimated at 70-75 percent of the population throughout the 1990s, based on a series of household surveys (viz. the 1993 Priority Survey, 1996 LCMS, 1998 LCMS II). The surveys only covered a 6-8 week period in each survey year (late October through early December, the lean season when poverty rates are higher). The more recent 2002/03 LCMS III covered a full 12 months to account for seasonality, and additional changes were introduced in the survey methodology<sup>2</sup> and the methods used to calculate poverty<sup>3</sup> that rendered LCMS III results incompatible with results from the earlier surveys. Using the most recent data from the LCMS III, this report estimates that the national poverty headcount in Zambia (percent of population falling below the poverty line) is 56 percent. Using a similar methodology and poverty line, the Central Statistics Office estimates a national poverty headcount of 67 percent.<sup>4</sup> According to NGOs and other stakeholders in Zambia, neither estimate

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<sup>1</sup> A national Indicators Monitoring Survey (IMS) recently was completed that is comparable in design to the 1998 LCMS II. The findings from the IMS should indicate whether headcount measures of poverty have or have not improved since 1998.

<sup>2</sup> The consumption module was implemented using a 1-month diary approach in the LCMS III, compared to a 1-week recall in previous surveys.

<sup>3</sup> Poverty lines were re-estimated, also adjusted for regional cost-of-living differences in 2002/03.

<sup>4</sup> To reiterate a point made earlier, neither CSO's nor this report's 2002/03 figures are comparable to earlier poverty estimates e.g. for 1998.

is correct. Most Zambians perceive the extent of poverty to be much greater. One of this report's key recommendations is that MoFNP set up an Expert's Advisory Group to facilitate and lead wider discussions in Zambia on what comprises a decent standard of living and what therefore should be Zambia's official poverty line. The advisory group could support Government in determining how many individuals and households currently fall below the poverty line and how best to monitor progress – in reducing poverty and raising living conditions – over time.

Current differences in views on poverty levels and trends should not distract attention from the central finding on which all parties agree: poverty levels are unacceptably high in Zambia and there is little if any evidence that poverty has fallen in recent years. By any estimate, Zambia remains one of the poorest countries in Sub-Saharan Africa and stronger and more effective efforts must be made to foster growth and improve the welfare of the poor.

**Human deprivation** is another important aspect of poverty. Zambians receive more education on average (6.4 years for men, 4.9 years for women) than residents of most other African nations. Of large countries in the region, only South Africa and Botswana have populations with higher average years of adult schooling. However, Zambia's successes were achieved in the 1960s and 1970s; Zambian men in their 40s have more education than men in their 20s and literacy rates have fallen for the younger cohorts. In contrast to men, literacy among younger women has deteriorated less and schooling rates continue to improve slowly. As of 2001, 75 percent of children (7 to 13 years) were enrolled in school, and the longstanding gap between boy's and girl's enrollments had closed. However, wealth matters: there is a gap of approximately 20 percentage points in school enrollment for children from the poorest 20 percent of households compared to those from the wealthiest 20 percent.

Zambia has the lowest life expectancy at birth in the world according to UN estimates. At current period death rates, less than one in three Zambians born today will survive past his or her 40th birthday. The UN figures have been disputed by the Zambian Central Statistics Office, which has produced official estimates of around 50 years for life expectancy at birth, very similar to what Zambia had achieved in the 1970s.

The Zambian people suffer from a high burden of disease, due in large part to high rates of HIV/AIDS, but also to malaria and other infectious diseases. In 2001<sup>5</sup>, HIV/AIDS prevalence was estimated at 18 percent for women and 13 percent for men, and Zambia was entering its third decade of double-digit HIV/AIDS prevalence. Children are particularly at risk: they are frequently malnourished—47 percent of Zambian children are chronically malnourished, rising from 40 percent in the early 1990s—and less shielded against disease. Three out of ten youngsters are still not fully immunized, and under-five mortality is very high at 176 per 1000 live births. Infant mortality is particularly high in households suffering from high levels of income poverty.

Just as the reality of poverty goes beyond material deprivation, it also encompasses more than shortcomings in human development. The poor—in Zambia as elsewhere—are highly **vulnerable**. They are exposed to multiple risks, including droughts, commodity price shocks, health shocks, and all too frequent deaths due to HIV/AIDS and other diseases, and they have limited capacity to cope with these risks. Often **voiceless and powerless**, the poor have little influence over institutions of the state. A small but growing subset of the poor is truly **destitute**, and the fear of joining their ranks, from which there is often no escape, colors the thinking and actions of the poor and non-poor alike. The poorest and most vulnerable in Zambia include

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<sup>5</sup> Zambia Demographic and Health Survey (2001 ZDHS)

widows and the disabled, as well as households caring for members with HIV/AIDS and other serious diseases. Fifteen percent of all children are orphans, many of whom live on the streets or in households with no adult caregiver, and those that have lost either their father or both parents are significantly less likely to be enrolled in school than other children. Female orphans fare particularly poorly. The elderly, particularly elderly heads of household in urban areas are emerging as a new very poor and at-risk group. Many are raising orphaned grandchildren, and they struggle to survive without the support traditionally provided by their own adult children. HIV/AIDS has extracted a terrible toll on Zambians of all ages.

### **The Causes: Poverty of Resources, Access, and Relationships**

***Poverty is the result of low levels of assets, coupled with low and uncertain returns to these assets.*** In combating poverty, Zambia will need to build purposefully on all its assets, those in public hands as well as those in the private sector, and not least the assets of the poor themselves.

The labor of poor men and women is concentrated in subsistence agriculture or low-paid casual work in Zambia's cities and towns. Few have secure jobs, and most own little in the way of productive assets.

While land is plentiful in rural Zambia, little is irrigated and most is in the hands of traditional chiefs who make allocations to individuals living in their communities. Labor is a binding constraint for many of the rural poor, and most cannot afford to purchase seeds, fertilizer, and other productivity-enhancing agriculture inputs. Although they are educated, the poor often lack marketable skills, and they suffer disproportionately from poor health and disability. Moreover they struggle with pervasive market failures, e.g. in credit and insurance markets, that make it difficult to protect their meager asset base in times of economic stress. Thus poverty in Zambia is caused by ***scarce and uncertain levels of private assets.***

Poverty in Zambia is also caused by a ***scarcity of public assets and services.*** Public services such as health and education frequently bypass the poor, and the services that are available are often under-funded, poorly managed, and capacity constrained. Community schools offer a viable alternative in some low-income urban settlements, but the quality of the services offered is rarely up to the standards in government schools. Existing public safety net programs have limited outreach and demand for services far outstrips supply. Infrastructure development, including provision for roads, communications, electricity, drinking water and irrigation, is low in rural Zambia, and access is particularly limited in more isolated regions of the country, where many of the poor reside. Infrastructure is more developed in urban areas but is suffering from inadequate capacity and years of poor maintenance. Despite these difficulties, there are some reasons for optimism. Access to rural health care facilities has improved since 1998, and reports from participatory studies indicate that school attendance has increased since primary school fees were abolished in 2002.

The poor do not participate as extensively as the better off in networks of informal assistance and mutual support: they suffer from ***poverty of social relations.*** Zambia society is comprised of a system of overlapping kinship networks whose members are obligated to offer each other assistance and support. However, the multiple strains of a deteriorating economy and pervasive risk has put traditional coping mechanisms under considerable strain. For those households with strong social networks (usually the better-off) these networks can open opportunities for investment or employment and can protect households against the economic shocks that push less fortunate households deeper into poverty and destitution.

## **The Instrumental Role of Risk**

Poverty in Zambia is persistent and self-perpetuating but far from static. Uncertainty and risk impact on the lives of poor men and women. Adverse events are all too common. Households describe frequent illnesses, injuries, deaths of breadwinners, losses in employment, crop failures, fires, thefts, droughts and floods. Shocks are an important cause of downward mobility and can lead to chronic poverty and destitution. Nearly all households have viable strategies for managing risk. However poor Zambians are more exposed to risk and largely depend on traditional support networks and informal risk management strategies. Many of these strategies, while effective in the short-term, may have adverse long-run consequences. In order to cope with a shock, poor households frequently run down critical assets like human capital (e.g. they pull children out of school in times of economic stress, or forgo critical health treatment) and other productive assets and may become perpetually trapped in poverty. Other poor households may shun risky albeit high-return economic activities (e.g. diversification into cash crops) and also remain perpetually trapped in a low-risk, low-return world.

## **The Policy Challenges**

Looking forward, Zambia faces four fundamental challenges in its efforts to reduce poverty, increase equity, and ensure better living conditions for all its citizens:

**First**, to expand economic opportunities for the poor. These include broad measures to improve the investment climate for private sector-led growth, ensure well-functioning markets, and promote a more diversified, stable, and faster-growing economy. Accelerating growth in rural areas is a particular priority, both on poverty reduction and equity grounds. In addition, it is essential to anticipate and better manage economy-wide risks, and improve the overall resilience of the Zambian economy.

**Second**, to provide the poor with the tools they need to participate in market-led growth. The poverty-reducing impacts of reforms are contingent on ensuring that poor men and women have the assets, education, entrepreneurial skills, good health, and access to public goods and services they need to grasp new opportunities.

**Third**, to reduce the vulnerability of the poor to risk. Large shocks like droughts and sharp increases in food prices can destroy the asset base of poor households. No matter how well the economy performs, many will still remain destitute, food insecure, and malnourished, and suffer from chronic or debilitating illnesses. It is essential to improve security for individuals, households, and communities through well-designed policies that support formal and informal risk management strategies and provide for the needs of the most destitute.

**Fourth**, to improve governance. In order to meet any of these challenges, Zambia must develop a well-functioning and responsive public administration, and an overall institutional environment that supports, and indeed encourages private sector initiatives, active and healthy involvement of civil society organizations (in policy debates as well and service delivery), and fair and transparent political processes.

## Reshaping the Role of the Public Sector

The burden of poor governance falls directly and indirectly on the poor. They are more vulnerable to predatory behavior on the part of government officials, particularly the police. Resources intended for the poor may be diverted for the use of the wealthy and politically well-connected. One result is that the poor frequently lack access to basic services, and those that reach them are of inferior quality. Indirect impacts are equally pernicious: the poor are confined to the sidelines in the country's political life. While they carry heavy burdens in their daily lives, they carry little or no weight in the offices, agencies and assemblies where their lives are often shaped without their active or informed consent. Moreover, they lack the resources (and frequently the opportunity) to vote with their feet and use private providers when unable to get the services to which they are entitled from the public sector.

A government cannot work for the poor unless it works for all citizens, rich and poor alike. In Zambia, the public sector faces serious challenges in reducing poverty. In recent years there has been a consistent record of gaps between the level of aspirations and policies. At all levels, a varying combination of political will, technical capacity, budgetary constraints, unrealistic expectations, corruption, and poor management combine to undermine the successful implementation of many plans and programs.

Even with the best of intentions, the public sector struggles to work in a manner that is *effective, transparent, and accountable*. Deficits in performance range from the quality of policy coordination and planning, through the management and control of the civil service, through the deficits in services intended to serve the people, especially those that target the poor. Priorities for reform include (1) more transparent and effective budget and procurement systems; (2) rightsizing ministries and other agencies based on organizational functions and the national budget envelope; (3) pay reforms to attract and retain skilled and professional staff; (4) greater transparency and effectiveness; and (4) progress on decentralization linked with capacity building for local and central governments.

Implementing public sector reform will have noticeable benefits for poverty reduction. In the place of inefficient and unproductive expenditures, more funds will be available for employing teachers, health staff, and other workers who directly benefit the poor. With them will come higher resource allocations to support improved service delivery.

Over the past five years, *corruption* has become a major focus of political debate in Zambia. Although much of the debate focuses on grand corruption and political corruption – the alleged wholesale extraction or misuse of state resources by people in high positions in the public sector – other forms of corruption affect many Zambians on a daily basis.

Based on the findings of a recent survey<sup>6</sup> commissioned by the Government of Zambia, *petty corruption* is the most common and visible form and affects people in all walks of life in Zambia. An estimated 40 percent of households in the survey reported that bribes were necessary to secure public services. *Corruption in procurement and budget mismanagement* are also common. It constrains the growth of the private sector, particularly in making the transition from an informal economy to the emerging small business sector. Public officials also reported that *nepotism and corruption in personnel* are serious challenges and affect opportunities for recruitment and subsequently access to training and promotion. This in turn affects the quality of services

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<sup>6</sup> The *National Governance Baseline Survey* was commissioned by the Government of Zambia and conducted in 2003 by the Department of Political and Administrative Studies of the University of Zambia.



delivered, by having the wrong people in key positions, and reducing the morale of more competent but less “successful” officials. The levels of corruption that affect daily work and progress within public sector institutions create a lack of respect for leaders, and subsequently reduces the performance and effectiveness of these organizations.

*Grand corruption and political corruption* are reported to be severe problems in Zambia. Political corruption is the abuse of public resources for political advantage, and grand corruption is the extraction of state resources by highly placed people. Instances of political corruption were recorded during the 2001 elections. State capture describes how laws, regulations and government decisions can be influenced through corruption. In Zambia, irregularities have plagued the privatization of state-owned enterprises and divestiture of some of the largest and most significant assets were affected by grand corruption and state capture. Even now, the need to engage with political corruption is said to be normal to maintain the operations of a large firm.

All forms of corruption are having an adverse impact on Zambia’s economic and social development and undermine confidence in the institutions of the state. Citizens’ voices are still ineffective in combating corruption in Zambia. Citizens often do not know how or where to report corruption, and if they do they often do not report it.

There is a pervasive need *to improve transparency and accountability* at all levels of government. While the Government of Zambia has an important role in fighting poverty, the battle cannot be won without the active and willing involvement of many other actors in Zambia—local communities, civil society, the churches, labor and trade organizations, the private sector, and the poor themselves. Popular participation – the dialogue between Government and Zambian stakeholders – has improved over time but is still uneven. At times partnerships between civil society and Government have been strong. At others, dialogue is replaced by tension and competition. A stronger and more consistent dialogue, characterized by a more open response from Government and a more realistic and results-oriented approach from civil society, could result in a more productive dialogue contributing to poverty reduction.

## **Broadening and Accelerating Economic Growth**

Growth is the foundation stone of poverty reduction efforts. A dynamic economy, growing strongly, is a powerful force for creating new and better employment opportunities for the poor, enabling empowerment, and reducing vulnerability. Experience from many countries shows that poverty falls in periods of rapid growth and stagnates in periods where growth is slow. Poverty in Zambia has risen as the economy has deteriorated, and stagnated in the latter part of the 1990s. While Zambia has registered positive rates of growth in recent years, the poverty impacts have yet to be demonstrated.

Achieving faster growth will require *greater diversification* in production, *international competitiveness* in export sectors, and *overall improvements in the investment climate for private sector led growth*. While Zambia is rich in natural resources, much of its natural resource wealth remains largely underutilized. Infrastructure has deteriorated since the mid-1970s. At present, the high costs of transport, communications, and power make it difficult for Zambian farmers to compete internationally. In the early 1990s, the Government removed many of the protective policies and state-administered pricing structures that had long prevailed in the economy. Recent surveys rank Zambia’s trade and exchange control regimes among the most open and liberal. However, the transition to a fully-market defined economy is by no means complete. Zambia is rated poorly compared to other African countries on the effectiveness of its legal system and the quality of public administration more generally. The country continues to

experience periods of macro instability, high levels of inflation, high interest rates, and exchange rate volatility.

**Poor governance and corruption** constitute the most important constraints to business development and to competitiveness in many emerging economies. In this regard, Zambia is no exception. In a recent survey, Zambian firms also expressed concerns (in order of importance) about access to finance as well as the high cost of finance, macro instability, high tax rates and poor administration, uncertainty in regulatory policies and weak and inconsistent implementation of existing policies, widespread crime and corruption that increases the cost of doing business, and inadequate and costly infrastructure services. Interviews with individuals and firms in the urban informal economy highlighted the impact of over-regulation and restrictive government controls. The informal economy could be strengthened by allowing the many entrepreneurs in Zambia's cities and towns to operate and develop their informal activities, e.g. by removing restrictions against street peddling and providing more affordable space and services in markets for informal vendors and artisans. While the Government has moved some way in removing regulations that curb economic activity and investments, there is a substantial unfinished agenda. And while good laws and measures have been passed or enacted, the main challenge ahead is to ensure effective implementation in practice.

### **Focusing on Rural Growth and Diversification**

Where poverty is endemic in the countryside, as in Zambia, any program to reduce poverty must include a leading role for **rural growth and diversification**, with a substantial focus on smallholder agriculture. The post-reform period has created both challenges and opportunities for the rural poor. The government's retreat from heavy-handed intervention in the agricultural sector has had mixed results. The end to government subsidies for agricultural inputs and a government-guaranteed purchased price for maize has created hardship for many smallholders, particularly those that are geographically isolated or have suffered debilitating shocks. Unfortunately, years of subsidies and agriculture supports have promoted maize cultivation in regions where maize will never be an economically viable crop. At the same time, the liberalization of agricultural markets has led to success for smallholders who are able to tap into the opportunities created by a more vibrant private sector. The challenge for the future is to allow the private sector to flourish while ensuring that the most vulnerable rural poor are not left behind.

A key success for rural growth has been cotton production, which is dominated by smallholders. A variety of evidence suggests that cotton production can be a viable path to prosperity for the rural poor, without endangering their food security. Due to geographical and climate constraints, however, the potential reach of cotton is limited, and a more broad-based approach is needed.

For broad-based rural development in Zambia it is essential to recognize the many bottlenecks to growth in rural areas, both in agriculture and nascent non-farm activities, which include (1) inadequate infrastructure; (2) the small size of the domestic market; (3) a macroeconomic environment not sufficiently conducive to growth; (4) inconsistent policies; and (5) inadequate provision of business services to support the development of the small and medium enterprise (SME) sector. These bottlenecks, in addition to weak public institutions and the lack of critical public good and services, can choke any attempts for the agricultural sector to become a stronger engine of growth in Zambia.

The report identified a number of basic actions to facilitate growth in the rural sector; these include (1) a (revived) system of regular manual maintenance of rural roads; (2) simple systems of animal disease control; animal movement control; health inspection of abattoirs, etc.; (3) a

revival and refocus of agriculture extension services and research, with an emphasis on promoting diversity of production and a de-emphasis on the mono-cropping of maize; and (4) a revisiting of the Government's approach to the maize sector, including whether there is still a need for Zambia to be self-sufficient in maize, to provide inputs on arbitrarily changing terms, or to ban exports. The report also highlights the importance of addressing the duality in the rural sector, and finding more effective ways to promote small-holder agriculture e.g. through strengthening the policy framework, improving market integration and infrastructure, and ensuring better access to capital and complementary inputs. It is essential to develop a more holistic approach to rural development that recognizes explicitly the need for complementary policies and inputs rather than partial responses.

Realistically, many of the rural poor will continue to need assistance for years to come. In the recent past, the Government has intervened in agricultural markets, making ad hoc decisions to provide free or subsidized fertilizer to a limited number of households and making limited purchases of maize. Such interventions, motivated both by political pressures and a concern for the well being of the rural poor, are understandable. However, haphazard intervention in the markets creates what is arguably the worst of all possible worlds. The government's limited and poorly targeted resources fail to assist the most vulnerable, while at the same time haphazard state intervention creates tremendous uncertainty in markets and effectively discourages private sector development. It is important to establish a stronger private sector-public sector dialogue to guide Government as to the services it should provide and the policies it should adopt. In addition, the use of maize inputs and buying as a form of poorly targeted social protection and "market strengthening" should be reassessed and likely discontinued, because it militates against the private sector's healthy development. There are other and more effective instruments for insuring against risk and promoting security.

Policies for the agriculture sector should be part of a general set of economic policies designed to turn Zambia into a competitive producer and exporter. Above all, whatever specific policy measures are adopted, they should be clearly stated and consistently adhered to. Substantial damage has been done to Zambian agriculture by covert policy changes and overall inconsistency.

### **Moving Beyond Growth—the Formidable Challenge of HIV/AIDS**

Zambia faces one of the world's most severe HIV/AIDS pandemics. Policies and measures to reduce the spread of HIV/AIDS are at least as important as policies to increase the rate of economic growth. Sixteen percent of adults are HIV positive, and among urban women in their 30s, prevalence exceeds 40 percent. No one in Zambia remains untouched by the consequences of the pandemic. Due to the society's strong kinship networks, many people bear the burden of caring for sick relatives and the nation's nearly 1 million orphans. AIDS has also placed immense strain on the nation's health system, crippled public services by claiming the lives of professional public servants, and discouraged private sector development by decimating the skilled labor force. Nonetheless, there are small signs of improvement, including some evidence that the prevalence rate has declined for girls aged 15-19. The Government has also achieved significant improvements in services for orphans and households affected by HIV/AIDS in the past five years.

Stronger political leadership and increased efforts on the part of Government are essential. Anti-retrovirals (ARVs) are increasingly available in Zambia, but they provide only a temporary respite from the disease, not a cure. Recent research suggests that the ARV treatment regime requires 95 percent compliance to be effective, and given difficulties of compliance and the many

pressures put on those who have access to ARVs, drug resistance will inevitably develop over time. Planning for the HIV/AIDS must confront the longer-term reality of the epidemic, and not focus solely on short term concerns. The needs of today's AIDS-affected individuals and households are considerable and there is urgent need for more and better support. While ARVs can improve the lives of those currently suffering from AIDS, they will not prevent future infections, and it is essential for Zambia to continue to confront the consequences of the pandemic. Priority actions identified in this report include (1) stronger political leadership for HIV/AIDS prevention campaigns; (2) more focused prevention efforts on youth; (3) correcting misleading information, providing accurate information; (4) targeting support programs according to the labor status of households; (5) significantly increasing commitment to staffing essential public services; (6) protecting access to education (particularly for girls); (7) improving health worker HIV/AIDS training; (8) scaling up and coordinating AIDS care and mitigation programs; (9) providing more support for local HIV/AIDS initiative.

### **Reducing Malnutrition**

Malnutrition is a longstanding and serious problem in Zambia. Malnutrition affects capacity to learn, physical development, and energy to work. The nutritional status of the entire population deteriorates during the pre-harvest season, when the supply of food is most limited and transmission of disease is highest due to heavy rains. Children under five, school-age children and women of reproductive age are most vulnerable to malnutrition because their requirements for energy, micronutrients, and protein are high. The prevalence of chronic malnutrition in children under five years of age increased in Zambia from 40 percent in 1992 to 48 percent in 2002-03. While malnutrition is in part driven by poverty, many children among even the wealthiest households are malnourished, and there is a need for additional measures specifically focused on nutrition. There are immediate steps that could be taken to address malnutrition, which include better nutrition information, improving the quality and coverage of rural health services, expanding access to clean water, better housing in rural areas, targeted food aid, improving micronutrient status, and delaying age at first pregnancy. Over the longer term, it is important to increase the diversity of children's' diets and make sure all children (in particular girls) attend school.

### **Protecting the Most Vulnerable**

A Social Protection (SP) Strategy is being formulated under the leadership of the Ministry of Community Development and Social Services (MCDSS) as part of the preparation for the Fifth National Development Plan. Since the early 1990s, Zambia has been reluctant to allocate funds for social assistance. Instead, there is a stated preference for spending on subsidies and programs that promote self-reliance, or at least graduation into self-reliance, such as fertilizer and other inputs subsidies. Better forms of social assistance are clearly needed. These should be targeted using local knowledge and institutions, and aim to complement rather than replace indigenous systems of support. They should recognize the specific vulnerabilities of the Zambian people including the plight of families affected by HIV/AIDS, orphans, and elderly heads of households, many of whom are caring for orphans. Zambia's draft Social Protection Strategy focuses on the needs of the most vulnerable. Some of the proposed programs have the potential to serve both as a *springboard* (to help households take advantage of new opportunities) and a *social transfer* (to protect the living conditions of destitute and chronically poor). As work on the strategy progresses, it will be important for Zambia's Social Protection Strategy to focus more on prevention and *ex ante* risk management policies and instrument, in addition to its current focus on the poorest and most vulnerable.

## **The Way Forward—Preparing for Zambia’s Fifth National Development Plan**

The forthcoming Fifth National Development Plan provides an important opportunity for public debate and making difficult choices about poverty reduction priorities and government spending, and to build a consensus for action around key poverty reduction priorities. Zambia just completed its 2002-2005 Poverty Reduction Strategy Program and the Transitional National Development Plan. The lessons from the PRSP and TNDP should inform and help to shape Zambia’s next National Development Plan.

### **Drawing From These Lessons...**

The new Plan must above all things ***be clear at the outset on what it is trying to achieve and how it will measure success***. There should be explicit links between inputs and outputs, and expected outcomes and impact, e.g. on the poor and other vulnerable groups. Monitoring and evaluation systems should be built into the design of the NDP, and thus become an integral part of M&E and accountability systems within line ministries and other implementing agencies.

The design of the next National Development Plan ***must be informed by good poverty analysis***, which takes account of existing commitments such as the MDGs as well as emerging issues and changes in the external environment. The poverty analysis should complement and help to focus macroeconomic work and more conventional growth analysis.

The Plan must be ***realistic*** in terms of what it can achieve over the five-year planning horizon, and programs included in the Fifth National Development Plan should have a realistic budget and realistic expectations of human resource capacity in implementing agencies and ministries. Moreover it is essential to improve the ***timeliness*** of planning and Government action in implementing the Plan.

Most importantly, greater effort must be made to ***identify and act upon core development priorities that will improve the lives and livelihoods of the poor and vulnerable***, and to reflect these fully in the Plan. Explicit trade-offs should be discussed and agreed. It is not sufficient to just set priorities; these priorities must be reflected across all functions of Government, including in budget allocations and actual spending, staffing decisions, and accountability systems.

### **In summary,**

Zambia faces formidable challenges: renewing growth and making it sustainable, putting the delivery of basic services to the poor on an efficient basis, empowering the poor as citizens and opening the public sector to public scrutiny so that both corruption and nonfeasance can be identified and redressed. These challenges would strain the resources and will of many developed societies. But they are not utopian goals. They are the prerequisites for steady progress, not just against poverty but toward widely and equitably shared well-being. Zambia will have to harness all her efforts and will to overcome the separate but interlocking challenges identified above.

## INTRODUCTION

### POVERTY IN ZAMBIA: SETTING THE CONTEXT

1. Rich in human and natural assets, Zambia once appeared to be a pace-setter for Africa's economic and social development. At independence in 1964, Zambia was among Africa's wealthiest countries. However, excessive dependence on copper together with a highly centralized one-party state left the economy vulnerable. The economy contracted beginning in the mid-1970s, when copper prices began to fall and fuel prices rose. Zambia resorted to heavy external borrowing to finance consumption and investment in capital-intensive, import-substitution industries. Zambia's industrialization policies were not a success and were accompanied by only limited investment in alternative exports. The economy continued to deteriorate and accumulate substantial external debt in the late 1970s and 1980s.

2. Zambia's transition to multi-party democracy in 1991 stoked optimism that its dormant economic potential would be awakened and that revived economic growth would improve the lot of the nation's poor. Unfortunately, Zambia's hopes for a sustained economic recovery during the 1990s remained unrealized. The continued deterioration in the international price of copper, the collapse of major manufacturing industries, the scourge of HIV/AIDS, and acute governance and policy failures have conspired to stifle the nation's progress. At the macro level, the disappointments of the decade are reflected in the decline of GDP per capita by an average 1.5 percent per year over the course of the decade. Other measures of welfare also declined: life expectancy fell, school enrollments stagnated, child malnutrition increased sharply, and by 1998, nearly three-quarters of the population were estimated to live in poverty.

3. Reversing this loss of dynamism and the impact of that loss on the poor and most vulnerable is Zambia's most important challenge. There are early and encouraging signs of economic recovery – the country has for the first time since the early 1970s registered positive rates of growth over five successive years. But these gains must be consolidated and built upon to ensure sustained improvements.

#### A. Objectives and Coverage of the Report

4. Zambia has nearly completed its 2002-2005 Poverty Reduction Strategy Paper (PRSP) and has begun preparation of its Fifth National Development Plan (5<sup>th</sup> NDP). Future PRSPs will be mainstreamed within Zambia's National Development Plans, beginning with the 5<sup>th</sup> NDP. This *Poverty and Vulnerability Assessment (PVA)* has been prepared for Zambia, with the aim of (i) updating the last World Bank Poverty Assessment, completed in FY95; (ii) facilitating an informed debate among stakeholders in Zambia about priority policies and programs to reduce poverty and improve security; and (iii) thus inform the preparation of the 5<sup>th</sup> NDP.

5. The report begins with a discussion about the public sector and poverty reduction. At the heart of Zambia's loss of economic momentum has been the loss of effectiveness of the state administration, which has led to a business environment not sufficiently supportive of private investment and growth, and to poor performance in the delivery of social and infrastructure services essential for growth, security, and poverty reduction. The 2002-2005 PRSP was Zambia's plan for reviving growth in the economy and reducing poverty. *Chapter 1* assesses the underlying opportunities and constraints to poverty reduction created by public sector management, governance, corruption, and democratic participation, and looks in detail at the planning, design, and implementation of the PRSP. PRSP implementation was uneven, in large part reflecting pervasive problems of governance and public sector accountability. The chapter takes stock of lessons from Zambia's first PRSP and highlights issues – including process and substance – that should be considered when preparing the 5<sup>th</sup> NDP.
6. The *second chapter* describes the nature and evolution of poverty in Zambia. It reviews the definition of poverty and discusses measurement issues specific to Zambia. It also touches briefly on some of the debates regarding poverty levels and trends during the 1990s and early 2000s. Data inconsistencies limit rigorous comparisons between poverty estimates based on earlier Central Statistics Office (CSO) household surveys and poverty estimates from the most recent 2002-03 survey. Based on various sources of information augmented by the findings of qualitative field studies, this report finds no convincing evidence that poverty has fallen between the early 1990s and 2002-03. This is particularly true for poverty in rural areas. However, there are early indications (based on recent changes in the structure of the Zambian economy as well as consultations and fieldwork in low income urban settlements) that the urban economy is beginning to recover.
7. A profile of the poor in Zambia is presented in *Chapter 3*, which analyzes poverty along three critical dimensions – poverty of private resources, poverty of access to public goods and services, and poverty of social relations. The chapter looks in depth at the characteristics of urban and rural poverty, and highlights the stark differences between the two.
8. *Chapter 4* then turns to an examination of the economic environment. It identifies the policies and barriers to Zambia's economic growth, which is vital for creating opportunities for the poor, enabling their empowerment, and reducing their vulnerability. The chapter briefly compares the investment climate in Zambia with that of other countries in Africa and explores some of the reasons why Zambia ranks so low. Infrastructure shortcomings and counterproductive regulations have reduced returns on private investment while poor governance and policy reversals have raised variability and uncertainty of such returns. The chapter looks in depth at constraints to growth in the rural sector, given the importance accorded to agriculture in the 2002-2005 PRSP and its central role in providing employment and income for the rural poor.
9. Many individuals in Zambia feel vulnerable and increasingly exposed to different sources of risk (e.g. weather shocks, external price shocks and related unemployment, health shocks, often linked to HIV/AIDS). Very few of the poor have the resources to protect themselves against risk. *Chapter 5* examines the links between risk and poverty, identifies the major risks in Zambia that affect the poor, and describes the strategies used by households and communities to manage these risks. Uninsured risk can be a major source of downward mobility, particularly for the poor. Due to shocks and other factors, there are an increasing number of destitute and chronically poor households in Zambia. *Chapter 6* looks at vulnerable groups and destitution. It describes the limited number of social assistance programs currently in place to address their needs and the new SP Strategy that will be integrated into the 5<sup>th</sup> NDP.

10. *Chapter 7* explores the links between HIV/AIDS and poverty. Zambia is entering its third decade of double-digit HIV/AIDS prevalence and the disease has had a devastating impact on people's lives that works across the social and economic spheres. Malnutrition is another grave concern. Chronic malnutrition among young children has risen from 40 to 48 percent between 1991 and 2002-03, which puts an ever increasing number of Zambian children at risk of early mortality and lifelong delays in cognitive development and schooling achievements. *Chapter 8* reviews the causes of malnutrition in Zambia and the policies for addressing these

## **B. Data Sources and Data Concerns**

11. This report makes use of a wide range of information, including data from household surveys, administrative records, and participatory studies and consultations, several undertaken specifically for the report. However, the survey data present a number of challenges; in particular, the interpretation of the most recent official data on welfare and poverty (2002/03 Living Conditions Monitoring Survey) with respect to earlier surveys is controversial, and while more generally accepted data are available, they are often out-of-date and of dubious current relevance.

### **2002-03 LCMS III**

12. The quantitative analyses of poverty and vulnerability in this report are based primarily on the 2002-03 Living Conditions Monitoring Survey (LCMS III), a nationally representative, household survey carried out by the Central Statistics Office (CSO) between November 2002 and October 2003. GRZ has carried out a number of other household surveys in the 1990s, including the LCMS II (1998), the LCMS I (1996), as well as Social Dimensions of Adjustment Priority Surveys in 1991 (PS I) and 1993 (PS II). These surveys have been used to estimate poverty levels and assess poverty trends in earlier studies, as well as for the PRSP (2002-2005). The Central Statistics Office recently published a report on the LCMS III.<sup>7</sup>

### **Other Sources of Data**

13. The report also utilizes data from three Demographic and Health Surveys (1992 ZDHS, 1996 ZDHS, 2001 ZDHS) and the 2000 and 1990 Population Censuses. Statistics on corruption are presented based on the findings of three in-depth baseline surveys commissioned by the Government of Zambia and conducted in 2003 by the Department of Political and Administrative Studies, University of Zambia.

### Urban and Rural Participatory Studies

14. Two in-depth, participatory studies of poverty and vulnerability were carried out in the process of preparing this report, in close partnership with Zambian NGOs, development specialists, and staff at the University of Zambia. (Box 1) The report draws extensively on these studies as well as a wealth of earlier participatory studies carried out in Zambia.

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<sup>7</sup> *Living Conditions Monitoring Survey Report 2002-2003*. Central Statistics Office, Government of Zambia, November, 2004.



### C. Consultations

15. The report and PVA background studies benefited enormously from the active collaboration and advice of many individuals and organizations in Zambia. The PVA process was highly consultative; it has involved Zambian NGOs and researchers, partners in the development community, and government counterparts at various key stages. The draft concept note was discussed with local stakeholders before being finalized. PVA background papers were disseminated and discussed in series of workshops – e.g. with civil society, with Members of Parliament and labor organizations, with the donor community in Lusaka – before this report was prepared. This report has been distributed to a range of stakeholders in Zambia, including but not limited to Government, and again discussed through a series of workshops and other consultations before it is finalized for wider distribution. The final report will note areas of consensus as well as areas of remaining debate.

### Urban and Rural Participatory Studies of Poverty and Vulnerability

#### **Poverty and Vulnerability in Rural Zambia**

As a component of the ZPVA, a participatory qualitative study of rural poverty and vulnerability was carried out by the World Bank, DFID and their partners from the University of Zambia, in Jan-March 2004. The research was carried out in villages and settlements of all three of Zambia's major agricultural/environmental zones. In each zone, research teams visited three villages in each of two randomly selected districts. The three zones vary significantly in terms of rainfall, terrain and soil quality, as well as in the degree of urbanization and investment each has experienced; and villages were purposively selected to reflect the range of conditions that is typical of each zone. Utilizing an array of six qualitative research instruments designed for the study, the field teams carried out focus group discussions, semi-structured and case history interviews, social mapping and wealth ranking exercises. The goal of the study was to elicit rural Zambians' views about: the factors that determine who is chronically poor and why, and the risks, events, shocks and set-backs that precipitate vulnerable households into further destitution. Informants were also asked to discuss the coping strategies they utilize to prevent, mitigate or compensate for these risks and shocks.

#### **Poverty, Shocks and Responses in Low-Income Urban Settlements of Zambia**

To examine the livelihoods and living conditions of Zambians residing in low-income and informal urban settlements, participatory data collection and analysis were carried out by the World Bank with extensive support and collaboration from academics and NGOs. The goal of the study was to capture some of the nationwide diversity of urban living conditions in low-income communities. To gain an understanding of this broad range of conditions, the researchers visited three types of urban centers that represent a cross-section of Zambian urban life. First, Lusaka, Kitwe and Livingstone were selected to illustrate large urban centers with many levels of economic diversification. Lusaka is the national administrative center, while Kitwe is a large industrial city and Livingstone exhibits a growing economy based on tourism. In addition, Mufulira was selected as an industrial city that has experienced a sharp economic decline after the nationwide collapse of mining activities. Finally, Kasaa was chosen to represent small provincial towns in rural hinterlands, since little was known about conditions in these rapidly growing "non-metropolitan" towns. The team carried out a series of qualitative and PRA exercises in poor communities in each of these urban centers, focusing on the plight of informal settlements that are unrecognized by government.

# **1. POVERTY REDUCTION AND THE PUBLIC SECTOR: CHALLENGES AND OPPORTUNITIES**

## **A. Introduction**

1.1 The Government has an important role in fighting poverty – indeed the public sector can act as a critical facilitator or fundamental blockage to poverty reduction. Besides having the capacity, standards of governance and willingness to prioritize poverty reduction, the public sector also must be prepared to proactively engage with many other actors in Zambia – civil society organizations, local communities, churches, the private sector, and not least the efforts of the poor themselves. The appropriate role of the donor community is to support local actors rather than replace them. As it prepares its next National Development Plan (5<sup>th</sup> NDP/PRSP 2006-2010), which will incorporate its PRSP, the Government of Zambia (GRZ) should seek to complement and enable the role of all these actors so that Zambia can harness all her resources towards the aim of reducing poverty and promoting greater security and well being.

1.2 Building an enabling environment in the public sector for effective poverty reduction requires efficient and focused management, overcoming the scourge of corruption at all levels and engaging in a meaningful and cooperative dialogue with elected and other representative and informed stakeholders. This shared agenda and common commitment is not created through blue-print or planning, nor does it result simply from stated aspiration, but rather it results from a determined national will, led by Government, to make the necessary decisions and act with purpose to achieve the goal of poverty reduction through economic growth and development.

1.3 Discussions between GRZ and other stakeholders on Zambia's 2002-2005 PRSP have focused on the volume of resources available for development purposes and concomitant levels of spending. Less in terms of significant, practical efforts have been paid to improving governance or increasing the quality of spending. While higher resource flows are no doubt needed, it is equally important to manage existing resources more effectively. There are indications of corruption and misuse of funds at all levels.

1.4 Even under the most optimistic scenario, external and domestic resources flows will fall short of what is needed to support higher rates of investment, achieve adequate levels of basic services, and provide for those who are unable to provide for themselves. Difficult choices must be made. In the past, Zambia has tended to avoid difficult budget choices and instead respond to populist pressures. For example, in 2004 the government faced hard budget constraints in the road sector and a demand for road construction and upgrading projects that far outstripped the supply of funds. Rather than prioritizing and fully funding a few projects, partial support was allocated to a large number of competing projects. As a result, few projects were completed, and many rehabilitation works have ground to a halt.

1.5 Zambia is just completing its 2002-2005 PRSP and Transitional National Development Plan (TNDP). The lessons from the PRSP and TNDP should help in shaping Zambia's future

development efforts. The forthcoming 5<sup>th</sup> National Development Plan provides an important opportunity to make important albeit difficult choices about poverty reduction priorities and public spending, to put in place credible systems to monitor progress, and to focus on results rather than inputs.

1.6 The first section of this chapter looks at the context in which the 5<sup>th</sup> NDP is being prepared, and discusses the underlying opportunities and constraints created by public sector management, corruption, governance, and democratic participation.

1.7 The second section then looks at the design of the 2002-2005 PRSP as the foundation of the 5<sup>th</sup> NDP. The section examines whether, notwithstanding deficits in implementation, the poverty reduction strategy proposed by the PRSP was appropriate to address the current poverty situation in Zambia.

1.8 The third section looks at the specific problems that hampered the implementation of the PRSP, which unfortunately may have limited its impact on poverty reduction.

1.9 Drawing on Zambia's experiences with the 2002-2005 PRSP and the PVA analysis, the final section of the chapter highlights some issues that should be addressed in preparing the Fifth National Development Plan.

## **B. The Public Sector Environment for Poverty Reduction**

1.10 This section examines the broad public sector context in which the 5<sup>th</sup> NDP is being planned. It discusses the status, opportunities and constraints linked to governance in Zambia governance, defined as public sector management, corruption, and democratic participation.

1.11 In Zambia, the public sector poses a constraint to effective poverty reduction. Over past years, there has been a consistent record of gaps between the level of aspirations and policies, and that of performance and results. At all levels, a varying combination of political will, technical capacity, budgetary constraints, unrealistic expectations, corruption and poor management combine to undermine the successful implementation of the majority of plans and programs. The precise reasons amongst these for multiple failures in achieving pro-poor results vary; but nonetheless, most initiatives result in weak performance.

1.12 There has been some discussion in Zambia on the ways that poor governance creates fundamental barriers to the successful implementation of pro-poor and growth oriented initiatives. Significant among the factors identified are inefficiencies in public sector management, corruption, and democratic participation. Problems in these areas are often related (for example, public sector management is constrained by corruption), but for the purposes of discussion it is useful to distinguish them. In discussing each, we will examine the current context, strengths and weaknesses, and discuss how each presents constraints and opportunities for achieving poverty reduction objectives.

### **Public Sector Management**

1.13 Even with the best of intentions, the Zambian public sector struggles to work in a manner that is effective, transparent, and accountable. Deficits in performance range from the quality of policy coordination and planning, through the management and control of the civil service, through the deficits in services intended to serve the people, especially those that target the poor.

1.14 Zambia public sector faces an array of problems, but recent dialogue between Government and the international community has agreed the following as the most serious areas of deficit::

- Budget and procurement systems - require greater transparency and effectiveness
- Accountability and transparency – needs considerable improvement with respect to the use of public funds;
- Ministries and agencies staffing – need effective rightsizing based on organizational functions and the national budget envelope;
- Pay reforms – to include incentives to attract and retain skilled and professional staff in key sectors;
- Decentralization strategy – to be implemented in step with the capacity of central government to support it, and of local government to undertake service delivery effectively.

1.15 The result of these deficits is public services that cannot operate in a timely or efficient manner, and delivery is further hampered by the demotivation of its under-paid staff. With a constant competition for scarce resources, priorities are *de facto* set by budget decisions made at the Ministry of Finance. Even where line agencies receive their allocated budget, these may not be sufficient to achieve the objectives or expected results, and in any case be reallocated to a more pressing or immediate demand. The Public Expenditure Management and Financial Accountability Review (PEMFAR) contains a tracking study of education allocations, illustrating that only between 14% and 34% of non-salary education spending reaches schools, whilst the rest is spent at district or provincial levels.

1.16 Moves to analyze and correct deficiencies in the public service were initiated more than ten years ago, with the Public Service Reform Program. Since that time, ministries and agencies have been subject to restructuring, initially accompanied by a redefinition of the purpose and core responsibilities of each. The original intention to *downsize* ministries was quite soon replaced by the aim of *rightsizing*. While the intention behind this change is clearly justifiable, it has diluted the original purpose of reducing the number of public sector employees. Furthermore, since the restructuring. While g exercise has addressed the needs of each ministry in turn, opportunities have not been created to look at some of the systemic inefficiencies, or to tackle some of the critical decisions concerning prioritization across Government functions.

1.17 Government is in the final stages of preparing the Public Service Management Program Support Project, which has allocated \$120 million of funding from domestic resources and the international community principally to Public Expenditure reform, administrative & civil service reform, and also to decentralization and strengthening of legal institutions of the market economy. Notably, this will support a substantial effort on the range of activities described in the Public Expenditure Management and Financial Accountability Reform (PEMFAR) package. This set of activities is intended to improve public sector financial management at all stages, from economic policy and planning, through budgeting, financial management, reporting and audit. Additionally, further efforts will be made to improve the staff profile of the public sector, with improved pay and conditions for priority staff, and reduced expenditure in areas of inefficiency, poor performance and low priority.

1.18 In implementing this program, Government faces substantial challenges. Not least, there are risks that the political will needed to sustain these reforms may falter, as difficult decisions and trade-offs have to be made. These may attract problems within the public service as restrictions on wage increases, the elimination of certain allowances, and retrenchment decisions

are made. The inefficiencies in the financial management practices of the past were not without beneficiaries, and reforming this sector will also require significant political will. Effective reform will require the buy-in of actors outside the political and civil service leadership, and would benefit significantly from the support of Trades Unions and the political opposition.

1.19 In improving financial management, Government and the international community have agreed on a network based IFMIS strategy. However, it remains to be seen whether the highly technological (and very expensive) solution agreed will be either technically achievable or effective in improving public financial management. In the past, major problems revolved around the fact that financial systems were often disregarded, making way for abuses and corruption. Audit reports were not acted upon and no actions taken against transgressors. It cannot be assumed (by either Government or donors) that the new IFMIS system can substitute for half-hearted political will to implement reforms – new technology and systems can be misused just as the old ones were.

1.20 Implementing public sector reform will have noticeable benefits for poverty reduction. In the place of inefficient and unproductive expenditures, more funds will be available for employing teachers, health staff and other public sector workers who directly benefit the poor. With them will come better resource allocations to support improved service delivery. Although engaging in serious reform is a test of determination for the Government, and will result in redundancies that inevitably hurt those involved, it is important to keep in mind the extent to which reforming the public service will support poverty reduction.

### **Corruption**

1.21 Over the past five years, corruption has become a major focus of political debate in Zambia. Although much of the debate focuses on grand corruption and political corruption – the alleged wholesale extraction or misuse of state resources by people in high positions in the public sector – other forms corruption in Zambia affects many people, especially the poorest, on a daily basis. The National Governance Baseline Survey was commissioned by the Government of Zambia and conducted in 2003 by the Department of Political and Administrative Studies of the University of Zambia. The following discussion draws on its findings as well as other sources of information.

1.22 There are four distinct types of corruption in Zambia:

- Petty corruption
- Corruption in procurement and budget mismanagement
- Nepotism and corruption in personnel
- Grand corruption, state capture and political corruption

1.23 From the point of view of the majority of Zambians, petty corruption is the most common and visible form. In the Governance Baseline Survey, about 40 percent of the service user respondents report that bribes are necessary to secure public services. One in four households reported that a household member had been asked to pay a bribe in the previous year. Low-income citizens are disproportionately penalized by paying bribes that represent a greater share of their income than households in the middle- and high-income brackets. Among households that had been asked to pay a bribe, total bribes requested amounted to 4 percent of household income on average. The burden of bribes was larger for the poor. Among the poorest households that been asked to pay a bribe, requested bribes averaged 17 percent of household income. This

suggests that petty corruption increases inequality, reduces the quality of public services and impedes access to basic services.

1.24 Corruption in procurement and budget mismanagement are also common. Corruption provides a severe constraint to the growth of the private sector, particularly in making the transition from the informal economy to the emerging small business sector. 36 percent of managers reported being asked for a bribe to obtain licenses and permits. Unofficial payments to get government contracts are also quite widespread, and managers report forfeiting, on average, 6.4 per cent of the invoice value to public officials in order to expedite contract payments. Small firms have to forfeit an even higher percentage of the invoice – up to 7.7 percent. While laws, regulations and mechanisms exist to ensure markets work well and to support direct investment, implementation has been poor. Bribes are used to influence regulations and licensing, avoid tax, gain contracts, influence the police, and ensure favorable court decisions.

1.25 Public service officials also report that nepotism and the purchasing of public positions is a serious challenge, and affects opportunities for recruitment and subsequently access to training and promotion. This in turn affects the quality of services delivered, by having the wrong people in key positions, and reducing the morale of more competent but less successful officials. The levels of corruption that affect daily work and progress within the public sector institutions creates a lack of respect for leaders, and subsequently reduces the performance and effectiveness of these organizations.

1.26 Grand corruption and political corruption are also reported to be severe problems in Zambia. Political corruption is the abuse of public resources for political advantage, and grand corruption is the extraction of state resources by highly placed people. Several instances of political corruption were recorded during the 2001 elections, including the use of public funds to purchase campaign vehicles. (Foundation for Democratic Process, 2004, 2005) Subsequently, by-election results have also been dominated by the widespread misuse of Government resources (particularly transport, and also salaries and allowances for political leaders who were campaigning). Prior to the 2001 elections, a number of cases of grand corruption were cited as part of the anti-third-term movement; since the elections, others have also emerged. These allegations are currently being pursued through an appointed task force on corruption. However, the initiative has so far resulted in no convictions, and concerns have been raised that decisions on prosecutions are made on political grounds.

1.27 State capture describes how laws, regulations and government decisions can be influenced through corruption. It is widely believed that large scale businesses, multinational companies, and powerful economic groups use corruption to exercise undue influence over the state. It is possible that criminal syndicates, especially those dealing in drugs, stolen vehicles and money laundering, also influence government's operations through corruption. State capture involves using bribery to wield influence over shaping policies, licensing decisions and regulations, to avoid taxes and other requirements, to influence court authorities and to damage the businesses of competitors.

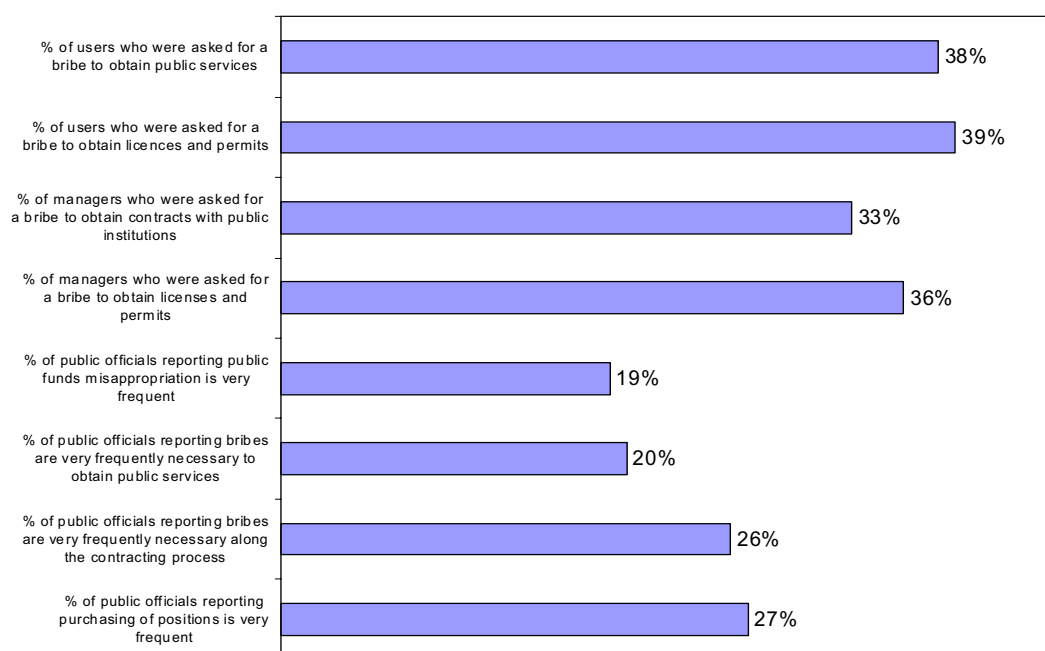
1.28 These forms of corruption may be having a substantial adverse impact on Zambia's economic and social development. In terms of large-scale economic development, it is now clear that irregularities plagued the privatization of state-owned enterprises. The divestiture of some of the largest and most economically significant assets appears to have been dominated by grand corruption and/or state capture. It is likely that corruption related to privatization in particular may have eroded public confidence in economic reforms (Chanda 2003). Even now, the need to engage with political corruption is said to be normal to maintain the operations of a large scale

business. Without maintaining such relationships, businesses may lose permits or contracts, or be subject to harassment from the tax or immigration departments.

1.29 Access to basic services is affected by corruption. Securing places in school, even at Universities or colleges, can result in demands for a bribe. Accessing good care in hospitals may require payments to nurses or doctors. Even courts are not perceived to be above the influence of corruption: about 40 per cent of households and 25 per cent of business managers report that bribes are paid to speed up legal proceedings. More than 50 per cent of managers believe that the judiciary is not independent of either the government or of economic pressures, and they do not believe that justice is administered in a fair, just, or transparent manner.

1.30 Citizens' voice is still ineffective in combating corruption. Citizens often do not know how or where to report corruption, and if they do they usually do not report it. Furthermore, although this is a common problem across the country, it is particularly true for the poorest and most vulnerable groups: only 14 percent of women and 20 percent of men belonging to the low-income group know where to report a corruption case. (UNZA, 2004). Lack of information about the reporting mechanisms, which is the main obstacle, is particularly pronounced in Northern, North-Western, and Eastern Provinces. Although public officials claim to know the corruption reporting process better than households do, they admit to not reporting all the cases of corruption they witnessed.

**Figure 1.1: Key Statistics from the National Governance Baseline Survey for Zambia**

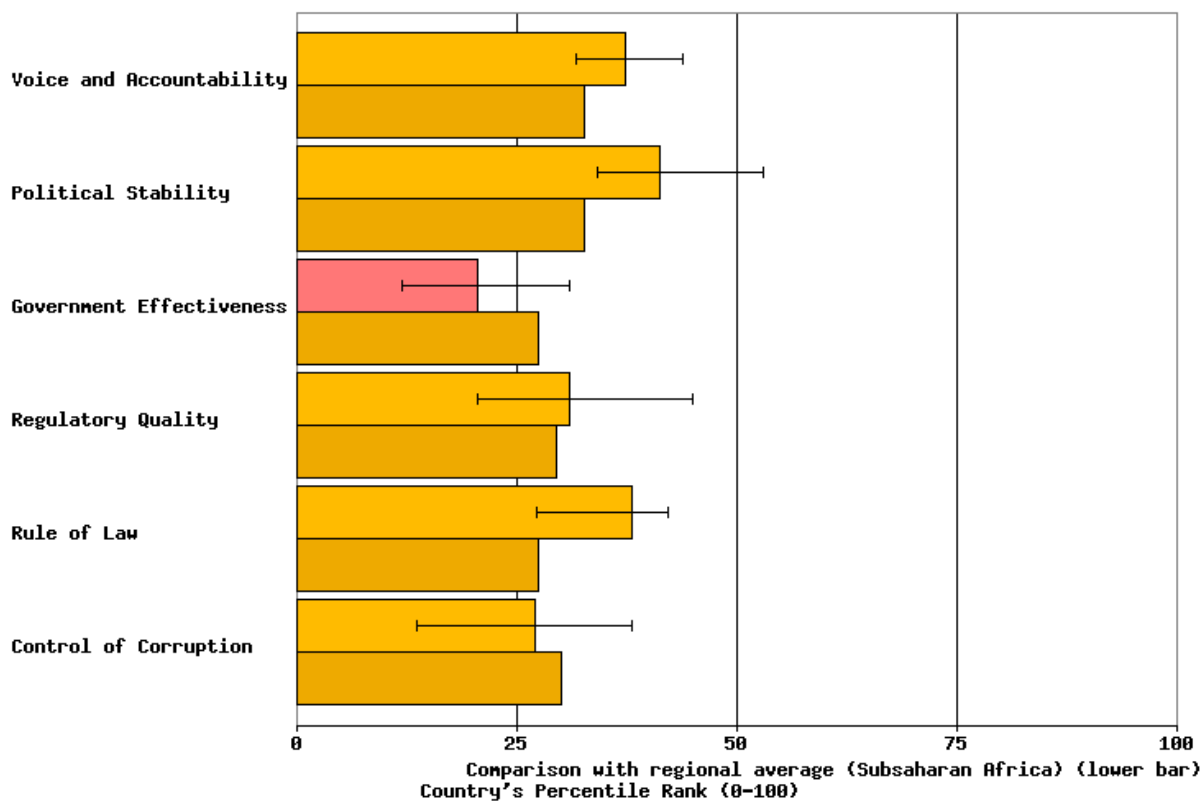


Source: National Governance Baseline Survey

1.31 By international standards, Zambia's levels of corruption are high but not extreme. In Transparency International's most recent Corruption Perception Index, which ranks countries based on the perceptions of business people and country analysts, Zambia is number 102 out of 146 in a ranking of countries from least corrupt to most corrupt. In sub-Saharan Africa a number of other countries are perceived as more corrupt: Nigeria, Chad, Cote d'Ivoire, the Democratic Republic of Congo, Angola, Kenya, Cameroon, Sudan, Niger, Zimbabwe, Sierra Leone, Ethiopia,

and the Republic of Congo-Brazzaville. (Transparency International, 2004). Similarly, along six governance indicators included in the World Bank’s Governance Research Indicator Country Snapshot (GRICS), Zambia’s ranks near the averages for sub-Saharan Africa (See).

**Figure 1.2: Indicators of Governance in Zambia and Sub-Saharan Africa, 2004**



Source: D. Kaufmann, A. Kraay, and M. Mastruzzi 2005: Governance Matters IV: Governance Indicators for 1996-2004 (<http://www.worldbank.org/ubi/governance/pubs/govmatters4.html>)

### Democratic participation

1.32 An elected government has a mandate to lead the country towards its development. However, the reasonable execution of that mandate requires that a constant dialogue is maintained with a range of stakeholders. Relevant stakeholders may be elected, representative or independently well informed – but wherever they are drawn from, their participation and support are necessary to ensure the best possible programming, and a unity of purpose that contributes to success.

1.33 In the days of the one-party state, dialogue outside the party and government was largely limited to dissemination of decisions that had already been taken. The Trades Union movement represented one of the few independent institutions that challenged Government, while the NGO sector was restricted by explicit regulations and in equal measure by the culture of self-regulation. Even electoral competition was restricted to managed ‘debates’, where each candidate was allowed to answer the same questions in turn.



1.34 Since the change in political dispensation in 1991, civil society has grown into a more dynamic movement. Churches, public pressure groups, professional associations and the independent media have combined to present a dynamic set of institutions that seek to interact with Government. The strongest evidence of this was in 2001, when moves to change the constitution to accommodate a third term of office for the incumbent president were halted through the force of response by civil society.

1.35 However, the dialogue between Government and civil society on development and poverty reduction varies over time, and between sectors. At times, partnerships are strong; at others, dialogue is replaced by tension, resentment and competition. Where partnerships have been successful, dialogue has generally been addressing concrete or practical matters. Government has seen civil society as a partner, recognizing their autonomy and (where relevant) their significant contribution in the communities where they work. A stronger and more consistent dialogue, with a more open and less patronizing tone from Government, and a more realistic and results-oriented approach from civil society, could result in a productive dialogue contributing to poverty reduction.

1.36 The specific contribution of civil society into the 2002-2005 PRSP is discussed below (paragraph 1.44). During the planning stage of the PRSP, the relationship was illustrative of how an engagement based on trust can help to achieve common purposes. However, recent experience suggests there is more to learn about on how to maintain effective cooperation.

1.37 Elected MPs are the representatives of people throughout the country, both rural and urban. Their constitutional role is performed through the activities of parliament, notably with regard to approving budgetary estimates, enacting legislation, and monitoring the executive through parliamentary committees. More discussion at the time of policy formulation, greater engagement with the budget process, and more awareness of implementation would all integrate MPs more closely into the development process, and establish stronger vertical linkages between the executive and communities throughout the country.

1.38 However, MPs are often treated with suspicion. Not entirely without justification, they are believed to want to annex benefits, dominate meetings or take credit for the actions of others. If MPs wish to overcome this image, they must work as a group to maintain appropriate standards in representing the people who elected them. Only then will they be able to make more effective demands on the Executive, to produce standards of implementation sufficient to have an impact on poverty.

### **Comment**

1.39 Thus the public sector faces serious challenges in providing an appropriate environment for poverty reduction. Technical capacity, political will, corruption and a shifting relationship with other stakeholders combine to derail virtually every attempt to convert an aspiration or policy into results for the poor. However, whilst assistance can be provided to help improve capacity, fight corruption or facilitate dialogue, success is dependent on the existence of strong political will to put poverty reduction and good governance at the very *top* of the agenda, and to eliminate all actions and priorities that work against it.

## **C. Overview of Zambia's 2002-2005 PRSP**

### **The Planning Process**

1.40 The PRSP was published in May 2002, and officially launched two months later. The preparation of the PRSP was coordinated by the Ministry of Finance and National Planning (MoFNP), through a specially established unit headed by a consultant coordinator. The unit was subsequently absorbed into the Planning and Economic Management Department (PEMD) of MoFNP. The PEMD coordinates and monitors the implementation of the PRSP and is managing the preparation of the 5th NDP.

1.41 The zero-draft of the PRSP comprised the outputs of eight working groups, each addressing a specific sector. The membership of each working group comprised representatives from Government, NGOs, the private sector, churches, donors, academia and professional associations. These initial outputs were discussed amongst a broader group of stakeholders at the national level, and the revised documents discussed at provincial level consultation workshops. The three cross-cutting issues – environment, gender, and HIV/AIDS – did not have working groups, but were represented by specialist institutions which held discussions with all the working groups before preparing the draft components on each issue. The provincial meeting provided reflections on the national documents, and highlighted the local priorities for poverty reduction.

1.42 The provincial consultation was not a consultation with the poor – the participants were the provincial leadership, the District Administrators, ‘a few sector experts like agriculture, health and education’, and representatives of NGOs and Churches. The closest to the poor themselves were ‘representatives of traditional leaders’, although how many of these were invited was not specified.

1.43 The draft PRSP document was then produced, for consultation with the donor community. Substantial changes were made between the first and second drafts, and again with the final draft. The changes were made in order to reduce the initially over-ambitious budget, and to ensure that the final document would be well-received by the international community.

### **Engagement of Civil Society and the Research Community in Zambia**

1.44 Civil society was closely engaged in both the working groups and the provincial consultations. Indeed, Zambia has been noted for the close cooperation between Government and civil society in developing the PRSP. One of the key reasons this was able to happen was that civil society organized and formalized their participation, through forming a coordinating body, Civil Society for Poverty Reduction (CSPR). The membership and board of CSPR is open to all registered NGOs working in poverty reduction, including international NGOs and trades unions. At inception, membership of CSPR was 15 organizations, which has now grown to around 100.

1.45 During the 2002 PRSP planning process, CSPR ensured that civil society was always represented, and that the various representatives were briefed and coordinated. Following the inception of the PRSP, CSPR updated its mandate so that it could continue to monitor implementation and advocate for improved performance. Leading thinkers and researchers in Zambia have worked closely with CSPR in monitoring and advocating for greater accountability in PRSP implementation (Seshamani, 2003). CSPR also printed and distributed a summarized version of the PRSP to communities throughout the country (CSPR/Harland, 2003). CSPR is now preparing to participate in the 5<sup>th</sup> NDP process, although at the outset (perhaps due to the late

start) the organization appears to be viewed as a stakeholder rather than a partner in its preparation.

1.46     Zambian civil society has been described as “vibrant”, and its participation in the PRSP taken as a model for other countries. However, there is a tendency to overstate the capacity, commitment and depth of these activities. Unlike the one-party state period, civil society is now legal, vocal and reported in the independent press. However, with the exception of CSPR itself, the Catholic organizations (e.g. Jesuit Center for Theological Research) and a few notable others, there is little said that is genuinely analytical or addressing policy. The numbers of individuals involved is small, and donor dependence is high. While Zambian civil society has moved forward, and is strong in comparison with *some* neighboring countries, it would be a mistake to overestimate the strength or impact that could be expected from its engagement with Government.

### **Participation of Line Ministries**

1.47     The involvement of Government ministries in the development of the PRSP is usually taken for granted. However, there are valid concerns about how ministries were represented, and deficits in this regard that appear to have undermined ownership across Government. Membership of each PRSP working group was limited, and not every relevant ministry was included. For example, the Ministry of Community Development and Social Services was excluded from the working group on education, despite having 65,000 children on bursary support in cooperation with the Ministry of Education. Even for ministries that were included, it was not always the case that the official representing the Ministry was from an appropriate department, or that they reported back, consulted and genuinely represented their colleagues in the discussion. Thus when the PRSP was published, weaknesses in the participation of some line ministries meant that levels of awareness and commitment to the plan were uneven and in some cases limited.

1.48     The lack of ownership of the PRSP at the outset has been exacerbated where sectoral ministries have subsequently developed new policies and plans, which may be without reference to the PRSP objectives and action plan. This marginalizes PRSP achievements, as in practice the pursuit of sectoral goals tends to take precedence.

### **Participation of MPs**

1.49     Integrating MPs into the PRSP planning process would have provided a chance to engage the voices of the electorate, and to encompass the views of all parts of Zambia. It would have also created awareness and “buy-in” to the plan, and provided an additional mechanism for monitoring implementation and gathering information. However, MPs were not included until the dissemination phase.

### **Donor Involvement**

1.50     There is debate over the extent to which the PRSP process was “donor driven.” Certainly the inception of the PRSP process was – at the outset – largely in response to the World Bank. In line with other countries, the need had been identified for a comprehensive poverty reduction package, as part of the justification for agreeing to debt relief. Initially somewhat low key, the PRSP planning process in Zambia gained the active participation across parts of Government, and of civil society, NGOs and the international community. By the time the document was

published, in May 2002, the contents had been discussed and debated quite extensively. However, although levels of ownership were high at the time of publication, these subsequently dipped.

### **PRSP Sector Advisory Groups (SAGs)**

1.51 The PRSP was broadly based on the outputs of the working groups mentioned above (Para 1.41). These groups were initially disbanded once the document was complete, but later re-established in 2004 as Sector Advisory Groups (SAGs), to oversee the implementation and monitoring in each sub-sector. The initial disbanding of the groups simply reflected the fact that the job was thought to be finished; the re-establishment was in response to the severe shortcomings in monitoring and reporting (raised as a critical problem in 2003). The interregnum in the life of the SAGs had a significant cost in terms of ownership and commitment; many of the SAGs remained very inactive through 2004, reflected in the quality of input into the quarterly “All-SAG” meetings. The inactive SAGs have remained the responsibility of the home Ministry, and only the more active groups have had a diverse and committed membership. However, with the planning of the new NDP in 2005, the membership has again broadened, and most SAGs have become active.

## **D. Overview of the Strategy**

1.52 The PRSP begins with a short analysis of poverty in Zambia, followed by descriptions of the five pillars that were identified as the focus of the plan, together with a budget and table of indicators for each activity. An extensive list of monitoring indicators was included in an annex to the plan.

1.53 The plan was based on the premise that achieving sustained economic growth and job creation would lead to the main goal of poverty reduction. The PRSP attributes the country’s worsening levels of poverty to:

- the lack of economic growth, particularly in the rural economy, and the very limited availability of domestic resources;
- High and continuing levels of inequality, due in many cases to structural features of the economy;
- Weak integration of the poor into the market and limited access to assets due to unfavorable land ownership laws and unsupportive land tenure systems;
- Insufficient prioritization of spending, which is often biased against pro-poor programs and policies;
- Inadequate safety nets to protect the living conditions of the destitute and most vulnerable;
- A high burden of debt that crowds out essential social expenditures;
- And large and growing dependence on external support. In 2001, when the PRSP was being prepared, 53 percent of the Government budget was expected to be financed through external resources.

1.54 The poverty reduction strategy presented in the PRSP had five pillars:

- (1) Improved economic performance (in agriculture, industry, mining and tourism)
- (2) Improved provision of social services (education and training, health and nutrition)

- (3) Improved infrastructure (transport, communication, roads, energy, water and sanitation)
- (4) Action on cross cutting issues (environment, gender, HIV/AIDS)
- (5) Improved enabling environment (macro-economic management & governance)

1.55 The primary focus is on **measures to achieve strong and sustained economic growth** i.e. *“a growing economy that creates jobs and tax revenues for the State is a powerful tool for reducing poverty.”*<sup>8</sup> The PRSP highlights the importance of increasing the level and quality of investment, expanding infrastructure throughout the country, and promoting commercialization and expansion of Zambia’s export sectors. Agriculture development would be given high priority, both on growth and equity grounds. The majority of the poor reside in rural areas and their livelihoods are based on agriculture. The plan was based on the premise that achieving sustained economic growth and job creation would lead to the main goal of poverty reduction.

1.56 The PRSP also looks at the enabling conditions for economic growth, including e.g. sound economic management, good governance, and investing in a range of infrastructure services. Improved health and education services are highlighted as well, both for their direct as well as indirect impacts.

1.57 The key priorities and budgets identified in the PRSP for each of these areas are summarized at the end of the chapter.

#### **Was the PRSP Appropriately Designed?**

1.58 It is important to consider whether the priorities and programs identified in the PRSP were appropriate for achieving the goal of poverty reduction, and what gaps existed in the planning.

1.59 *The first issue to consider is whether there was sufficient analysis of the nature of the growth process and the appropriate mix of policies to ensure growth was pro-poor growth. Also whether there was sufficient consideration of poverty reduction measures beyond growth.* The PRSP identified economic growth as the primary engine for national development, without which poverty reduction would be impossible – the plan says *“little can be achieved to reduce poverty unless measures are taken to revive Zambia’s economy.”* While evidence from around the world shows that economic growth is essential for poverty reduction, there remains debate about the mix of policies most likely to lead to inclusive (pro-poor) growth, and the relevant levels and composition of public spending. In the case of Zambia, it was assumed that growth would reach the poor through increased opportunity to earn or to farm, better infrastructure, and increased access to schools and health services.

1.60 Once economic growth was identified as a pre-requisite for poverty reduction, it became the central focus of the PRSP. The plan was based on a growth promotion analysis, with little focus on (1) how different policies and investment priorities would influence the composition of growth and hence the extent of poverty reduction or (2) key impediments to pro-poor growth.

1.61 Nor was attention given to risk factors. Zambia was hit by several large, covariate shocks in the 1990s (e.g. climate shocks, macro price shocks) and the economy suffered as a result.

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<sup>8</sup> PRSP, p. 12

Despite these experiences, and despite the fact that security was highlighted as one of the three pillars of poverty reduction in the 2000/1 World Development Report, the PRSP made no attempt to identify key production risks and assess potential impacts on growth, nor to assess consumption risks and links with the well-being of children, the elderly, and other vulnerable groups. More generally, the vulnerabilities and risk aversions of the poor were not considered (which in itself may threaten the potential success of the strategies identified). The barriers to participation and the poverty spirals that entrap the poor were not assessed. The absence of well-conceived livelihood strategies for the poor was noted in the PRSP but not addressed. Although the PRSP strategy and spending priorities did include health and education, short shrift was given to the needs of vulnerable groups (e.g. the elderly, female-headed households) and the most destitute.

1.62 This lack of a pro-poor focus provides food for thought at the end of the first PRSP period; many of the informants in both the Rural and Urban Participatory Studies, as well as other recent field studies claim that the benefits of the last few years of economic growth are primarily concentrated in the hands of the better-off, and largely by-passed the poor, especially in rural areas. Zambia's rural economy is still characterized by extreme dualism between commercial farmers and small-holders, and dualism within the small-holder sector itself. Inequality has fallen over the past few decades but remains well above that of many other low-income countries.

1.63 The lack of specifically pro-poor analysis and planning in the PRSP often has been overlooked by GRZ. Indeed, if an activity is consistent with the PRSP it is said to be pro-poor. The substantial broadening of what is taken to be a poverty reduction program in the 2005 national budget may further obscure a better focus on pro-poor activity, as even the most remote association with poverty is now classified as a Poverty Reducing Program (PRP).

1.64 It is likely (and indeed desirable) that the 5<sup>th</sup> NDP will also take economic growth as its major focus; however it is essential that the Plan goes further than the PRSP and also addresses the question of what policies for growth promotion are most likely to reach the poor in Zambia, how public resources should then be allocated to ensure a balanced and inclusive growth process, and what additional measures are needed to enhance security and equip the poor to take advantage of new opportunities.

1.65 ***The second issue to consider is the relationship between the PRSP and other established national commitments.*** When the PRSP was launched in 2002, Zambia had already committed itself to the Millennium Development Goals (MDGs) as a comprehensive set of targets to be achieved by 2015. The MDGs are focused on poverty reduction, from the level of the individual up to macroeconomic and global trade issues. The international community is committed to achieving progress under the MDGs and structuring its support to this effect. Integrating the MDGs into the PRSP would have helped to provide a more coherent results framework and promoted stronger initial commitment from the international community. However, the MDGs are not mentioned in the PRSP.

1.66 Besides the MDGs, Zambia has committed itself to a number of other conventions and goals that are implicitly focused on poverty reduction. For instance, the Convention on the Rights of the Child has specific goals in terms of children's access to health, education and security. Other international conventions that have been ratified offer the opportunity of useful

financial support for implementation of their commitments made<sup>9</sup>, these could have helped structure PRSP activities.

1.67 By not reflecting these existing commitments, the PRSP lost opportunities to improve its pro-poor focus and reduce fragmentation in donor-funded programs. Furthermore, the status of national commitments and goals is undermined by the repeated habit of abandoning or ignoring previous pledges.

1.68 ***The third issue to consider is whether, given its overarching rationale, the PRSP had gaps and omissions that might have compromised its effectiveness.***

1.69 Employment and labor policies were omitted from the last PRSP, which emphasized small-scale business development and farming rather than formal sector employment. At its peak in the early 1970s, nearly 25 percent of the Zambian labor force was employed in the formal sector, while today it constitutes less than 10 percent. However, obtaining secure, full-time permanent employment remains the goal for many people. At present, many employers and investors claim that legislation increases the cost of employment, through considerable statutory rights and benefits for employees, and high personal tax rates for the low paid.<sup>10</sup> This deters employers from offering permanent employment, and promotes the casualisation of labor – with little or no security or rights for workers. Investment in in-service training activities is therefore reduced, and workers have little opportunity to access social security, or to save or invest.

1.70 The PRSP largely ignores the informal sector and its important current role in providing jobs and incomes for the poor. The Urban Participatory Study found that informal settlements in many Zambian towns and cities are diverse and dynamic, with enormous economic potential that can be used as a basis to create new jobs and reduce urban poverty. But the administrative and economic environment in Zambia's urban areas neither recognizes nor supports this potential. Neither the government nor most urban dwellers recognize the informal sector as a longer term source of livelihoods and even of wealth. Instead, many are still waiting for formal sector employment. The same is true for local authorities who continue to enforce outdated regulations that hinder rather than enable the growth of informal economic activities. As a result, many of the urban poor consider their current (informal) economic activities as temporary coping mechanisms, and they have little incentive to invest or build on them for the longer term.

1.71 Nonetheless, whilst greater engagement and consideration of the needs and opportunities found in the informal sector is needed, it is not necessarily the case that the informal sector offers the best opportunity for urban poverty reduction in the medium to long term. Issues of whether reliance on the informal sector can promote income security, safety at work and or necessary levels of economic growth can all be questioned. Since the informal sector provides a substantial contribution to current economic survival, and offers a flexible coping strategy for households in need, it deserves greater recognition. But in order to make a significant contribution to poverty reduction, means must be found to help the informal sector transform into a small and medium scale business sector. Efforts to do exactly this in the retail sector, through market upgrading, have conspicuously resulted in the displacement of informal traders to even less suitable

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<sup>9</sup> Particularly the environment-oriented conventions including Convention to Combat Desertification, RAMSAR (the wetlands convention), CITES and the World Heritage Convention.

<sup>10</sup> Many public sector workers earn less than the official poverty line, and the minimum cut-off for taxable income is less than half the poverty line. Tax is payable at 30% on earnings over K320,000 (US\$66) per month.

environments for business, and the occupation of new markets by traders (many foreign) who were already engaged in business at a higher level.

1.72 The PRSP is largely based on the premise that poverty is maintained by a lack of infrastructure and other public goods and services. The condition of poverty is interpreted as a passive, pre-modern state, which requires investments in order to change. The PRSP places less weight on factors that actively maintain poverty, or prevent the poor from securing their livelihood. Had it taken this approach, the PRSP would have given greater emphasis to less tangible issues, including legal rights, attitudes of service providers, media independence, corruption and access to law enforcement and justice. In addition, little attention was given to assessing the long term prospects and sustainability of key programs. For example, despite supporting the development of new health and education infrastructure and focusing on improved delivery of basic services, there was little discussion of the deficits in human resources for either sector.

1.73 Social protection was omitted from the PRSP, both explicitly and implicitly. The implication was that social protection is a luxury to be afforded once the economy has grown, not an essential part of the development process. However, since 2002 this belief has modified somewhat – in Zambia as elsewhere – and social protection will be a full component in the 5<sup>th</sup> NDP (see chapter 6).

1.74 The key priority of HIV/AIDS, as well as gender and environment, were addressed in the PRSP as cross-cutting issues. The decision to address these issues differently is debatable, since other themes with unquestionable cross-cutting links remained sectoral. More importantly, the effect of being included as a cross-cutting issue was to bury these critical issues at the back of the PRSP, and to lose them as important priorities in planning, implementation, and monitoring.

### **E. Issues in PRSP Implementation 2002-2005**

1.75 The PRSP 2002-2005 has achieved little in terms of measurable and reported poverty reduction. Experiences in implementation faced a number of constraints that were not due to the broader weaknesses of the public sector, or to issues in the design of the PRSP. This section discusses some of the issues that hampered implementation, and draws lessons for future implementation.

#### **Funding the PRSP**

1.76 PRSP implementation lagged through much of the period 2002 to 2004, and most component programs had low disbursements. Although simply spending money does not ensure reduction in poverty, a severe lack of funds will certainly compromise any prospect of achievement.

1.77 As the PRSP began, the budgets allocated from domestic resources were more or less in line with the levels laid out in the PRSP. However, the actual releases were well below the budget levels. In 2002, a total of K240 billion domestic financing was expected to be released to PRSP programs (identified as “PRPs” in the budget), but only K110 billion was achieved. In 2003, disbursements were also well below budget, especially in first half of the year, when disbursements totaled only 12.9 percent of the annual budgeted amount.



1.78 During this period, there was significant variation in the proportion of the budget released to each program. Some programs received nothing at all, while others received all of their allocation and more. There is no explanation on how these decisions were made, although the pattern was similar to cuts and supplementary funding decisions made in previous years. The ministries receiving the highest percentage of disbursements and over-budget allocations included the Ministry of Home Affairs (for police camps and prisons) and the Ministry of Legal Affairs (for local courts), whilst the social sector ministries received less

1.79 Zambia's budget management woes are linked to the problematic implementation of "cash budgeting" in late 1993. Under this system, monthly budget releases to ministries in principle cannot exceed the Treasury's actual cash on hand. Cash budgeting was intended to reduce the budget deficit and restore fiscal discipline, thus reducing inflation. In practice, cash budgeting has largely failed to tame the budget deficit or control inflation. At the same time, cash budgeting has had a deleterious impact on ministries that promote economic growth and social development. Monthly allocations are made largely on an ad hoc and emergency basis by a small group of executives, rather than along the lines of the national budget passed by Parliament. As a result, actual public expenditures are much more oriented towards short-term ad hoc requests rather than the long term investment expenditures called for by the PRSP. In the monthly battle for funds, projects like rehabilitation of rural access roads lose out to short-term needs like the travel costs of Zambian diplomats abroad. Additionally, cash budgeting has created extreme month-to-month volatility in disbursements, making it impossible for mid-level government managers to plan ahead on any reasonable time horizon. (Dinh, Adugna, and Myers 2002).

1.80 The prevailing belief in Government in 2002 and 2003 was that the US\$1.2 billion PRSP budget could not be funded domestically, and should largely be funded by donors. The PRSP document was quite explicit about this – it observed that "*most of the existing domestic revenue will remain committed to running government, with hardly any room left for spending on PRSP programs beyond those that are already running*". It was argued that international donors were already expected to release around US\$1 billion over the three year period of the plan, and therefore "*it is donor financial assistance... that should finance the PRSP*". It was observed that donor activities were not yet aligned with the PRSP, a matter that was identified as a topic for future discussion<sup>11</sup>. Deeper analysis may have shown that significant levels of donor funding were already fully committed over the three year period, tied to non-PRSP programs, public sector reform, technical assistance contracts, or balance of payments support.

1.81 The prevailing belief that donors should pay for the implementation of PRSP may have been responsible for these low levels of disbursement in 2002 and 2003. Indeed, high level public statements were made to the effect that if the donors did not fund these activities, they could not expect the PRSP to be implemented. This caused confusion in the international community, as some interpreted the statements to suggest that poverty reduction was seen as their responsibility and a low priority for GRZ.

1.82 However, by 2004 many of the international donors active in Zambia had begun the process of aligning their financial assistance with the PRSP. The World Bank uses the same strategic priorities as the PRSP in developing their most recent Zambia Country Assistance Program (CAS). Representatives from the donor community are also involved in the reconstituted PRSP SAGs, and in the work-up to the 5<sup>th</sup> NDP.

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<sup>11</sup> PRSP page 127

1.83 By late 2003 and throughout 2004, however, disbursements were on-budget and regular. GRZ attributed this significant improvement in performance to the introduction of the Medium Term Expenditure Framework (MTEF) and ABB systems. In addition, the improvements coincided with Zambia's loss of the PRGF program, and the subsequent provisions of the Staff Monitored Program (SMP) agreed with the International Monetary Fund (IMF). The full monthly disbursement of PRSP programs was a key component of the SMP, essential to re-gain the PRGF and subsequently qualify for the debt relief under HIPC. Under these circumstances, the Ministry of Finance was unable to alter disbursements, although the political commitment to domestic PRSP disbursement had changed significantly.

1.84 The only significant shift in budget allocations from the original PRSP has been in funding the agricultural sector, which have nearly doubled from the expected 14 percent to 27 percent of PRP allocations (see discussion on agriculture, below). Much more money is being provided for the agriculture sector, and being used in a manner that was not anticipated in the PRSP.

### **Monitoring and Evaluation**

1.85 The monitoring and evaluation of the PRSP has been problematic, clearly demonstrating the need to integrate M&E into the design and implementation of poverty-reducing programs, rather than letting it become an ex-post or retrospective process. The first PRSP implementation report was prepared in mid-2003, and revised towards the end of the year. In the absence of a regular monitoring system, the report focused chiefly on disbursements, with few performance indicators or statements on outcomes or impact. Although these deficits were recognized by GRZ, and attempts were made to address the problem in the 2004 report and addendum, the absence of regular M&E as an integral part of each activity created problems that should be addressed in the preparation of the new NDP.

1.86 PRSP monitoring could be focused on each or all of three levels: inputs (budget disbursements, donor contributions); outputs (the achievement of targeted activities in selected projects and programs); and outcomes / impact (the result and effect on the poor of having implemented that program). The indicators originally presented in the PRSP focused on outputs, while financial reporting incorporated PRSP inputs. However, there was no discussion on outcome or impact monitoring until late 2003, by which time it was too late to be included in the PRSP reporting systems. In any case, despite several M&E initiatives and numerous workshops, the country still lacks a clear strategy for developing an integrated system for PRS monitoring. (Annex I describes the current situation)

1.87 Providing good M&E information is contingent on having clearly identified objectives and targets. While some of the objectives and targets in the PRSP were clearly specified, others were aspirations or normative injunctions that do not lend themselves easily to M&E. Examples include 'to reduce disparities in education; to create environments that support health; to prevent malnutrition; to enhance women's participation'. Integrating M&E from the beginning of the design process would have had the added advantage of focusing attention on exactly what outcomes and impacts are being sought at the planning stage, and ensuring that design at all levels of planning is robust and appropriate. This would have helped bridge the gap from vision to strategic plan; strategic plan to action plan, and action plan to individual components of implementation.

### **Timeliness of Information and Action**

1.88 The quality of implementation of the PRSP has been hampered by a lack of timely information and dialogue between the Ministry of Finance and National Development, and the implementing agencies both in Government and outside. This deficit may be attributable to the initial low profile that was given to PRSP implementation in the initial period (2002-mid 2003), and the subsequent problems of always being behind schedule and trying to catch up.

1.89 Timeliness on the part of MoFNP is essential for effective implementation. The quality of GRZ performance can be compromised by a last-minute work culture. There are substantial responsibilities that fall on a small number of the professional staff in the Ministry; implementation capacity should be assessed carefully.

1.90 The lack of timeliness also reduces the time available for effective dialogue. The management and subsequent performance of the PRSP SAGs are a good example of this, as constant lateness may damage the opportunity to develop a shared vision and team spirit across the PRSPs. An example of this lack of timeliness is in the delays in starting the planning for the new NDP. A decision to delay the new plan from 2005 and 2006 was first stated several years ago, but only confirmed in late 2004. The subsequent lack of progress in starting the planning process meant that even with an extra year, the process is now so late that the SAGs are receiving last-minute instructions, and have had little opportunity to contribute to the process through dialogue.

### **Policy Consistency: the Agricultural Sector**

1.91 In order to deliver a five year program effectively, consistency in policy direction is (to a large extent) necessary. This implies careful policy consideration at the planning stage, and subsequent commitment to implementation. The consequences of *not* doing this can result in subsequently haphazard and apparently arbitrary policy changes, which can result in uncertainty amongst implementing agencies, and (where relevant) create a reluctance to engage amongst potential private sector actors. Changes can also absorb extra funding, depriving other sectors of planned and expected resources. An example of shifting PRSP policy between 2002 and 2005 is shown in the agricultural sector, discussed in this section.

1.92 The activities proposed in the PRSP in 2002 for the agriculture sector have shifted significantly during the implementation period. The PRSP sought to strengthen the liberalization process, by implementing policy consistently, improving technology, expanding land availability, strengthening markets, improving access to credit and increasing food security. The target suggested that the sector would grow by 10 percent per year, with maize production doubling; the area cultivated increasing five-fold; and significantly increases in access to extension, vet services, irrigation and appropriate technology. The budget for activities that would achieve these goals was estimated at K178 billion for the three year program, with around 8 percent allocated to input distribution.

1.93 However, by 2004 the agricultural activities financed under the PRSP had changed radically. The program had shifted away from market oriented activities, and much of the resources were focused on Government controlled inputs and marketing. Rather than the planned 8 percent, up to 90 percent of the expenditures in the agricultural sector were directed towards Government subsidies and intervention in agricultural production and marketing. The activities originally planned were largely abandoned. This indicates a significant shift in policy and budget

allocation, which undermines the PRSP and creates uncertainty and lack of confidence amongst farmers, investors and the agricultural support industry.

1.94 Despite the resulting instabilities, changing policy could be justifiable if the new expenditures were (or could be) poverty reducing, and/or likely to contribute to economic growth. However, there is growing concern that these programs represent a reversion to the old system of pan-territorial subsidized maize production, regardless of the suitability of maize in a given area. Years of previous experience show no evidence that this system promotes self-sufficiency or boosts production, or even provides a secure standard of living for small scale farmers, but instead demands increasingly large amounts of money to support inefficient production and inappropriate cropping, and barely ensures national or household food security. Shifting policy in the maize sector has deterred many responsible private sector from engaging in the agricultural sector, or from trading in maize inputs, production or marketing. A lack of confidence that Government policy may not change over night means that any private sector engagement in maize presents a risk to this investment; a risk that is supported through passing the costs to the farmer. Alternatively, the private sector can engage in the maize sector if they are protected by powerful connections, or do not engage in honest business.

1.95 This example shows that planning needs to reflect genuine political consideration and commitment to the policy goals outlined. Radical policy shifts create uncertainty, and undermine future commitment to the planning process.

#### **Political Commitment to the PRSP**

1.96 Has poverty reduction suffered in Zambia because of a lack of political commitment? In examining this, it is important to distinguish between commitment to the PRSP, and commitment to poverty reduction; also the changes in political commitment over the period of the PRSP. GRZ has had a stated commitment to poverty reduction throughout, but it may not have had a clear commitment to the PRSP as a vehicle for achieving this until late in 2003.

1.97 The simple issue of the timing of the development of the PRSP undermined political commitment to its implementation in 2002-03. The Presidential elections in the last days of December 2001 heralded a change in political leadership. From the outset, the new administration had plans to revive some key planning functions that had been stopped in the early 1990s. In January 2002, the President instructed the Ministry of Finance to develop a Transitional National Development Plan (TNDP), as a temporary measure while a new five year plan was created<sup>12</sup>. The TNDP was signed by the President in October 2002, and explicitly absorbed the PRSP into a broader framework, with some modifications:

*The TNDP is linked to the PRSP in four significant ways: First, it shares the same theme with the PRSP. Second it draws heavily on the invaluable work of the PRSP working groups by converting the PRSP chapters into TNDP format. Third, it encompasses areas not adequately covered by the PRSP. Finally, it extends the horizon of the PRSP by a year<sup>13</sup>.*

1.98 The TNDP included the thematic chapters from the PRSP. However, as noted above, the format had changed, and to some extent the contents had changed as well. The structure of the TNDP was, in comparison to the PRSP, difficult to follow. The changes in substance, even

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<sup>12</sup> This is in fact the 2006-2010 5th NDP.

<sup>13</sup> Foreword to the TNDP

where they were not very great, had the unfortunate effect of reducing levels of ownership amongst the stakeholders who had been involved in the PRSP Working Groups.

1.99 These events may help to explain the low priority given to the PRSP in 2002 and 2003. In itself this would not have mattered had the TNDP simply taken over the PRSP inside a broader framework. However, the problem was that the TNDP had been hastily prepared, had changed the PRSP chapters too far to preserve ownership amongst sectoral stakeholders, and was not given much credence by the international community. The original PRSP was suspect, and the TNDP never became the guide to planning and action that it was intended to be.

### **Government Responsibilities in Poverty Reduction**

1.100 The Government of Zambia has critical responsibilities in reducing poverty and protecting the lives and livelihoods of the Zambian people. Regardless of other aspects of public sector performance, which could be efficient but not poverty reducing, these are specific functions that Governments have to perform if objectives of poverty reduction are to be realized. Examining the implementation of the PRSP provided insight into the effects of failures in specific areas of the public sector.

1.101 The public sector performs three functions that are critical for poverty reduction:

- Policy making, managing the budget and implementation;
- Delivering critical goods and services in areas such as infrastructure and social support;
- Advancing economic and social equity, either directly through grants, subsidies, transfer payments and public employment schemes, or indirectly through tax policy or positive discrimination

1.102 In each of the above, Zambia is making some degree of progress, but more consistent and concerted action is required to achieve a critical level that will yield effective results.

1.103 On a *policy front*, the lack of leadership by the Policy Coordination Unit in Cabinet Office results in a piecemeal approach, where sectoral policy is generated in response to technical issues or pressure from the international community, but is not part of an overarching vision or integrated framework. There is little high level oversight of the policy process, resulting in a patchwork coverage and multiplicity of implementation mechanisms. The budgetary or other practical implications of policy are not highlighted or made explicit, with the result that many policies are over-ambitious and therefore are only partially implemented. A good example of this is the Decentralization Policy, which has had various forms since the Decentralization Act of 1985, and in its most recent version proposes a radical de-concentration to district level. The budget and human resource implications of this policy are profound, but the trade-offs required in terms of movement of power and people from the centre to the districts have not been discussed. Lack of action on the part of the Policy Coordination Unit means that many decisions on what Government will do are actually made administratively i.e. at the Ministry of Finance. Decisions on what to fund, and where to over-spend or to cut tend to be made an *ad hoc* way, often without reference to policy objectives and outcomes.

1.104 In terms of *delivering goods and services*, and despite recent improvements, Government performance is still hampered by poor planning, weak financial management, burdensome bureaucracy, an inadequate human resource base, and corruption. The substantial over-commitment in policy terms means that officials may be daunted by unachievable expectations,

and discouraged by constant failure to deliver services to an expected level. These problems are mutually reinforcing and Government is struggling to provide basic services to a decent, consistent, accessible standard. A decade of public sector reform has not been sufficiently rigorous, perhaps as a result of avoiding some of the necessary but difficult decisions about which areas of activity should be prioritized, and which should be scrapped. There are encouraging signs that public sector reforms are beginning to bear fruit, but Zambia still has a long way to go.

1.105 Programs intended to promote *economic equity* largely favor the rural areas, and are usually manifested as subsidized or free maize inputs. However, the equity impact of these programs remains to be established, and, as noted above, the productivity of smallholder farmers remains persistently low. The continuing operation of these programs goes back to the social and political importance of the maize industry under the one-party state. For many years, the social contract between the Government and rural people was largely based on transfers through maize that secured minimum incomes. Programs to promote economic or social equity in the urban areas are largely absent. Low paid workers are taxed highly, and services that seek to support the most vulnerable attract little support<sup>14</sup>.

### **Staying the Course on Pro-poor Spending**

1.106 As discussed in paragraph 1.83, there was an explicit link between the GRZ diligence in funding PRPs from late 2003 to date, and achieving the HIPC completion point. Indeed, the achievement of the debt relief under HIPC became sufficiently important that the 2003 wage agreement with the civil service was withdrawn, and other expenditures were also curtailed.

1.107 However, having regained the PRGF and reached the HIPC completion point, and with the prospect of further debt relief on the horizon, the many demands from powerful institutions on the treasury may resurge, and it may be more difficult to ensure rigorous implementation of Zambia's future poverty reduction program. Contingencies and other needs may divert money to other activities, particularly leading up to the 2006 election year. Already since the HIPC completion point, a fund to subsidize fuel prices has been announced, and the Government has announced the sale of houses in the Copperbelt at just over US\$100 each.

1.108 The possibility of core poverty reduction activities being relegated to lesser importance a continuing concern, particularly so in light of the reclassification of poverty reduction expenditures in the recent budget. In previous budgets (since 2001), there has been a specific budget code for poverty reduction expenditures, which clearly identified domestic and donor allocations to the program identified in the PRSP. However, it was argued that identifying a narrow set of PRPs as a HIPC condition ignored the fact that many different types of Government spending are necessary to reduce poverty. It has therefore been decided that all programs that may directly or indirectly contribute to poverty reduction would be classified as a PRP I or II respectively, including the wage bills of many civil servants, district administration costs, transport, drug costs, planning workshops, monitoring costs, research, training and higher education. Even voter registration has been reclassified as a poverty reduction program. A third category, PRP III provides for the administration of program and institutions that serve PRP I and II programs.

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<sup>14</sup> For example, Government grants to community schools went down from K3 billion in 2004 to K1.29 billion in 2005. This is 0.15 percent of the annual education budget. In contrast, the two universities received 100 times more, at 15 percent of the annual education budget. There are 1925 community schools, making up approximately one-third of primary education level facilities.

1.109 While there is merit in the general argument i.e. that many types of expenditure are important for poverty reduction, not just a narrow set of PRPs, the reclassification transforms the proportion of domestic budget that is allocated to PRPs to around 50 percent. However, it is not simply the classification of expenditure *per se* but rather how the funds are used that determines whether spending is or is not pro-poor. The reclassification could indicate the Government is willing to address poverty in a more integrated and holistic fashion (likewise the integration of the PRSP within the Fifth National Development Plan). On the other hand, it may indicate a growing lack of focus on core budget priorities that have the maximum impact for poverty reduction, and instead a focus on inputs, rather than a results-oriented approach. Further, prospects for monitoring outcomes and impact recede further as the task becomes too unwieldy and poorly defined.

1.110 As the budget becomes tighter, the Government may look to the donors for increased support for poverty reduction. This creates an unhappy situation. Donors' multi-year commitments, particularly in the light of the move towards greater predictability of aid flows, mean that they would continue to support poverty reduction spending (as currently defined) even if Government disbursements fall short of expectations. This skews the balance of resources further towards the donors, creating problems of even greater dependency on aid flows. And as the proportion of donor funding rises, the programs inevitably risk becoming donor driven.

#### F. Lessons for the 5<sup>th</sup> National Development Plan

1.111 What advice can this report and the analysis that underpins it offer to the Government of Zambia as it prepares for its 5<sup>th</sup> NDP/PRSP?

1.112 First and foremost, the Government and other stakeholders should grasp the opportunity provided by the 5<sup>th</sup> NDP to learn from and build on the good experiences and outcomes linked to the 2002-05 PRSP, while at the same time breaking with some of the less than optimal decisions of the past. And second, to use the process of preparing the new Plan to identify Zambia's priorities for poverty reduction and development, and to build a consensus for action around them.

1.113 The new Plan must above all things be clear at the outset on ***what it is trying to achieve and how it will measure success***. There should be explicit links between inputs and outputs, and expected outcomes and impact e.g. on the poor and other vulnerable groups. ***Monitoring and evaluation systems*** should be built into the design of the NDP, and thus become an integral part of M&E and accountability systems within line ministries and other implementing agencies.

1.114 The new Plan must be **realistic** in terms of what it can achieve over the five-year planning horizon, and programs included in the 5th NDP should have a realistic budget and realistic expectations of human resource capacity in implementing agencies and ministries. One of the key lessons from the 2002-05 PRSP is that the capacity of the civil service is limited, despite ongoing support from the international community; and progress at reducing poverty is contingent on better public sector performance. Staff performance has been hampered by a lack of resources and competing priorities. This has at times comprised the ***timeliness*** of planning and government action.

1.115 Much greater effort must be made to ***identify and act on core development priorities*** that necessary to improve the lives and livelihoods of the poor and vulnerable. It is not sufficient to just set priorities; these priorities must be reflected across all functions of Government i.e. in

budget allocations and actual spending, in staffing and human resource decisions, also in accountability systems and recognition of good performance. In order to focus on priorities, some other activities will have to be excluded, despite pressure from advocacy groups and powerful special interests to include them. Ensuring transparency in budgeting and reporting will help to strengthen Government's hand in making these hard decisions.

1.116 The *SAGs have an important role in preparation and planning for the next Plan*. It is important for line ministries and other representatives from Government to participate fully in SAG planning activities as well as M&E responsibilities. The SAGs provide an opportunity for cross-ministerial debate and coordination, but only if participation is authoritative and representative. If they are to work, the Government must take a leadership role in the SAGs, and not let discussions be driven by donors' priorities and external interests.

1.117 The design of the next National Development Plan must be informed by *good poverty analysis*, which takes account of existing commitments such as the MDGs as well as emerging issues and changes in the external environment. Good data are important as well. There is no problem with the *quantity* of data available in Zambia: the Central Statistics Office (CSO) has implemented a substantial number of national household surveys<sup>15</sup> since 1991, as well as two Population Censuses (1990 and 2000). There is, however, a problem with the *quality of data* and also the *quality of statistics*. Resources may well be a constraint. But it is also important for Zambia's data collection systems to respond better to the needs of policy makers. For example, despite the many surveys done in the 1990s, there is no good data on access of the poor to poverty reduction programs, subsidies, and social assistance programs. Important statistics such as the poverty headcount and life expectancy (where questions have been raised about CSO's recent estimates) should be developed in a transparent fashion and under the supervision of Zambian experts. Many countries have set up Expert Advisory Groups e.g. in Ministries of Planning or Finance and Development, to advise on data priorities and methods for estimating key development statistics. These groups often work closely with national statistics offices, but have an independent review and advisory function. This approach would work well in Zambia and help e.g. in resolving the current debate about levels of poverty and recent progress.

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<sup>15</sup> Since 1991, three Living Condition Monitoring Surveys (LCMS), two Priority Surveys, three Demographic and Health Survey (DHS), at least four post-harvest enumeration surveys, two indicator monitoring (IM) surveys, a survey on HIV/AIDs and sexual behavior, and possible others.



**PRSP Priorities and Budgets: 2002-2004**

Sector goal	Budget US\$ (2002-4)	Major programs
<b>Promote self-sustaining export-led agricultural sector, increasing household incomes and food security</b>		
Generate income & employment through increased agricultural production	43,375,000	Establish Agricultural Development Fund
Enhance sector contribution to national balance of payments	30,961,000	Establish infrastructure support for export zones; strengthen rural business groups and outgrower schemes
Land & infrastructure development	30,000,000	Construct trunk and feeder roads
Technology development and dissemination	65,436,000	Animal production credit; animal disease control; livestock research; animal draft power extension
Targeted support for food security	15,000,000	Distribution of inputs
<b>Growth of export-led industry</b>		
Increase investment in industry	2,800,000	Establish estates for MSMEs; produce resource endowment maps of Zambia; market investment opportunities abroad
Increase manufacturing exports	3,500,000	Establish modern testing & certification facilities
Develop capital markets		Reduce government borrowing; strengthen stock exchange; re-capitalise DBZ
Improve industrial crafts	100,000	Study incentives to attract and retain qualified staff

## Annex I: PRSP Monitoring and Evaluation

1. Even though Zambia has had a National Poverty Reduction Strategy since July 2002, and made efforts to develop a system to monitor the implementation of the PRSP, the country still lacks a clear strategy for developing an integrated system for PRS monitoring. Donor supported plans have not received government endorsement, and little progress has been made in building the data collection and analytical capacity required to respond to increasing demands for PRSP monitoring from both donor community and civil society.
2. The institutional structure for M&E is ineffective, and while the indicators for monitoring the PRS have been developed and discussed at length, the administrative data systems and analytical capacity to inform policy discussions are weak.

### Institutional framework

#### Planning and Economic Management Department (PEMD), Ministry of Finance and National Development

3. The Planning and Economic Management Department (PEMD) of Ministry of Finance and National Planning (MFNP) is the department in charge of national planning, PRSP implementation, and economic management. With it also lies the responsibility for PRSP monitoring and evaluation. M&E guidance is provided by the Interministerial Technical Committee, headed by the Director of PEMD. Several units under PEMD share responsibility for different and overlapping aspects of the M&E system:

*SOPU* is in charge of coordinating poverty monitoring and analysis, and makes substantive contributions to PRSP-related outputs.

*The Poverty Reduction and Analysis* section of the Macroeconomic Policy unit also has monitoring responsibilities, but the section only exist on paper.

*The Monitoring & Evaluation Secretariat* is responsible for monitoring projects and, specifically, for developing an IT-based monitoring system for input and output indicators, and an evaluation system for outcome and impact indicators. It is the contact point for all poverty reduction programs. It functions under the guidance of the Inter-ministerial Technical Committee, headed by the Director of PEMD. The M&E TS operationalizes the decisions of the Inter-ministerial Committee and has 16 specialists in key technical areas (e.g., IT, GIS). The Provincial M&E Technical Secretariats are integrated by four development program specialists appointed by the MoFNP PS. They receive 5 percent of project costs to meet their monitoring and evaluation responsibilities which include: i) desk appraisal for current fiscal year project, ii) monitoring for project under implementation, and iii) ex-post evaluation for completed or interrupted projects. Currently the unit counts with a rudimentary project MIS which will need to be operationalized to provide comparative project information across projects and across geographical areas.

*The Poverty Monitoring and Analysis (PMA)* unit is responsible for contracting analytical work on the PRSP. It was recently relocated from the ZAMSIF to the MoFNP. Its structure includes a manager, a study fund advisor, and administrative officer and

poverty information and documentation specialist (PIDS). PMA counts with a PMA Steering Committee over viewing the work of the Social Sector Technical Subcommittee and the User/Producer Subcommittee. Since 2002, PMA has counted with a \$1M budget to fund research proposals on a competitive basis (34 for \$15K and 10 for \$50K). By 2004 all funds have been committed. PMA has worked primarily with researchers in the University of Zambia (depts. of economics, education, social development studies, agriculture and mines), Copperbelt University, the Institute for Economic and Social Research (INESOR), and the Participatory Assessments Group.

4. Several factors constrain PEMD's ability to undertake M&E. Among them are scarce human and physical resources, and ineffective organizational structure and division of responsibilities. For example, the three units under PEMD that hold M&E responsibilities—SOPU, M&E and PMA—are currently understaffed or suffering from an inadequate skill mix, under-funded (e.g. PMA research funding has dried up and funding for staff is scheduled to end in June 2005), with overlapping responsibilities and unclear mandate. As a result PEMD has limited capacity to coordinate a national program of poverty reduction, or implementing a strategy to strengthen M&E across the government, a prerequisite for strong M&E of the government program.

#### Sector Advisory Groups (SAGs)

5. In October 2003, the government re-established the Sector Advisory Groups (SAGs) “to help coordinate the planning, implementation, monitoring and evaluation of the PRSP and the Transitional National Development Program (TNDP)”. Thirteen SAGs have been established under the leadership of the Permanent Secretary for each sector. Their composition counts with the participation of the government and representatives from civil society, NGO, private sector and donor communities. Civil society participation has been strengthened relative to that prevailing in the SAGs predecessors, the PRSP working groups. Each SAG meets periodically either monthly or quarterly.

6. The way SAGs might be envisioned to work is as coordinating bodies for the development of yearly sector strategies and financing plans, and for monitoring and follow-up of those strategies.

7. At present, however, several issues affect the ability of the SAGs to function at their potential. The first is the need to strengthen SAGs' terms of reference. TOR should recognize the relative strengths of different actors and assign clear and defined responsibilities to each. TOR should also align the work and deliverables of the SAG with the national government policy-making and budgeting cycles to ensure that SAGs have an opportunity for timely feedback of information into those cycles. , including adequate division of responsibilities among members, and a defined timing for delivering outputs and providing feedback into the policy-making and budgetary processes. Second is to shift the current practice of treating SAGs as consultative meetings and transform them into active supervisors to the implementation process. Third is establishing a clear and predictable schedule for SAG participants to ensure full participation from all concerned.

#### District Monitoring

8. In the medium-term, the government will need to think about the need to built capacity for M&E at the district level. Two initiatives are playing a role at this level. ZAMSIF has been

working with 9 of the 72 districts to provide them with greater autonomy in prioritizing activities and additional resources. Also a GTZ project is supporting decentralized rural development in the Southern Province, and helping districts collect data for poverty monitoring, using a refined PRSP indicator system.

## **Data collection**

### Administrative data

9. Administrative data systems are weak and in some cases non-existent even in sectors that are a priority for PRS monitoring. Strengthening capacity for administrative management information systems is of paramount importance for PRS monitoring, specifically to collect and organize relevant administrative data for policy planning and monitoring, at levels of disaggregation relevant for decentralized policy making.

10. While health and education have received donor assistance in the past, sectors like agriculture, water and sanitation, and tourism have been left unattended by government and donors alike. Significant resources will be required to finance capacity building efforts and strengthen these sectors' ability to deliver quality administrative data, at both the national and district levels.

### Survey and national data

11. The legal framework for the Zambia National Statistical System (NSS) is laid out in the 1964 Statistical Law. The most important institution in the NSS is the Central Statistical Office (CSO) in the Ministry of Finance and National Development. The CSO has the responsibility for census and survey data collection, economic statistics (national accounts and trade), price indexes, and sector statistics. Other agencies in the National Statistical System include the Central Bank and sector ministries.

12. In practice, the institutions of the NSS are constrained by unreliable financing flows, and poor capacity to retain trained staff associated with low pay levels. Even though CSO has the capacity to carry out the data collection functions that would be expected from a national institute of statistics, its ability to plan and carry out its functions is weakened by the institutional environment.

13. Furthermore the lack of effective institutional mechanisms for coordinating the methods for the collection of information, harmonize codification and definitions, and approve survey collection plans, has resulted in inconsistent data collection methods being adopted by different institutions in the NSS and waste in the use of resources. Incomparable data from different sources as led to controversy in policy discussions.

14. In 2004, the CSO prepared a Strategic Plan for the Zambia National Statistical System (2003-2007). The Plan is mainly focused on the CSO, its medium term data collection strategy and capacity building needs. As such it fails to take a wider view at the institutional issues of the Zambia National Statistical System (NSS). Nonetheless, it is a good starting point for a National Strategy for the Development of Statistics.

## **ZamSED**

15. The Zambia Socio-Economic Database (*ZamSED*) is an important source of statistical information. The database is maintained by the CSO, with support from key ministries and from UNICEF, and is available on CD-ROM. It counts with background information (metadata) for each indicator, including variable definition, unit of measurement; a discussion of the purpose of the indicator, source; time lag in availability of the data; and the data collection method.

## **Access to Public Information**

16. On average, the general attitude towards public information provision is quite open in the country. The Ministry of Finance and its Central Statistical Office have been found to be very responsive to demands for information coming from civil society. Ministries are, reportedly, less forthcoming.

17. Several issues affect the government ability to deliver public information on demand in an efficient manner. The first is the issue of clarity in what constitutes public and confidential information. The second is the issue of capacity in delivering information to interested users. The third issue is the timeliness in the availability of data. (Freedom of Information Bill, Media Institute for Southern Africa (MISA))

## **Analysis**

18. Policy making has been lacking a permanent focal unit or institution with the mandate to systematically channel poverty analysis to policy makers at different levels, and characterized by an inadequate utilization of poverty information by policy makers and others.

## **ZIPPA**

19. A new non-governmental organization, the Zambia Institute for Public Policy Analysis (ZIPPA), was established in September 2004 to provide public policy support to MoFNP. Its mandate is to carry out research on economic and social issues, and provide a platform for public policy debate and discussion. ZIPPA has a semi-autonomous status which allows it to work with government institutions and private sector and civil society alike.

20. ZIPPA works under the guidance of a 7-member steering committee, including a representative from the Economics Association of Zambia, the Zambia Chamber of Commerce and Industry, the University of Zambia, and the Policy Analysis Coordinating Unit in the Cabinet Office. This committee is assisted by a 5-member technical committee. ZIPPA staff includes the Director, four researchers, and two research assistants, supported by an IT administrator, an accountant, two secretaries, a librarian and two drivers.

## **Civil Society**

21. Civil society is quite active and resourceful. The umbrella organization, Civil Society for Poverty Reduction (CSPR) counts with a membership of about 300 civil society organizations. CSPR focus in supporting monitoring and evaluation of the PRSP is on participatory poverty assessments (PPAs) and expenditure tracking. Baseline and follow up PPAs have been undertaken in 15 sites in five provinces since 2002. The more recent initiative with expenditure

tracking started in March of 2004 with training from IDASA (RSA) and Uganda. The first expenditure tracking experience is ongoing in five sectors (agriculture, water, education, health and HIV/AIDS).

22. Several institutes support civil society monitoring and evaluation activities. They include the Institute of Economic Research, the University of Zambia, and the Participatory Assessments Group.

## 2. POVERTY IN ZAMBIA: MEASUREMENT, LEVELS, AND TRENDS

### A. Introduction

2.1 This chapter examines poverty—broadly defined as *unacceptable deprivation in well-being*—in terms of material deprivation, human deprivation, vulnerability, destitution, and social isolation. It draws on a range of data sources and methods to define the extent of poverty in the state, as well as shed light on recent trends in poverty.

2.2 Poverty cannot be understood in terms of a single indicator or measurement methodology. Consequently, this Assessment takes a multidimensional view of poverty and draws upon a variety of information to analyze the situation faced by the poor in Zambia. The broad definition of poverty used here includes three components – poverty of private resources, poverty of public goods and services, and poverty of relationships. *Poverty of private resources* refers to lack of access to both material assets and human capital—health, education, and skills. The poor also suffer from *poverty of access to public goods and services* like schools, roads, clean water and security. Finally, many of the poor suffer from *poverty of social relations and networks*. The very poor often belong to fewer social networks and informal systems of support; some are even isolated from their kinship networks and close family members. All three of these components should be taken into account to fully understand poverty in Zambia. To present a full picture of poverty, this Chapter draws upon both qualitative and quantitative information drawn from both nationally representative household surveys and from in-depth participatory studies. Where possible, comparisons between multiple data sources are made.

### B. Self-Assessed Poverty Levels in Zambia

2.3 Perceptions of poverty in Zambia are partially determined by expectations based on past experience. Zambia was once relatively prosperous, with per capita income at the time of independence in 1964 that placed it among the wealthier countries in sub-Saharan Africa. As the price of copper fell beginning in the mid-1970s, the country experienced an almost continuous decline in income per person. Only since 2000 has Zambia experienced consistent growth in income per capita. Because Zambians take past prosperity as a reference point for their standard of living, they overwhelmingly view themselves as poor. Table 2.1, based on the LCMS III, shows 97 percent of rural Zambians and 92 percent of urban Zambians consider themselves either “very poor” or “moderately poor.”

**Table 2.1: Do Zambians Perceive Themselves to Be Poor?  
Percentage Distribution of Self-Assessed Poverty Status, 2002-03**

<i>Self-Assessed Poverty Status</i>	<i>All Zambia</i>	<i>Rural</i>	<i>Urban</i>
Very Poor (%)	47	52	37
Moderately Poor (%)	48	45	55
Not Poor (%)	5	3	8
Total	100	100	100

Source: 2002-03 LCMS

### C. Consumption-Based Poverty Measures: Methodology

2.4 While emphasis is placed in this report on broad measures of poverty, the poverty rates presented here are calculated using consumption data collected in the 2002-03 LCMS. The consumption poverty figures provide a starting point from which to consider the multi-dimensional nature of poverty. This section briefly describes the how the poverty line was determined and used to measure consumption-based poverty rates. A fuller treatment is given in the Annex. The principal steps involved in calculating poverty figures are the following: 1) measure household consumption, 2) adjust for variation in cost of living, 3) determine a poverty line, and 4) calculate a poverty rate. Each of the four steps is explained below.

#### Measuring Household Consumption

2.5 Households surveyed in the 2002-03 LCMS reported on their levels of consumption of both food and non-food items, including housing. Recorded consumption included purchased items, along with food which the household both produced and consumed. Material consumed was valued at local prices (collected in a separate price survey at markets in district centers), and all consumption was added up to produce a total value of consumption for the household.<sup>16</sup>

2.6 The poverty analysis was conducted using each household's level of consumption per adult equivalent rather than consumption per person. Consumption per adult equivalent for each household was calculated by dividing the household's total consumption by the number of adult equivalents in each household. In calculating adult equivalents, adults each counted as one, while each child counted as a fraction of an adult equivalent, with the exact figure depending on age. The lower adult equivalent values for children reflects the lower calorie needs of children. In terms of how much consumption is needed to meet basic needs, a young child is "equivalent" to less than one adult.

<sup>16</sup> Purchases of durable goods, i.e. those that are used over a long period of time, are not included in the consumption aggregate, and instead a "durable good user fee" is calculated for households that own such goods. Also, housing costs are imputed for most households. See the Annex for details.



### Box 2.1: Why Measure Poverty with Consumption and Not Simply Expenditure or Income?

A household's consumption is equal to the sum of (1) expenditures plus (2) the value of home-produced food. Expenditure rather than income is used for the first half of the calculation for two reasons. First, household surveys measure what people spend more accurately than their incomes. Second, income is typically variable over the course of the year, so expenditure provides a better measure of welfare over time. Consumption is a better measure of welfare than simple expenditure alone, because much of what many households consume is their own production, which would not be captured by expenditure. Ignoring home-produced food would greatly understate the consumption levels of rural households

#### Adjust for Variation in Cost of Living

2.7 Because there is wide variation in the cost of living across space in Zambia, it was necessary to adjust the value of household consumption using a price index. This price index was calculated using local price data collected as part of the LCMS. The index also corrects for variation in prices over the 12 months during which the survey data was collected.<sup>17</sup>

#### Determine a Poverty Line

2.8 This is the key step in the process. The notion of a poverty line is conceptually rooted in a "standard of living." The poverty line is the minimum level of consumption below which people are unable to meet their basic needs for food, housing, and everything else. There is no single correct poverty line, and any poverty line necessarily reflects some measure of judgment about what "basic needs" entails in a particular society. The procedure used to estimate the poverty line here follows the procedure used in a variety of other developing countries:

- *Choose a level for minimum food calorie needs.* Minimum calories per adult were taken as 2464 per day, as per guidelines from the World Health Organization (1985).
- *Determine the composition of food basket for a typical household near poverty line.* Average shares of consumption in different foods were determined for households that ranked in the middle fifth (quintile) of all households nationally.
- *Calculate cost of meeting calorie needs with that food basket.* The cost of reaching 2464 calories with the food basket was found to be 52843 Kwacha per month, at national median prices. This is the core or food poverty line, i.e. the minimum consumption level of food required to meet basic food needs alone.
- *Add additional amount for non-food consumption.* Because basic needs entail more than food, the poverty line should reflect non-food as well as food needs. Like the food basket shares, the non-food share was determined by examining the consumption patterns of a typical household near the poverty line. Specifically, it was found that for the average household in the middle quintile of all households nationally, 28 percent of its consumption was for non-food items. The *total* poverty line was then calculated by adding a corresponding percentage to the food poverty

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<sup>17</sup> Cost-of-living adjustments for both urban and rural households were done using price data collected at markets at district centers, which are generally urban. Consequently, the price index does not reflect differences in prices between urban and rural areas within districts. According to CSO personnel, in many areas district centers are the only locations with active markets, so prices for district centers may in fact represent the most relevant market prices for households in the district. Assuming that spatial price variation is chiefly between rather than within districts, this shortcoming in the price index probably has minimal impact on the analysis presented here.

line.<sup>18</sup> The total poverty line, which is the minimum monthly consumption needed to satisfy basic food and non-food needs, was found to be 73394 Kwacha per adult. The total poverty line is referred to throughout the text as simply the “poverty line.”

2.9 At official exchange rates in mid-2003, the poverty line is equal to approximately \$US15 per adult per month, or US\$0.50 per adult per day. For a typical family of six, the poverty line amounts to about 350,000 Kwacha per month.<sup>19</sup>

2.10 The food basket used for the poverty line calculation reflects the diet of a typical poor person in Zambia. A poor person gets 70 percent of his or her calories from grains, chiefly various forms of maize, and most of the remainder from vegetables. The daily food consumption of a poor Zambian adult with consumption level at the core poverty line would be roughly as follows:<sup>20</sup>

- 2-3 plates of nshima
- a medium-sized vegetable such as a sweet potato or tomato
- a few spoonfuls of oil
- every 3-4 days, a small serving of chicken, beef, or fish
- every 3-4 days, a piece of fruit such as a banana or mango
- a handful of groundnuts
- a couple teaspoons of sugar

### Calculate Poverty Rates

2.11 Once the poverty line is determined and consumption per adult equivalent calculated for each household, estimating poverty rates is straightforward. The most common measure is the poverty headcount, which is simply the fraction of individuals with levels of consumption below the poverty line. In addition to the headcount, two other consumption poverty measures were estimated. The poverty gap index expresses the average gap between the consumption of the poor and the poverty line. The poverty gap index is higher not just when there are more people but also when consumption levels are lower among the poor. The poverty severity index is similar to the poverty gap index but gives greater weight to the very poorest individuals.

2.12 Poverty rates are also calculated using both the poverty line and the lower food or core poverty line. The use of two poverty cutoffs provides some indication of the sensitivity of poverty measures to the poverty line.

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<sup>18</sup> Specifically, the food poverty line was multiplied by  $1/(1-0.28)$ .

<sup>19</sup> This figure was calculated using the adult equivalent scale for a “typical” family of six consisting of two adults, and one child in each of 4 age categories: 1-2, 3-5, 7-10, and 10-12.

<sup>20</sup> The food basket underlying the poverty line consists of 44 items, reflecting the much wider variation in foods consumed across the whole country than is consumed by a typical individual. This stylized food basket was determined by scaling the poverty-line food basket down to the food consumption level of someone with total consumption at the core poverty level, grouping the foods into major categories, adding up the basket’s food quantities by weight in those categories, and then determining corresponding quantities among the most common foods.

**Box 2.2: How Can the Core Poverty Line Be Interpreted?**

Like many other poverty studies, this analysis defines both a total poverty line and a core poverty line equal to the food poverty line. A problem with the idea of a core poverty line (also sometimes called the food poverty line or the extreme poverty line) is that core poverty does not correspond to any underlying welfare concept. It is simply a lower line, without any clear basis. It is sometimes referred to as the minimum expenditure required to meet basic food needs. However, this is a misleading interpretation. Because some non-food consumption is a part of basic needs and all individuals will have some non-food consumption, someone with total consumption equal to the food poverty line is not meeting his or her basic food needs.

An alternative core poverty line could be constructed by revisiting the underlying calorie requirement. The calorie requirement used here is taken from the WHO's recommended calorie intakes. An alternative core poverty line could reasonably be constructed with food and non-food components, but basing the food component on a calorie requirement of, for example, 70-80% of the WHO's recommended calories.

It is also possible to interpret the usual core poverty line as if it were a basic poverty line calculated from a lower calorie requirement. Given the mathematics of the poverty line calculations and the particular non-food consumption share in Zambia, the core poverty line used in this report is equal to a total poverty line (with food and non-food components) based on a calorie requirement of 72% of the WHO's recommendations. This lower calorie requirement amounts to 1774 calories per adult and correspondingly lower figures for children. This is similar to the lower calorie requirements used in some poverty studies and sometimes associated with "minimum" calorie requirements rather than the WHO's more generous "recommended" calories. Thus the core poverty rates in this paper can be viewed as poverty rates which account for both food and non-food needs but assume a lower calorie requirement. This provides an alternative way of interpreting the core poverty figures.

**Poverty Measures**

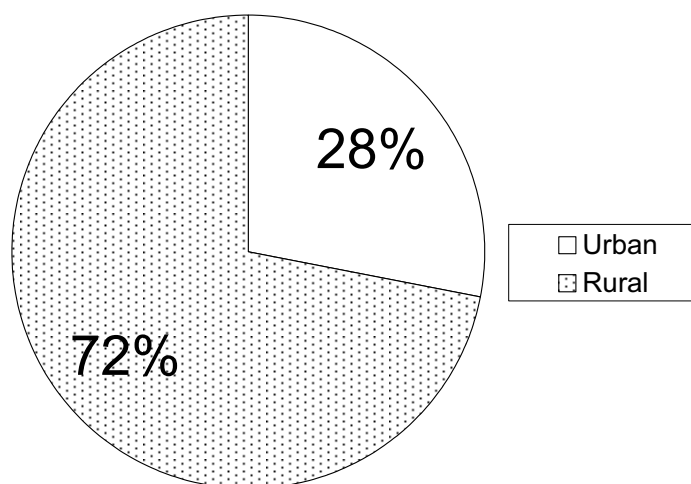
2.13 Using the poverty line and core poverty line described in the previous section, the national headcount estimates are 56 percent for poverty and 36 percent for core poverty. In other words, over half of Zambians have levels of consumption that are insufficient to meet basic needs, and more than a third have consumption levels that would be inadequate to meet basic food needs alone, even if they were able to forego all non-food consumption. Table 2.2 shows poverty and core poverty rates for urban and rural households separately. Poverty rates are highest in rural areas where two-thirds of Zambia's population resides. Consequently, the poor are highly concentrated in rural areas. Seventy-two percent of the poor live in rural zones.

**Table 2.2: Headcount Poverty Estimates, 2002-03**

	<i>National</i>	<i>Rural</i>	<i>Urban</i>
Below Poverty Line (%)	56	62	45
Below Core Poverty Line (%)	36	40	28

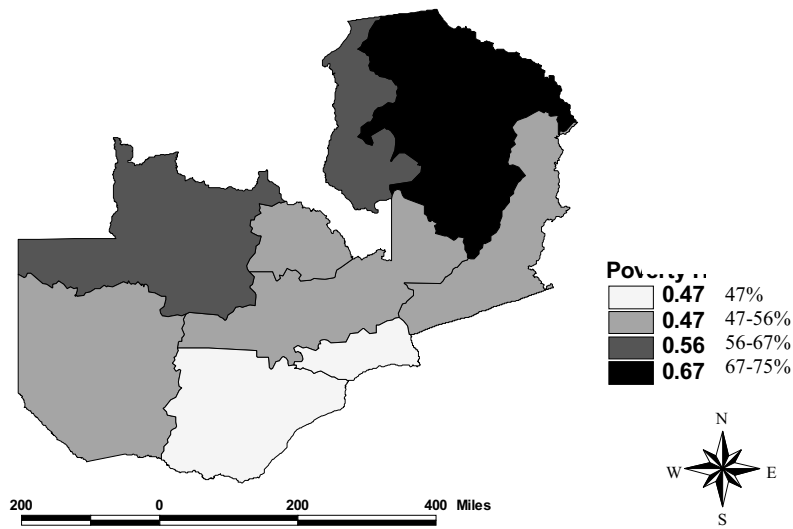
Source: Analysis of 2002-03 LCMS

**Figure 2.1: Where are the Poor?  
Percentages of Nation's Poor Living in Urban and Rural Areas**



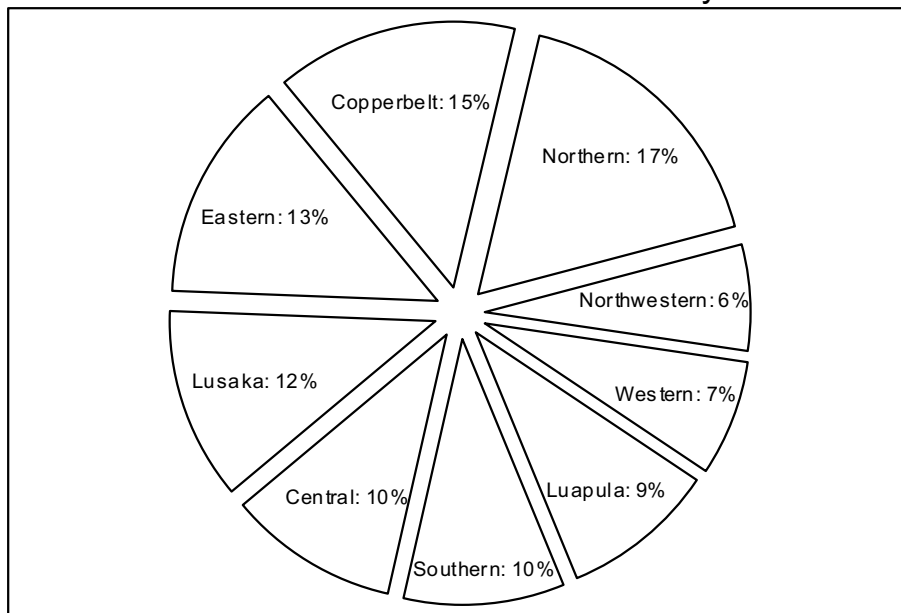
2.14 The urban population of Zambia is found mainly in Copperbelt and Lusaka provinces, which are home to 69% of urban Zambians. The remaining seven provinces are overwhelmingly rural. Poverty is lowest in Southern and Lusaka provinces, which both have headcount poverty rates of 47%. Poverty rates are highest in the most northerly provinces: Northern, Luapula, and Northwestern.

**Figure 2.2: Poverty Headcount by Province**



2.15 Figure 2.3 show a breakdown of the location of the poor by province. The largest fraction of the poor on a national basis—17 percent—is found in Northern, which is also the province with the highest poverty headcount rate. Although Lusaka and Copperbelt have relatively low poverty rates, they also have large populations. Consequently, they are home to large fractions of the country’s poor.

**Figure 2.3: Where are the Poor? Distribution of Poor by Province**



#### D. Central Statistical Office Consumption-Based Poverty Figures

2.16 There is an internal debate in Zambia about the levels of poverty. In analyzing the same LCMS data used here, the Zambia Central Statistical Office (CSO) implemented a similar methodology to that described above, but with a number of minor variations. CSO made slightly different choices for its food basket, minimum calorie requirements, adult equivalent definition, and price index. Further details are presented in the Annex. As a consequence of these differences, CSO finds higher poverty rates, e.g. a national headcount of 67 percent compared to the 56 percent found using the methodology in this report. It is important to note that the differences in methodology are relatively minor, and that the differences in poverty estimates are largely inconsequential. The ranking of subpopulation and the overall profile of both urban and rural poverty in this report differs little from what is presented in CSO's own analysis of the survey data, CSO (2004). The small differences in poverty point estimates should not distract from the larger picture of poverty in Zambia, which is largely the same whether one uses CSO's figures or those in this report.

2.17 The headcount poverty estimates from this report ("PVA estimates") are shown side by side along with the CSO estimates in Table 2.3. Also shown are the ranking by province in terms of headcount. While there are some differences in provincial rank between the two sets of estimates, the overall differences are small. Both the PVA and CSO estimates show that the poorest areas are Northern, Luapula, Northwestern, and Eastern provinces while the least poor are Copperbelt, Lusaka, and Southern provinces.

2.18 The Jesuit Centre for Theological Reflection (JCTR), a prominent non-governmental organization in Lusaka, monitors the monthly price of a Basic Needs Basket which represents the cost of living for a family of six in Lusaka and other urban areas. The cost of the basket includes a much larger cost for housing than that used for the analysis presented here. Consequently, taking the JCTR cost of living as a poverty line would imply higher poverty rates than those presented here.

**Table 2.3: 2002-03 Headcount Poverty Estimates Compared to CSO Estimates**

	PVA Estimates	CSO Estimates	Province Rank (PVA)	Province Rank (CSO)
Province				
Central	54	69	5	5
Copperbelt	52	58	7	8
Eastern	56	71	4	3
Luapula	67	70	2	4
Lusaka	47	57	8	9
Northern	75	81	1	1
Northwestern	61	72	3	2
Southern	47	63	9	7
Western	52	65	6	6
All Zambia	56	67		
Rural	62	74		
Urban	45	52		

Source: 2002-03 LCMS

### E. Additional Measures of Well-Being

2.19 Consumption-based poverty figures offer only a partial view of the state of the poor. Table 2.4 provides a snapshot of a variety of additional indicators related to education, HIV/AIDS, childhood mortality, and child malnourishment, separately for men and women. Trends in these figures over time and comparisons to other sub-Saharan African nations are shown in subsequent sections.

**Table 2.4: Additional Measures of Well-Being in Zambia**

	<i>Both Sexes</i>	<i>Male</i>	<i>Female</i>
<b><u>Education</u></b>			
Adult Literacy Rate (%), ages 15 and above	67	77	58
Mean Years of Schooling, ages 15 and above	5.6	6.4	4.9
School Attendance Rate (%), ages 7-13	75	75	76
School Attendance Rate (%), ages 14-18	64	71	56
<b><u>HIV/AIDS</u></b>			
Prevalence Rate (%), Urban and Rural, ages 15-49	16	13	18
Prevalence Rate (%), Urban, ages 30-34	38	34	43
<b><u>Life Expectancy and Childhood Mortality</u></b>			
Life Expectancy at Birth	37.4	37.9	36.9
Infant Mortality (deaths per 1000 births before age 1)	95	95	93
Under-5 Mortality (deaths per 1000 births before age 5)	168	176	160
<b><u>Child Malnourishment</u></b>			
Stunted (%), ages 5 and under	47	48	46
Wasted (%), ages 5 and under	5	6	4

Sources: 2000 Census (literacy and schooling), 2002/03 LCMS (attendance), 2001/02 Demographic and Health Survey (HIV/AIDS, childhood mortality, child malnourishment), UN World Population Prospects: 2004 Revision (life expectancy)

2.20 The summary figures in the table show substantial differences by gender. There is no significant difference in child malnutrition rates by gender, and as in most countries, child mortality is higher for boys than girls. Primary school age children (7-13) show no difference in attendance rates by gender. For all other measures examined here, women fare worse than men. Adult literacy, mean years of adult schooling, and secondary school age attendance and all much lower for women. HIV prevalence rates are also substantially higher for women. Women are so much more affected by AIDS that unlike almost everywhere else in the world, life expectancy at birth in Zambia is lower for women than men.

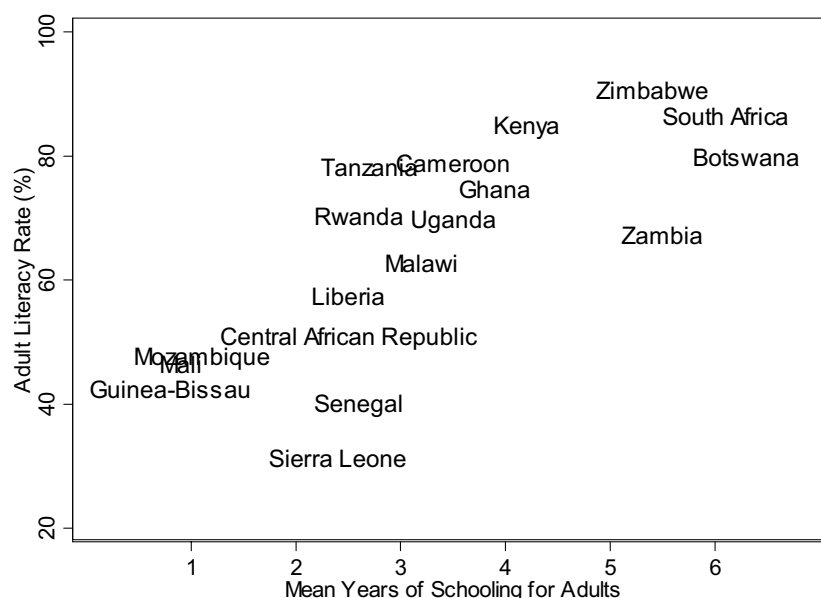
### F. Zambia in the Sub-Saharan African Context

2.21 Zambia shares many features with other sub-Saharan African nations, but it also has features which set it apart. Like much of sub-Saharan Africa, Zambia experienced a long period of European colonial rule geared chiefly towards extraction of resources. As the territory of Northern Rhodesia, the area was administered by the South Africa Company from 1891 until it was taken over by the United Kingdom in 1923. The name was changed to Zambia upon independence in 1964. Zambia both achieved independence peacefully and has avoided violent conflict since becoming an independent nation-state, unlike some of its immediate neighbors—namely Angola, Mozambique, the Democratic Republic of Congo, and Zimbabwe. Zambia's peaceful environment and mineral wealth enabled it to fuel large public sector investments in the

1960s and 70s, but the subsequent decline in the international price of copper has caused per capita income to drop precipitously. Although the country's economy outranked its neighbors immediately after independence, it is now among the poorer states on the continent.

2.22  
Zambians receive more education on average than residents of most other sub-Saharan African nations. Of large countries in the region, only South Africa and Botswana have populations with higher average years of schooling for adults. This is largely a legacy of the post-colonial period, when the government poured income from copper wealth into education, and rapid gains were made in completed schooling, particularly for women. Zambia's adult literacy rate, however, is no higher than that of nearby countries like Rwanda and Uganda that have much lower schooling rates.

**Figure 2.4: Adult Literacy and Schooling: Zambia vs. Other Sub-Saharan African Nations**



Source: (for countries other than Zambia) CIA World Factbook and Barro-Lee dataset

2.23  
Life expectancy at birth in Zambia is the fifth lowest in the world, according to United Nations estimates. Life expectancy for those born 2000-05 was just 37.4 years, a drop of 14.3 years from 25 years earlier.<sup>21</sup> Zambia's decline was especially large because it had a long way to fall. During its period of relative prosperity in the early 1970s, Zambians enjoyed a life expectancy at birth of 50 years, one of the longest in region.

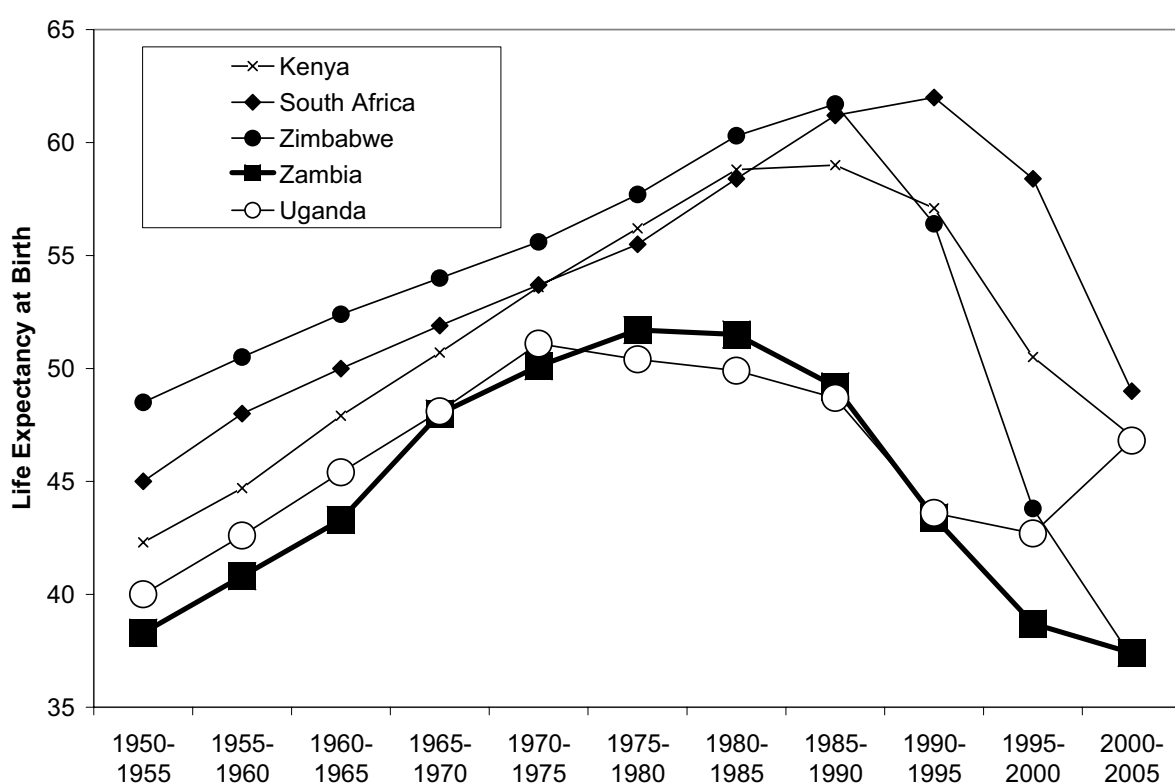
2.24  
The decline in life expectancy at birth has been driven in large part by HIV/AIDS. Zambia is one of just ten countries worldwide, all in sub-Saharan Africa, with double-digit HIV prevalence rates. Figure 2.5 shows the changes in life expectancy that have taken place in Zambia

<sup>21</sup> Zambia's CSO has proposed alternative, higher, estimates of life expectancy at birth in 2000. They do not dispute, however, that adult mortality in Zambia has greatly increased. CSO's analysis of census data shows that between 1980 and 2000 life expectancy at age 15 declined by 14 years for men and 17 years for women (CSO 2003, Table 4, p. 145). This is consistent with the U.N.'s estimate of a decline of 14.3 years since 1970-75 in life expectancy at birth for both sexes combined.



and other large countries hit by the HIV/AIDS pandemic. Like other African nations, Zambia saw large advances in life expectancy from the 1950s up through the 1970s and then a drop due to AIDS-related deaths. Because Zambia was one of the first countries where AIDS took hold, the drop in life expectancy occurred earlier there than elsewhere. Uganda is a notable exception and contrast to the life expectancy patterns of Zambia and other AIDS-affected countries. Uganda and Zambia had very similar life expectancy levels before and during the earlier stages of the pandemic, and life expectancy in both nations was approximately 43 years in the first half of the 1990s.<sup>22</sup> Uganda confronted AIDS with strong political leadership committed to a frank education program and managed to beat back the disease, leading to a rise in life expectancy to 46.8 in 2000-2005.

**Figure 2.5: Life Expectancy at Birth Over Time for Zambia and A Selection of Other Sub-Saharan African Countries With Extreme HIV Prevalence Rates**



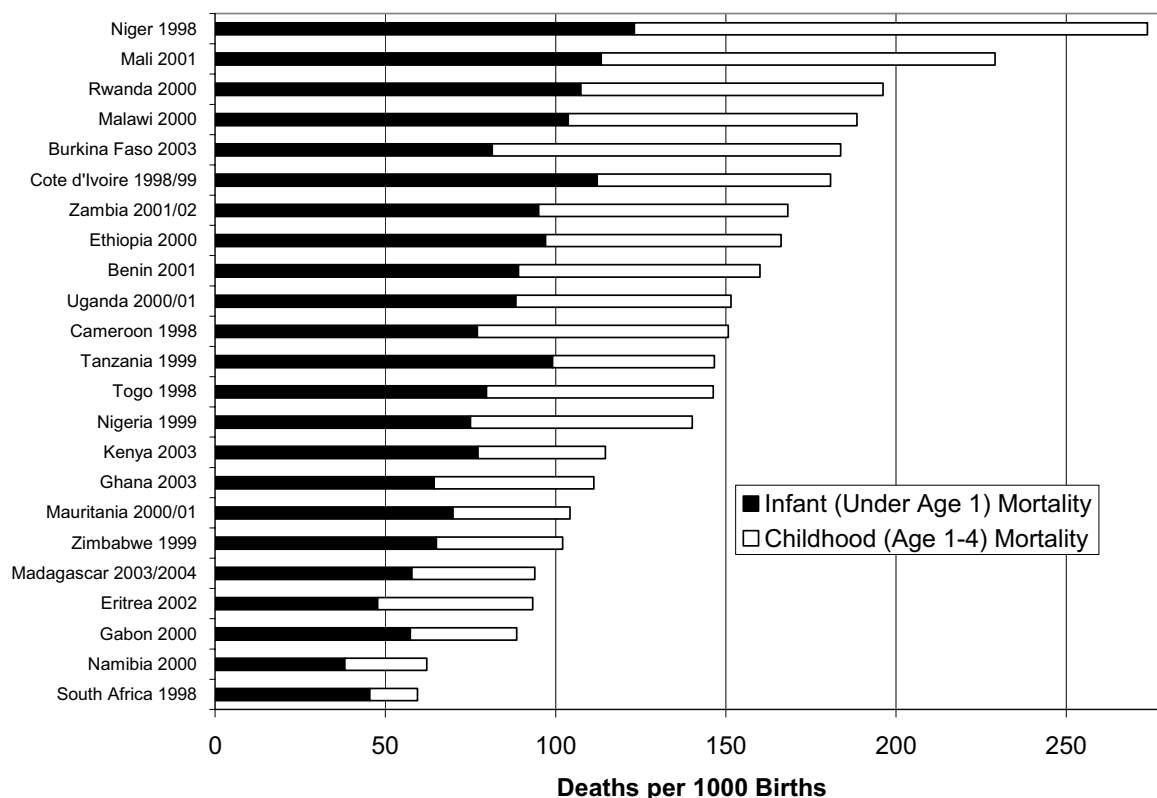
Source: United Nations Human World Population Prospects: 2004 Revision

2.25 Zambia's low life expectancy is also due in part to continued high child mortality rates. Zambia is one of a small number of countries to have both an extremely high HIV rate and one of the world's worst child mortality rates. Figure 2.6 shows infant mortality rates (under age 1) and childhood mortality rates (age 1-4) for Zambia and other sub-Saharan African countries for which recent data is available from Demographic and Health Surveys. Countries are shown ranked by under-5 mortality, which is the sum of the mortality rates up to age 1 and ages 1-4. Child mortality rates in some of Zambia's neighbors—South Africa, Namibia, and Zimbabwe—are lower, despite high HIV prevalence rates, reflecting those nations' relative wealth and more

<sup>22</sup> The United Nations estimates of life expectancy are for five-year periods.

sophisticated health infrastructure. In contrast, a child’s odds of survival in Zambia are among the lowest in Africa. Ninety-five out of 1000 Zambian children do not survive past their 1<sup>st</sup> year, and an additional 80 die before reaching age five.

**Figure 2.6: Child Mortality Rates for Sub-Saharan African Countries**



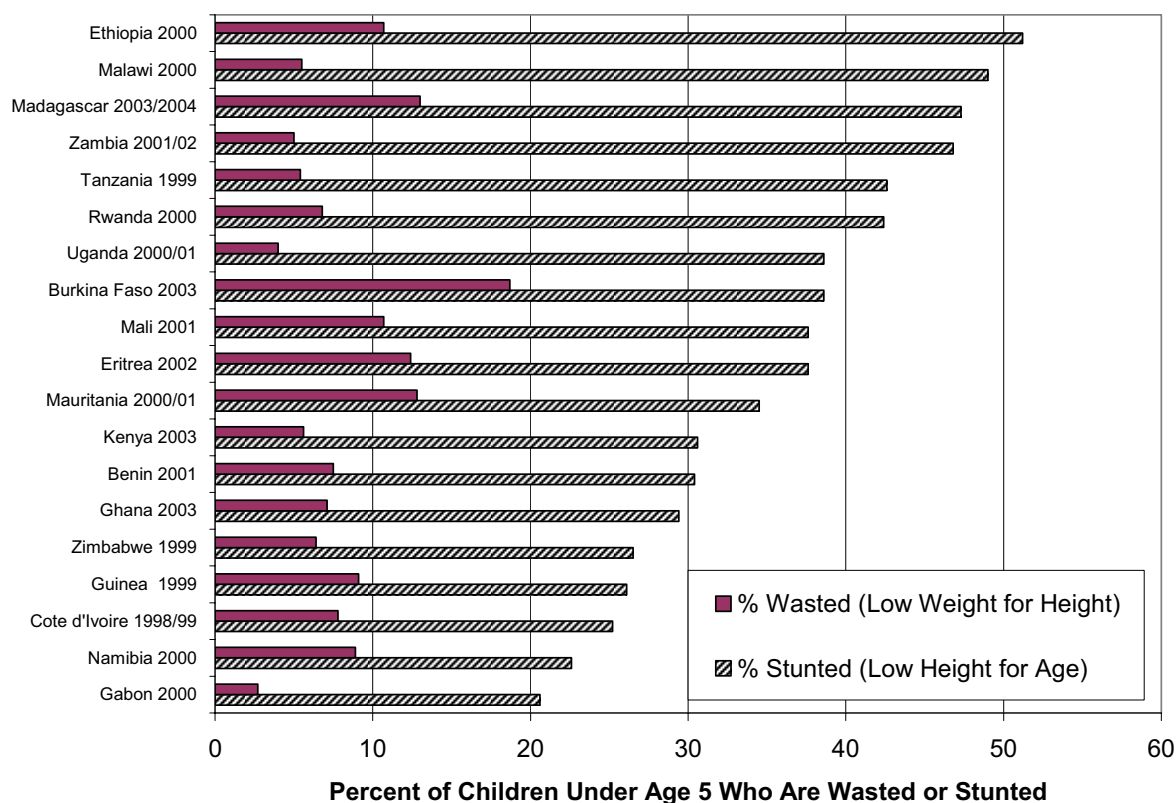
Source: Demographic and Health Surveys

Note: The sum of the two bars is equal to the under-5 mortality rate.

2.26 Another way to compare welfare across countries is by examining child nutrition outcomes. There are two indicators typically used: wasting and stunting. A “stunted” child is substantially below normal height-for-age while a child who is “wasted” is substantially below normal weight-for-height.<sup>23</sup> Stunting generally indicates chronic, long-term malnutrition and disease, while wasting is associated with more recent hunger. Zambia’s rate of stunting for children under age five is 46.8 percent, one of the highest among sub-Saharan African countries for which data is available. The percentage of Zambian children that were wasted in 2001-02 is 5 percent, which is relatively low for the region.

<sup>23</sup> Specifically, a child is considered wasted or stunted if he or she is more than 2 standard deviations below the norm for a reference population.

**Figure 2.7: Child Malnutrition Rates For Children Under 5 in Sub-Saharan African Countries**



Source: Demographic and Health Surveys

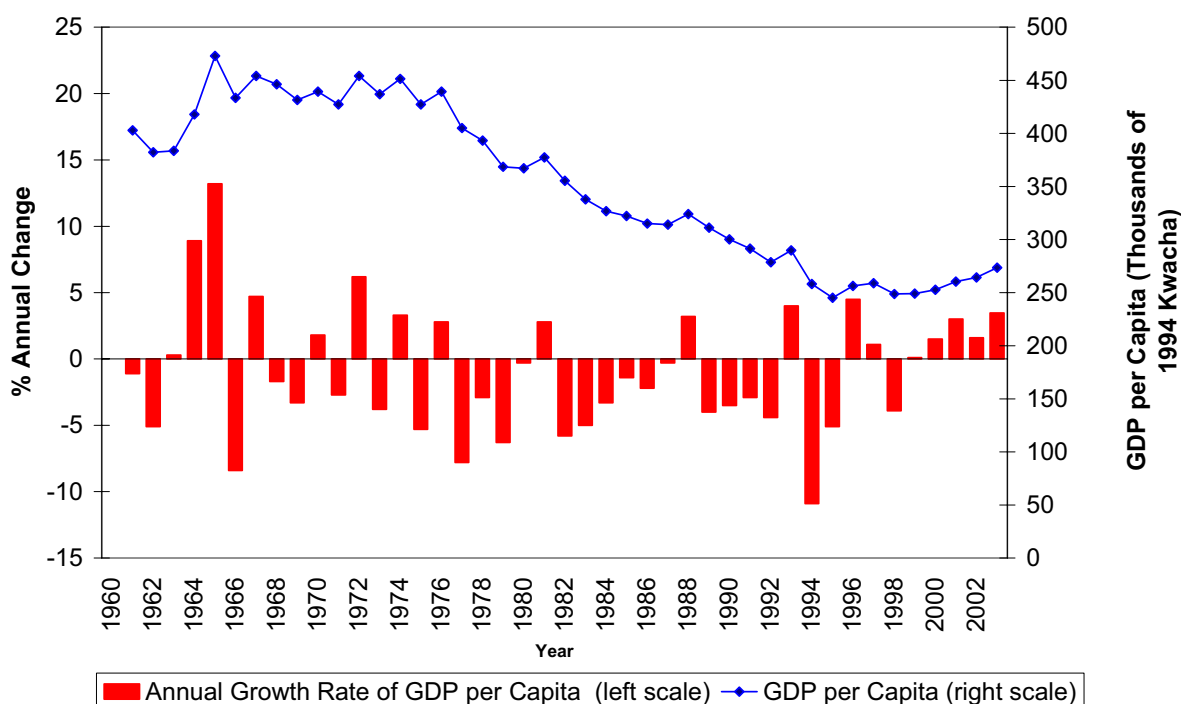
2.27 Compared to other countries in sub-Saharan Africa, Zambia presents a mixed picture. Along the lines of health indicators—HIV prevalence, life expectancy, child mortality, and long-term child nutrition—the country is at or near the bottom. At the same time, the country's human development as a whole still shows the sign of its relative past wealth, with a high mean schooling level and a literacy rate substantially above that of the poorest African states.

### G. Trends Over Time

2.28 A key question for Zambia is the extent to which things have changed since the country embarked on a series of economic reforms in the early 1990s. Unfortunately, due to technical changes in the way data was collected in the most recent household survey, consumption-based poverty figures based on that survey cannot be compared to figures from earlier surveys. Other measures of well-being examined in this Assessment can be tracked over time. Two types of variables are useful for considering changes over time. On the one hand, average completed schooling and literacy rates of adults describe the well-being of the population as a whole but evolve only slowly over time. Separately, while child malnutrition, mortality, and school attendance rates are only directly relevant to children, they change more rapidly over time in response to changing conditions. Both sets of variables are examined in this section.

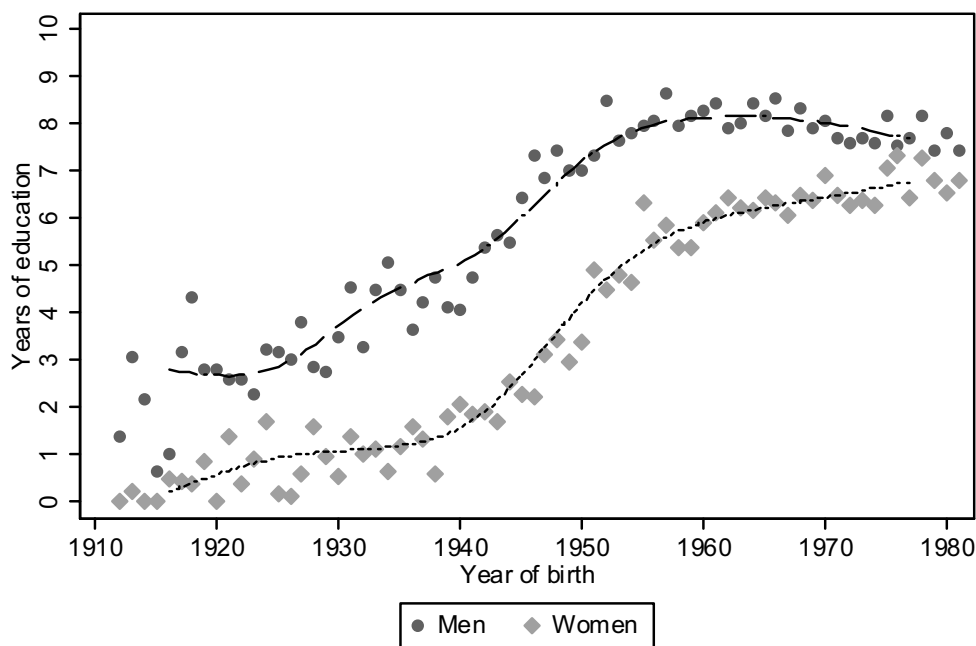
2.29 At the macro level, the economy has finally emerged from a period of great instability and achieved stable but modest growth. The economy experienced severe declines in the first years after the implementation of reforms. Output per capita declined by 11 percent in 1994 and a further 5 percent in 1995. (The pattern of growth since 1991 is examined in more detail in Chapter 3.) Evidence does suggest that the reforms set the stage for later growth. In recent years, Zambia has experienced its longest period of sustained growth since independence, averaging 2 percent annual GDP per capita growth 2000-2003. Given the rocky pattern of growth at the aggregate level that Zambia experienced during the 1990s, it would be surprising if there had been substantial improvements in human welfare on average over that period. Indeed, most welfare indicators show only small changes over the course of the decade.

Figure 2.8: GDP Per Capita, Levels and Annual Growth Rates



Source: IMF

2.30 Over the course of the post-independence period, there were large advances in education levels, and gains were particularly rapid for women. Average years of education by sex and year of birth are shown in Figure 2.9. The average Zambian woman born in 1940 received just over one year of schooling, while women born in 1960 averaged over six years of education. Later cohorts of women showed continued modest gains, but average education levels for men have declined slightly. Overall, forward progress on education has stagnated since Zambia's economic woes intensified in the 1970s.

**Figure 2.9: Average Years of Schooling by Year of Birth and Sex**

Source: 2002-03 LCMS

2.31 The same pattern can be seen by focusing on changes in primary school completion rates over time. Table 2.5 shows the percentage of adults that have completed primary school by age group and gender, in both 1990 and 2000. Reading down a column takes one back through history and illustrates the dramatic progress in education Zambia made in the years after independence. The gains in education levels are most visible in the contrast between primary school completion rates for the youngest Zambian and those over age 65. In 2000, only 18 percent of Zambian men in the oldest age group completed primary school, compared to 66 percent of those age 15-24. Likewise, primary school completion rates increased by a factor of 10 for women, from 5 percent for those over age 65 to 50 percent for women 15-24. The reversal in education gains for men that took place in the 1980s and early 1990s is also visible in the table. In 1990, 71 percent of men age 25-34 had finished primary school. By 2000, the completion rate for that same age group had dropped to 66 percent. For both men and women, completion rates among the youngest age group were higher in 2000 than in 1990. The figures suggest that primary school completion rates have recovered somewhat after falling during the 1980s and the early 1990s.

2.32 With two censuses, it is also possible to track cohorts over time. For example, men age 35-44 in 2000 are the surviving members of the group that was age 25-34 in 1990. A cohort can be followed by reading along the diagonal of Table 2.5. Although only 52 percent of men age 15-24 in 1990 had completed primary school, 66 percent of the same cohort had finished primary school by 2000. This reflects the fact that due to late entry to school, many men finish primary school in their late teens. A similar pattern, but with a smaller increase, is seen for women. For the cohorts of both men and women who were 25-44 in 1990, there were drops between 1990 and 2000 with a primary school education. This may reflect higher mortality rates for those with

HIV/AIDS. Urban residents are more than twice as likely to be infected with HIV and also much more likely to have completed primary school.<sup>24</sup>

**Table 2.5: How Have Primary School Completion Rates Changed Over Time? Percentages Finishing Primary School by Age Group and Sex, 1990 and 2000**

<i>Age Group</i>	<i>Men 1990</i>	<i>Men 2000</i>	<i>Women 1990</i>	<i>Women 2000</i>
15-24	52	56	48	50
25-34	71	66	49	50
35-44	63	67	28	44
45-54	35	58	9	26
55-64	18	34	6	9
65+	11	18	6	5
All adults	52	57	37	43

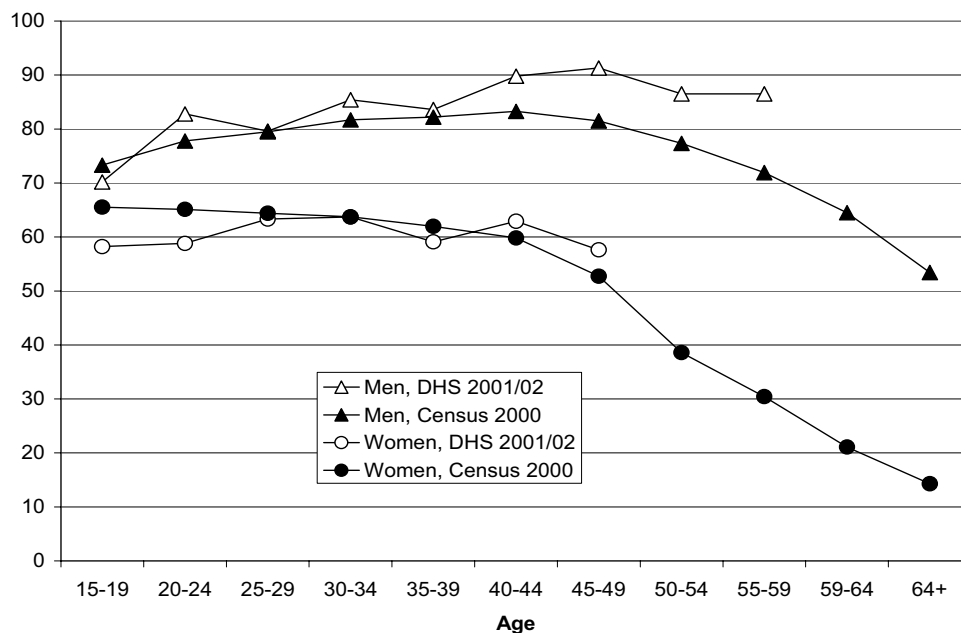
Source: 1990 and 2000 Censuses

2.33 Another way to track the evolution of human capital over time is to examine changes in literacy by age group. Literacy figures from both the 2000 Census and the most recent Demographic and Health Survey are shown in Figure 2.10. Although the DHS and the census collect literacy information in very different ways, the two series are similar, except that the DHS shows higher rates of literacy for older men.<sup>25</sup> Both show that literacy rates are roughly unchanged for adult women up to age 44 and that they have declined in recent generations of adult men.

<sup>24</sup> It is not possible to examine actual HIV/AIDS prevalence rates by education level. Prevalence data comes from testing done for the 2001/02 Demographic and Health Survey. Only province, age, and sex information are reported with HIV status.

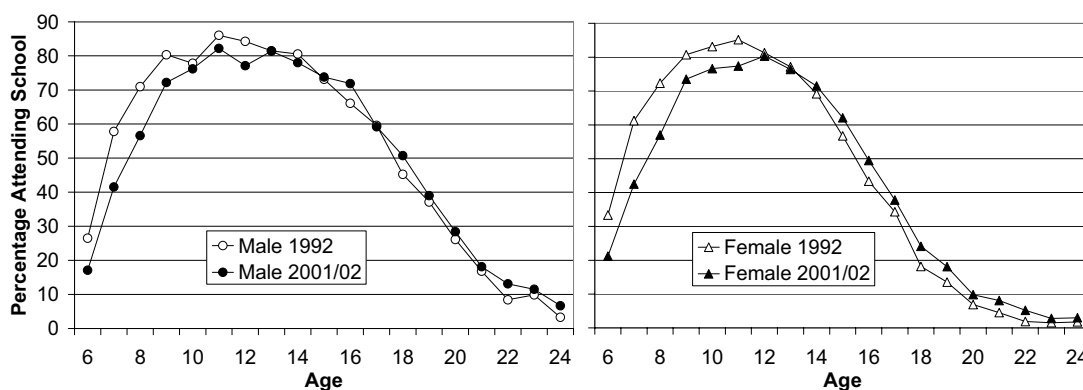
<sup>25</sup> The census collects literacy information by asking if household members can read and write. The DHS assumes that those with post-primary education are literate and tests literacy skills of other respondents by asking them to read a sentence written on a card.

**Figure 2.10: Literacy Rates by Age Group**



2.34 Next we consider measures of child well-being, which are more responsive to short-term changes in the environment. Figure 2.11 shows age-specific school attendance rates in both 1992 and 2001/02 from Demographic and Health Surveys. Primary school attendance rates dropped off markedly between 1992 and 1996, following the imposition of school fees and during the economic contraction of 1994-95.<sup>26</sup> In various surveys, the high cost of schooling is the most cited reason that children are not attending school. In 2002, the government abolished school fees for primary school. The 2001/02 data, however, is from the 2001 school year and does not reflect changes that occurred after the end of fees.

**Figure 2.11: School Attendance Rates by Age and Sex, 1992 and 2001/02**



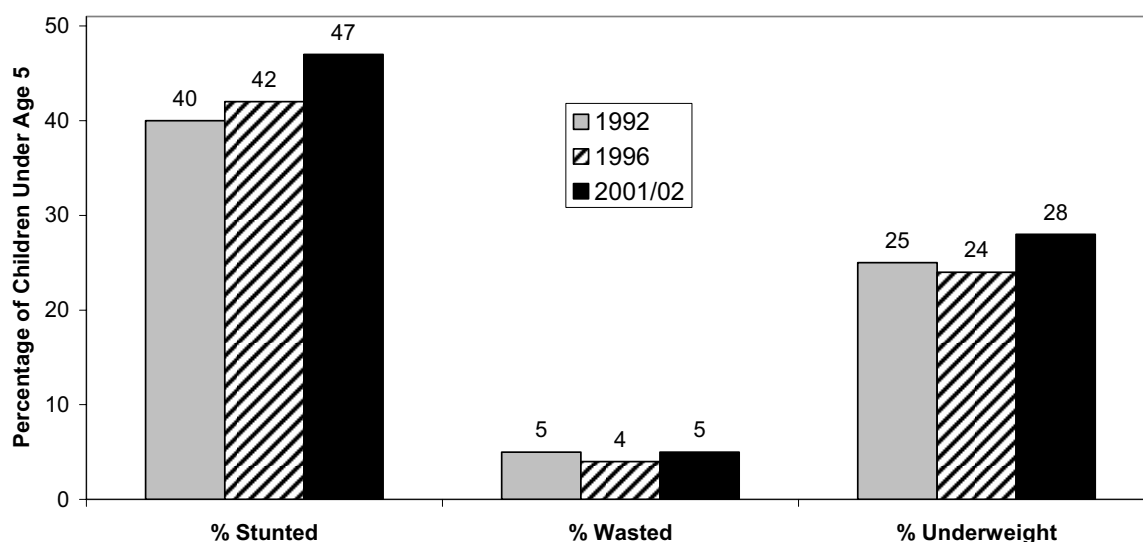
Source: Demographic and Health Surveys

<sup>26</sup> Primary school attendance rates calculated from the 1996 DHS (not shown here) are very similar to those in 2001-02.

2.35 Child malnutrition worsened in Zambia over the course of the 1990s. The stunting rate for children under age five increased from 40 percent in 1992 to 47 percent in 2001-02. The percentage of Zambian children who are wasted remained constant at 5 percent. The percentage of Zambian children underweight increased from 25 to 28 percent between 1992 and 2001-02. Malnutrition is examined further in Chapter 8.

2.36 Typically, an increase in child malnutrition would be associated with an increase in child mortality. Additionally, one would expect that adult HIV/AIDS infection rates to catastrophic levels would have depressed child survival rates, because many children are born infected with HIV. However, in Zambia, despite the fact that surviving children are less healthy, child mortality dropped during the 1990s. Under-five mortality per 1000 live births rose slightly from 191 to 197 between 1992 and 1996 and then declined to 168 in 2001/02, according to figures from Demographic and Health Surveys. The decline, which is statistically significant, is puzzling. The observed change may partially be the fact that the DHS figures omit the experience of children whose mothers have died, although this phenomenon could not fully explain the drop. In any case, even after the decline, child mortality rates in Zambia are among the highest in Africa.

**Figure 2.12: Child Malnutrition Rates, Children Under Age 5**



Source: Demographic and Health Surveys

2.37 As a whole, the trends of the welfare measures examined here imply a worsening of conditions in the 1990s. However, the available data is insufficient to evaluate how conditions have evolved during the period of steady growth that began in 2000.



## **ANNEX 1: POVERTY METHDOLOGY**

1. This section details the methodology used to calculate the poverty estimates in this paper. It explains the construction of the consumption aggregate, the price index, and the poverty line, along with the parameters used for the calculation of the poverty figures. The final portion of this section explains differences in the approach used by the Zambia Central Statistical Office (CSO) for its parallel set of calculations.

### **Consumption Aggregate**

2. The nominal household consumption aggregate was constructed following the guidelines in Deaton and Zaidi (2002). The World Bank and the Zambia CSO used identical procedures to construct their consumption aggregates. The consumption aggregate consists of four components: food, housing, consumer durable user fee, and other non-food. The aggregate was calculated on the basis of total monthly consumption. The consumption aggregate excluded water payments, remittances, and consumer durable purchases.

3. Housing rental costs were also collected in the survey. However, rental values were reported for less than two percent of rural households and only 34 percent of urban households. For households not reporting rent, rent was imputed using a single national-level regression of log rent on provincial dummies, an urban dummy, and housing characteristic variables. Actual rent values were used for those households reporting rent. Both reported and imputed rental values were trimmed at the bottom; monthly rent values below 10,000 Kwacha were set to 10,000.

4. A consumer durable user fee was calculated following the preferred procedure in Deaton and Zaidi (2002), using the average annual inflation rate, interest rate, age of assets, value at the time of purchase, and current value. User fees were calculated for the following items: bicycle, motorcycle, motor vehicle, tractor, television, video player, radio, electric iron, refrigerator, land telephone line, cellular phone, satellite dish, electric or gas stove, computer. The total consumer durable user fee was equal to the sum of the individual item user fees.

### **Price Index**

5. Prices in Zambia vary widely over time and space. The LCMS survey was collected over the course of a calendar year, in ten separate survey periods referred to as “cycles.” Consequently it was necessary to adjust not only for spatial price variation but also for variation over time. A price index was calculated with price data collected as part of the survey and used to adjust all consumption values to national median prices. The single price adjustment accounts for both spatial and temporal differences in prices.

6. The food price index is a Paasche price index (with weights based on each household’s consumption) to adjust consumption to national median prices. For each item, a single national median price was calculated across all households reporting consumption of the item, in all

provinces and cycles.<sup>27</sup> The price index is a single-stage index which adjusts for spatial and temporal differences in one step. Specifically, the index for household  $h$  is defined as follows:

$$P^h = \frac{1}{\sum w_k^h \left( \frac{P_k^0}{p_k^h} \right)},$$

where  $w_k^h$  is the share of good  $k$  in household  $h$ 's total consumption,  $P_k^0$  is the national median price of good  $k$ , and  $p_k^h$  is the price of good  $k$  reported for household  $h$ 's cycle-province. This can also be written in terms of a log approximation:

$$\log P^h = \sum w_k^h \log \left( \frac{p_k^h}{P_k^0} \right)$$

7. The set of household-level price index values is also summarized at the province and cycle levels using a regression procedure analogous to the Country-Product Dummy method proposed by Summers (1973). The household-level index is modeled as the product of a provincial-level index, a cycle-level index, and a household-specific term. If household  $h$  is surveyed in province  $r$  and during cycle  $c$ , the household-level value can be expressed as the produce of the three terms:

$$P_{hrc} = A_r B_c e_h,$$

In log terms, this is

$$\ln P_{hrc} = \ln A_r + \ln B_c + \ln e_h$$

Defining  $\alpha_r = \ln A_r$ ,  $\beta_c = \ln B_c$ , and  $\varepsilon_h = \ln e_h$ , this becomes

$$\ln P_{hrc} = \alpha_r + \beta_c + \varepsilon_h.$$

8. The provincial- and cycle-level food price indices can then be estimated from the household level index values with a regression of the log of the index on a set of nine provincial and ten cycle dummies:

$$\ln P_{hrc} = \alpha_2 * PROV2_{hrc} + \alpha_3 * PROV3_{hrc} + \dots + \alpha_9 * PROV9_{hrc} + \dots \\ + \beta_2 * CYCLE2_{hrc} + \beta_3 * CYCLE3_{hrc} \dots + \beta_{10} * CYCLE10_{hrc} + \varepsilon_h$$

Note that this regression includes no constant term. The province- and cycle-level index

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<sup>27</sup> Prices for each item were only recorded for province-cycles that included households consuming the item. The medians were taken across households reporting consumption of the item, rather than across province-cycles. Weights were not used in the calculation of median prices.

values are defined as equal to one for the omitted province and cycle dummies (province 1 and cycle 1 as written here).<sup>28</sup> The province- and cycle-level values of the index are equal to the antilogs of the estimated coefficients.

9. A separate housing price index was calculated at the stratum (province-urban/rural) level based on the coefficients from the housing imputation regression. First, national means of all the explanatory variables were calculated. The imputation coefficients were then used to calculate a value for national predicted rent at the national means of all variables, including the province and urban/rural dummies. A predicted rent value was also calculated for each of the 18 strata using the national means of housing characteristics, *excluding* the province and urban/rural dummies. (For each prediction calculation, province and urban/rural dummies were set appropriate to the stratum in question.) The housing index was calculated at stratum level as the ratio of the stratum-level predicted rent to national predicted rent. This index captures differences in housing price across strata, holding housing characteristics constant at national means.

10. The total price index was constructed using Paasche-type (household-level) weights and the corresponding price indices for the four components: food, housing, durable good use fee, and other non-food. Data was not available to calculate a price index for non-food items and durable good user fees. The price index treats the nominal values for these components as the real values.

### **Poverty Line**

11. A new poverty line was calculated from the 2002-03 LCMS, using the cost-of-basic-needs method outline in Ravallion (1998). Calculation of the poverty line involves determining a calorie requirement, creating a food basket, evaluating the cost of meeting the calorie requirement using that food basket, and then developing a non-food component of the poverty line. All calculations for the poverty line were done on a per-adult-equivalent basis. Both the adult equivalents and the calorie requirement underlying the poverty line were determined using a widely used analysis of energy intake needs from the World Health Organization (1985). The WHO figures are shown in Table 2.6 below.

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<sup>28</sup> The omitted dummies are for cycle 1 and Lusaka province.

Table 2.6 Recommended Calories by Age, Sex and Workload and

Adult Equivalents by Age					
Age	Workload	Male	Female	Average of male and female	Implied Adult Equivalent (based on 2464 per adult)
<1		820	820	820	0.33
1-2		1150	1150	1150	0.47
2-3		1350	1350	1350	0.55
3-5		1550	1550	1550	0.63
5-7		1850	1750	1800	0.73
7-10		2100	1800	1950	0.79
10-12		2200	1950	2075	0.84
12-14		2400	2100	2250	0.91
14-16		2650	2150	2400	0.97
16-18		2850	2150	2500	1.0
18-30	Light	2600	2000	2300	
30-60	Light	2500	2050	2275	
>60	Light	2100	1850	1975	
18-30	Medium	3000	2100	2550	
30-60	Medium	2900	2150	2525	
>60	Medium	2450	1950	2200	
18-30	Heavy	3550	2350	2950	
30-60	Heavy	3400	2400	2900	
>60	Heavy	2850	2150	2500	
Adult Averages		2817	2111	2464	

Source: World Health Organization (1985) "Energy and Protein Requirements." WHO Technical Report Series 724. Geneva: World Health Organization.

12. The calorie requirement was taken to be 2464, the unweighted average of the calorie requirements for adult men and women in the three workload categories and three age groups. For those under 18, the average calorie requirement of males and females by age group was calculated. The adult equivalent for each child age group was then calculated by dividing by the adult requirement of 2464. Gender was not used in assigning adult equivalents.

13. In general, constructing a food basket requires detailed food consumption by quantity at the household level. Although households in the 2002-03 LCMS did report quantities in their household diaries, quantity data was not recorded by enumerators or transferred to the electronic data files. Because actual quantities at the household level were not available, item quantities were estimated by dividing household consumption (in Kwacha) by reported prices. To generate a preliminary food basket, average quantities were calculated for households in the middle (3<sup>rd</sup>) quintile.<sup>29</sup> The items in this food basket were ranked in descending order by cost

<sup>29</sup> Quintiles were calculated on the basis of price-adjusted consumption per adult equivalent, using weights equal to household sampling weights multiplied by household size. Thus, these are properly viewed as quintiles of individuals in the population.

for the average quantity, at national median prices. The final food basket was defined as the top 44 items, which accounts for 90% of the cost of the preliminary basket.

14. Quantity-calorie conversions were done using a conversion table of calorie values for African foods from the Food and Agriculture Organization. The final food basket was found to amount to 2120 calories per day. The quantities were scaled upwards so that the total calories equaled 2464 calories per day. The price of this scaled food basket, in terms of national median prices, was multiplied by 31 to produce the food poverty line in monthly terms.

15. The non-food component of the poverty line was determined by estimating the average non-food share in consumption for households with food consumption in the third quintile of consumption. This was found to be 0.28. The food poverty line was multiplied by  $1/(1-0.28)$  to scale up to the total poverty line. A single poverty line was calculated for urban and rural areas.

### **Poverty Measure Calculations**

16. The headcount, poverty gap, and poverty severity indices were calculated using the price-adjusted consumption aggregate. The poverty measures calculated are those of the Foster-Greer-Thorbecke (1984) class. Calculations were weighted using weights equal to household size multiplied by household sampling weights. All poverty measures were calculated based on total household consumption per adult equivalent terms. Standard errors were calculated taking into the account both the sample stratification and cluster design.

17. Poverty figures were calculated primarily using the “total” poverty line, which is equal to the consumption level sufficient to meet basic needs for both food and non-food consumption. Additionally, “core” poverty rates were determined using a lower core poverty line, which is defined as the food component of the total poverty line. In analyses conducted in other countries, core poverty rates are sometimes referred to as rates of extreme or severe poverty.

### **Poverty Estimates**

#### Basic Poverty Estimates

18. This section presents the basic poverty estimates by the main subgroups. The complete estimates for all three Foster-Greer-Thorbecke measures—the headcount rate, poverty gap index, and poverty severity index—with associated standard errors are shown in Table 2.7, Table 2.8, and Table 2.9.<sup>30</sup> A graphical presentation of the estimates and a discussion follows, focusing on the headcount poverty estimates.

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<sup>30</sup> Standard errors were calculated taking into account the survey’s two-stage sampling design.

Table 2.7 Headcount Poverty Estimates, 2002-03 LCMS

	Poverty	Std. Err.	Core Poverty	Std. Err.
National	0.56	0.01	0.36	0.01
Rural	0.62	0.01	0.40	0.01
Urban	0.45	0.02	0.28	0.02
<b><u>Type of Household</u></b>				
Small Farm	0.63	0.01	0.41	0.01
Mid-Size Farm	0.47	0.04	0.24	0.03
Large Farm	0.30	0.12	0.13	0.10
Rural				
Nonagricultural	0.46	0.05	0.34	0.04
Urban Low Cost	0.53	0.02	0.33	0.02
Urban Mid-Cost	0.28	0.04	0.13	0.03
Urban High Cost	0.12	0.03	0.06	0.02
<b><u>Province</u></b>				
Central	0.54	0.04	0.32	0.03
Copperbelt	0.52	0.04	0.35	0.03
Eastern	0.56	0.03	0.34	0.03
Luapula	0.67	0.03	0.47	0.04
Lusaka	0.47	0.03	0.29	0.03
Northern	0.75	0.03	0.54	0.03
Northwestern	0.61	0.03	0.37	0.03
Southern	0.47	0.03	0.25	0.03
Western	0.52	0.04	0.35	0.04
<b><u>Time of Survey (Cycle)</u></b>				
Nov-Dec 02 (1)	0.59	0.04	0.40	0.04
Dec-Jan 03 (2)	0.59	0.04	0.40	0.04
Jan-Feb 03 (3)	0.54	0.03	0.34	0.04
Feb-Mar 03 (4)	0.48	0.04	0.27	0.03
Mar-Apr 03 (5)	0.50	0.04	0.29	0.03
Apr-May 03 (6)	0.51	0.04	0.33	0.04
May-Jun 03 (7)	0.53	0.03	0.32	0.03
Jun-Jul 03 (8)	0.61	0.04	0.38	0.03
Jul-Aug 03 (9)	0.59	0.04	0.39	0.04
Sep-Oct 03 (10)	0.63	0.04	0.45	0.04

Table 2.8 Poverty Gap Index Estimates, 2002-03 LCMS

	Poverty	Std. Err.	Core Poverty	Std. Err.
National	0.21	0.01	0.11	0.01
Rural	0.23	0.01	0.12	0.01
Urban	0.17	0.01	0.09	0.01
<u>Type of Household</u>				
Small Farm	0.24	0.01	0.13	0.01
Mid-Size Farm	0.15	0.02	0.07	0.01
Large Farm	0.09	0.04	0.02	0.01
<u>Rural</u>				
Nonagricultural	0.19	0.02	0.11	0.02
Urban Low Cost	0.20	0.01	0.11	0.01
Urban Mid-Cost	0.08	0.02	0.04	0.01
Urban High Cost	0.03	0.01	0.01	0.00
<u>Province</u>				
Central	0.19	0.02	0.09	0.01
Copperbelt	0.20	0.02	0.11	0.01
Eastern	0.19	0.02	0.09	0.01
Luapula	0.28	0.02	0.17	0.02
Lusaka	0.18	0.02	0.10	0.01
Northern	0.32	0.02	0.19	0.02
Northwestern	0.22	0.02	0.11	0.01
Southern	0.15	0.02	0.07	0.01
Western	0.19	0.02	0.10	0.01
<u>Time of Survey (Cycle)</u>				
Nov-Dec 02 (1)	0.24	0.02	0.14	0.02
Dec-Jan 03 (2)	0.24	0.02	0.14	0.02
Jan-Feb 03 (3)	0.20	0.02	0.10	0.01
Feb-Mar 03 (4)	0.16	0.02	0.08	0.01
Mar-Apr 03 (5)	0.18	0.02	0.09	0.01
Apr-May 03 (6)	0.19	0.02	0.10	0.02
May-Jun 03 (7)	0.18	0.02	0.09	0.01
Jun-Jul 03 (8)	0.22	0.02	0.11	0.01
Jul-Aug 03 (9)	0.23	0.02	0.12	0.02
Sep-Oct 03 (10)	0.26	0.03	0.15	0.02

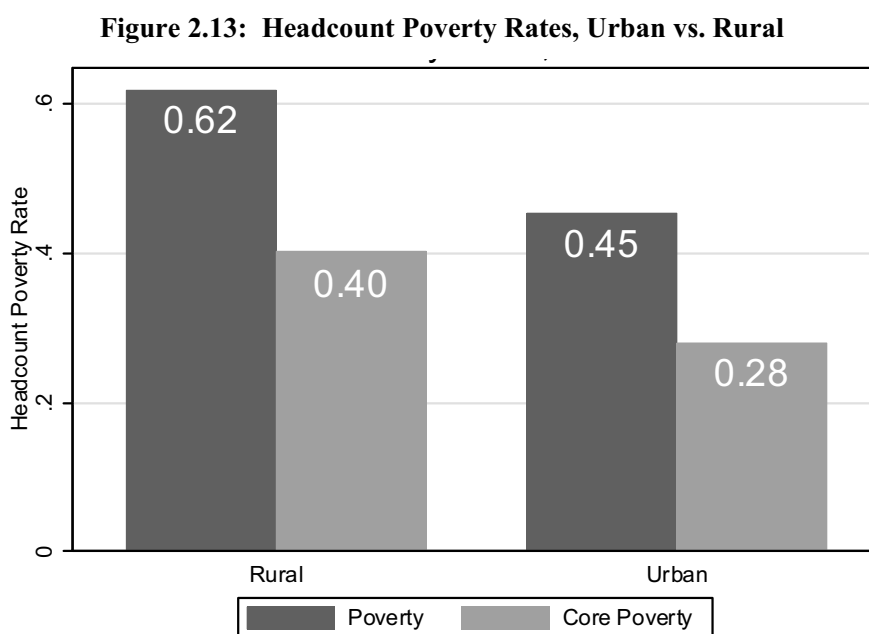
**Table 2.9 Poverty Severity Index Estimates, 2002-03 LCMS**

	<b>Poverty</b>	<b>Std. Err.</b>	<b>Core Poverty</b>	<b>Std. Err.</b>
National	0.10	0.00	0.05	0.00
Rural	0.12	0.01	0.05	0.00
Urban	0.08	0.01	0.04	0.00
<b><u>Type of Household</u></b>				
Small Farm	0.12	0.01	0.06	0.00
Mid-Size Farm	0.07	0.01	0.04	0.01
Large Farm	0.03	0.01	0.01	0.01
Rural Nonagricultural	0.10	0.01	0.05	0.01
Urban Low Cost	0.10	0.01	0.05	0.00
Urban Mid-Cost	0.04	0.01	0.02	0.00
Urban High Cost	0.01	0.00	0.00	0.00
<b><u>Province</u></b>				
Central	0.09	0.01	0.03	0.01
Copperbelt	0.10	0.01	0.05	0.01
Eastern	0.09	0.01	0.03	0.01
Luapula	0.15	0.02	0.08	0.01
Lusaka	0.09	0.01	0.04	0.01
Northern	0.17	0.02	0.09	0.01
Northwestern	0.10	0.01	0.04	0.01
Southern	0.07	0.01	0.03	0.01
Western	0.09	0.01	0.04	0.01
<b><u>Time of Survey (Cycle)</u></b>				
Nov-Dec 02 (1)	0.13	0.02	0.07	0.01
Dec-Jan 03 (2)	0.12	0.01	0.06	0.01
Jan-Feb 03 (3)	0.09	0.01	0.04	0.01
Feb-Mar 03 (4)	0.07	0.01	0.03	0.01
Mar-Apr 03 (5)	0.08	0.01	0.04	0.01
Apr-May 03 (6)	0.09	0.01	0.04	0.01
May-Jun 03 (7)	0.08	0.01	0.04	0.01
Jun-Jul 03 (8)	0.10	0.01	0.04	0.01
Jul-Aug 03 (9)	0.11	0.01	0.05	0.01
Sep-Oct 03 (10)	0.14	0.02	0.07	0.02

19. The national headcount estimates are 0.56 for poverty and 0.36 for core poverty. In other words, over half of Zambians have levels of consumption that are insufficient to meet basic needs, and more than a third have consumption levels that would be inadequate to meet basic food needs alone, even if the individual were able to forego all non-food consumption. Figure 2.13 shows poverty and core poverty rates for urban and rural households separately. Due to weaknesses in the price data, it was not possible to satisfactorily adjust the consumption data for urban-rural price differences. As a result comparisons in poverty figures across the urban-rural divide do not reflect differences in the cost of living between urban and rural areas. Poverty comparisons between rural and urban areas should therefore be treated with caution.



20. The estimates show a higher level of poverty in terms of the headcount in rural areas, where 62 percent are below the standard poverty line and 40 percent fall below the core poverty line. In urban areas, 45 percent of Zambians are in poverty, and the core poverty rate is 28 percent.



#### Poverty Estimates by Province and Urban-Rural Subcategories

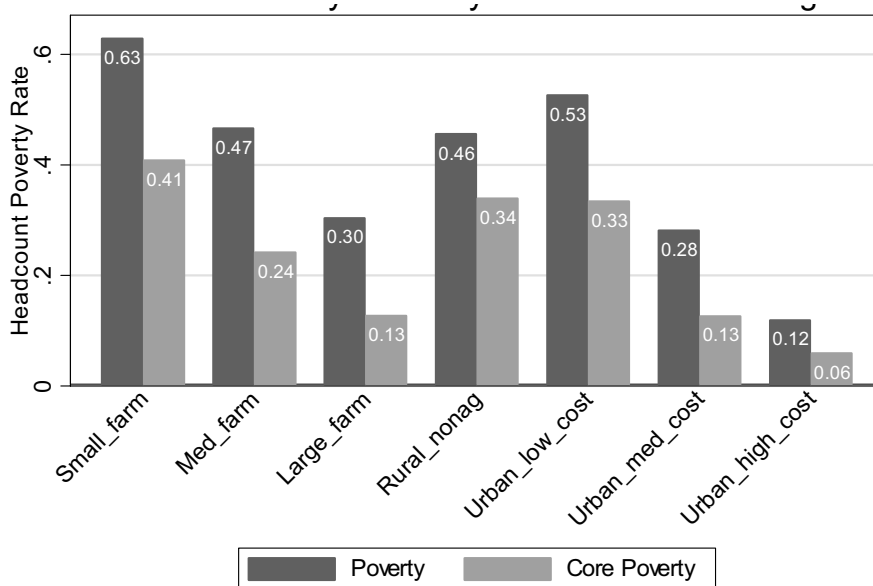
21. Although Zambia is much more urbanized than most African countries, it is still predominantly a rural country. In the 2000 national census, from which the LCMS sampling frame and weights are derived, 6.5 million of its nearly 10 million residents lived in rural areas. This fact combined with the higher poverty rate in rural Zambia means that poverty is concentrated in rural areas; 72 percent of the poor live in rural zones.

22. Households within each survey enumeration area were broken down into household categories. For rural areas these were small-scale farmers, medium-scale farmers, large-scale farmers, and non-agricultural. For urban areas, the categories were high, medium, and low cost. Households were categorized this way in order to stratify the sampling within enumeration areas, to ensure adequate coverage of a diverse set of households.

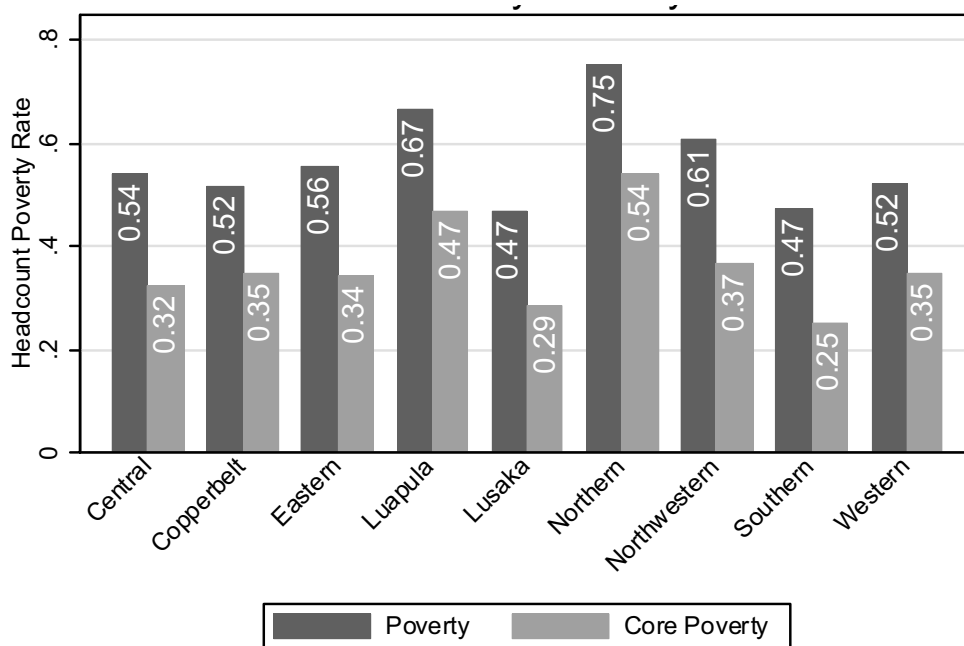
23. The headcount poverty rates by household category are shown in Figure 2.14. Unsurprisingly, urban poverty is highest among “low cost” households. In rural areas, poverty is highest among the small farm households that form the bulk of the rural population, while non-agricultural households in rural areas have poverty rates similar to those of medium-size households.

24. Across provinces, there is substantial variation in poverty. Provincial figures are shown in Figure 4. The lowest poverty rates are found in Lusaka and Southern Provinces, but even there 47 percent of the population has consumption insufficient to meet basic needs. Northern Province stands out as having the highest poverty rate.

**Figure 2.14: Headcount Poverty Rates by Urban-Rural Subcategories**



**Figure 2.15: Headcount Poverty Rates by Province**



25. Table 2.10 shows separate headcount rates by urban and rural areas within each province, and Table 2.11 displays a corresponding breakdown of where the poor are located. The urban poor are highly concentrated in just two provinces, Lusaka and Copperbelt. The urban areas of just those two provinces are home to 20 percent of Zambia’s poor, while the smaller urban areas of the remaining provinces account for only an additional eight percent.

The rural poor are more widely distributed. They are most concentrated in Eastern and Northern Provinces, the rural areas of which are home to 28 percent of the nation's poor.

**Table 2.10 Headcount Poverty Estimates by Province and Urban/Rural**

	<b>Rural</b>	<b>Std. Err.</b>	<b>Urban</b>	<b>Std. Err.</b>
Central	0.55	0.04	0.52	0.07
Copperbelt	0.65	0.05	0.48	0.04
Eastern	0.58	0.03	0.34	0.09
Luapula	0.70	0.04	0.48	0.08
Lusaka	0.63	0.08	0.43	0.04
Northern	0.78	0.03	0.59	0.07
Northwestern	0.64	0.03	0.37	0.08
Southern	0.51	0.03	0.32	0.05
Western	0.53	0.04	0.40	0.08

**Table 2.11 Where Are the Poor? Fraction of National Poor by Province and Urban/Rural**

<b>Province</b>	<b>Fraction of National Poor Living in Province</b>	<b>Fraction of National Poor Living in Province's Rural Areas</b>	<b>Fraction of National Poor Living in Province's Urban Areas</b>
Central	0.10	0.08	0.02
Copperbelt	0.15	0.04	0.11
Eastern	0.13	0.13	0.01
Luapula	0.09	0.08	0.01
Lusaka	0.12	0.03	0.09
Northern	0.17	0.15	0.02
Northwestern	0.06	0.06	0.01
Southern	0.10	0.09	0.02
Western	0.07	0.06	0.01
<b>Total</b>	<b>1.00</b>	<b>0.72</b>	<b>0.28</b>

### **Differences in Methodology with Central Statistical Office**

26. The methodology employed in this paper is broadly similar to that used by the Zambia CSO in its own analysis of the 2002-03 LCMS data. However, the methodology differs in several key details:

#### Reference prices: Median prices vs. Lusaka cycle 1 prices

27. As the reference prices for its price index, CSO used prices collected in Lusaka Province during the first of ten cycles, where a cycle corresponds to a data collection period lasting 36 days. The danger in using such a narrow set of prices is that the results will be

sensitive to outliers in the data. The LCMS price data, like much price data from developing countries, is extremely noisy, with implausibly large variation in prices across time and space.

28. As Deaton and Zaidi (2002) note, “A good choice [for reference prices] is to take the median of the prices observed ....” They argue that the use of medians reduces sensitivity to outliers. Furthermore, “[t]he use of a national average price vector ensures that the money metric measures conform as closely as possible to national income accounting practice, as well as eliminating results that might depend on a price relative that occurs only rarely or in some particular area.”

29. An additional reason to favor the use of median prices is that for future comparisons over time with new data, it will be necessary to replicate the price concept underlying the 2002-03 poverty estimates. Because the timing and design of a future survey may differ somewhat, it may not be possible to collect prices that correspond well to the Lusaka cycle 1 prices in the 2002-03 survey. For these reasons, the analysis in this paper use a price index referenced to national median prices.

#### Price index: Single-stage vs. two-stage

30. CSO employed a two-stage price index procedure rather than a single-stage index. First, consumption figures were adjusted over time, to cycle 1 within each province, using a province-specific temporal price index. Second, the consumption data was adjusted to Lusaka cycle 1 using a second spatial price index.

31. In the judgment of this author, the two-stage index unnecessarily doubles the number of calculations and involves the province-specific cycle 1 price data, which introduces new error into the calculations. The use of a single-stage price index, adjusting consumption directly from a province-cycle set of prices to national median prices, reduces the number of calculations and bypasses the province cycle 1 data. As explained above, this single-stage price index can be used to produce summary price indices at the province and cycle levels.

#### Price index: Adjust non-food and durable goods components?

32. Like most developing country household consumption surveys, the LCMS includes price data for food but not non-food goods. The familiar question arises as to what price adjustment, if any, to apply to the non-food portion of consumption. Both for this paper and for the CSO analysis, a composite price index was constructed based on the food price index and a housing price index was constructed using the coefficients from the housing cost imputation. What price adjustment should be applied to the remaining non-food components, which are the durable goods user fee and other non-food? CSO applied the food price index to these components. This is sensible, assuming that food and non-food prices tend to be correlated. However, it is not clear that they are correlated, and they may even be negatively correlated if, for example, transport costs are important so that in rural areas agricultural goods are cheaper and manufactured goods are more expensive. Given this uncertainty, for this paper the remaining non-food components are left in nominal terms.

#### Calorie requirement used to calculate poverty line

33. CSO reports that it has used a calorie requirement of 2094 calories per capita, although it calculated its poverty figures on a per adult equivalent basis. CSO employed the same adult

equivalents used in an earlier study, Republic of Zambia (1997), based on calorie requirements established by the National Food and Nutrition Commission (1993).<sup>31</sup>

34. The analysis in this paper uses calorie requirements based on World Health Organization guidelines. The WHO figures were chosen so as to give the poverty line as solid a basis as possible in a widely recognized reference.

#### Determination of food basket underlying poverty line

35. In general, quantity data by food item is required to construct a food basket for a food poverty line. Because the 2002-03 LCMS did not include direct quantity data, it was necessary to use some sort of second best procedure.

36. CSO chose to calculate average item shares in expenditure for a group of households with expenditure per adult equivalent equal to the unweighted median plus or minus 20 percent. Next, representative expenditures by item were calculated by multiplying these shares by median expenditure. These expenditure values were then divided by Lusaka cycle 1 prices to generate quantities for a preliminary consumption basket.

37. Given the data imperfections, the first part of the CSO procedure is reasonable. The households in a range around the median provide a plausible set of nationally representative expenditure shares by item. However, because these expenditure shares are for the country as a whole, to convert these shares to quantities, some set of nationally representative prices should be used, rather than Lusaka cycle 1 prices. The obvious choice would be national median prices.

38. Calculating quantities by dividing national average expenditure shares by Lusaka cycle 1 prices is inconsistent and distorts the composition of the food basket. The resulting basket is representative neither of the nation as a whole nor of Lusaka during cycle 1. Relative to a truly nationally representative food basket, CSO's resulting food basket has too little of foods that are expensive in Lusaka cycle 1 and too much of those that are cheap in Lusaka cycle 1.

39. For purposes of this paper, a different procedure was used to determine the food basket. Quantities were estimated at the household-item level by dividing reported expenditures by province-cycle prices. Because the price data is noisy and does not reflect the actual prices paid by individual households, this procedure is inferior to the use of true quantity data. Nonetheless, it is the best approximation available to household-level quantities. Next, average quantities were calculated for households in the middle (3<sup>rd</sup>) quintile nationally. These items were ranked in descending order by cost for the average quantity, at national median prices. The final food basket was defined as the top 44 items, which accounts for 90% of the cost of the preliminary basket.

40. Using the list of items produced by its method, CSO chose to use the top 61 food items, accounting for 94% of expenditure in the preliminary list. This cutoff (and the 90% cutoff used for this paper) is arbitrary.

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<sup>31</sup> The adult equivalent weights are 0.36 for a child aged less than 4, 0.62 for age 4-6, 0.78 for age 7-9, 0.95 age 10-12, and 1.0 for all others.

41. Separate from the question of how to determine the quantities in the food basket is the issue of the choice of prices used to cost the food basket when determining the poverty line. The price index is used to adjust nominal consumption values, and the adjusted consumption values are used to determine poverty rates. It follows that the food basket must be priced using the same set of prices which are the reference prices for the price index. Accordingly, CSO priced its basket using Lusaka cycle 1 prices, while for this paper the basket was priced with national median prices.

### **3. PROFILE OF THE POOR**

#### **A. Introduction**

3.1 The urban-rural divide is stark, a reflection of the lopsided history of development in Zambia. Until the early 1990s, Zambian policy heavily favored urban development, as resources were focused on the lucrative mining industry and parastatal industry. Rural residents subsisted largely on maize subsidies and remittances from the mining and related manufacturing industries. With the move away from state-run agricultural marketing and the decline of the mining industry, most rural Zambians have been left with little source of support. The analysis in this chapter shows that there is remarkable homogeneity in rural areas. The large bulk of people, including those who rank high in terms of consumption, are engaged in growing maize chiefly for their own consumption. Few possess any substantial assets, and access to public services other than a school and health clinic is meager.

3.2 The analysis presented in this chapter finds that urban areas present a more complex picture. Following the decline of much formal employment, the urban economy is now overwhelmingly dominated by informal workers engaged in a wide range of activities. Urban infrastructure is much more developed than in rural areas but is suffering from inadequate capacity and insufficient maintenance. With the country facing a variety of strains, many community groups have come into existence in urban informal settlements to respond to social needs.

3.3 Despite the difficulties, there are some reasons for optimism. Access to rural health care facilities has improved since 1998, and reports from participatory studies indicate that school attendance has increased since primary school fees were abolished in 2002. These improvements in human capital should provide the basis for higher growth and reduced poverty in the future. In addition, during the first years of the new millennium, Zambia has achieved sustained—though modest—growth in GDP per capita for the first time in decades. Zambia may finally be ready to reap the benefits of going through its difficult reform period.

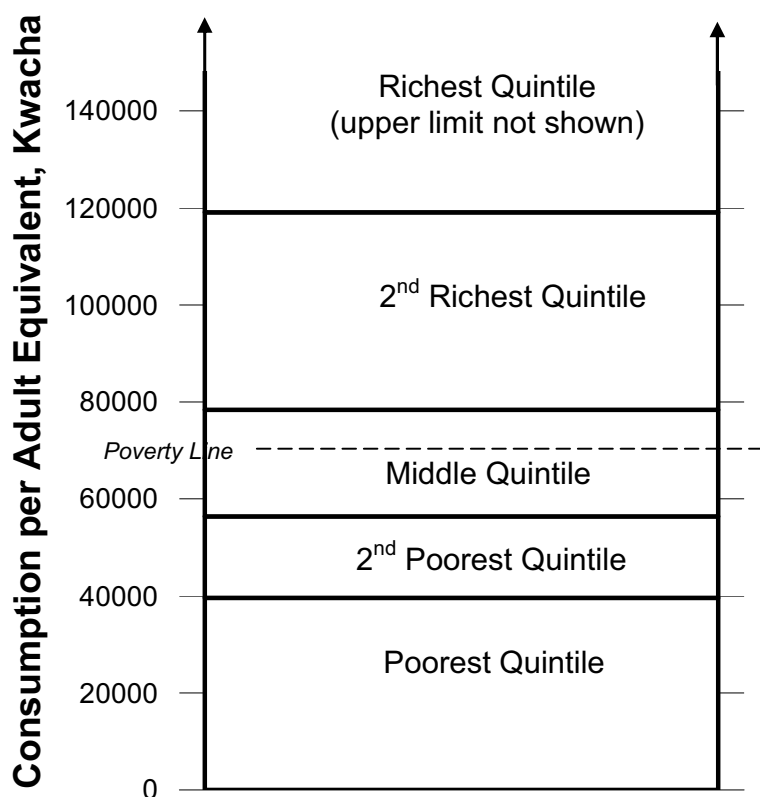
#### **B. Analysis by Quintiles**

3.4 In order to present a more vivid distribution of the entire population, indicators are presented by quintiles of consumption, calculated at the national level. The approximate values of the quintile cutoffs can be seen in Figure 3.1.<sup>32</sup> The poverty line of 73394 Kwacha is represented by a dashed line.

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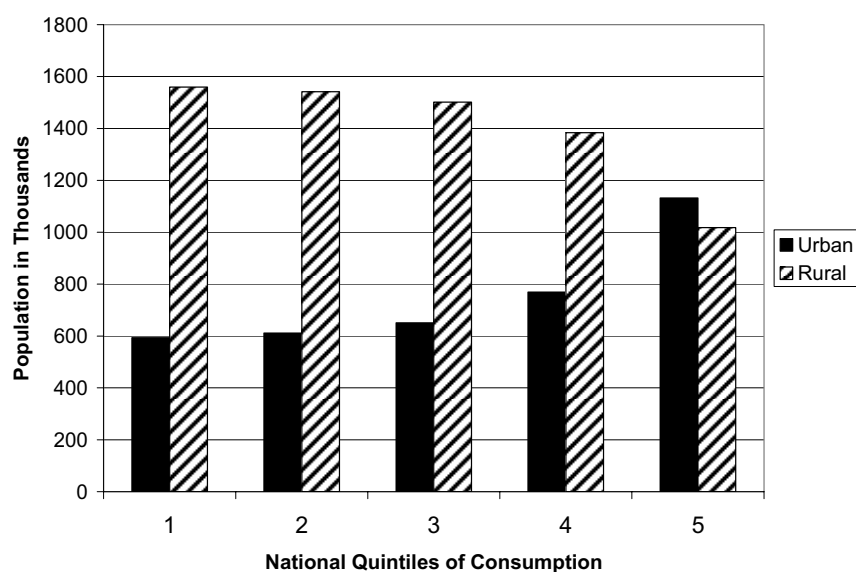
<sup>32</sup> The precise ranges are up to 39608 for the poorest quintile, 39608 to 56431 for the 2<sup>nd</sup> poorest quintile, 56431 to 78381 for the middle quintile, 78381 to 119122 for the 2<sup>nd</sup> richest quintile, and above 119122 for the top quintile.

Figure 3.1: Ranges of National Consumption Quintiles



3.5 The quintiles at the national level are used as consumption groups to examine how characteristics vary by consumption within the rural and urban zones. By definition each quintile covers 20 percent of the *national* population. Because rural areas as a whole are poorer than urban areas, the rural population is concentrated in poorer quintiles, as can be seen in Figure 3.2. Only 15 percent of rural residents are in the top quintile, compared to 30 percent of urban residents. It may be helpful to think about the quintiles as simply the ranges of income values shown in Figure 3.1. The analysis is set up in this way in order to make it possible to perform urban-rural comparisons with reference to the quintiles. Individuals in a given quintile in urban areas have consumption in the same range of values as individuals in the same quintile in rural areas.



**Figure 3.2: Distribution of Urban and Rural Population by National Quintiles**

### C. Rural Poverty

#### Overview

3.6 Although Zambia is more urbanized than most African nations, two-thirds of its people and 72 percent of the poor live in rural areas. Rural areas have suffered from years of developmental neglect. For many years, copper revenue funded a program of government intervention in agricultural markets. The government offered a guaranteed price for the maize staple and supplied agricultural inputs at subsidized prices. At the same time, workers in the mining and related manufacturing sent home remittances. The combination of personal and government transfers helped support rural consumption levels, but the government intervention discouraged diversification into cash crops and substituted for sorely needed infrastructure investments.

3.7 Since liberalization in the 1990s, government intervention in agricultural markets has not ceased entirely but has continued haphazardly, no longer providing consistent support for maize growers. The cash-strapped government has largely pulled out of rural development and expected the private sector would step in to fill its place.

3.8 The picture painted in this section is of extremely poor areas with very little government presence other than a school and health clinic. Other public services are largely nonexistent. For households in every quintile, consumption of their own agricultural production accounts for half of consumption.

#### Characteristics of Poor Households

3.9 The vast majority of rural Zambians consider themselves to be poor. In the 2002-03 LCMS survey, respondents in 97 percent of rural households reported that they were “very poor”

or “moderately poor,” and in the Rural Participatory Study carried out in 2003, discussion groups typically identified initially everyone in their community as poor (see box). When pressed, they were able to divide households into categories of “very poor,” “moderately poor,” and “better off.” For the Rural Participatory Study, respondents were asked to describe the characteristics of those in the three groups. Very poor households were described as having the following characteristics:

- Inadequate food
- Poor clothing
- Lack of bedding
- No livestock
- Mud/thatch house
- Aged, chronically ill, disabled
- Keep orphans
- Illiterate
- Unable to send children to school
- Use hand hoe for farming
- Lack agricultural inputs
- Work for others
- No remittances from outside village
- No visible source of income
- Work for others
- Poor access to public resources

3.10 The better-off were characterized largely by the type and quality of their assets: cattle, farm implements, a bicycle, a radio, and a house made of permanent materials. The better-off were also identified as those who are food secure, able to educate all their children, and employ others.

**Box 3.1: Rural Inequality Is Very Low**

In comparison with rural communities in many parts of the world, Zambian villages do not appear to harbor wide discrepancies in levels of wealth. Although wide differences in household wealth levels do exist in Zambia, the truly wealthy were not found to be residing in the rural villages visited during the Rural Participatory Study. During wealth ranking exercises conducted as part of the study, nearly every villager was initially defined as “poor.” Informants may have exaggerated the poverty of the village because they hoped that the poor were being identified in order to provide them with a service or benefit. After explanations to the contrary, it became clear that informants recognized three categories: the very poor, the poor and the better off (who were never more than 2-3 households in each village). Even those households defined as better off, however, were viewed as vulnerable and their future well-being was described as far from certain.

One consequence of this is that the teams did not find rural elites controlling local resources or denying them to the poor and powerless. Instead, a generalized condition of economic uncertainty and material scarcity prevails in these villages. In consequence, there are few households with sufficient resources to hire poorer neighbors or provide them with loans or other assistance in times of extreme need. The better-off do occasionally provide emergency loans or assistance to the poor, or buy their surplus produce. In general, however, they can offer only a day’s casual agricultural labor (ganyu), paid in food or in kind.

The qualitative finding of low rural inequality is mirrored in the fact that quantitative analysis, based on the LCMS survey, shows only small differences in the characteristics of households by consumption quintile.

3.11 Poorer households in rural Zambia are on average larger and have more children per working age adult than better off households. Basic household characteristics of those in the top and bottom quintiles are summarized in Table 3.1. The household heads of the poorest households have less schooling and are older and more likely to be female than the heads of better off households. The contrast in education levels, however, is not stark. Household heads in the top quintile average just 1.6 more years of education than those in the bottom quintile.

**Table 3.1: Characteristics of Households by Quintile of Consumption, Rural Areas**

	All	Poorest 20%	Richest 20%
Mean household size	5.3	6.5	3.7
Median age of household head	40	44	35
Female household heads (%)	24	27	24
Mean years schooling of household head	5.3	4.4	6.2
Dependency ratio	1.15	1.35	0.80
Youth dependency ratio	1.07	1.26	0.72
Old-age dependency ratio	0.08	0.09	0.08

Source: 2002-03 LCMS

3.12 When asked to identify the reasons for their poverty, rural Zambians cite a mix of structural reasons and short-term shocks. Table 3.2 shows the principal reasons they identified and the percentages of respondents who cited each reason among the top three reasons for their poverty. Structural problems, as opposed to shorter term shocks, dominate the list. The overwhelmingly dominant concerns are related to agriculture, particularly the twin problems of lack of access to agricultural inputs and lack of credit. Lack of cattle was also cited as a reason for

poverty. Land access, however, was cited by only a negligible fraction of respondents, which is in keeping with the widely held view that land is not a binding constraint in rural Zambia. Shorter-term shocks—drought, the death of a bread winner, and the death of cattle due to disease—were mentioned by smaller, but still substantial numbers of respondents. Finally, hard economic times were cited by 40 percent of respondents, reflecting the economic decline that took place through most of the 1990s.

**Table 3.2: Self-Assessed Reasons for Poverty, Rural Areas**

	<i>% Reporting</i>
<b><u>Agriculture-related</u></b>	
Agricultural inputs too expensive or unavailable	57
Low agricultural production	15
Agricultural prices too low/lack of markets	13
Lack of credit	42
Lack of cattle	30
Lack of land	4
<b><u>Shocks</u></b>	
Drought	9
Flood	2
Death of bread winner	6
Death of cattle due to disease	5
<b><u>Other</u></b>	
High prices	19
Hard economic times	26
Lack of job opportunities	10
Salary/wage/pension too low	7
Retrenchment	0
Disability	1
Debt	0

Source: 2002-03 LCMS

3.13 Poverty as described by participants in the Rural Participatory Study was related to economic activities, material assets, natural resources, social assets, access to public goods and services, health and education service, and safety nets. Each of these characteristics and how they relate to the profile of the urban poor is considered in the following sections.

### **Economic Activities**

3.14 Agriculture is the overwhelmingly dominant activity in rural areas. In four out of five rural Zambian households, the principal activity of the household head is farming. People at the top of the distribution are slightly less likely to be engaged in agriculture. Activities by quintile are shown in

3.15 Table 3.3. Only nine percent of individuals live in households where the head is engaged mainly in wage work, with a smaller percentage among the poorest households.

**Table 3.3: Principal Economic Activity of Household Head, Rural Areas  
Percentages of Household Heads by Quintile of Consumption**

	<i>Quintile of National Distribution</i>		
	<i>All</i>	<i>Poorest 20%</i>	<i>Richest 20%</i>
Wage work	9	6	13
Self-employed	6	4	10
Farming	79	82	71
Fishing	2	4	1
Forestry	0	0	0
Piecework	2	2	3
Other	2	3	3
	100	100	100

Source: LCMS 2002-03

Note: "Other" includes "not working," "student," "unpaid family labor," "retired," "too old to work," and "other."

3.16 Although agriculture has always been the dominant activity in rural Zambia, activity shifted more towards farming, fishing, and forestry in the 1990s. This can be seen in Table 3.4, which shows reported industries of men and women in rural areas, as reported in the 1990 and 2000 censuses. The small percentage employed in health and welfare—largely government workers—declined markedly, while the fraction working in agriculture rose above 90 percent for both men and women. A more detailed analysis of rural economic activity is given in Chapter 4.

**Table 3.4: Industry of Working Individuals, Rural Areas**

	<i>Men and Women</i>		<i>Men Only</i>		<i>Women Only</i>	
	<i>1990</i>	<i>2000</i>	<i>1990</i>	<i>2000</i>	<i>1990</i>	<i>2000</i>
Farming	88.2	93.5	85.8	91.5	92.1	95.5
Mining	0.5	0.2	0.8	0.3	0.0	0.0
Manufacturing	1.9	1.0	2.2	1.1	1.3	0.9
Electricity, Gas, Water	0.2	0.1	0.2	0.1	0.0	0.0
Construction	1.0	0.5	1.5	1.0	0.1	0.0
Trade	1.1	1.9	1.1	2.0	1.2	1.9
Transport & Communication	0.7	0.3	1.2	0.5	0.0	0.0
Finance	0.6	0.2	0.6	0.2	0.6	0.1
Health & Welfare	5.9	2.4	6.6	3.2	4.7	1.6
	100	100	100	100	100	100

### Material Assets

3.17 Ownership of material assets is relevant to an understanding of poverty both as a measure of household wealth built up from past income and also as an indicator of the household's capacity to generate income in the future. Table 3.5 shows percentages of households owning various assets by quintile. Two points stand out. First, there are only small differences in asset

ownership between the poorest households (those in the bottom quintiles) and better-off households (those in the top quintile.) Second, rural households in general are asset poor. Of the assets listed, only a residential building and basic farm tools—an axe and a hoe—are owned by a majority of households. Only a few others are owned by more than 20 percent: a bicycle, brazier, non-electric iron, and radio. The poorest households are less likely to own all of these assets, but the differences across quintiles are not large.

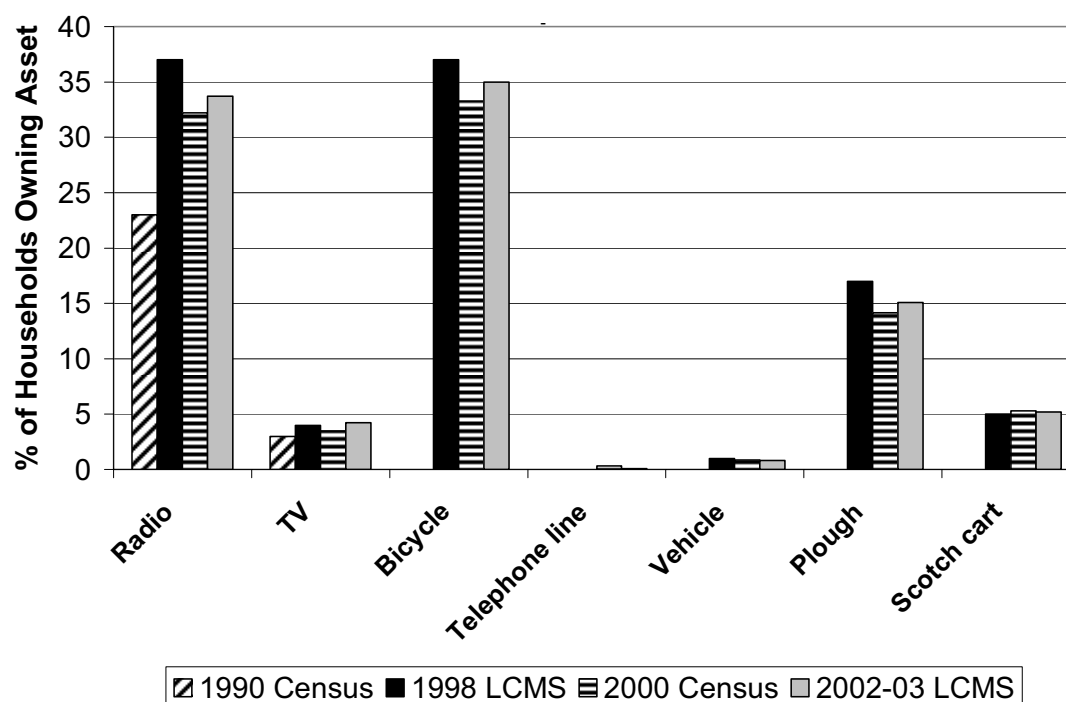
**Table 3.5: Percentages of Households in Rural Areas Owning Particular Assets, by Quintile**

<i>Asset</i>	<i>All</i>	<i>Poorest 20%</i>	<i>Richest 20%</i>
Axe	88	87	85
Bicycle	35	27	35
Brazier	43	39	42
Canoe	8	13	6
Cell phone	0	0	1
Computer	0	0	1
Crop sprayer	6	4	9
Electric iron	2	0	5
Electric or gas stove	1	0	3
Fishing boat	1	1	1
Fishing net	13	16	10
Hammer/grinding mill	1	0	1
Hoe	97	94	96
Hunting gun	2	2	3
Knitting machine	0	0	0
Motor vehicle	1	0	3
Motorcycle	0	0	0
Non-electric iron	23	19	29
Non-residential building	3	1	6
Plough	15	9	19
Radio	34	25	38
Refrigerator	1	0	4
Residential building	77	77	73
Satellite dish	0	0	0
Scotch cart	5	3	7
Sewing machine	4	3	6
Telephone line	0	0	0
Tractor	0	0	1
TV	4	1	9

Source: 2002-03 LCMS

3.18 Ownership of durable goods has also not changed substantially over time in rural Zambia. For those goods which can be tracked over time, only radio ownership has changed at all, increasing from 23 percent in 1990 to 34 percent in 2003.

**Figure 3.3 What Do Rural Households Own?  
Rural Asset Ownership Over Time**



Source: 2002-03 LCMS

## Livestock

3.19 The Rural Participatory Study team asked villagers to describe the most important differences between the very poor and the better-off. After basic food security, the distinguishing trait that was mentioned most often was possession of livestock, particularly cattle, pigs, goats and sheep. Domestic animals were described as both an indicator and a source of higher economic standing. The ability to plough using draught animals can dramatically increase a household's productive capabilities. Cattle can also produce manure in sufficient quantities to fertilize a small plot. Cattle, therefore, were described as the most desirable livestock assets, although they are highly vulnerable to disease and beyond the means of the average poor household. Cattle ownership differed significantly by quintile in the LCMS: 19 percent of households in each of the top two quintiles own cattle, compared to just 11 percent of those in the bottom quintile. Cattle ownership is also highly concentrated geographically in Central, Eastern, Lusaka, Southern, and Western provinces.

3.20 Small livestock are also a common means of attempting to establish security and cushion against shocks and shortfalls in consumption. Many household breed chicken and goats and sell them to smooth consumption, pay school fees, or buy medicines when a family member is afflicted by illness.

3.21 Livestock are a key household resource and safety net, but animals are prone to disease, and the theft of livestock was said to have risen steeply as a result of poverty. Because households rely on the sale of smaller livestock to see them through periods of food shortage, the

death or theft of these animals is perceived to be actually life-threatening to members of affected households.

### Box 3.2: A Very Poor Household

Doras is a widow who was born in 1938 in Kanemela village, Luangwa District, where she still resides. She did not go to school and therefore cannot write or read in any language. She is not sure of her age at marriage, but estimates that she was sixteen or seventeen. She did not know the age of her late husband at the time of their marriage. Eight children were born to her during this marriage, though only five are still living. Her household's main source of income is farming, but her household does not produce enough food to last the year – the household was out of food at the time of the interview (March). During periods of food scarcity the family eats wild fruits and skips meals. Nevertheless, all three of the orphaned grandchildren living in her home are attending school. An NGO orphan assistance program (CCF) enables them to continue in school by providing uniforms and paying school fees. Doras feels that keeping these children in school is of critical importance. If well educated, they will be independent as adults and are expected to provide support to Doras at that time.

### Natural Resources

3.22 Common property resources, including forest products, fish, wildlife, and water courses, are essential sources of livelihood for many of the rural poor. Many households rely on such resources as a fallback option or coping mechanism in times of crop failure. Overexploitation was thought to have led to deterioration in the quality and abundance of these resources. In addition, some areas report declining soil fertility and soil exhaustion. Many households in these areas are reverting to shifting cultivation—a well-known source of deforestation—as a result.

### Box 3.3: Impoverishing Environmental Change:

The Luangwa area, which is watered by the Luangwa and Zambezi rivers, provides an example of the impact of recent climate and environmental changes upon the economic well-being of farming households. Many Luangwa households cultivate a combination of arid upland fields and well-watered riverbank fields (*Dambo* fields). Recently, some of the fertilizer distributed free or at subsidy in this area has been sold for food or returned to Lusaka unused, because the upland fields now receive too little rain to produce a crop even if fertilizer is applied. During the same period, many households have lost the crops growing in their *Dambo* fields as a result of flooding. The villagers blame upstream dams for the frequent floods they experience, but erosion from *Dambo* fields and removal of reeds from the river bank for mat-making have contributed to siltation of both rivers. This siltation has not only caused more frequent flooding, but has also damaged the fishing industry that attracted many households to this region in earlier times. Few fish are now being caught on the Zambia side of these rivers as a result of siltation and over-fishing, and agricultural production is also failing to meet the basic food security needs of this population.

3.23 Although Rural Participatory Study participants did identify deterioration of a soil quality as a concern, they did not raise access to land as a factor in poverty. Likewise, in the nationally representative 2002-03 LCMS, only a negligible fraction of households listed “insufficient land” as a reason for their poverty. This finding is compatible with the observation that population density is low in Zambia—13 per square kilometer compared to 28 per square kilometer in Africa



as a whole—so that scarcity of land is unlikely to be a constraint for rural households. Land is discussed further in Chapter 4.

3.24 The LCMS includes data on crop land usage, which is summarized by quintile for rural households in Table 3.6. On average, rural households farm just over one hectare for food crops and just 0.11 hectare for non-food crops. (Means include zeros.) Ninety-three percent of rural households farm at least some food crop land, and 13 percent farm some non-food crop land. Wealthier households farm more land overall and more than twice as much land per capita.

**Table 3.6 Mean Area of Crop Land Used for Food and Non-food Crops, by Household, Rural Areas Only**

	Quintile of National Distribution					
	All	Poorest 20%	2	3	4	Richest 20%
Hectares of food crops	1.08	0.97	1.11	1.11	1.05	1.16
Hectares of non-food crops	0.11	0.05	0.09	0.14	0.12	0.12
Hectares of all crops	1.19	1.02	1.20	1.26	1.16	1.28
Hectares of all crops per capita	0.25	0.16	0.21	0.24	0.28	0.36

Source: 2002-03 LCMS

### Social Assets

3.25 Social assets can play an important role in generating pathways out of poverty. In rural Zambia, the extended family is a key social network. The extended family can provide assistance to relatives outside the immediate household, particularly those unable to support themselves because they live in households headed by an elder, child, widow, or chronically ill person. The Rural Participatory Study found no evidence that the poorest are unable to access traditional social capital assistance through the extended family.

3.26 The Rural Participatory Study did find that respondents believed that there is less reliance on the extended family to provide assistance in times of trouble than in the past. In addition, some traditional extended family leveling and support mechanisms, such as communal meals, have broken down entirely. Others are also less common than in the past. Voluntary labor sharing between related households, for example, is less common than in the past. As part of the extended family tradition, Zambians have often fostered children from related households. This is usually done either to provide additional labor for the labor-deficient or to broaden opportunities for the child. For example, rural children sometimes join the households of their urban relatives in order to gain access to better schools and services. This tradition, too, was said to be on the decline. Families feel the need to concentrate scarce resources on the feeding and education of their own children, and they are less certain that their investment in nieces and nephews will be repaid.

3.27 In the Rural Participatory Study, respondents typically attributed these changes to a generalized increase in poverty—extended family members were said to have fewer resources to spare for relatives experiencing economic stress. It is also likely that the changes reflect the rise of HIV/AIDS during the past two decades, which has caused a serious strain on the extended family system, since the proportion of households in distress has grown in virtually all kin

groups. Whatever the case, there is evidence of an evolution in social norms in the direction of increasing investment in the nuclear family at the expense of the extended family.

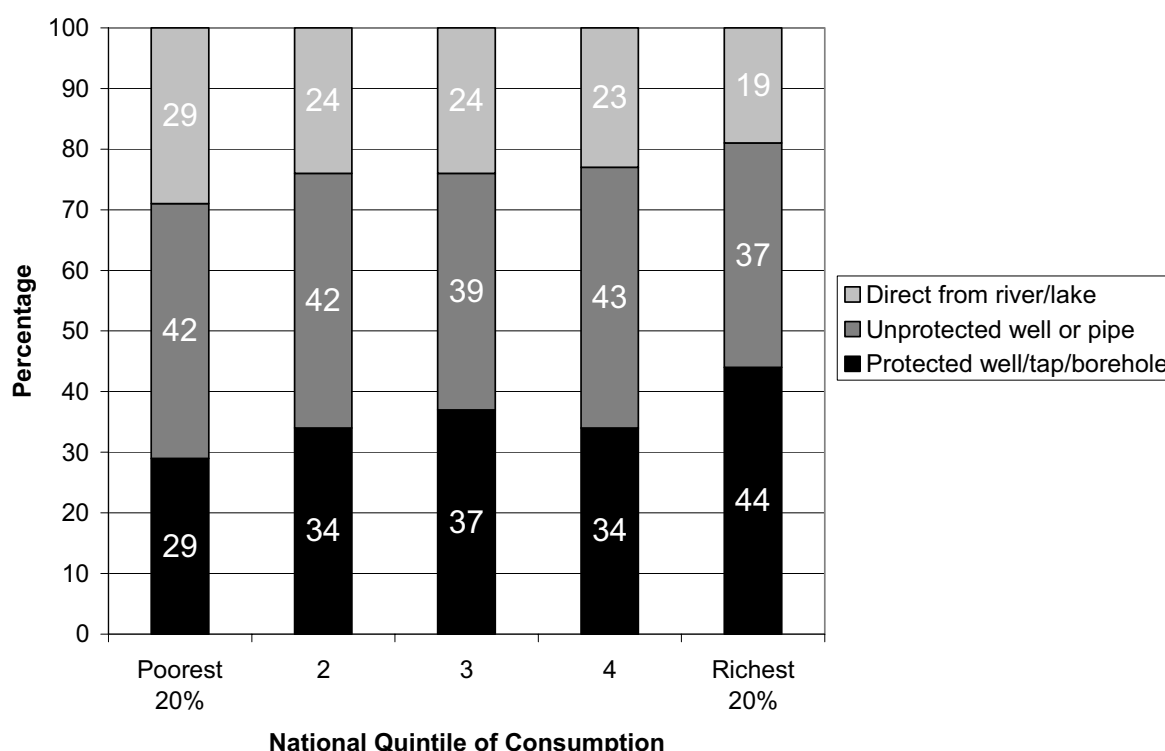
### Access to Infrastructure and Services

#### Water and Sanitation

3.28 Rural Participatory Study participants highlighted the importance of having access to safe water. Many areas experience water shortages in the dry seasons and are still dependent on unsafe water from wells, rivers, and lakes. In a few communities, some participants reported that chlorine is available in local shops and that they add it to water. This practice appears to be uncommon, however, because many households cannot afford chlorine.

3.29 Data from the 2002-03 LCMS shows that access to safe water sources—a tap, borehole, or protected well—is least common among the poorest households. Twenty-seven percent of rural households get their water from the least safe source: directly from a river, stream, or lake. Although only a minority of rural households have access to safe water, the situation has improved from 1990, when 37 percent of rural households obtained water directly from a river, stream, or lake. Most likely, this reflects investments in boreholes. Many communities in the Rural Participatory Study reported that the Government, donors, and NGOs have all sought to improve access by sinking community boreholes at public central points.

**Table 3.7 Where Do Rural Households Get Their Water: Water Sources by Quintile**



Source: 2002-03 LCMS

## Housing

3.30 The vast majority of rural Zambians live in homes with mud floors and grass or straw roofs. These are the dominant materials even among the wealthier households. Higher quality homes, with concrete floors and asbestos or iron roofs, are slightly more common in better-off households. Comparisons over time show no change in housing materials since 1990. Figures from both the 1990 and 2000 censuses show nearly identical patterns: roughly 85 percent of rural Zambian homes have mud floors and thatched roofs.

**Table 3.8 Material Used for Floor, Rural Areas**

	<i>Quintile of National Distribution</i>		
	<i>All</i>	<i>Poorest 20%</i>	<i>Richest 20%</i>
Concrete only	6	4	8
Covered concrete	7	4	11
Mud	85	91	79
Other	2	1	2
	100	100	100

**Table 3.9 Material Used for Roof, Rural Areas**

	<i>Quintile of National Distribution</i>		
	<i>All</i>	<i>Poorest 20%</i>	<i>Richest 20%</i>
Asbestos sheets	3	2	5
Asbestos tiles	1	1	1
Iron sheets	10	7	14
Grass/straw	85	90	80
	100	100	100

Source: 2002-03 LCMS

## Distance to Markets

3.31 The poor in the Rural Participatory Study identified access to markets as a significant concern. Many said that it was too expensive for them to transport their own goods to market, so that they have to rely on private traders and middle-men. Due to lack of access to markets and market price instability, the poor tend to view crop diversification as likely to increase the vulnerability of their households. Half of rural households are more than nine kilometers from the nearest food market. Rural households are more distant from agricultural input markets, which sell fertilizer and seeds. Half have to travel more than 25 kilometers to reach an input market.

3.32 Even though most rural roads are in very poor condition, few complaints were heard about roads in the Rural Participatory Study – though some participants did indicate that the roads connecting them to neighboring villages are very bad and should receive immediate attention. The general silence on the question of rural roads is probably due to the fact that the study was conducted during the rainy season and therefore, it only be implemented in communities that are accessible during this period. Villages that are cut off during the rainy season would be those most likely to raise the issue of inadequate roads, and these villages could not be visited.

## **Community Assets**

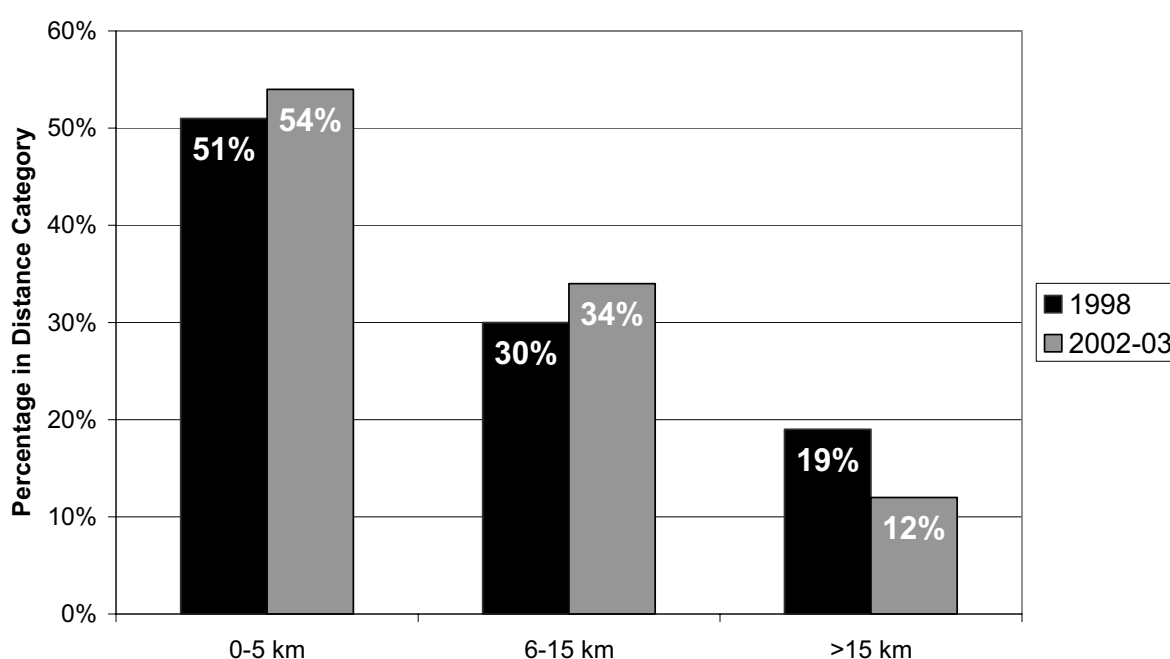
### Health

3.33 Many informants in Rural Participatory Study said that they were pleased that health posts had been established in some rural communities. They reported that the number of health

posts has increased, and community health workers are visiting them with some medicines, bringing the first level of the referral system closer to the users. Nonetheless, many problems remain. Stock-outs of essential medicines were reported at various levels of the health system. The cost of transport to hospitals was also mentioned as a limitation.

3.34 The LCMS data shows a small improvement in access to rural health facilities. Only 12 percent of rural households in the most recent survey were located more than 15 km from a health facility, compared to 19 percent in 1998. These findings are consistent with the Government’s policies of prioritizing the delivery of basic services, rather than secondary or tertiary services in health and education – an improvement that may be viewed as pro-poor.

**Figure 3.4 Distances to Nearest Health Facilities, Rural Households, 1998 and 2002-03**



Source: 2002-03 LCMS

3.35 The LCMS also asked about sickness and usage of health facilities. Sixteen percent of rural Zambians reported an illness or injury within the previous two weeks. Poorer rural Zambians are less likely both to report being sick or injured and to see a health care provider. Half of those with an illness or injury (8 percent of the population) consulted a health care provider, in almost all cases a government-run hospital, clinic, or health post. Eleven percent of those who consulted health care providers did so at a church mission institution. There is little differentiation by quintile for type of provider consulted.

#### Education Services

3.36 School attendance rates in rural areas vary with the economic position of the household, but the relationship is not monotonic. For most age groups, the poorest children are least likely to be in school, but girls 14-18 in the bottom quintile are actually more likely to be in school than

those in the top quintile. Overall, among children of primary school age (7-13), 70 percent of boys and 72 percent of girls are in school.

**Table 3.10 Percent Enrolled in School by Age Group, Sex, and Quintile of Consumption for Rural Areas**

Age Group and Sex	All	Quintile of National Distribution				
		Poorest 20%	2	3	4	Richest 20%
<i>Male</i>						
5-6	12	10	11	4	20	22
7-13	70	66	66	72	74	80
14-18	69	64	73	66	69	74
<i>Female</i>						
5-6	13	9	13	9	17	26
7-13	72	62	70	79	75	78
14-18	50	48	54	53	49	43

Source: 2002-03 LCMS

3.37 Educational services are mainly provided through the Ministry of Education (MOE). In addition, churches run some schools. Respondents in the Rural Participatory Study voiced satisfaction with the fact that a great many schools have been rehabilitated, the number of primary schools has been increased, free education up to grade seven was introduced in 2002, and some primary schools have been upgraded to basic schools. It was pointed out that these developments have helped to increase school enrollments in the communities where they took place.

3.38 Despite the many positive observations regarding education, some informants indicated dissatisfaction because many schools have not yet been rehabilitated, are located very far from many households, and have too few teachers. In many communities, it was urged that the rehabilitation of rural schools should continue. Community members were also dissatisfied with the fact that senior and high schools are very few and therefore distant from most villages. Only those who can afford to pay the school fees (including transport, school fees, boarding fees, and PTA fees, etc) are able to continue their education past the primary or basic level.

3.39 Schools face strains due to teacher absenteeism and a shortage of employed teachers. Both problems are in part consequences of the HIV/AIDS pandemic. One survey found that 20 percent of teachers are not present on a given day. Half of teacher absences were attributed to personal reasons, almost all of which were illness of the teacher, illness of the teacher's family members, and attending funerals. The same study found that students assigned to teachers who were often absent learned substantially less than students with less absent teachers. (Das, 2004).

3.40 Data from the 2002-03 LCMS reflects the findings in the participatory study. While access to primary schools is widespread in rural areas, secondary schools are much more distant for the typical household. Although 58 percent of rural households are within five kilometers of a middle basic school (grades 1-7), only 8 percent are within five kilometers of a secondary school.

#### Social Protection

3.41 Previous to the reforms of the early 1990s, the government's main assistance to rural areas was provided in the form of subsidized agricultural inputs and a guaranteed purchase price

for maize. In the post-reform period, the government has provided more limited assistance, complemented by interventions from NGOs and churches. One of the government's principal social protection programs has been the Food Security Pack Program, administered by an NGO, the Program Against Malnutrition. The main component of the FSP is a set of agricultural inputs targeted to vulnerable farmers. This and other social protection programs are discussed more in depth in Chapter 5.

## D. Urban Poverty

### Overview

3.42 Before the decline of copper, the economy was dominated by government and parastatal industry. Today, the urban economy presents a more complex picture. Government continues to be a major employer, particularly for those in the top echelons of the income distribution, but there is also a diverse private sector as well. Overall, the urban sector is highly diverse, in terms of both household conditions and economic activities.

3.43 This section draws heavily from the Urban Participatory Study carried out during 2003-04 in urban informal settlements. Informal settlements, however, are not specifically identified in the national censuses or household surveys. Most of the quantitative data presented here is for urban areas as a whole, while the qualitative information largely reflects informal settlements, where the bulk of the urban poor reside.

### Box 3.4: Formal and Informal Settlements

The distinction between "formal" and "informal" settlements dates from the creation of the first urban centers that followed British planning and construction codes. These formal centers were reserved for European settlers and were the only recognized permanent urban settlements. They were designed with infrastructure for housing, transportation, access to piped water, sanitation and social services. Africans were not allowed permanent residence in these urban centers and their temporary stay was tied to being formally employed. As a result, at the expiration of their short-term employment contracts, those who wanted to remain in urban centers retreated to temporary settlements on farms on the outskirts of cities. After independence in 1964, Africans were granted the right to live permanently in cities, but formal urban centers were not large enough to accommodate the new migrants attracted by the thriving urban economies. The temporary settlements on the urban outskirts thus became the main areas where new migrants could find housing. Without public support, these settlements lacked essential infrastructure and services. Today, despite some upgrading in the 1970s and 1980s, their situation has not much improved. Estimates are that 50-80 percent of the urban population resides in informal settlements, including the most of the urban poor.

### Characteristics of a Poor Household

3.44 In urban Zambia, 92 percent of respondents in the 2002-03 LCMS survey classified themselves as "very poor" or "moderately poor. When asked to identify the reasons for poverty, more than three out of four cited general economic conditions of the country. Other reasons mentioned are chiefly reflections of the overall economic environment: lack of employment opportunities and low wages. A substantial fraction—29 percent—identify access to capital to start expand their farm or enterprise as a key cause. Reflecting the prevalence of agricultural activity in urban and peri-urban areas, 7 percent of urban residents cite high prices of agricultural inputs as a reason for their poverty.

**Table 3.11 Self-Assessed Reasons for Poverty, Urban Areas**

	<i>% Reporting</i>
<i>General</i>	
Hard economic times	63
High prices	34
Lack of job opportunities	22
Salary/wage/pension too low	43
Retrenchment	5
Disability	1
Debt	1
Lack of credit	30
<i>Shocks</i>	
Drought	0
Flood	0
Death of bread winner	7
Death of cattle due to disease	0
<i>Agriculture-related</i>	
Agricultural inputs too expensive or unavailable	6
Low agricultural production	1
Agricultural prices too low/lack of markets	1
Lack of cattle	1
Lack of land	2

Source: 2002-03 LCMS

3.45 Focus groups in the Urban Participatory Study estimated that between 60 and 90 percent of the households in their settlements were poor. They identified female-headed households, households unable to send their children to school, and those eating no more than one meal per day as most likely to be poor. Groups identified as being particularly poor and vulnerable were orphans, widows, and persons with severe disabilities. When asked for the typical profile of the non-poor, focus groups identified those in stable formal wage employment and businessmen, such as owners of buses, large shops and bars.

3.46 As in rural areas, poorer households in urban areas are larger on average, with more children per working age adult. They also have older, more educated household heads who are more likely to be female than heads of better off households. There is a sharp contrast between the poorest and the better off in terms of education of household heads. Household heads in the top quintile average 4.5 years of education more than those bottom 20 percent.

**Table 3.12 Mean Characteristics of Households by Quintile of Consumption, Urban Areas**

	All	Poorest 20%	Richest 20%
Mean household size	5.6	6.8	4.6
Median age of household head	39	45	36
Female household heads (%)	21	27	21
Mean years schooling of household head	9.3	6.6	11.1
Dependency ratio	0.89	1.18	0.66
Youth dependency ratio	0.86	1.12	0.65
Old-age dependency ratio	0.03	0.06	0.02

Source: 2002-03 LCMS

### Economic Activities

3.47 Although the Zambian economy appears to have stabilized, urban unemployment and underemployment are still major problems. Among individuals age 20 and over, fourteen percent of individuals overall and 18 percent of those in the bottom quintile reported themselves to be unemployed in the 2002-03 LCMS. The reforms of the early 1990s were accompanied by a restructuring of the labor market and by retrenchments that have not yet translated into the creation of new formal employment opportunities on a large scale. As a result, the livelihoods of most urban dwellers, many of whom used to work in the protected formal sector, especially in large state-owned enterprises, today depend on the informal rather than the formal sector.<sup>1</sup> Fifty-six percent of urban workers are in the informal sector.<sup>33</sup> The shift in employment is evident in the industries of working individuals reported in the 1990 and 2000 census, shown in Table 3.13. There have been sharp declines in the fraction of workers employed in mining, manufacturing, and the government-dominated health and welfare sector. Large increases have occurred in the trade and farming sectors, reflecting the growth of informal sector vendors and urban agriculture.

**Table 3.13 Industry of Working Individuals, Urban Areas**

	Men and Women		Men Only		Women Only	
	1990	2000	1990	2000	1990	2000
Farming	10.1	17.2	10.1	14.4	10.1	23.3
Mining	11.0	5.4	13.5	7.5	2.3	0.9
Manufacturing	14.7	9.3	16.0	10.8	10.2	6.1
Electricity, Gas, Water	1.8	1.6	2.1	2.2	0.5	0.5
Construction	4.8	4.3	6.0	6.0	0.6	0.6
Trade	11.4	24.1	8.7	20.2	20.9	32.2
Transport & Communication	8.8	7.9	10.4	10.7	2.9	1.9
Finance	6.0	4.1	5.3	4.1	8.4	3.9
Health & Welfare	31.5	26.2	27.9	24.1	44.1	30.5
	100	100	100	100	100	100

Source: 1990 and 2000 Censuses

An informal sector worker is defined using the Central Statistical Office's definition as someone who works in an establishment employing 5 persons or fewer and is not entitled to paid leave, gratuity and social security.



3.48 Sources of household income provide a different look at urban economic activities. Salaries provide half of the income of the average urban household and a lower fraction for the poorest households. Non-farm business income, which includes most self-employment income, accounts for a quarter of income for the average household. Remittances are also a substantial factor. Although cash income from agricultural production is minimal for urban households, many, particularly the poorest, rely in part on consumption of their own production from urban agriculture.

**Table 3.14 Mean Shares of Household Income by Source, by Quintile, Urban Areas**

	Quintile of National Distribution					
	All	Poorest 20%	2	3	4	Richest 20%
Non-farm business	24	25	27	27	26	19
Salary	50	38	40	46	50	60
Remittances	6	8	6	5	6	5
Other income	15	20	19	16	14	13
Consumption of own production	5	9	7	7	4	3
	100	100	100	100	100	100

Source: 2002-03 LCMS

3.49 The diversity of urban employment is not well captured by the coarse employment and income categories of household surveys. Urban areas are by their nature home to a wide variety of activities. Table 3.15 shows activities that were reported as sources of income in the Urban Participatory Study. The few residents of informal settlements who are formally employed mostly have low-paid jobs, as shop assistants, security guards, soldiers and domestic helpers. In old informal settlements, such as Chawama in Lusaka, there are also teachers, nurses, police constables and other front-line civil servants.

Table 3.15: Activities Reported as Sources of Income in Informal Urban Settlements

	Large dynamic city (Lusaka)			Declining economy (Mufulira)			Non-metropolitan town (Kasama)		
	men	women	youth	men	women	youth	men	women	youth
<b>FORMAL ACTIVITIES</b>									
<b>Formally employed wage earners</b>									
Bus drivers									
Civil servants (nurses, school teachers, police constables)									
Workers in nearby flower farm									
<b>INFORMAL ACTIVITIES</b>									
<b>Primary sector - cultivation and extraction</b>									
Gardening or small-scale farming									
Farming as a main activity									
Raising and selling free range chickens									
<b>Secondary sector - production, manufacturing and transformation</b>									
Crushing stones into gravels									
Repairing shoes, television, radios, bicycles, tires									
Sewing and tailoring									
Running a butchery									
Running a restaurant / selling food in the streets									
Producing metal works and welding									
Making earth bricks or cement blocks									
Making baskets and curios									
Baking foods									
Producing knitting and crochet work, or tie and die cloth									
Brewing local beers									
Operating a hair salon or barber shop									
Running a laundry shop									
Burning charcoal									
Running a tavern									
Operating a grinding mill									
Producing pottery									
<b>Tertiary sector - services</b>									
Hawking in the streets or outside markets (no fixed stall)									
Selling basic necessities from shop or stall									
Selling roasted meat at markets and beer halls									
Taking unskilled piece work (transporting water, goods...)									
Lending money									
Exchanging old bottles against brooms, reselling the									
Practicing traditional healing									
Providing entertainment: showing videos									
Using arts for social messages (plays, kits, dances,									
Charging batteries									
Selling building materials (cement and sand)									
Digging wells and pit latrines									
Providing skilled construction work (masonry, carpentry, plumbing, welding, electrical work)									
Operating public pay phones									
Operating public toilets									
Selling plots or houses (real estate agents)									
Renting out houses/rooms									
Managing solid waste									
Repairing umbrellas, radios, watches and TV									
Painting houses									
Running a religious congregation (being a pastor)									
Running a private school									
Washing clothes on a piecework basis									
Washing cars									
Working as domestic helper									
Cross-border trading									
Petty trading (local)									
Selling water									
Selling grass for thatching									
Selling second hand clothes									
<b>Other activities</b>									
Commercial sex									

3.50 Most residents of informal urban settlements are self-employed. They work in a variety of informal economic activities ranging from producing and selling building materials, to trading petty commodities, farming, and renting out houses or rooms. Housing-related activities provide jobs to many: unskilled workers produce crushed stones, sand and bricks, while skilled artisans manufacture fittings such as door and window frames, and offer services in plumbing, electrical work or carpentry. Most people working in the informal sector combine several activities, including the cultivation of undeveloped urban or peri-urban land to supplement their incomes and food intake. Economic outlooks are diverse even in the informal economy. While there is economic dynamism in some urban centers such as Lusaka, other towns remain sluggish, with legions of unemployed mainly expecting direct help from large-scale employers, NGOs, or the government.

3.51 Many public officials encountered during the Urban Participatory Study voiced the view that the urban poor are largely unproductive because they are not formally employed. The study found, however, that poor urban dwellers have adapted to the decline of formal employment by pursuing at least one activity that allows them to generate revenue or produce enough food to survive. These activities illustrate the resilience and ingenuity of poor urban communities to adapt to a very unfavorable economic context in which few formal jobs are available.

### **Material Assets**

3.52 In urban Zambia ownership of a wide variety of assets is common. Many urban Zambians own not just productive assets but also consumer goods. Asset ownership distinguishes better off Zambians from the poor, but even many of the poor own substantial assets. Table 3.16 shows the diversity of ownership patterns by quintile. While many of the poorest urban Zambians have not much more than tools and only 36 percent own a radio, many in the top quintile have an array of consumer goods: cell phone (27 percent), motor vehicle (17 percent), refrigerator (51 percent) and video player (29 percent).

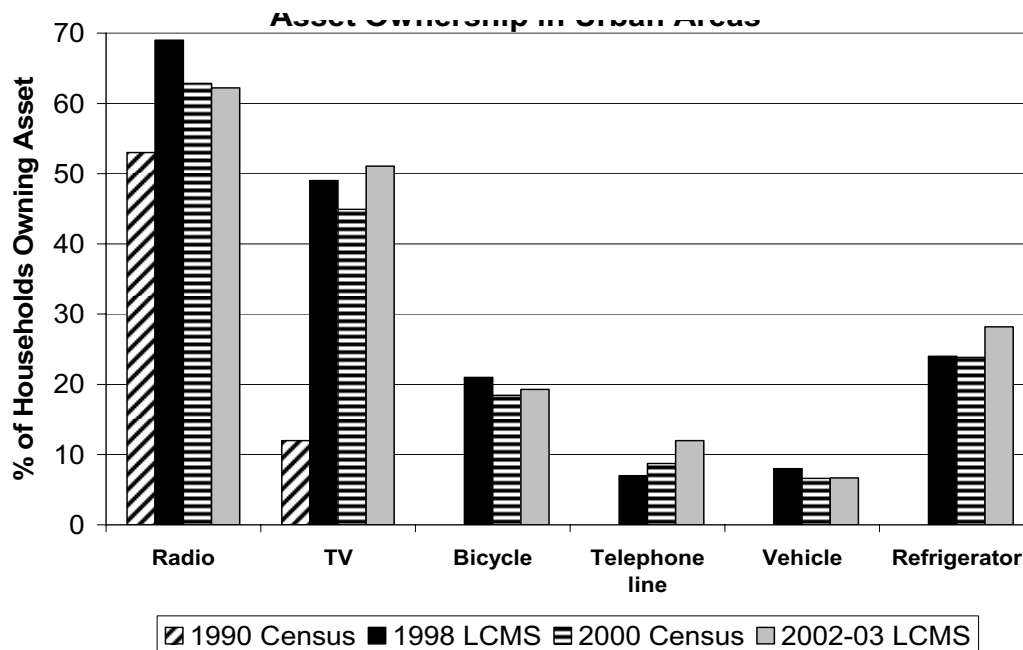
**Table 3.16 Urban Asset Ownership, by Quintile**

<i>Asset</i>	<i>All</i>	<i>Quintile of National Distribution</i>	
		<i>Poorest 20%</i>	<i>Richest 20%</i>
Axe	35	40	32
Bicycle	19	13	21
Brazier	91	93	86
Canoe	1	2	1
Cell phone	12	0	27
Computer	2	0	4
Crop sprayer	2	0	3
Donkey	0	0	0
Electric iron	36	6	61
Electric or gas stove	34	5	57
Fishing boat	0	0	0
Fishing net	1	3	1
Hammer/grinding mill	1	0	2
Hoe	54	63	51
Hunting gun	1	0	2
Knitting machine	0	0	1
Motor vehicle	7	0	17
Motorcycle	1	0	1
Non-electric iron	28	41	18
Non-residential building	2	0	4
Plough	2	1	3
Radio	62	36	78
Refrigerator	28	3	51
Residential building	46	49	42
Satellite dish	2	0	5
Scotch cart	0	0	1
Sewing machine	9	5	14
Telephone line	4	0	11
Tractor	1	0	1
TV	51	18	72
Video player	20	1	39

Source: 2002-03 LCMS

3.53 For most assets which can be tracked in multiple surveys and censuses, ownership has remained fairly constant over time. An exception is televisions; between 1990 and 1998 the fraction of urban Zambian households owning TVs jumped from 12 to nearly 50 percent. With increasing use of cellular phones, telephone ownership has increased substantially since 1998 but is still limited almost entirely to urban Zambians in the top quintile.

Figure 3.5 Asset Ownership in Urban Areas Over Time



Source: 2002-03 LCMS

### Social Assets

3.54 The Urban Participatory Study found that although extended family networks are less cohesive than in rural areas, community-based support structures have become important social assets. In many informal urban settlements, community-based organizations (CBOs) run by local volunteers have stepped up to offer services that previously were provided by the government or via less formalized networks. CBOs include Residents Development Committees (RDCs) which coordinate local participatory development activities. A typical role for an RDC is constructing local infrastructure, often with the support of outside NGOs. Other CBOs include local trade associations, cooperatives, community schools, and groups that provide literacy training, home care assistance for HIV/AIDS patients, and assistance for orphans, widows, and the disabled.

**Box 3.5: Community-Based Organizations Are Key to Support Vulnerable Groups**

Bwafwano Community Association was formed in 2000 to educate orphans and disabled children in Chawama (Lusaka), and provide life skills to widows and widowers. Its executive committee is composed of a chairperson, seven women, and five men.

By early 2004, Bwafwano was running a series of programs for vulnerable members of the community: a community school for orphans and disabled children, a training program for women in tailoring, knitting and making flowerpots, a theater course for out-of-school children, the distribution of food and other support to child headed-households, and referrals of neglected children to the welfare department and of abused women to the police's Victims Support Unit. Its beneficiaries were 20 disabled children and 25 adults, 500 children attending the community school, 150 widows, and 20 persons attending adult education. They have a team of forty home-based caregivers, and are in part supported by Project Concern International (PCI), which donates food and teaching material.

In Chawama again, the Zambia National Association of the Physically Handicapped (ZNAPH) estimates there are 200 to 300 disabled persons. The organization supports them with vocational training programs in tailoring and design, and an HIV/AIDS counseling program. It also runs a community school for 444 children with support from PCI, which provides food for the children and subsistence allowances to the volunteer teachers. Enrollment in the programs is open to all (disabled or not) to promote the integration of persons with disabilities in society. Four out of a class of 10 in the vocational training course are handicapped persons.

**Access to Infrastructure and Services**

3.55 In informal settlements visited during the Urban Participatory Study, access and quality of urban infrastructure vary widely. In many cases, summary statistics fail to illustrate the shortcomings of urban infrastructure. Although infrastructure is far more widespread in urban areas than in rural Zambia, much of the infrastructure is outdated, poorly maintained, and overcrowded. RDCs are active in many communities in managing infrastructure. The participatory study team observed that in Chawama (Lusaka), RDCs expanded the local police station, built storm water drainages, and conducted regular clean-ups of the community. In Ipusukilo (Kitwe), they constructed footbridges and storm water drainages to enhance environmental cleanliness. In Kalikiliki (Lusaka), the community regularly maintains storm water drainages and repairs the footbridges which women use to fetch water in Mtendere compound. In Chiba (Kasama), the community attracted funding from international donors to build the local market. In Kawama market (Mufulira), the RDC and marketers were building additional toilet blocks. Most of this voluntary work and development was financed through donations and grants from ZAMSIF, Irish Aid, DFID, and JICA.

Water

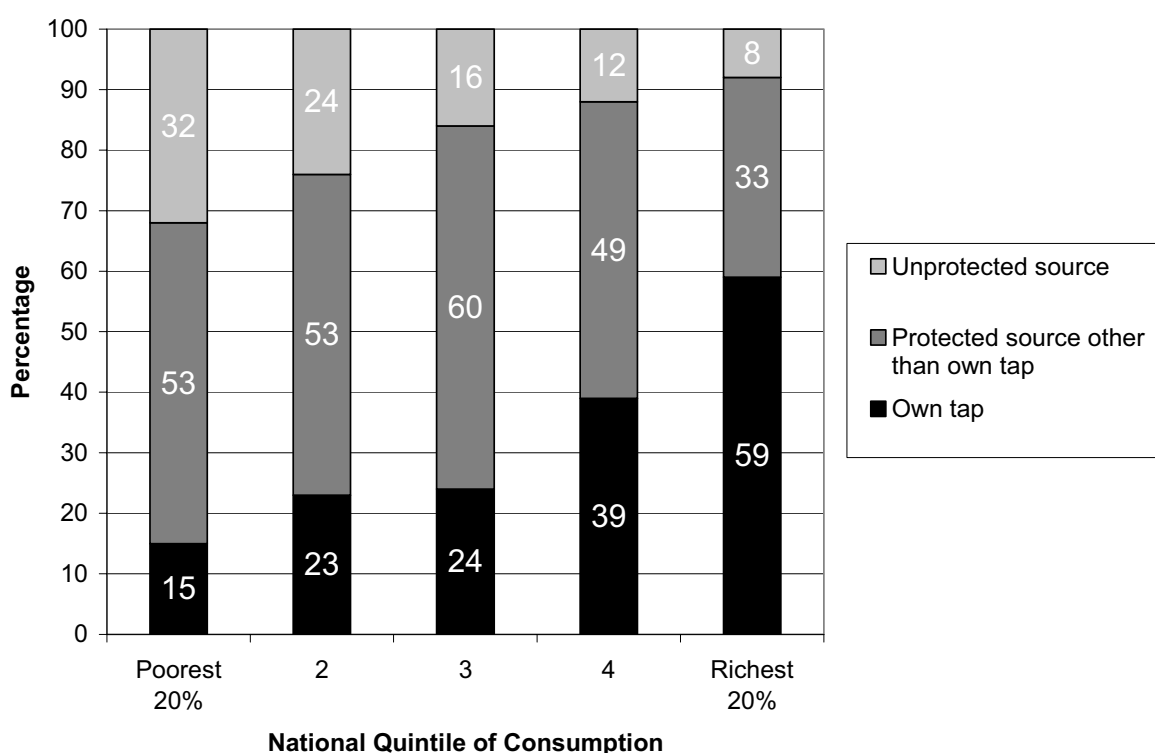
3.56 Residents of informal urban settlements generally rely on self-made shallow wells for water supply and on pit latrines for disposal of human waste, which poses serious health challenges, because of possible contamination of the water. The situation is worsened by the fact that most residents cannot afford to either boil or chlorinate their drinking water. As a result, they generally drink untreated water and are extremely vulnerable to diarrhea diseases.

3.57 Urban settlers face water shortages even in areas where water had previously been installed. In Chawama, Lusaka, most respondents indicate that though they have pipes, often these are dry. As in most other settlements the water system suffers extensive leakage. Out of the 314 initial standpipes that had been set up for communal use, 142 have been vandalized and are

unusable.<sup>34</sup> In most settlements where water is available, it is rationed for a few hours daily and is of low quality because of many leaks. The response to shortage of water has been to use water from shallow wells, which are often polluted due to the proximity of pit latrines.

3.58 Data from the 2002-03 LCMS, shown in Figure 3.6, clearly demonstrates that the poor are the least likely to have access to protected water sources. Even the sources categorized as “protected”—own tap, public tap, borehole, and protected well—may provide unsafe water if contamination enters through leaky pipe systems.

**Figure 3.6 Sources of Water for Households in Urban Areas**



Source: 2002-03 LCMS

3.59 In general, the water supply situation is better in Lusaka, thanks to the community-based water supply schemes put up by international development agencies.<sup>35</sup> However, it is not clear whether community-based management schemes can be sustained without the continued involvement of funding or implementing agencies, as they rely on user fees that many residents cannot pay. Some schemes put up under the World Bank supported Urban Water Supply Project have hence collapsed after the withdrawal of the implementing agencies, as did the Mulundu water supply scheme in Mufulira, when the community could not pay for its operation. In such cases, residents revert to unsafe shallow wells as their main source of water.

<sup>34</sup> The pipes are often stolen and resold, as are the valuable brass taps. At times, it is the nearby private resellers of water who make sure that the public distribution system is unusable.

<sup>35</sup> Such as the Japanese International Development Agency (JICA) and the Department for International Development UK (DFID) through CARE International.

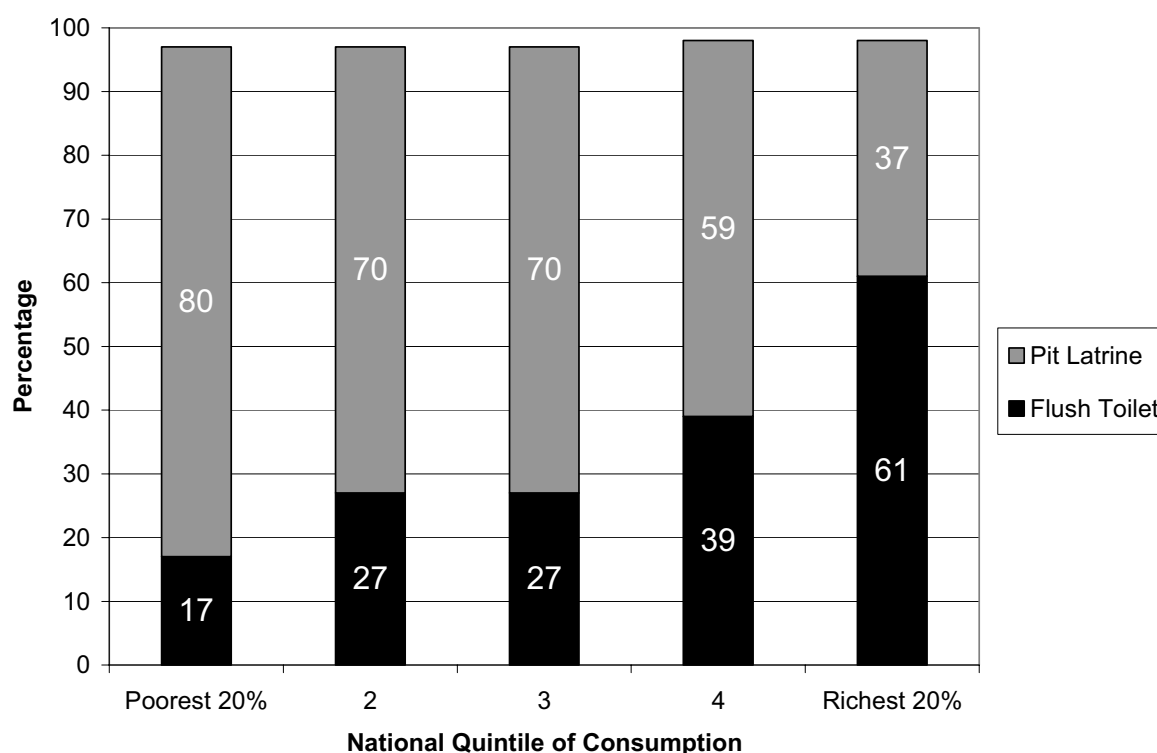
**Box 3.6 Community-Based Water Supply**

Many urban settlements have solicited donor funds to bring clean water to their areas. In Kitwe’s Ipusukilo, residents approached the local water and sewerage company to bring water to their area. As a result, twenty-four water vendors have been equipped with kiosks and meters from which people buy clean water. In Kasama, a water project funded by the Development Cooperation Ireland (DCI), working with the Chambeshi water and sewerage company has agreed with RDCs to manage water supply in their settlements, including revenue collection for which they will be paid 25% of the total money collected. However, these water collection points are only open for short periods each day (two hours in the morning, at noon and in the evening), which makes it difficult for residents to obtain water when they need it. This pushes many people to continue using water from shallow wells.

Sanitation

3.60 Sanitation in urban Zambia is generally poor, because most residents do not have access to a sewerage system and thus use either pit latrines or septic tanks. The former is the predominant means of disposing human waste in informal urban settlements. Figure 3.7 shows type of toilet facility by quintile for urban areas. The majority of urban Zambians in all quintiles other than the richest use pit latrines.

**Figure 3.7 Types of Toilet Facilities for Households in Urban Areas**



Source: 2002-03 LCMS



3.61 In general, the sanitation situation appears better in informal settlements outside Lusaka with lower population densities, as most houses have adequate space to build pit latrines. It is, however, a very serious problem in the older informal urban settlements of Lusaka upgraded in the mid 1970s, such as Chawama and Kanyama. In these settlements, space for construction of new pit latrines is a major source of conflicts with neighbors as most houses have run out of space. As a result, large numbers of people use only a limited number of pit latrines.

3.62 Because many residents of unauthorized urban settlements rely on unprotected shallow wells for water supply and on pit latrines for disposal of human waste, many face serious health threats. The local authorities, government and international development agencies have generally ignored the sanitation crisis in the older informal urban settlements, probably because the conventional methods of resolving the sanitation problem are too expensive. In particular, extending the sewerage system to areas currently not connected is generally considered unaffordable for the majority of residents. For the same reason, other means of prolonging life spans of pit latrines (e.g., Ventilated Pit Latrines) have not been widely adopted.<sup>36</sup>

### Housing

3.63 The quality of urban housing varies both across space and socioeconomic level. Many of the poorest urban Zambians live in mud huts with grass or straw roofs, as do nearly all those who live in rural areas. However, among urban residents, a majority in the poorest quintile and nearly all those in the top quintile live in homes of modern materials: concrete, iron, and asbestos tiles or sheets.

**Table 3.17 Material Used for Floor,  
Urban Areas**

	<i>Quintile of National Distribution</i>		
	<i>All</i>	<i>Poorest 20%</i>	<i>Richest</i>
			<i>20%</i>
Concrete	58	47	61
Covered concrete	23	11	32
Mud	19	41	7
Other	0	0	0
	100	100	100

**Table 3.18 Material Used for Roof,  
Urban Areas**

	<i>Quintile of National Distribution</i>		
	<i>All</i>	<i>Poorest 20%</i>	<i>Richest</i>
			<i>20%</i>
Asbestos sheets	49	35	59
Asbestos tiles	5	3	7
Iron sheets	29	31	25
Grass/straw	11	22	4
Other	6	9	5
	100	100	100

Source: 2002-03 LCMS

3.64 The Urban Participatory Study found that among informal settlement zones, Lusaka has comparatively better houses than secondary cities, as many of its informal settlements have been legally recognized, thus giving residents some tenure security and allowing them to improve their houses when economic conditions were propitious. The settlements that have not been upgraded or legally recognized – which include most settlements in secondary cities – have particularly poor houses, built of mud, wood and thatched .

<sup>36</sup> The problem of sanitation has been recognized by CARE International in the older informal settlements where it operates, such as Kanyama, George and Chipata in Lusaka. CARE is experimenting with the use of chemical enzymes to prolong the life spans of pit latrines.

**Table 3.19 Types of Building Materials Used in Informal Urban Settlements**

	<i>Large dynamic city</i>	<i>Non-metropolitan town</i>	<i>Declining economy</i>
<i>Walls</i>	Mostly concrete blocks Mud bricks in oldest area	Mostly mud bricks A few using burnt bricks	Mud bricks A few using concrete blocks
<i>Roofs</i>	Asbestos and corrugated iron sheets	Grass thatch A few with iron sheets	Grass thatch A few with iron sheets
<i>Floors</i>	Concrete and compacted soil	Cement/mud	Mud floors; few w/ cement
<i>Electricity</i>	Yes	In some settlements	In some settlements

Source: Urban Participatory Study

## Community Assets

### Access to Markets

3.65 Urban Zambians enjoy access to a wide variety of markets, and market proximity is not a constraint for urban residents. For example, all urban households in the 2002-03 LCMS reported being within 5 kilometers of a food market. However, the Urban Participatory Study found that market infrastructure was inadequate in most informal settlements visited by the survey team. Markets were often built for much smaller populations than they currently serve, and are poorly maintained. They are usually overcrowded, and suffer from the insufficient provision of water, sanitation facilities, and solid waste management.

### **Box 3.7: Some main types of markets in informal urban Zambia**

**Kasama** (a non-metropolitan town) has three main markets (1) Musenga has a trading area with some stalls built along the road passing through the settlement. It has no running water, or toilet facilities. (2) Chiba has a well-built market set up with the help of Irish AID. It is well organized and managed by the local resident development committee. It has toilets but poor garbage management, and has not been able to attract sufficient traders to occupy all stalls. (Because of the fee charged, many prefer to sell directly from their homes.) (3) Chisanga has a new market with good infrastructure, but underutilized, with less buyers than sellers and many unoccupied stalls, reflecting the population's very low purchasing power.

**Mufulira** (a declining economy). In Mulundu, market traders mainly sell food along the major road. Although there is a water supply network constructed under the World Bank-supported Urban Water Supply Project, no water is available as the community cannot pay for its operating costs (mostly power supply to the pumps.) Kawama has a vibrant market selling many diverse goods with makeshift stalls surrounding a few permanent structures.

**Kitwe** (a diversifying economy). Ipusikilo has a large open and busy market with about 3000 traders in specialized sections selling foods, household goods and second hand clothes. Its infrastructure is yet deficient, with insufficient space, a lack of storage facilities and security. It is run by a 14 member committee, which levies fee going to the Kitwe City Council. Yet, the council is not arranging for services, and the water supply depends on shallow wells while a network of 24 water kiosks is not operating because of a lack of funds.

### Health

3.66 As a result of the extension of health clinics to informal settlements, 99 percent of urban Zambians live within 5 kilometers of a health facility. Urban Participatory Study respondents

noted that facilities available to them were generally overcrowded. They also expressed the need for maternity services and mortuary units closer to their communities. Mortuary units are needed to accommodate the large number of HIV/AIDS victims who die in their homes. Households often endure great expense to transport the deceased to hospitals or health centers that have mortuary facilities.

3.67 A widespread success story in most settlements visited by the participatory study team was the cooperation between local health centers and community health promoters who supplement government workers to reach residents with health information and medical services. Neighborhood health committees, organized and managed by community volunteers, undertake health education and promote environmental hygiene for the benefit of their settlements. District health management boards train volunteers in basic health and home-based care. The volunteers in turn assist the chronically sick in their houses, and provide them necessary transport to the hospital. Environmental health technicians promote the prevention of diseases, the safety of water, waste disposal, sanitation, and food hygiene by giving health education talks in their communities both in groups, families and on one to one.

**Box 3.1: Volunteer in Health Neighborhood Committee**

Mrs. Ziwase Phiri is a volunteer of the Chawama Health Neighborhood Committee. She is vice secretary in a Committee of 11 members, which develops educational materials on health and carries out health education in zone one with its residents. The committee assists community members not covered by a medical scheme to access medical services in case of emergency, educates community members on good health and nutrition practices, assists medical staff at Chawama clinic in under five clinics management, organizes self-help environmental cleaning and protection, encourages residents to deposit solid waste at designated points, and undertakes home based care of the chronically sick.

3.68 Despite these successes, the urban poor depend chiefly on government-provided health care for which they often are required to pay user fees. In the 2002-03 LCMS, 9 percent of Zambians in urban areas reported an illness or injury within the previous two weeks and 5 percent saw a health care provider, with no differences between the poor and the better off. Seventy-nine percent who saw a health care provider went to a government hospital or health clinic. Wealthier urban Zambians sometimes used private facilities or employer-provided facilities, which accounted for 11 percent and 4 percent, respectively, of all visits. For 55 percent of health care visits, the costs were paid directly by the patient or his or her family; in a quarter of cases no payment was made.

Education Services

3.69 School attendance rates in urban areas are somewhat differentiated by consumption level. At all ages, children from households in the top quintile are more likely to be in school than those in the poorest quintile, and the difference is greater for girls than boys. Because the poor typically start school later, the greatest difference is at young ages: among girls age 5-6, only 19 percent of those in the poorest quintile are in school, compared to 69 percent of those in the top quintile.

**Table 3.20 School Attendance Rates by Age Group, Sex, and Quintile of Consumption for Urban Areas**

Age Group and Sex	All	Quintile of National Distribution				
		Poorest 20%	2	3	4	Richest 20%
<i>Male</i>						
5-6	12	10	11	4	20	22
7-13	70	66	66	72	74	80
14-18	69	64	73	66	69	74
<i>Female</i>						
5-6	46	19	33	43	56	69
7-13	86	77	81	88	88	94
14-18	68	59	65	61	74	74

Source: 2002-03 LCMS

3.70 There are two types of schools in urban Zambia: government-run schools and community schools. Many community schools, which are typically supported by NGOs or churches, were organized after the introduction of primary school fees in the early 1990s to provide an alternative for children of poor households and orphans, who could not afford to attend government schools. The Urban Participatory Study found that since the abolition of user fees for primary education in 2002, however, many poor children have returned to the government schools, particularly in the Copperbelt and in Kasama. Some community schools even closed after 2002, as pupils returned to the public education system.

3.71 Nonetheless, community schools remain significant. In 2004 there were 1925 registered community schools and approximately 4500 government-run primary schools. Community schools are also in rural areas that are distant from public schools. In Lusaka, most community schools are supported by NGOs and churches, and they have continued to run seemingly unaffected by the change of policy on fees. This is partially due to the fact that uniforms, which must be purchased by the child's family, are still required in many urban schools. Children of the poorest families still tend to go to community schools, in large part to benefit from the feeding programs that many run (some even distribute food to families so they let children come to school). Another main reason is the lack of alternatives, since there is not enough space in public schools. Community schools are particularly favored for students who start attending school late, because they cover the seven year primary curriculum in just four years.

3.72 Although the reform to provide free primary education has helped bring many children back in school, there remains a dire lack of capacity to answer needs. In 2003, Chisuba school in Chawama could for instance only accommodate 360 of the 1200 applicants to first grade, leaving 70% of them without access to government education. Fees are still charged for education after grade seven (ZMK150,000 per year) and there are fewer slots as one progresses to middle and high school. This not only deprives many children of access to education, but also creates much space for corruption and unfair practices in the allocation of the few spots available.

### **Box 3.2 Parent and Teachers Associations Have Key Roles in Government Schools**

Chisuba is a basic school in Chawama teaching grade one to nine to 3000 pupils. With 61 teachers, it runs eight classes in each of grade one to seven, but only four classes for each of grade eight and nine. Class size ranges between 42 and 58 pupils.

The Parents and Teachers Association (PTA) has an important role in managing the school. It employs a secretary and a handyman to supplement the single staff member that Government can pay. The PTA is very active and obtained support from BESSIP to rehabilitate the school. Yet, although BESSIP supplies enough books, the school still lacks furniture, such as seats for the teachers. In principle, there is now enough toilets for all, but as there is no water access, most are unusable.

3.73 Both parents and educators however note that there are often important differences in quality between government and community schools. The government overall provides public schools the resources necessary to offer quality education, but community schools must rely on limited donations from the residents of poor settlements and from NGOs. They cope with very little resources, often counting on local volunteers to teach, and churches to lend space. Tight resources make it difficult for them to follow the same curriculum and standards as public schools, and some parents withdraw their children from the community schools that cannot offer good education. Many of these schools recognize their limitations, but continue their mission, persuaded that the little they offer at least keeps children off the streets.

3.74 Attendance remains a major problem in all schools. Some girls have to stay home and take care of their families when parents go to church or funerals; others are put to work on the market to support the family.

### **Box 3.3: Community Schooling: an Alternative or Complement to Public Education**

There are four community schools in Ipusukilo (Kitwe) for 3800 children. The most active of them receives 1300 pupils from 7 to 17 years old who come from Ipusukilo, Kawama, and Riverside. The nearest government school is located several kilometers away.

The school operates seven classes from preschool to grade seven. Each class has one teacher running daily three sessions of 60 children from 07h30 to 17h00. The school was registered in 1997 and receives some support from the Provincial Health and Education boards to purchase teaching material and to support teachers. Over the last year, it has received K2.6 million of public funds per term, and one teacher is paid by the government. As an incentive, the volunteer teachers receive ZMK70,000 per month (the teacher paid by government receives a regular salary of ZMK400,000.) The school also receives support from community members in cash and in-kind (such as food during harvests.)

The school is governed by a PTA, with 7 parents and 3 schools representatives. Teachers and school volunteers keep a list of orphans and vulnerable children (OVCs) in the community and bring them to school. Currently, over one fourth of the pupils are OVCs.

The main problem for children in the community is that many cannot go to school and yet have no skills to work and earn a living. They often work in or around the markets, selling or carrying goods. To support them, some schools run extra-curricular activities to teach them life skills, e.g., making door mats, crocheting, playing drama, or child-to-child education. They also run sports activities to keep the children off the streets.

3.75 Aside from the lack of access to basic education, there was concern in many informal urban settlements over the lack of adult literacy programs. It was noted in numerous discussions for the Urban Participatory Study that many young adults who grew up in the late 1980s and early 1990s had missed their basic education, partly because of the cost-sharing policy and of the shortage of school places. Thus, to ensure that these young adults acquire basic education, there is a widespread request for adult literacy programs.

**Table 3.21: Summary of Access to Essential Infrastructure & Services in Settlements Visited by the Urban Participatory Study**

City/Town Settlement	Basic Schools	Community Schools	Health Centers	Police Post	Post Office
<b>Lusaka</b>					
Chawama	4	50	1	1	1
Kalikiliki	None	None	None	None	None
Ng'ombe	1	Several	1	1	None
<b>Kasama</b>					
Chiba	1	Closed	None	1	None
Musenga	1	None	None	None	None
<b>Mufulira</b>					
Minambe	1	None	None	None	None

#### Social Protection

3.76 The Urban Participatory Study found that government social protection services function poorly due to lack of resources, despite the presence of many qualified and dedicated civil servants working to provide services to urban communities. Those public services that do operate are often dependent on project funds from outside sources such as international NGOs and churches. Dependency on external funding in general tends to result in a lack of clarity on their mandates and lines of accountability, especially as the roles of different government service providers often overlap. Programs which the study team perceived as successes include literacy and maternal health programs. CBOs run by local volunteers have in many places substituted for government programs.

## **4. GROWTH AND POVERTY IN ZAMBIA**

### **A. Introduction**

4.1 Growth is the foundation stone of poverty reduction efforts worldwide. A dynamic economy, growing strongly, is a powerful force for creating new and better employment opportunities for the poor, enabling empowerment, and reducing vulnerability. Experience from many countries shows that poverty falls in periods of rapid growth and stagnates in periods where growth is slow. Poverty in Zambia has risen as the economy has deteriorated, and stagnated throughout most of the 1990s. (CSO, 2004; McCulloch, Baulch, Cherel-Robson, 2000; Thurlow and Wobst, 2004) Although Zambia has registered positive rates of growth in recent years, the poverty impacts have yet to be demonstrated.

4.2 Achieving faster growth will require greater diversification in production, achieving international competitiveness in export sectors, and overall improvements in the environment for private sector led growth. While Zambia is rich in natural resources, much of its natural resource wealth remains largely underutilized. Infrastructure has deteriorated since the mid-1970s. At present, the high costs of transport, communications, and power make it difficult for Zambian farmers to compete internationally. In the early 1990s, the Government removed many of the protective policies and state-administered pricing structures that had long prevailed in the economy. Recent surveys rank Zambia's trade and exchange control regimes among the most open and liberal. However, the transition to a fully-market defined economy is by no means complete. Zambia is rated poorly compared to other African countries on the effectiveness of its legal system and the quality of public administration more generally. The country continues to experience periods of macro instability, high levels of inflation, high interest rates, and exchange rate volatility, which impede economic growth.

4.3 The chapter begins with a discussion of the recent growth history of the country, followed by a short section on the business environment in Zambia, with reference to comparator countries in Africa as well as other regions. The remainder of the chapter focuses on opportunities and constraints to rural growth, and in particular growth in the agriculture sector, which is often touted as Zambia's future 'engine of growth'. It is a critically important sector for the rural poor in Zambia. The chapter concludes with a discussion of the growth and poverty reduction prospects over the next decade, based on simulations from an econometric model developed for the World Bank's most recent Country Economic Memorandum (CEM). The model was calibrated using data from 1991-1998, which limits predictive accuracy; efforts are underway to update the model to 2005.

## **B. Economic Performance from Independence to 1991**

4.4 Zambia has long been a nation with immense untapped potential. It has large mineral and agricultural resources that have not been fully utilized. Less than half the nation's 23 million hectares of potential arable land is used for agriculture, and its substantial water resources are largely unused. The country also has vast mineral resources, particularly for copper and cobalt, but years of neglect of investment in the country's mining infrastructure combined with a long-term decline in the price of copper have reduced the viability of the mining sector.

4.5 During the eight years immediately following independence in 1964, real output grew at an average rate of 4 percent. High copper prices sustained both high levels of domestic capital investment and a rapid expansion of schooling. The government pursued largely market-oriented economic policies during this period.

4.6 Starting in the mid-1970s, the country switched to an economy characterized by state control. The government created a large number of parastatal companies in manufacturing, mining, agriculture, and services. It also maintained an overvalued exchange rate to promote import substitution industrialization and protected local producers with a high tariff regime. In rural areas, the government established a guaranteed national purchase price for maize and provided highly subsidized agricultural inputs. The expansion of government spending coincided with a plunge in the international price of copper. As a consequence, the government had to dramatically increase its foreign borrowing. Starting after 1976, the country experienced two decades of an almost continuous decline in income per capita.

4.7 During the 1980s, as the price of copper continued to fall, the capital stock declined and the economy continued to contract. The government made multiple aborted attempts to pursue structural adjustment policies, and its international debt mounted.

## **C. The Reform Decade: Zambia 1991 to 2005**

4.8 In 1991 the Movement for Multi-Party Democracy won elections in Zambia with promises of political and economic reforms. Over the course of the following decade the government liberalized the economy, in a break with the state-heavy policies of the nation's recent past. Trade reforms were adopted which removed quantity restrictions and simplified the tariff regime, exchange rates and interest rates were liberalized, the government greatly reduced its role in the agricultural sector, and many parastatal enterprises were privatized.

4.9 Although initial gains were impressive – including a substantial albeit short-lived reduction in inflation, rapid take-off in non-traditional exports, and some progress towards a more diversified pattern of agriculture production – these gains were not sustained. Real GDP fell by an average 0.2 percent per year between 1991 and 1998, with major contractions taking place in 1994 and 1995 following drought and the end to most government subsidies for agriculture. The decline in the economy over the period was traceable in part to drops in agriculture and in greater measure to the shrinking of the mining sector, which contracted at an average annual rate of 8.7 percent over the period. The industrial sector was stagnant, and the service sector, which expanded at a rate of 2.7 percent, was the only substantial source of growth during the period. Total factor productivity—the efficiency with which capital and labor are combined to produce output—declined at an average annual rate of 1.9 percent a year during 1991–98, suggesting that the reform process which moved Zambia towards a market-based economy was by no means smooth and costless.



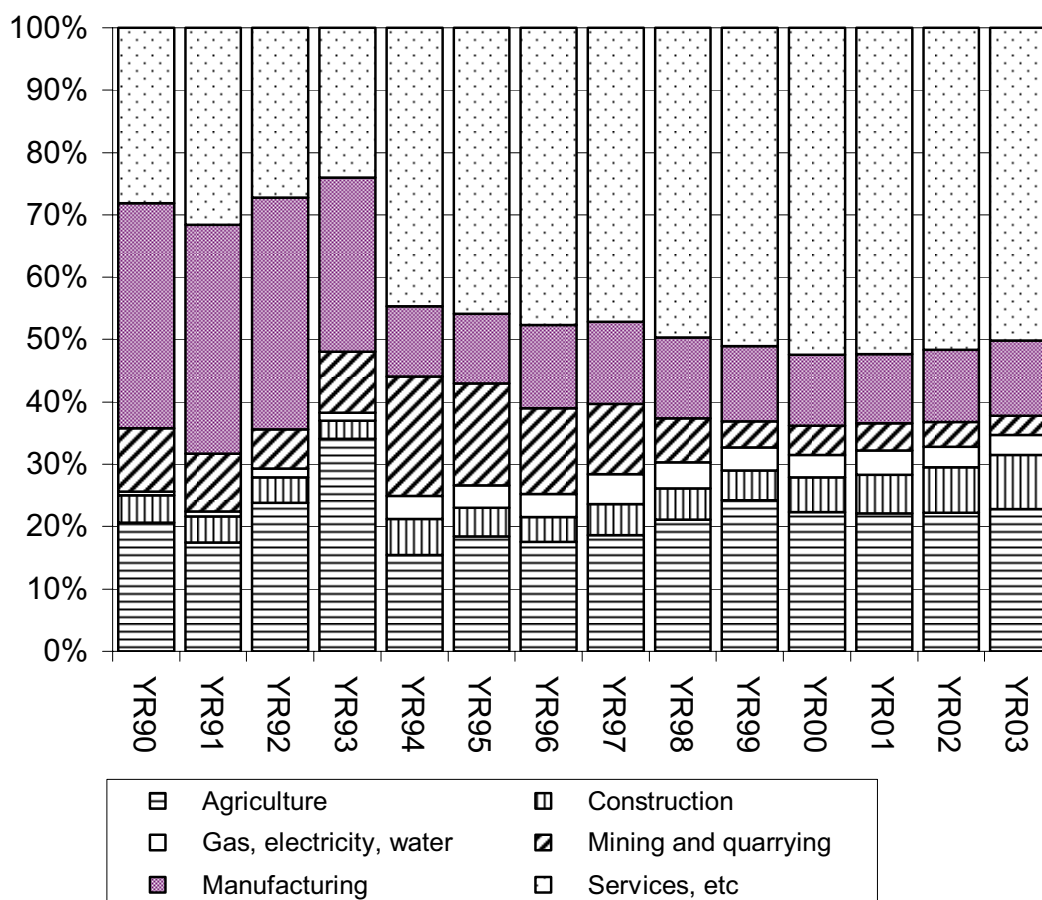
4.10 During the period 1991-98 poverty increased, particularly in urban areas, as employment fell in the parastatal sector. In addition, HIV/AIDS clearly hurt urban poor, likely lowering the productivity of the labor force. The rural areas experienced a different development as agricultural liberalization provided incentives for small holders to diversify away from maize. Economic liberalization, including liberalization of the exchange rate, facilitated foreign direct investment inflows in agriculture, which stimulated increases in cash crops.

4.11 The Zambian economy witnessed a reversal of fortunes beginning in 1999, registering a sustained period of consistent growth in GDP per capita. Growth was broad-based, encompassing industry, services, and agriculture. Two-thirds of the total growth over 1999-2002 was attributable to growth in services. Agriculture, often plagued by the impact of frequent droughts and a focus on subsistence farming, continued to be a stable source of growth, though at rates far too low to have a major affect on poverty. Real GDP grew at an average rate of 3.8 percent, and growth continued in 2003 and 2004. This represents the longest period of continuous growth in output per capita since independence, accompanied by a substantial change in the structure of the economy.

**Table 4.1 Sources of Growth by Sector, 1965-2002**

	Average growth rate (percent)				Contribution to growth (percent)			
	1965- 2002	1991- 2002	1991- 98	1999- 2002	1965- 2002	1991- 2002	1991- 98	1999- 2002
GDP (at factor cost)	1.4	1.1	-0.2	3.8	1.4	1.10	-0.20	3.80
Agriculture, forestry, fishing	1.9	1.3	1.2	1.3	0.2	-0.14	-0.26	0.23
Mining and quarrying	-3.2	-5.1	-8.7	2.1	-0.7	-0.74	-0.89	0.00
Industry	3.3	1.8	0.0	5.2	0.7	0.26	-0.10	1.04
Manufacturing	4.0	2.0	0.9	4.1	0.5	0.14	-0.01	0.46
Gas, electricity, water	9.1	2.5	1.0	5.4	0.2	0.07	0.02	0.17
Construction	-1.0	-0.7	-4.8	7.5	0.0	0.05	-0.11	0.40
Services	3.0	3.3	2.7	4.6	1.2	1.73	1.06	2.53

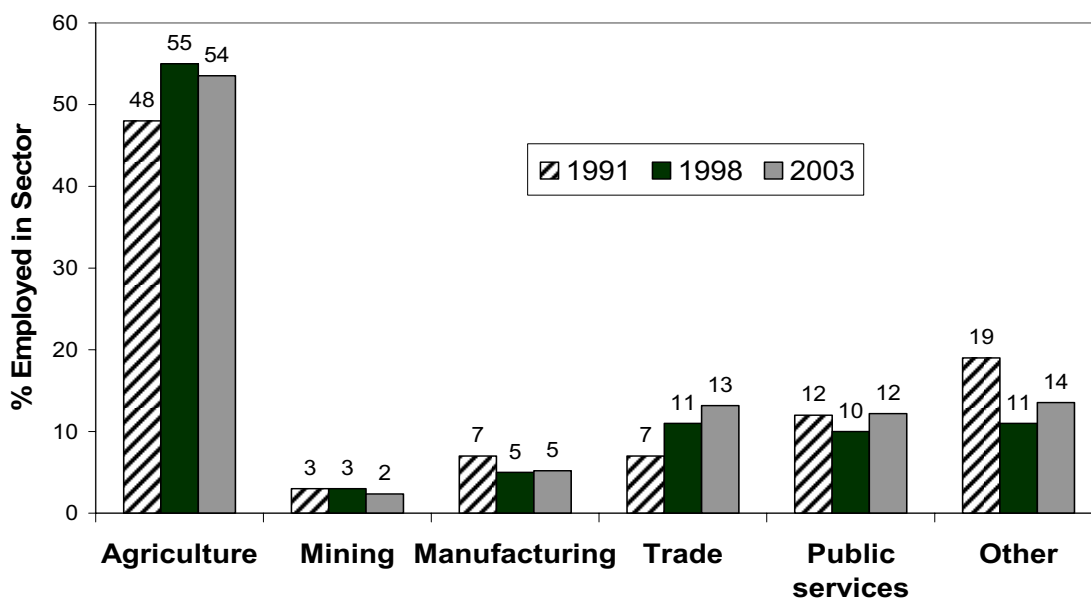
Source: World Bank (2004) (CEM)

**Figure 4.1 Sectoral Contributions to GDP at factor cost (current prices)**

4.12 Changes in the Zambian economy can also be understood by examining the changing makeup of employment since 1991.<sup>37</sup> Figure 4.2 and Figure 4.3 show employment by industry and type of employer in 1991, 1998, and 2003. The impact of the privatization program and cutbacks in government that took place between 1991 and 1998 are reflected in the plunge in employment with government and parastatals. Small growth in private sector employment took place, and the ranks of the self-employed grew substantially. In terms of industry, there were employment drops in manufacturing, public services, and the “other” category, which includes sectors previously dominated by parastatals. The relative share of agriculture as a source of employment increased.

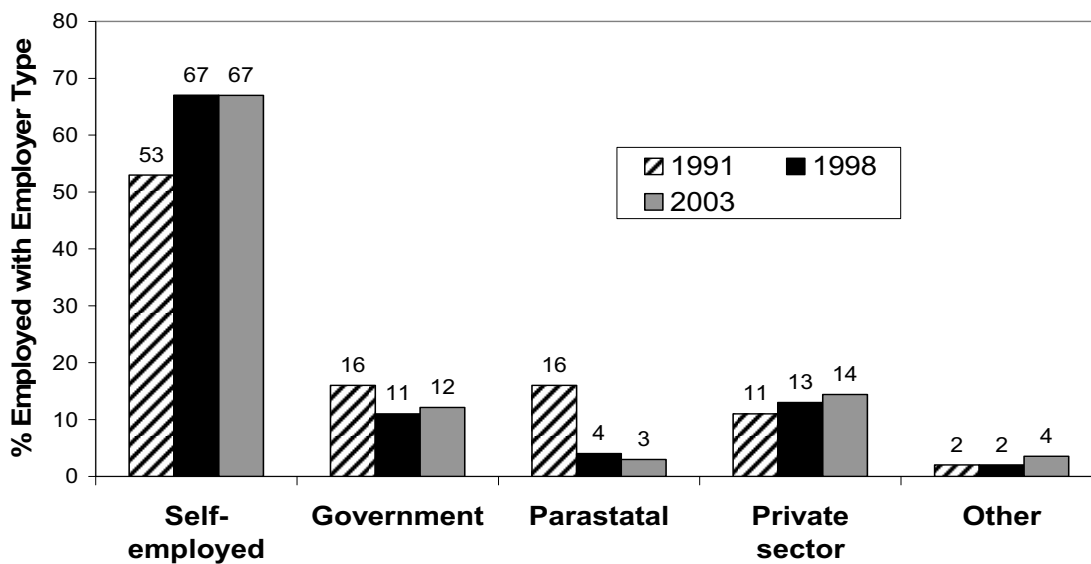
<sup>37</sup> Employment figures in this report are drawn from two sets of sources: the 1990 and 2000 censuses and 1991, 1998, and 2002-03 household surveys. Census data provides the best information as it is comprehensive and the most comparable over time. Consequently, census data is used for the urban poverty profile in Chapter 2 and the rural growth discussion later in this chapter. For the finer discussion presented here of trends over different periods since 1990, the household survey data are used.

**Figure 4.2 Employment by Industry: 1991, 1998, 2003**



Source: Lofgren, Thurlow, and Robinson (2004) for 1991 and 1998 (based on the 1991 Priority Survey and the 1998 LCMS) and Bank staff analysis of the 2002-03 LCMS.  
 Note: Other sectors include energy, construction, transport, communications, hotels and tourism, and private services.

**Figure 4.3 Employment by Type of Employer: 1991, 1998, 2003**



Source: Lofgren, Thurlow, and Robinson (2004) for 1991 and 1998 (based on the 1991 Priority Survey and the 1998 LCMS) and Bank staff analysis of the 2002-03 LCMS

4.13 No major shifts in employment patterns by industry or type of employer took place between 1998 and 2003. Most notably, no statistically significant change took place in the fraction employed in the private sector. This suggests that the growth that has taken place in recent years has not yet translated into widespread private sector opportunities available to the bulk of Zambians. In 1991, before the reforms had taken place, just over half of Zambian workers were self-employed. In both 1998 and 2003, two-thirds were self-employed. In both years, two-thirds of workers reported themselves to be self-employed.

4.14 The self-employed are a diverse group, and it is difficult to measure and gauge the scope of their activities. The self-employed are overwhelmingly farmers (76 percent), as can be seen in Table 4.2, which shows employment in 2003 broken down by both industry and type of employer. The ranks of the self-employed grew in agriculture, manufacturing, and particularly trade. In 1991, the employed in the trade sector accounted for just 5 percent of all workers. By 2003, this fraction had more than doubled; more than 1 in 10 of all workers are now self-employed in the trade sector. This extremely rapid growth is compatible with findings in the Urban Participatory Study that there has been a proliferation of work in small-scale informal activities.

**Table 4.2 Employment by Industry and Type of Employer, 2003**

Industry	Self-employed	Government	Parastatal	Private sector	Other	Total
<i>Across industries</i>						
Agriculture	76	6	1	13	10	54
Mining	0	0	27	9	0	2
Manufacturing	3	2	15	15	2	5
Trade	16	1	2	16	5	13
Public services	1	79	7	10	9	12
Other	4	12	47	37	75	14
All sectors	100	100	100	100	100	100
<i>Within industries</i>						
Agriculture	95	1	0	3	1	100
Mining	11	2	34	53	0	100
Manufacturing	44	4	9	42	1	100
Trade	79	1	0	18	1	100
Public services	5	79	2	12	3	100
Other	20	10	10	39	19	100
All sectors	67	12	3	14	4	100

Source: Bank staff analysis of 2002-03 LCMS.

4.15 Reconciling national accounts data with employment information is typically a challenge in any country. In Zambia as elsewhere, the sectors in the national accounts data do not match up cleanly with particular employment sectors. For Zambia, it is particularly unclear if the recent growth in services in the national accounts appears in employment patterns. In general, growth in a particular sector must translate into increased employment, higher wages, greater returns to capital, or some combination of the three. The slight lift in the employment share in the trade sector, from 11 percent in 1998 to 13 percent in 2003 provides some hint of increased employment in services, but not enough to account for the 4.6 percent annual growth rate for

services shown in the national accounts. The nature of recent growth in Zambia remains not fully understood and a topic for future analysis.

#### **D. Improving the Environment for Private Sector-led Growth**

4.16 Despite its breadth of reforms, Zambia still confronts significant challenges in improving the overall environment for private sector-led growth. Indirect costs are high and Zambian firms are less productive on average than firms in many other countries in Africa. (Collier and Gunning, 1997; Eifert, Gelb, Ramachandran, 2005) Productivity improvements are essential if Zambia is to raise employment levels and incomes, and thereby accelerate economic growth and reduce poverty.

##### **Box 4.1: Why is the Business Environment Important for Growth?**

“The *business environment* is the nexus of policies, institutions, physical infrastructure, human resources and geographic features which influence the efficiency with which different firms and industries operate. At the firm level, the business environment directly influences costs of production; at the industry level it often relates market structure and competition. These effects are felt more heavily in traded sectors which are not particularly intensive in natural resources (i.e. manufacturing, high-value services) than in primary production and extractive resource sectors because the former tend to more intensively require “inputs” of logistics, infrastructure and regulation (Collier, 2000). For example, the combination of macroeconomic instability, crime and poor security, a weak and politicized financial system, shoddy local roads and electricity systems, high transport costs, and predatory local officials will have relatively little influence on costs and productivity of offshore oil industries, but will be devastating for small and medium-scale manufacturing. Even efficient firms with low “factory-floor” costs can be driven out of business by the increase in indirect costs occasioned by a poor business environment.”

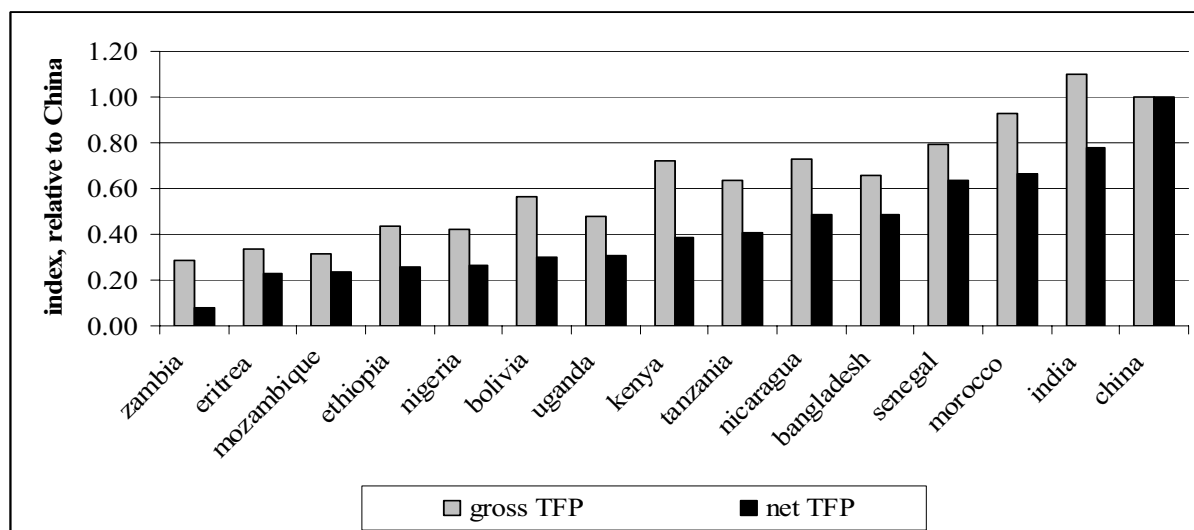
Source: Executive Summary, Eifert, Gelb, Ramachandran, 2005.

4.17 A recent multi-country study<sup>38</sup> of the business environment and comparative advantage in Africa, based on a number of country-level firm surveys done for the World Bank’s Investment Climate Assessments (ICAs), confirmed a pattern of generally low productivity throughout countries in Africa, and identified the importance of high indirect costs and business-environment-related losses in reducing the productivity of African firms in comparison to firms operating in other countries. According to Zambia’s own ICA firm survey, median profits and returns to capital were sharply negative, also among the lowest among ICA countries in Africa. Using China as a comparator, firms in Zambia were found to have low levels of gross Total Factor Productivity (TFP), and even lower levels of “net” TFP (defined as gross TFP minus indirect costs). (Figure 4.4) This is due to high indirect costs as well as substantially lower (factory floor) productivity and high labor costs. As a group, TFP estimates for firms covered under the ICA study in Zambia were among the lowest for countries included in the study, and the impact of indirect costs among the highest. (Figure 4.5)

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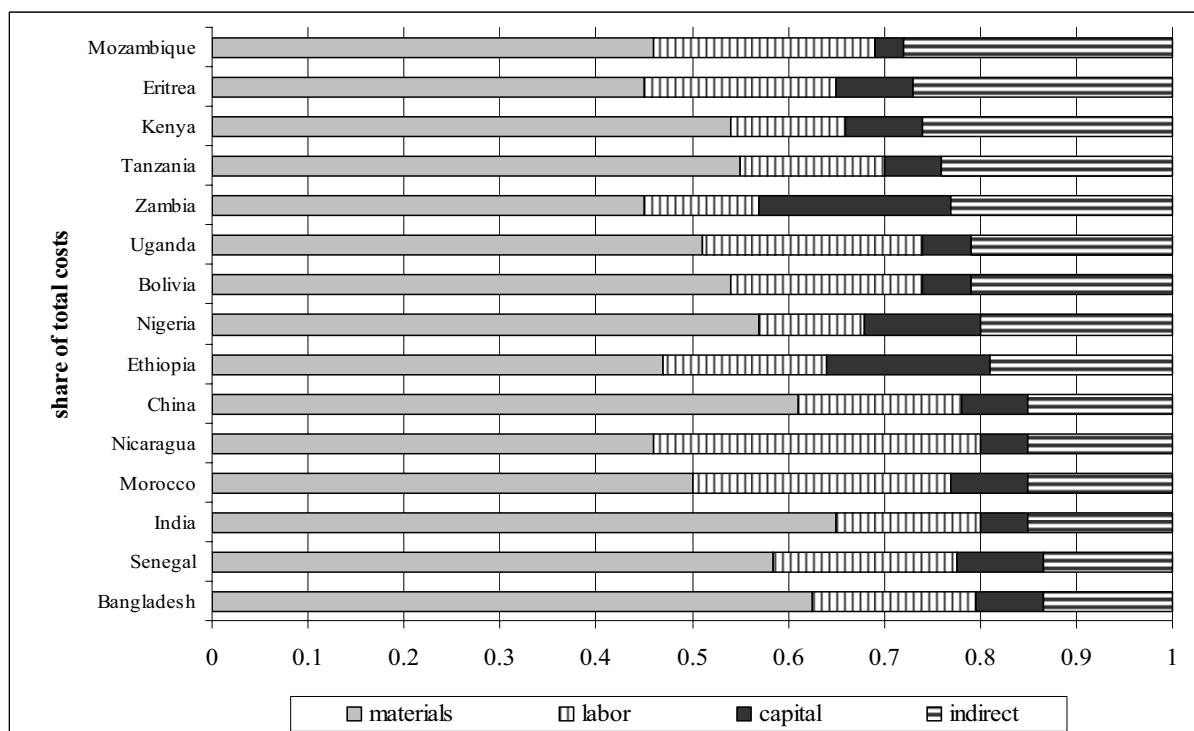
<sup>38</sup> In addition to Zambia, the study covered firms in Eritrea, Ethiopia, Nigeria, Kenya, Mozambique, Senegal, Tanzania, Uganda, Bolivia, Nicaragua, Bangladesh, India, China, and Morocco. (Eifert, Gelb, Ramachandran, 2005)

**Figure 4.4 Net and Gross Total Factor Productivity (TFP) by Country (in comparison to Chinese firms)**



Source: Table 3.5, Eifert, Gelb, Ramachandran

**Figure 4.5 Cost Structure: Firm-level Averages by Country (Percent of Total Costs)**



Source: Table 3.3, Eifert, Gelb, Ramachandran, 2005.

**Table 4.3 Median Inspection Days by Firm Size**

Country	<i>Inspection days, median</i>		
	<i>Micro</i>	<i>Small / Medium</i>	<i>Large / Very Large</i>
Bangladesh	6.5	10	12
China			
Eritrea	7	4	4
Ethiopia	3	7	6
India	3	7	12
Kenya	11	16	17
Morocco	0	1	3
Mozambique	3	3	3
Nicaragua	4	15	32
Senegal	9	13	13
Tanzania	12	32	62
Uganda	2	5	17
Zambia	52	64	75

Source: Eifert, Gelb, Ramachandran, 2005.

4.18 Governance and corruption constitute one of the most important constraints to business development and to competitiveness in many emerging economies. In this regard, Zambia is no exception: Table 4.3, also drawn from the cross-country study of the business environment and comparative advantage, highlights the heavy burden that regulatory oversight poses for Zambian firms (measured in median inspection days) in comparison to firms in other countries. However, the issue should not be posed in terms of too much or too little regulation, but rather in terms of the right kinds of regulation and how well these are actually implemented. There is a current controversy in Zambia concerning the privatization of the mines and the associated sharp deterioration in miners' earnings, conditions of service, and occupational safety. There has been a spate of accidents in the mines that popular opinion attributes to the negligence of foreign investors. While the link may not be entirely justified, it does highlight the importance of adequate and effective regulatory mechanisms as a part of the privatization process.

4.19 In a recent ICA survey, Zambian firms expressed concerns (in order of importance) about access to finance as well as the high cost of finance, macro instability, high tax rates and poor administration, uncertainty in regulatory policies and weak and inconsistent implementation of existing policies, widespread crime and corruption that increases the cost of doing business, and inadequate and costly infrastructure services. Interviews with individuals and firms in the urban informal economy highlighted the impact of over-regulation and restrictive government controls. The informal economy could be strengthened by allowing the many entrepreneurs in Zambia's cities and towns to operate and develop their informal activities, e.g. by removing restrictions against street peddling and providing more affordable space and services in markets for informal vendors and artisans. While the Government has moved some way in removing regulations that curb economic activity and investments, there is a substantial unfinished agenda. And while good laws and measures have been passed or enacted, the main challenge ahead is to ensure effective implementation in practice.

## E. The Challenges of Rural Development

4.20 Zambia's rural areas are home to a majority of Zambia's poor, who live almost entirely on smallholder farms. Any program to reduce poverty in Zambia must include a leading role for rural growth, with a substantial focus on smallholder agriculture. This section provides an overview of rural growth and its potential relationship to poverty reduction in Zambia.

### Overview of Rural Growth Issues

4.21 Major market-based policy reforms affecting the rural sector were carried out in the 1990s. The state institutions that marketed and distributed agricultural inputs and outputs were dismantled, producer subsidies were greatly reduced, trade was liberalized, and market-determined prices were introduced. It was hoped that these policy shifts would benefit producers of all sizes. The evidence suggests that while the reforms have opened up opportunities for large-scale producers and those smallholders with market access, many rural Zambians have not benefited from the reforms.

4.22 Following the reforms, agriculture's dominance in the rural economy increased. Agriculture accounted for 22 percent of GDP in 2000, up from 20 percent of GDP in 1990. As a share of rural employment, agriculture grew from 88.2 percent in 1990 to 93.5 percent at the end of the decade. Agriculture's growing role accompanied the relative decline in public sector employment in health and welfare services. (Table 4.4)

**Table 4.4 What do Rural Workers Do?**  
Industry of Working Individuals, Rural Areas

	Men and Women		Men Only		Women Only	
	1990	2000	1990	2000	1990	2000
Farming	88.2	93.5	85.8	91.5	92.1	95.5
Mining	0.5	0.2	0.8	0.3	0.0	0.0
Manufacturing	1.9	1.0	2.2	1.1	1.3	0.9
Electricity, Gas, Water	0.2	0.1	0.2	0.1	0.0	0.0
Construction	1.0	0.5	1.5	1.0	0.1	0.0
Trade	1.1	1.9	1.1	2.0	1.2	1.9
Transport & Communication	0.7	0.3	1.2	0.5	0.0	0.0
Finance	0.6	0.2	0.6	0.2	0.6	0.1
Health & Welfare	5.9	2.4	6.6	3.2	4.7	1.6
	100	100	100	100	100	100

Source: LCMS III

4.23 For the typical rural household in all quintiles, more than half of income consists of consumption of the household's own production; the poorest households are slightly more dependent on own-production, while the wealthiest households have a slightly more diversified income portfolio.. Table 4.5 shows a breakdown of average shares of household income by



source. Rural households also receive income from crop sales, non-farm business, wage work, migrant remittances, and other sources<sup>39</sup>.

**Table 4.5 Where do Rural Households Get Their Income?  
Mean Shares of Household Income by Source, by Quintile**

	Quintile of National Distribution					
	All	Poorest 20%	2	3	4	Richest 20%
Food crop sales	6	7	6	6	6	5
Nonfood crop sales	2	1	2	3	2	2
Non-farm business	10	11	10	10	13	11
Livestock and other ag. income	2	2	2	3	2	3
Salary	6	3	5	6	7	11
Remittances	6	7	6	6	7	5
Pension	0	0	0	0	0	0
Nonagricultural rent	0	0	0	0	0	0
Other income	11	13	12	12	11	9
Consumption of own production	55	57	55	54	55	52

Source: LCMS III

4.24 Although Zambia's agricultural sector has significant untapped potential, it is characterized by structural problems and risks that constrain realization of this potential. This is especially true for the smallholder sector. Zambia's smallholders face unique constraints and the smallholder sector is significantly different from both the emerging commercial farm sector and the large scale commercial farming sector. The smallholder sector is characterized by a lack of market orientation, with production primarily rain-fed and geared toward own-consumption.

4.25 Zambian smallholders, however, are not a homogeneous and monolithic group. There are distinct differences in smallholder households' asset portfolios, income-generating potential, livelihood strategies and welfare outcomes that need to be taken into account. A significant proportion of smallholders have not been able to take advantage of market opportunities.

4.26 Geography is one key factor differentiating opportunities among smallholders. Zambia can be divided into three agro-ecological zones. The three zones vary significantly in terms of rainfall, terrain and soil quality, as well as in the degree of urbanization and investment each has experienced. The borders of the agro-ecological zones are shown in Figure 2.1.

**Zone 1** is low-altitude, and accordingly low-rainfall and high-temperature. It lies in the southern portion of Zambia. It primarily borders Zimbabwe and is one of Zambia's hottest, driest and poorest region. It includes the valleys of the Zambezi and Luangwa rivers, where soils are sandy and fertility is poor. Zone 1 also includes a major game management area, where farming households attempt to coexist with wildlife. It is

<sup>39</sup> Although it is difficult to quantify, a substantial amount of rural income is generated from illicit activities such as game meat harvesting, illegal fishing, smuggling to and from the eight neighbouring countries, gemstone mining and dealing, and timber harvesting. The unlicensed brewing and selling of beer and hard liquor is a common and important temporary expedient for families that have fallen on hard times or who need to generate cash quickly. These activities are locally regarded as "traditional" rather than illegal. Income from these sources may not be fully reflected in LCMS III tabulations.

suitable for game animals e.g. tourism, hunting, also for cattle and goat raising in game depleted areas. Sorghum is grown (for beer), sunflowers and cowpeas are cultivated, and there is a little recessional winter cultivation of maize and vegetables. The zone is generally not viable for arable agriculture, and maize is only grown where subsidized inputs are provided (and relief food is available in times of need) The fishing industry has drawn many to the area. Mats and baskets are made from reeds and sold to middlemen who visit the area for this purpose.

**Zone 2** comprises a belt running east-west through the center of the country. It is an area with relatively good soils and receives more rainfall than Zone 1. It is a more successful agricultural region, and includes the capital city, Lusaka. It has received more intensive assistance from government, NGOs and donor organizations than other regions of the country. Although maize is the staple crop, a wide variety of other crops is grown in Zone 2, including beans, groundnuts, sorghum, cassava, millet, sweet potato, sunflower, cotton, rice, tobacco, paprika, vegetables (such as tomatoes and onions) and fruits (bananas, citrus fruits and guavas).

**Zone 3** is a high-rainfall area in the north of the country. It includes the mines of the Copperbelt area, which is relatively urbanized and was once a source of prosperity for the nation. Zone 3 contains major river systems, such as the Luapula and Mansa rivers, as well as numerous lakes. Livestock is not viable in Zone 3 (due to animal disease and parasites), and the soils tend to be sandy, acid, and leached by the rain – a situation that *chitemene* slash-and-burn practices are well-adapted to. The use of chemical fertilizers is not sustainable because it accentuates the acidity of the soil (unless used in combination with lime, which is not common in Zambia). The major crops produced are cassava, groundnuts, millets, sorghum, some maize, beans and sweet potatoes; small-scale fishing and fish-trading are also sources of income.



**Table 4.6 Crops by Quintile, Rural Households  
Percentages of Households Growing Each Crop**

	Quintile of National Distribution					
	All	Poorest 20%	2	3	4	Richest 20%
<i>At least one food crop</i>	93	94	96	95	92	89
Local maize	59	54	63	62	62	54
Hybrid maize	19	11	15	19	21	28
Cassava	38	50	45	39	33	28
Millet	16	24	20	16	12	11
Rice	5	4	4	3	6	6
Mixed beans	16	18	18	16	15	12
Soya beans	2	2	3	3	2	2
Sweet potatoes	30	30	33	32	29	26
Irish potatoes	2	2	2	1	2	2
Groundnuts	40	40	44	45	38	32
Sorghum	8	7	9	6	8	8
<i>At least one non-food crop</i>	13	9	14	16	15	13
Cotton	9	6	7	10	10	9
Tobacco	1	0	2	2	1	1
Sunflower	5	3	6	5	5	4
Paprika	0	0	0	0	0	1
Flowers	0	0	0	0	0	0

1

## Maize

4.28 Maize is the basic staple for most Zambians. Most rural households grow maize, and many sell maize surpluses. At least 25 percent of smallholder households are net consumers of maize during good years, while two-thirds are net consumers in poor years (Saasa et al, 1999). Smallholders produce two-thirds of Zambia's maize output, and most maize (in Zambia as well as other countries) is rain-fed. Consequently, maize yields are highly sensitive to rainfall.

4.29 Maize's dominance has its roots in history. It achieved dominance in pre-independence Zambia because white settler farmers knew the crop, the food processors knew how to mill and store it, and the mines (which themselves subsidized maize) used it to feed the mineworkers. Its continuing dominance is linked to historical government support for the crop, as well as its low labor-intensity and responsiveness to chemical fertilizers. The post-independence government subsidized maize to feed urban residents and mine workers, and to integrate farmers in outlying areas into the national economy. Previous to the reforms of the early 1990s, the Zambian government provided subsidized agricultural inputs, guaranteed a national price for maize, provided transport subsidies for maize, and offered subsidized credit for agriculture. Substantial yield increases were achieved in the early 1960s as a result of Green Revolution technologies; high yielding hybrid maize turned out to be an excellent large-scale, mechanized crop, although poorly suited to "labor only" small-holder technology. Despite this, various incentives and subsidies were offered to encourage smallholders to grow maize at the expense of other crops. Added to this was a demand from urban workers that food prices should not rise above the low levels initially brought about by Green Revolution technology. The end result was a hemorrhage of subsidies, reaching 17 percent of the total government budget in the late 1980s (Goward and

Mungoma, 1996). Since the reforms, the government has continued to intervene in maize markets occasionally but on a much reduced scale.

4.30 The partial withdrawal of maize subsidies has spurred diversity in crop production. Maize currently occupies approximately 50 percent of Zambia's cropped area, down from about 70 percent at its peak in the mid-1980s. (MAFF, 2000; Howard and Mungoma, 1996). The decline in maize area has been most substantial in agro-ecological Zones 1 and 3, where the returns to maize cultivation are lowest, and the impact of state subsidies was the greatest. In Southern and Western provinces, smallholders have shifted from maize to sorghum, millet, cassava, and groundnuts. In Eastern province, farmers have shifted to cotton and groundnuts.

4.31 Despite this increased diversification, maize continues to be the overwhelmingly dominant crop in rural Zambia, and in the Rural Participatory Study, a majority of villagers expressed a firm dedication to continuing in smallholder maize cultivation. The Rural Participatory Study identified three reasons that smallholders continue to produce primarily maize. First, consumption of maize is culturally engrained for Zambians. Even households that have shifted to other staples would still prefer to cultivate maize, which is thought to be more palatable, more nutritious, and easier to process than alternatives. Rural Zambians feel that no meal is complete without maize. Second, they do not have knowledge about how to grow other crops, and such information is not easily available.

4.32 A third reason for smallholders' attachment to maize is that switching to new crops involves risk. Because the Zambian smallholders typically have very limited means of insuring themselves, they are reluctant to adopt new strategies. In planting new crops, they face uncertainty not only in their ability to successfully master the techniques required for the crop, but also in finding markets and in facing market price fluctuation. These uncertainties undermine the willingness of small cultivators to invest in crops that cannot be stored and eaten if unsold. Overall, the flexibility of maize, combined with continuing albeit uneven Government and NGO support, makes it a safer choice to the risk-averse poor. It is a subsistence crop, a cash crop, and a safety net. Although maize is produced primarily for consumption by the household, any surplus can be sold as a cash crop or, if an acceptable market price is not found, it can be stored and consumed during lean periods. Maize produces good quantities of fodder for livestock and can be eaten early (green) in the season if alternative food is not available. Other crops offer fewer of these advantages. Markets for sorghum, cassava and millet are smaller and unpredictable, and perishable market garden vegetables must be disposed of immediately even if the going price is ruinous. Moreover there are strong and continuing political pressures to continue to provide subsidies to maize producers.

4.33 Continued reliance on maize does not, however, protect households from risk. Maize yields are sensitive to rainfall, and consequently households that grow only maize suffer during periodic droughts. Yields are also sensitive to the use of chemical fertilizers; fertilizer supply is highly unpredictable and prices volatile. Additionally, continued haphazard intervention by the government in maize purchasing enhances speculation and uncertainty in maize prices. While the option to consume their own maize production does provide some insurance against low prices, households that produce only maize are still highly vulnerable to both price and weather shocks.

### **Food Crops Other than Maize**

4.34 While maize has been in decline, the area devoted to growing millets, groundnuts, sorghum, sweet potatoes, and cassava has been increasing (Government of Zambia, 2000.) In the Rural Participatory Study, many Zone 3 farmers reported that they have reduced or abandoned

maize cultivation in favor of cassava and millet, and some cultivators in Zone 1 have ceased producing maize in favor of sorghum. Cassava does not require fertilizer, it is a traditional crop in Zone 3, and although difficult to process is easy to grow in this ecological zone. Sorghum is drought-resistant and hence more appropriate to Zone 1, a low rainfall area. A number of Zone 2 and 3 farming households have also begun to intensify their investment in horticulture. This was said to have improved the nutrition and food security of those households, as well as providing cash income if markets can be found for the fruits and vegetables they produce.

4.35 Some of these food crops also produce cash returns for some smallholders. Groundnuts, in particular, are sold by 16 percent of all rural households, and a third of those in Eastern province. There is an active market for cassava in Luapula and Northern provinces, and Northwestern province to a lesser extent. All three provinces are located in Zone 3. In Luapula province, 30 percent of households sell at least some cassava. (Table 4.7) Cassava, groundnuts, and millet were identified by one study as crops that are more profitable than maize and considerably less costly to produce (Saasa, 1999). As with maize, the fact that they can be eaten by the household allows the household to insure against the risk of a fall in price or difficulty in transporting product to market.

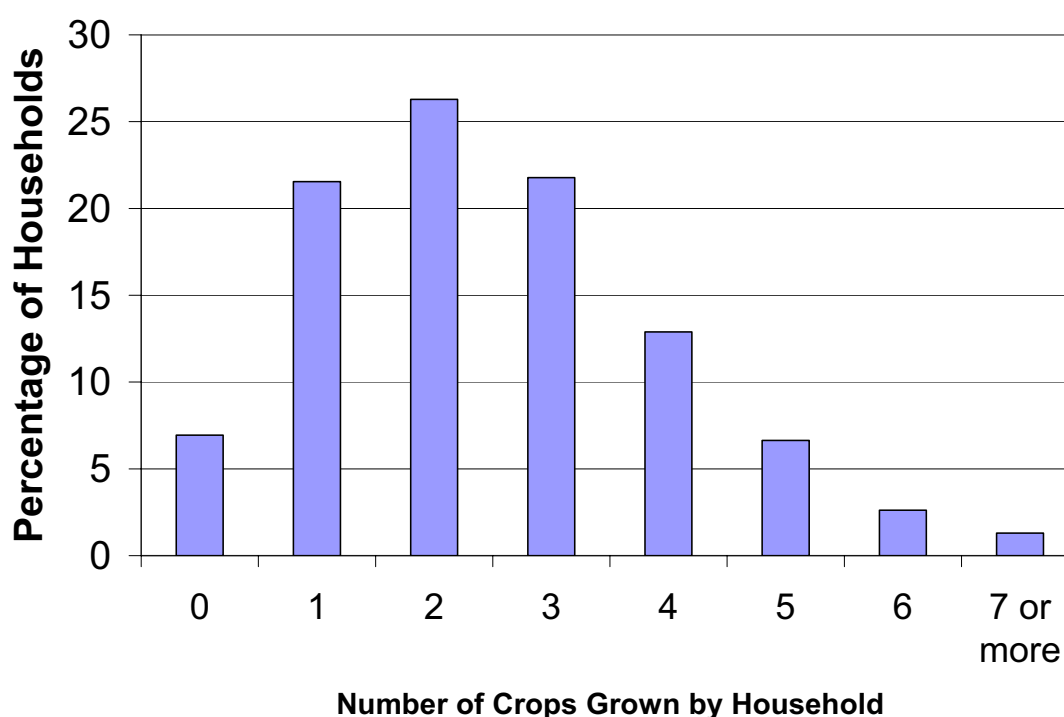
**Table 4.7 Crop Sales, Rural Households, by Province**

	Percentages of Households Selling Each Crop									
	All	Central	Copper-belt	Eastern	Luapula	Lusaka	Northern	Nwstern	Southern	Western
Local maize	15	17	21	18	10	9	16	30	6	11
Hybrid maize	6	17	6	6	3	15	3	3	8	3
Cassava	11	4	1	2	30	0	25	15	0	8
Millet	3	2	1	1	2	0	12	3	0	1
Rice	2	1	0	2	1	0	6	0	0	6
Mixed beans	7	1	0	4	3	1	22	16	0	3
Soya beans	1	3	0	2	0	0	2	0	0	1
Sweet potatoes	10	15	20	8	9	8	12	17	2	6
Irish potatoes	1	1	1	0	0	2	2	3	1	0
Groundnuts	16	9	4	32	23	4	23	12	3	3
Sorghum	1	1	0	0	0	0	1	3	0	1
Any food	45	47	40	50	51	30	64	54	16	31
Any crop	51	58	40	69	51	33	64	54	28	32

Source: 2002-03 LCMS III

4.36 The increased diversification in food crops is a largely positive development. A more diverse portfolio of crops for the country reduces the impact of price and weather shocks for the country as a whole. Likewise, when a household grows more than one crop, it is insured against shocks that affect just one crop. A mixed strategy of growing both maize and other crops is optimal for most households because it allows them to experience maize's advantages (flexibility, satisfaction of tastes) while reducing risk.

Figure 4.7 Number of Crops Grown by Household



Source: 2002-03 LCMS

### Cotton

4.37 Cotton has been a success story for post-reform rural Zambia. Cotton is the one non-food crop grown by a large number of smallholders. In 2002-03, 114,000 households (9 percent of all rural households) were growing cotton, approximately triple the number in the early 1990s. There is evidence that cotton has boosted the incomes of many smallholders without threatening food security. Unlike maize, cotton is highly labor intensive. In comparison to commercial growers, Zambian villagers have a relative abundance of free family labor, which gives them a comparative advantage in cotton cultivation.

4.38 Like the rest of the agricultural sector, the cotton industry was entirely a government-run operation until the reform period. The state-owned cotton company, LINTCO, provided inputs and extension services and then bought cotton from farmers at a fixed price. Lonrho(UK) also provided some services, albeit under a regulatory framework developed by LINTCO. Following the sale of the LINTCO to Lonrho(U.K.) (sold to Dunavant in 2000) and Clark Cotton (South Africa) in 1995, cotton production has been reorganized along the lines of “outgrower” schemes, by which cotton companies provide agricultural inputs on credit which are then repaid when harvested cotton is sold to the company’s agent. (Tschirley, Zulu and Shaffer, 2004)

4.39 The lack of contract enforcement mechanisms in rural Zambia has killed many outgrower initiatives, but cotton has tended to be protected because it is a low value crop in its raw unginned form as seed cotton, and thus costly to transport. The industry did face difficulties in 1997 when credit recovery rates plummeted. In that year, several new ginneries opened and competed for the

cotton crop with the firms that had provided inputs on credit. Many farmers sold to the new entrants rather than the firms that had provided them credit, defaulting on their loans. The viability of the entire outgrower scheme was threatened, as firms were not willing to provide inputs on credit without reasonable certainty that loans will be repaid. As a result, the cotton firms developed the “distributor” system by which independent agents are responsible for providing the inputs and recovering their value later on, with the agents’ earnings determined as a function of their success in recovering the value of inputs. Under the distributor system in recent years, both credit repayment rates and cotton yields have risen markedly.

4.40 Households that grow cotton are on average more prosperous than households that do not. One study compared cotton-growing households to non-cotton growing households in Zambia (Tschirley et al, 2004). In order to ensure that the two groups of households are roughly comparable in the opportunities they have to grow cotton, the non-cotton growing households used for the comparison are limited to those in cotton-growing areas. Table 2.5 shows a comparison of households that grew cotton with those that did not grow cotton during the 1999-00 growing season. Cotton-growing households are on average just 10 percent larger than non-cotton growing households but have incomes that are 51 percent higher. They are also more likely to own a bicycle and a radio. Importantly, cotton growing does not come at the expense of maize production. Average per capita maize production and land cropped in maize are essentially identical for cotton and non-cotton growing households. Another study that uses more sophisticated matching techniques to estimate a causal effect of growing cotton in Zambia also finds large gains, estimated at 24-68 percent of household expenditure. (Balat and Porto 2004)

**Table 4.8 Cotton Growing vs. Non-cotton Growing Households**

	Cotton	Non-Cotton
<u>Demographics</u>		
Mean household size	6.6	6.0
Mean # adults age 13-64	3.6	3.2
Mean education of household head	5.2	4.8
<u>Agriculture</u>		
Mean land cropped (ha)	2.7	1.6
... for maize (ha)	1.2	1.2
... for cotton (ha)	0.6	0
Mean per capita maize production (kg)	359	368
<u>Assets/HH Chars (% owning)</u>		
Bicycle	65.5	44.3
Radio	50	31.1
Improved Roof	13.5	13.1
Brick or Concrete Walls	16.2	18.6
Cement floor	13.9	14.8
Mean HH Income (‘000 Kwacha)	2016	1339

Source: Balat and Porto, 2004

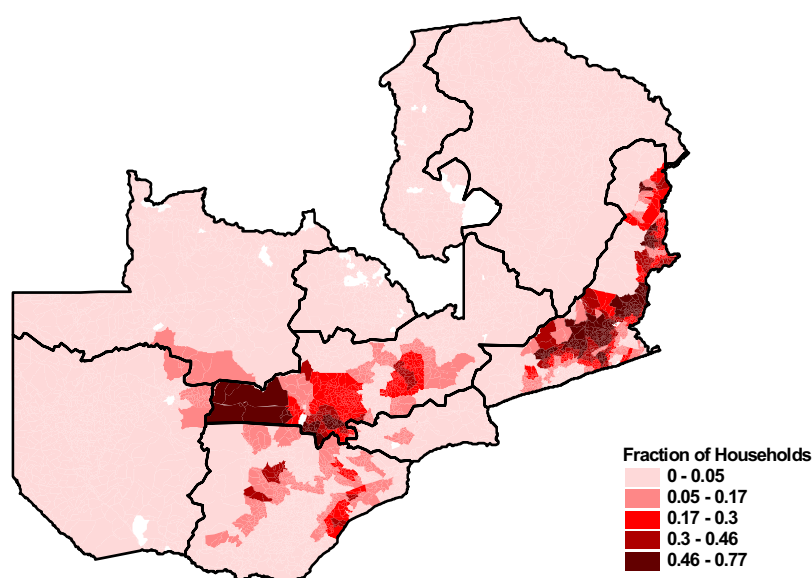
4.41 Outgrower schemes were generally viewed positively by participants in the Rural Participatory Study. Not all households were eager to engage in outgrower contracts, however. Some villagers who had taken such contracts had complaints. They recognized that the labor



required to produce these crops is harder and more strenuous than that required to produce maize. They also feel they get too little payment for the harvested crop (hand-picked cotton tends to require work that is far in excess of anything that can justify even the Zambian minimum farm wage) and that they are often cheated. Nonetheless, outgrower arrangements were largely described favorably as having raised some household incomes.

4.42 Cotton production is not an option for all Zambian smallholders. Geography is the principal limiting factor. Outgrowing schemes are only operated in areas that have climate and soils favorable to cotton and that have nearby cotton ginneries. Ginneries are located only in Eastern, Lusaka, Central, and Southern provinces. As the map in Figure 4.8 shows, cotton production is highly concentrated in those provinces.

**Figure 4.8 Where is Cotton Grown?**  
**Fraction of Households Growing Cotton by Ward**



Source: 2000 Census

4.43 Another limiting factor for smallholder cotton production is household labor. Households with a large share of members who are ill are less likely to produce cotton, presumably because they cannot supply the needed labor (Balat and Porto 2005, Table 7). Sickness and mortality associated with HIV/AIDS has reduced the ranks of available workers for many households. While producing cotton in addition to maize is an attractive option for households with the capability to do so, cotton, too, poses risks. The long-term price trend for cotton, like most agricultural commodities, is downward (Baffes, 2004). Zambian cotton will continue to be profitable for smallholders only if there are continued productivity gains.

### **Sugar, Tobacco, and Coffee**

4.44 Sugar, tobacco, and coffee all offer some opportunities for smallholder agriculture. These opportunities, however, are currently limited for various reasons.

4.45 **Sugar** is Zambia's leading agricultural export, accounting for an average of about 32 percent of total agricultural exports during the second half of the 1990s. All sugar cane in Zambia is grown under irrigation, which means production is restricted to the Kafue Flats area, the only zone with adequate irrigation facilities (Saasa et al. 1999). Cane is produced at the Zambia Sugar Company's estate near Mazabuka, through commercial production in the Kasama area of Northern Province, and by commercial farmers and smallholders through outgrower schemes. All sugar producers are located within roughly 20 km of the company's refinery, because at greater distances transport costs become too high. Zambia Sugar provides support for small-scale farmers by providing inputs and extension advice through its outgrower program. The estate itself employs 3,300 permanent employees and another 5,000 seasonal workers. There is potential to expand sugar production into other areas of the country.

4.46 **Tobacco** is grown by a mix of commercial farmers to the west of the Luangwa River producing barn-cured Virginia tobacco and small-scale farmers in Eastern Province harvesting burley tobacco. Zambia's climate in Southern and Eastern Provinces is ideal for tobacco production. At independence, Zambia was producing substantial amounts of tobacco (some 5-10 of the amount grown in Zimbabwe, the largest tobacco producer in the region), but at the end of the 1990s, the country was producing about 1 percent of the quantity grown in Zimbabwe. The fall in production in Zimbabwe due to the disruption of agriculture, accompanied by translocation of part of the Zimbabwean industry into Zambia, has increased interest of international firms in Zambian tobacco.

4.47 Repeated analysis shows that the fundamental constraint to expansion of the tobacco industry is the problem of loan recovery faced by the outgrower operators. Attempts to enforce the licensing provisions of the Tobacco Act, or the provision of the Agricultural Credit Acts against tobacco outgrowers and traders has not been successful.

4.48 In the case of **coffee**, smallholder production is only marginally if at all profitable at today's low world prices. Smallholder costs of production are much higher than those of commercial farmers primarily because the cost of collecting, bulking, and transporting coffee from geographically dispersed small producers is high. Smallholder coffee quality is also much more variable than that of commercial producers, so smallholder coffee does not fetch a premium price. In contrast, commercial coffee production has been relative successful (until recent price drops). Commercial coffee may contribute to poverty reduction: it is a heavy employer of labor, especially seasonal labor, and it has the advantage that terms and conditions of employment can be regulated by Government as well as improved through collective bargaining.

## **Livestock**

4.49 Livestock accounts for about 35 percent of national output and animal herding is the only livelihood activity for some traditional farmers in remote areas. Smallholders use livestock for the household's own consumption, to generate cash income, and as a form of savings. Most rural Zambian households own chickens, and many own cattle and goats as well. Cattle ownership is more prevalent among better-off rural households and is concentrated in Central, Eastern, Lusaka, Southern, and Western provinces.

4.50 For smallholder farmers, the productivity of livestock production is low and is characterized by high mortality, slow growth, and low reproduction rates. Zambia's cattle numbers declined drastically during the second half of the 1990s, due to the spread of diseases as well as other factors. The collapse of the compulsory cattle-dipping program (and other animal health measures), due to the general breakdown of regulation in the agriculture sector (begun at

Independence) as well as more recent reforms, has led to high livestock mortality. While the reforms have been factor, the spread of Corridor disease in Southern province already was well advanced by the early 1990s and continued to rise throughout the decade. The cattle population fell from 5.4 million in 1996 to just 2.9 million in 1999. New vaccines were developed; the government initiated a vaccination program in 2000 and cattle population has started to increase. However much remains to be done to restore basic sanitary and commercial discipline in the livestock sector.

**Table 4.9 Livestock Ownership and Fish Farming, Rural Households, by Province**

	Percentages of Households Owning Each Type of Livestock									
	All	Central	Copperbelt	Eastern	Luapula	Lusaka	Northern	Nwstern	Southern	Western
<i>Any livestock</i>	71	77	53	74	68	60	76	69	73	66
Cattle	16	20	4	23	1	15	7	6	31	27
Goats	18	21	7	18	13	23	19	16	33	3
Pigs	8	2	2	17	2	6	11	6	10	4
Sheep	1	2	0	2	1	1	1	2	0	1
Chickens	64	70	51	67	61	54	72	63	63	58
Ducks & geese	5	6	5	5	12	6	4	3	3	5
Guinea fowls	4	5	0	5	2	4	3	3	8	1
Other poultry	3	4	2	3	1	4	3	1	6	1
Fish farming	0.4	0.0	0.1	0.3	0.3	0.0	1.1	1.0	0.0	0.0

## F. Constraints to Pro-Poor Rural Growth

4.51     Zambian smallholders view the constraints they face through the lens of their historical experience. Until the early 1990s, they were accustomed to a government-led agriculture program which provided highly subsidized inputs and a stable, guaranteed price for maize. Nearly a decade after the initiation of the reforms and the move towards a more private sector approach, most rural Zambians still hope for a return to the past.

4.52     Participants in the Rural Participatory Study viewed the major constraints they face to be lack of fertilizer and a guaranteed market price for maize. Many participants stated that they could not afford to buy fertilizer at the market price, and, not surprisingly, praised the Government for continuing partial subsidy programs. At the other end of the production cycle, informants reported that the few farmers who produce a small surplus in maize are very disappointed with the failure of the government to buy their maize at reasonable prices. With no alternative to the private middle-man, they believe they are forced to sell to these traders at unfair prices. Farmers complained that their revenue from surplus maize sales could not finance the following years' fertilizer and seed requirements.

4.53     In the opinion of most cultivators, maize is the major staple food of the country and self-sufficiency in maize production is an important local and national goal. According to farmers, begging for food is deeply embarrassing, and recent shortfalls in maize production have placed many households in danger of beggary. Many who are qualified for food aid would prefer to

cultivate their own food. They would therefore like to do everything possible to increase maize production. Would-be cultivators often remarked that they cannot understand the readiness of Government and donors to import food and distribute food aid, when Zambian farmers could be enabled to produce adequate food for the country and even for export. They appealed for support to expand food production; but in most cases, the support they envisioned would entail the provision of free or virtually free inputs.

4.54 In response to the recent push to diversify agricultural production, participants argued that there are no guaranteed markets for other crops and livestock, and that farmers are therefore unable to develop a feasible plan to diversify away from maize production. On the other hand, some farmers said that they have been forced to reduce production of hybrid maize, since it requires the purchase of fertilizer and has no guaranteed market or price. These informants indicated that this has often involved switching to subsistence production of traditional maize, cassava, sorghum, sweet potatoes, beans, and groundnuts. Traditional maize, though it can be grown without expensive inputs, is low yielding and therefore does not generate any surplus that might pay for school fees or other basic needs. In Zone III, many participants indicated that they have reverted to the *Chitemene* system (shifting cultivation) to enable them to obtain reasonable yields.

4.55 In light of their experience, the attitudes and actions of Zambian smallholders are entirely understandable. Since the beginning of the reforms, the rural agricultural economy has been characterized by uncertainty—in terms of prices, weather, death and disease, and government policy. Consequently farmers crave a return to the stability and relative prosperity of the past. Although there are new opportunities for some farmers, e.g. those in cotton-growing regions, nothing offers the certainty rural Zambians had before the reforms.

4.56 While recognizing the validity of the perceived constraints of Zambian smallholders, this section considers constraints more broadly.

### **Fertilizer**

4.57 The most contentious issue in Zambian agricultural policy is the role of the government in supplying fertilizer. The Rural Participatory Study found that most participants felt that their major constraint to increased maize production was lack of fertilizer. They praised the government's fertilizer subsidy programs but complained that they were too limited. Similarly, inability to afford agricultural inputs ranked as the top reason for poverty cited by respondents in the 2002-03 LCMS III survey.

4.58 The debate is characterized by sharply contrasting views on the two sides. On the one hand, some stakeholders believe that a government role in fertilizer marketing and distribution is essential. They argue that fertilizer is essential to increasing productivity and incomes for rural smallholders. They also claim that the private sector is unable or unwilling to supply fertilizer to remote rural areas and that even when private markets do function, the price of fertilizer is beyond the means of many smallholders. In this view, free or subsidized fertilizer should be provided by the government to assist the rural poor. On the opposing side, others argue that if the government were to simply get out of the way, the private sector would step in and supply fertilizer widely at a lower price. In this view, government intervention in the fertilizer market is itself the problem.

4.59 Given the unresolved debate and the government's restricted finances, the government has issued confusing and haphazard policies, repeatedly promising to withdraw from the fertilizer

market but then re-entering the market under popular pressure and with an understandable desire to assist the rural poor. Before the early 1990s, the government maintained total control of the fertilizer market and supplied subsidized fertilizer on credit across the country. Even after the market was liberalized to allow private suppliers to operate, the government continued to supply some fertilizer through government agents. Later, the government switched to contracting private suppliers to provide and deliver subsidized fertilizer.

4.60 Since 2002, the government has delivered fertilizer through two programs. MACO-FSP provides a 50 percent subsidy for input to farmers who belong to cooperatives. The pack includes four 50 kilogram bags of urea, four 50 kilogram bags of D-compound, and 20 kilograms of maize seed. Separately, MCDSS-FSP provides, at no cost, a pack of inputs for 0.25 hectare of a cereal (maize, sorghum, or millet), legume (beans, cowpeas, groundnuts, or soybeans), and tuber (sweet potato or cassava). Beneficiaries of the MCDSS-FSP program are expected to pay back 20 kg of cereal to a cereal bank, but repayment rates are low. MCDSS-FSP is intended for the most vulnerable households; targeting is done through a network of community-based NGOs. Each program is intended to reach 200,000 households per year, totaling approximately one-third of the country's 1.2 million smallholder agricultural households. Under both programs, purchase and delivery of the subsidized fertilizer is handled through private companies.

4.61 The current programs are plagued by problems. Every year, the government issues contracts for fertilizer purchases at the last minute and when world fertilizer prices are at the annual peak. Because successful bidders are given just six weeks to import and deliver fertilizer, they are forced to use higher cost import routes. By one estimate, these failures roughly double the price the government pays (Mwape 2004). In other words, the extra cost due to government inefficiency is approximately equal to the 50% subsidy provided by MACO-FSP. Multiple sources also report that the programs are not well targeted. Many recipients are not even farmers but traders who resell the fertilizer at large markups. Finally, the government's fertilizer purchases undoubtedly distort the market and depress the supply of fertilizer on the commercial market. Because long-term planning is required to arrange low cost fertilizer imports, the annual uncertainty about the timing and level of government purchases is particularly damaging.

4.62 It is very unlikely that the government withdrawing completely from the market for agricultural inputs. Providing subsidized fertilizer and seed is one of the few levers the government has for directly assisting the poorest rural residents. Consequently, whatever its stated intentions, the government will face continue to face pressure from its citizens, NGOs, and some donors to continue and expand its subsidy programs. Given that reality, continued reform should focus on tailoring assistance programs such that they function efficiently and do not discourage the development of private markets. Improving the administration of current programs and contracting for fertilizer purchases several months ahead of delivery dates would be an important first step. Over the longer term, moving to less distortionary schemes should be considered. One option would be to operate a system of vouchers which could be given to poor farmers and then used to purchase fertilizer and seed from private suppliers.

### **Credit**

4.63 Lack of access to credit is the flipside of the need for fertilizer. If credit were readily available, farmers for whom fertilizer use is profitable would be able to borrow to purchase inputs and then repay at the time of harvest. Before liberalization, credit was provided through government-run financial institutions, many of whom went bankrupt as a result of non-repayment and corruption (e.g. Land Bank, Credit Organization of Zambia, and later Lima Bank). Since the end of government funding of agricultural credit in 1997, interest rates have been very high and

so credit has been out of reach for most of the rural poor. The interest rate for informal borrowing within communities can go up to several hundred percent annually. In some cases, new institutions have emerged to provide credit for rural farmers:

- *Microfinance institutions.* A number of NGOs operate microcredit facilities, which use group and community social networks to overcome screening, monitoring, and enforcement problems.
- *Informal credit schemes.* In the absence of other mechanisms, informal credit systems among friends, relatives, and neighbors exist, particularly in emergency situations.
- *Outgrower schemes.* Outgrower schemes, through which inputs are provided on credit by the agent for a private company, and the loan is repaid at the time the crop is sold to the same agent. These have become particularly important for cotton, which is grown by nine percent of all rural households. They have also been used on a smaller scale for paprika and tobacco. Outgrower arrangements were viewed positively by respondents in the Rural Participatory Study.

### **Extension Services**

4.64 Extension services are a vital resource to assist smallholder farmers in identifying markets for their products, adopting improved techniques to increase production, reducing fertilizer costs, and reducing livestock diseases and deaths. Unfortunately they have been in decline since shortly after Independence. One study found that Zambian households that make use of extension services have higher productivity than those that do not (Balat and Porto 2004). The guidance they receive needs to be tailored for each household to particular capabilities, soil type, and weather conditions. Sustained productivity growth in agriculture can only be achieved if there is a mechanism for continual transmission of technical advice to farmers.

4.65 The quality and availability of extension services has greatly declined since the introduction of reforms in 1991, in large part due to budget cuts. Agricultural services are provided through the Ministry of Agriculture and Cooperatives (MACO), donor funded projects, NGOs, and churches. Most participants in the Rural Participatory Study indicated that they depend on agriculture-related activities as their primary source of livelihood, and that they attach a high value to any services that can improve the productivity of agricultural activities. However, they observed that even though there are MACO extension workers in their villages, they do not provide any extension services to enhance production and do not serve as good models in the community. Many participants noted that extension workers used to visit farmers in the past but no longer do so. In some cases, extension workers ask farmers to buy them fuel to enable them visit farmers and attend to their problems. This is beyond the means of most farmers. For the most part, farmers have abandoned efforts to obtain extension services from government.

4.66 With the deterioration of extension services, an alternative method of knowledge transmission has developed. Under outgrower schemes, which are widely used in cotton production, company agents provide technical advice along with inputs on credit. Such programs, however, have limited reach.

### **Labor**

4.67 For many rural households, a shortage of labor is the crucial constraint. During the Rural Participatory Study, having sufficient family labor to cultivate land was widely cited as the

pivotal factor separating the self-sufficient from the food deficient. HIV/AIDS has dealt multiple blows to household labor supplies, through incapacitating its victims and then killing them, and also by putting demands on healthy family members who must care for their loved ones. Households with a shortage of adult labor, i.e. those with high dependency ratios, are much more likely to be poor than larger households.

### **Market Access**

4.68 Remoteness is an obstacle to market integration for many households. Due to the long distances between villages and low road quality in many areas, many smallholders have no access to agricultural markets beyond their immediate location.

4.69 Cotton production, a clear success of the post-reform period for smallholders, offers an example of the disadvantages faced by remote households. The possibility of taking on cotton outgrower schemes is only available to farmers who live in areas that are well-suited to cotton and situated close to cotton ginneries. (See Figure 2.3.) Outgrower agents only operate in such areas because traveling over wider areas with low population density would not be cost effective. As a result, cotton is not an option for smallholders in most parts of the country.

4.70 More remote households have less land under cultivation, lower returns per household member, and lower returns to land. Alwang and Siegel (2003) show that net returns are roughly 10 percent lower for remote households. Improved market access through improving rural roads could improve returns and the welfare of remote households. Unfortunately, actual expenditures on rural roads have fallen well behind budget allocations.

### **Land**

4.71 Zambia has a dual system of land tenure, whereby approximately 6 percent of total land area is held by the state and administered under the principles of English statutory law (Subramanian, 1998). Land held under this system is granted in 99-year leases, commonly called titles, to claimants. The remainder of land is held under customary land arrangements, which vary widely and generally allow for limited transfer rights.

4.72 A variety of evidence shows that access to land is not a binding constraint, particularly for smallholder agriculture. Land was not raised as a concern by respondents in the Rural Participatory Study, and only a negligible number in the 2002-03 LCMS listed lack of land access as a reason for their poverty. A stylized model of rural household behavior employed by Alwang and Siegel (2003) suggests that a typical household does not have the capability to farm more land than it does currently. Additionally, both Milimo et al. (2003) and Skjonsberg (2003) find that official titling has been pursued only by the small minority of farmers with link to commercial agriculture.

4.73 Modernizing the land tenure system by bringing more land into the English system and issuing titles would have significant risks without clear benefits. Land titles would provide collateral for rural producers and possibly improve the functioning of credit markets. However, traditional chiefs derive much of their power from their authority to administer and enforce traditional rules governing access to land. Removing the chiefs' power over land administration would undermine their control and leave no alternative source of authority, further compromising social cohesion. A land titling reform could also upset common property and natural resource arrangements, with unknown consequences.

## The Way Forward for Rural Development

4.74 In order to stimulate broad-based agricultural growth a combination of policy reforms and investments have been recommended, such as reforms of land and fertilizer markets, and investments in roads and other infrastructure (World Bank, 2002a; 2004b;c). However, a recent review of policy reforms in several Sub-Saharan African countries, including Zambia, emphasizes that reforms need to be considered in the context of a broader rural development strategy. For example, the rural poor lack not only land and well-functioning input and output markets, but other productive resources that would allow them to respond to policies and investments that are aimed at stimulating agricultural growth. Issues such as market liberalization, addressing unequal land distribution, and the targeting of poor areas are complex; and simplistic solutions might actually harm the rural poor, especially in the short term (Jayne, et al., 2001).

4.75 In particular, for broad-based rural development in Zambia it is essential to recognize bottlenecks to private sector development, such as: (i) inadequate infrastructure, (ii) lack of public-private sector dialogue and cooperation, (iii) lack of a macroeconomic environment conducive to growth, (iv) the inadequate provision of business services to the small and medium enterprise (SME) sector, and (v) having a small domestic market and the concomitant need for greater export market orientation (NORAD, 2002; World Bank, 2004d;e). These bottlenecks, in addition to weak public institutions and the lack of critical public good and services, can choke any attempts for the agricultural sector to be an engine of growth.

### A Return to Basics

4.76 Many of the basic rural systems that were set up pre-Independence and initially continued have not become defunct, primarily due to budgetary and capacity constraints. Based on the findings of various studies, priority improvements include:

- A system of regular manual maintenance for rural roads. At Independence, maintenance was provided by Public Works Department (PWD) camps along various stretches of roadway. Once a road was constructed it could be kept in good working condition at very little cost for an indefinite period.. The *de facto* policy of zero maintenance is the culprit behind the present “constraint” imposed by rural roads (in the mid-1970s, the Bank’s economic report for Zambia said the country had a surfeit of rural infrastructure, including roads).
- Simple systems of animal disease control; animal movement control; health inspection of abattoirs etc. The return of these systems would reduce animal mortality and open up export markets (presently closed for sanitary reasons) and generally boost animal production.
- As noted above, extension services have sharply deteriorated and should be returned to the standard they once met, with an emphasis on diversity of production and a de-emphasis on the mono-cropping of maize such as they currently display.
- Government’s approach to the maize sector should be modernized. There is no longer a crucial strategic need for Zambia to be self-sufficient in maize at any cost, to ban exports, to provide inputs on arbitrarily changing terms etc.
- The use of maize inputs and buying as a form of poorly targeted social welfare and “market strengthening” should be re-assessed and in all likelihood discontinued, because it militates against the private sector’s healthy development. Social protection should be carried out as social protection. and the staple food market should be left alone, except for market stabilization measures in exceptional circumstances.



- At the same time there may be, on a case by case basis, the need to put up tariff or non-tariff barriers to protect Zambian producers against dumping and to subsidize, overtly or covertly, export drives and new crop expansion.

4.77 But these measures should just be part of a general set of policies designed to turn Zambia into a competitive producer and exporter by such means as lowering taxes, reducing interest rates and allowing the kwacha to find its natural level in the foreign exchange markets. The avoidable problems associated with Zambian agriculture are only soluble through good economic governance by the Zambian government. There is little that can be achieved by well-meaning outsiders in the absence of consistent national leadership.

#### Broader Challenges for Rural Development

4.78 The dualistic structure within the Zambian agricultural sector is increasingly being recognized (Siegel and Alwang, 2004; World Bank, 2004c), and also increasingly being considered when: (i) formulating rural development strategies, (ii) selecting investment priorities, and (iii) designing projects (see for example, World Bank, 2004, FAO, 2004; IFAD, 2004). There is even a vision of having “a role for expanded commercial farming existing side by side with small-scale farming, which can benefit from large farms through out-grower schemes (World Bank, 2004b, p.11).” The CEM (World Bank, 2004b) specifically recommends a two-pronged development strategy comprising of support for: (1) raising the productivity of smallholder crop and livestock systems in a sustainable manner, and (2) smallholder linkages to commercial agriculture through out-grower schemes.

4.79 Rural Zambia is characterized by rather distinct spatial differences in conditions affecting economic growth and poverty reduction. The differentiated spatial distribution of economic potential (based on agro-ecological conditions and access to markets) implies the need for differentiated rural strategies according to an area’s specific assets, markets and institutions. However, area economic potential does not automatically translate into greater household prospects for improved well being, as evidenced by pockets of rural poverty in Central, Lusaka and Copperbelt Provinces. Considering the heterogeneity of areas and households within areas in Zambia, there is a need for area- and household-specific rural development strategies, investment priorities and the design of project interventions. The sequencing of interventions is also critical, as is the need for improved risk management for all rural residents; including improved social protection for the most vulnerable areas and households.

4.80 Investments in agricultural technology or credit or rural roads need complementary investments for the impacts to have a poverty-reducing impact. Asset complementarities reinforce the need for multi-sectoral investments. These investments should be designed according to specific needs of regions, sub-regions and households residing within them. Ideally prioritization of investments would be carried out in a demand-driven manner at the community level. In addition, publicly provided assets need to be complemented with more private, productive ones. Mechanisms should be designed to stimulate strengthening of private assets to complement public goods. For example, education might be complemented with vocational training, resources for business start-ups (including access to credit), and mechanisms for creating producer organizations.

4.81 The lack of intangible assets such as social capital, information about markets and opportunities, access to public services are major constraints to broad-based growth, depending on the area and development strategy in question. Information about markets, opportunities and productive technologies has public good attributes. Community organizations can be an effective

means of organizing producers to meet stringent production requirements for non-traditional agricultural exports and for handicraft production and marketing. The potential for similar organizations to effect public action in other arenas should also be explored.

4.82 To improve growth prospects, productive investments should be targeted toward higher-potential areas and should complement existing area comparative advantages. The World Bank's proposed Zambia Agricultural Development Support Project (ADSP) takes this approach. However, productive investments should be paired with targeted efforts to help disadvantaged households participate in rural areas. Barriers such as limited education, poor access to markets, small holdings of low-productivity agricultural lands, etc. need, however, to be addressed through concerted public action.

4.83 Broad-based agricultural growth is constrained by absence of technologies for labor productivity enhancements, poorly functioning input and output markets, weak institutions for technical assistance and broader information about markets, degradation of natural resources such as water and soil fertility, and others. The extent to which agricultural growth will lower rural poverty depends on how these critical shortcomings are addressed. Spatial heterogeneity clearly indicates that the agricultural strategy that is most appropriate for Zone 2 is different from the strategy for Zones 1 and 2.

4.84 Natural resource management is often treated separately in policy discussions from more specific agricultural programs. However, natural resource management is closely linked to agricultural productivity. Without environmental improvements, agricultural growth will be limited, especially in areas of higher population density. Management of common resources requires group participation and agreement. Agricultural development projects can be designed to stimulate group formation for production and marketing; the same group structures could be exploited to promote community-based natural resource management. Natural resource management is broader in scope than agricultural projects and could be incorporated into efforts to support governance and decentralization.

4.85 For low potential areas characterized by poor soils and chronic water deficits, there is a need to be realistic about expectations from the agricultural sector. There is a need to identify regions, communities and households with extremely limited prospects for directly benefiting from economic growth and that are vulnerable to major risks. Large-scale water management systems might benefit these areas in the medium to longer term, but in the short term smallholders should be encouraged to adopt appropriate water efficient and drought resistant farming systems that combine crop and livestock production. Clearly in these areas rural communities need to develop plans for sustainable natural resource management. Different types of investments, institutions and instruments are needed to assist the poorest. Thus, it is important to identify the rural population whose asset bases prevent them from being able to take advantage of growth opportunities and will depend, to a large extent, on transfers and other types of assistance (e.g., elderly, infirm, disabled).

4.86 For low potential households that lack a healthy adult capable of contributing labor for farming activities (usually as a result of HIV/AIDS or other illness shocks), there is a need for direct nutritional assistance, especially for children, and other types of social protection programs over an extended period. For example, the World Food Program's (WFP) "Food for Assets" program provides school-feeding, supplementary feeding and support to HIV/AIDS affected households with the overall objective of strengthening the capacity of hungry poor families to meet their food needs and withstand economic shocks and natural disasters. In contrast, households with healthy laborers might be through a program that provides inputs or cash to

smallholders in payment for part-time or temporary labor on rural infrastructure (Parker and Mwape, 2004).

4.87 Market and trade liberalization during the 1990s created new opportunities for Zambian farmers. But it also led to many new challenges and revealed limitations. More realistic expectations about the possibilities for smallholder transformation are needed. As Whiteside (1998, p.1) noted: “Donors and governments need to recognize that to achieve sustainable increases in agricultural productivity will take decades, not years.” Improved research and extension based on the assets held by smallholders and the new policy regime are needed, including a “basket of choices” that consider smallholder farming systems and off-farm opportunities. Investments in transport and communication infrastructure can help lower transaction costs.

4.88 There is need for short-term interventions to help poor smallholders make this transformation, since the constraints they face will take time to overcome. Targeted short-term interventions for rural poverty reduction and social protection, such as public works, soil fertility improvements, and other forms of safety nets and social funds are options. Market and trade liberalization in Zambia were unsuccessful because of the hasty elimination of the public marketing systems, private-sector weaknesses, inappropriate incentive structures, and the lack of infrastructure in rural areas. Furthermore, rural Zambians who had become dependent on public-sector marketing systems did not have the requisite human and social capital to deal with the new realities.

4.89 As noted in a recent publication by the Institute for Development Studies,

*“... making the playing field more level is an important prerequisite for effective pro-poor policies. ...It is important to look at how the poor markets, and gain the capacity to engage with some strength in markets, important contributing factors highlighted by the case studies include: access to capital, gaining new skills (from marketing to business experience), building social and commercial networks, the existence of NGO ‘facilitators,’ and logistical support (from roads to mobile phones. Thus, overall, adding a pro-poor component to market oriented policies is not an easy game. Markets are highly politicized, the playing field is uneven, and, without regulation and protection, poor communities are vulnerable to potential exploitation. Without attention to improving the capacity of poor people to engage in markets – through active state support and redistributive measures – the ideals of ‘pro-poor growth’ and ‘private sector partnership’ for development will remain more rhetorical gloss than reality.” (IDS, 2003, 22-24)*

This points to the need for a more comprehensive and holistic approach to rural development is needed, not just an agricultural or commodity-specific strategy. This approach should build on a return to basics and good and consistent policy implementation. It is critical to consider the dualistic nature of the agricultural sector, and to think in terms of specific smallholder strategies. However, policies for the agriculture sector ultimately be part of a general and integrated set of economic policies designed to turn Zambia into a more competitive producer and exporter

## G. Growth Prospects

4.90 Zambia’s prospects for growth and poverty reduction over the next decade depend on both exogenous factors and policy and institutional measures. Included in the recent Country Economic Memorandum (CEM) are simulations of the growth and welfare impacts of both exogenous changes and alternative government policies over the next decade (2004-2015). In

carrying out these simulations, a base-case growth scenario is developed, which is based on key assumptions about population and labor force growth, government spending, current account deficit, interest on foreign debt, and copper prices. The population and labor force is assumed to grow at around 2 percent and reflects the expected impacts HIV/AIDS. Under the base case, Zambia is projected to growth at an annual average rate of 4.1 percent.

4.91 The implications for growth and poverty reduction of exogenous changes as well as alternative government policies are then simulated around the base-case growth path using a Computable General Equilibrium (CGE) model. For exogenous changes, the impact of alternative copper prices as well as the impacts of HIPC debt forgiveness are simulated. For policies that are under the control of the government, the impact of increased spending on HIV/AIDS, increased spending on education, increased productivity in subsistence and export agriculture, and increased investment in transportation and rural roads are simulated.<sup>40</sup>

4.92 The simulation results provide several useful insights. First, targeting traditional and nontraditional crops, which have strong links to foreign markets, is the best way to enhance growth and household welfare. The pro-poor outcomes of agricultural expansion would be greatly enhanced if market access were widened on a large scale. Improving the condition of the road network and extending the network to remote areas is a key step not only to increasing growth but also to reducing rural poverty significantly. Second, rural households will be cushioned from the negative effects of a likely decline in copper prices (and output) over the next decade, while urban households will face increased poverty. Finally, unless the funds released by HIPC are used to finance policies that favor the poor, the impact of debt relief on poverty reduction is likely to be very modest. Urban growth would need to focus on reducing cost of doing business in Zambia and initially on attracting businesses that can absorb relatively low skilled workers

4.93 The simulation results also suggest that Zambia is unlikely to achieve the Millennium Development Goal (MDG) of halving poverty by 2015. Under the base case growth scenario, Zambia will not be able to halve poverty until after 2040. However, if the government “breaks with the past” by implementing various pro-poor policy measures the headcount poverty rate can be reduced by two to three additional percentage points over the next decade. Still, this is not sufficient; Zambia needs to move to a much higher growth path—estimated to be between 8-10 percent per annum—to reach this particular MDG.

4.94 No sustainable poverty reduction in Zambia can be achieved without positive growth. But to stimulate growth and to strengthen poverty reduction, it is imperative to reduce inequality or to prevent it from increasing disproportionately. Therefore, poverty reduction depends critically on growth that facilitates asset accumulation, human as well as physical, and provides opportunities for the poor, urban and rural to participate in the market economy by reducing transaction costs in doing business through reducing indirect costs of operating a business (See FIAS and ICA 2004) and decreasing transportation cost for rural dwellers to access markets.

4.95 In addition, redistribution of wealth to poor people can have a positive impact on growth. For example correcting credit market imperfections that have not allowed poor individuals to access savings for viable investment projects to take place given the fact that they lack collateral should be growth enhancing as more profitable investment will be able to be undertaken if such a constraint gets lifted. Hence, such market imperfections prevent poor people from seizing investment opportunities that would benefit both the poor people as well as society as a whole.

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<sup>40</sup> For a detailed presentation of the various scenarios see the CEM, Volume 2.

Therefore, Zambia underutilizes its productive and growth potential, as long as these types of market imperfection remain in place. A carefully thought through redistribution of land in rural as well as urban areas which would allow individuals to pledge their land holdings as collateral could potentially lift such a credit market imperfection. A careful look should also be given to prioritization of income transfers that enable the accumulation of human capital, e.g. transfers that improve the health status of beneficiaries or their ability to attend school.

4.96 For growth to be sustainable one requires a balanced and multifaceted approach. Consistent policy implementation, evenhanded and well sequenced interventions along the following dimensions: macro environment, infrastructure (human as well physical), business environment, empowerment and sustainable development (see Stern, Dethier, and Rogers 2005). Particular focus should be given to infrastructure that facilitates access to markets for subsistence farmers that are willing and able to produce cash crops.

## 5. RISK, VULNERABILITY, AND POVERTY

### A. Introduction

5.1 The second and third chapters analyze the levels and distribution of welfare in Zambia and present a profile of the characteristics of the poor. They touches upon some of the underlying processes that have contributed to the country's high observed levels of poverty, as well as reasons for poverty persistence. Many factors combine to explain the dynamics of wealth and poverty. Exposure to risk is one of these factors, and in high risk environments, characteristic of many low-income countries in Africa, looking at risk directly helps us better understand the dynamics by which households move in or out of poverty or remain chronically poor. The analysis of risk and vulnerability in this chapter is thus a natural complement to the more traditional poverty analysis in Chapters 2 and 3 and deepens discussions of risk and pro-poor growth in the previous chapter.

5.2 The analysis of risk and vulnerability typically encapsulates two separate areas of attention. First, it focuses on the role of risk in the dynamics of poverty and the strategies households use to address the exposure to various sources of risks. Here, the focus is on the impact of risk on poverty, taking into account the informal and formal mechanisms of risk reduction, mitigation and coping available to households. Second, there is a focus on specific vulnerable groups that are characterized by limited resilience to avoid poverty and few opportunities to escape chronic poverty.

### B. Approach

#### Social Risk Management (SRM)

5.3 This report approaches risk and vulnerability from the viewpoint of Social Risk Management (SRM), which provides a framework for analyzing *how societies manage risk*. Two important assumptions underpin the SRM approach: first, that some members of society, in particular the poor, are more exposed to risk than others, and second, that the poor have less capacity to manage shocks when they do occur. Individuals and households confront a number of barriers that cause many of them to be poor and undermine attempts to escape poverty and improve their economic well-being. Some of these are predictable and known, i.e. linked to past and present policies, institutions and structural features of the economy. Others are linked to adventitious shocks and unexpected adverse events that impact on individuals, households and on the wider community.

5.4 Poverty in Zambia is persistent and self-perpetuating but far from static. The Urban and Rural Participatory Studies' fieldwork and follow-on consultations with low-income communities revealed that a few fortunate households are able to escape poverty through dint of hard work, good fortune, and the relative absence of major shocks. Many others hover on the brink of

economic calamity and may suffer a catastrophic loss in welfare when a shock occurs. Adverse events are all too common in Zambia: households described frequent illnesses, injuries, deaths of breadwinners, losses of employment, crop failures, fires, thefts, droughts, and floods.

Households also described an array of instruments—including informal, community, market-based and public sector policies and programs—that help them manage these risks. Analysis suggests that poorer households not only have more limited resources but also less access to risk management instruments and thus are likely to descend even deeper into poverty when serious shocks occur. Moreover, many poor households employ coping strategies that work in the short run but have adverse impacts over the longer-run, e.g. pulling children out of school, reducing meals, and prostitution. Households that run down critical assets like human capital and productive inputs may end up perpetually trapped in poverty. But households that shun risky, high-return economic activities (e.g. cultivating cash crops) with the aim of protecting fragile livelihoods may also remain trapped in poverty. (Dercon, 2002, 2004; Carter and Barrett, 2004; Barrett, Mesfin, and Abdillahi, 2000)

5.5 To summarize, good risk management strategies are important for poor households in Zambia because they

- help to prevent shocks that can derail growth and asset accumulation;
- promote risk taking, innovation, and entrepreneurship;
- broaden participation (of poor men and women) in growth;
- help to counteract irreversible depletion of assets.

### Vulnerability in Zambia

5.6 The term “vulnerability” is used in many different ways in the development literature. For purposes of this work, we follow the definition developed by Zambia’s Social Protection Sector Advisory Group (SP SAG)<sup>41</sup>, “vulnerability implies susceptibility to the impact of risky events, as a result of particular weakness or lack of defenses, and resulting in a worsened situation for the sufferer(s)”. (SP SAG, 2005)

5.7 As noted above, the work on vulnerability in this report focuses on two complementary areas of concern.

5.8 Exposure to Risk: *Risks* are potentially dangerous events that are likely to cause economic loss or damage when they occur, while *shocks* are the actual occurrence of a risk. Although poor households are more likely than others to be exposed to risk, e.g. because of poor nutrition and hazardous living conditions, certain risks (such as potential infection with HIV/AIDS) appear to be common and widely distributed within the country at all economic levels. The shocks and set-backs that damage vulnerable households are normally classified into two types: covariate and idiosyncratic. *Covariate shocks* – such as droughts and floods -- are those that simultaneously affect a large number of households (usually those in close geographic proximity to one another). *Personal or idiosyncratic shocks* include household-specific problems

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<sup>41</sup> The Government of Zambia (GRZ) has set up a number of Sector Advisory Groups (SAGs) to monitor the implementation of the first PRSP and to advise on the development of the Vision 2030 study and the Fifth National Development Plan (NDP), which will fully integrate poverty concerns and replace the PRSP. Social protection was not adequately reflected in the first PRSP. The SP SAG is developing a national social protection strategy that will become a part of the Fifth NDP. See Chapter 6.

such as serious or chronic illness, loss of a breadwinner through death or desertion, and loss of property through fire or theft.

5.9 Although idiosyncratic shocks can be singularly devastating, it may be even more difficult to cope with the aftermath of covariate shocks. Households struck by droughts, crop failures or natural disasters may not be able to gain assistance from their traditional networks of support, since neighboring and kinship-related households have also suffered losses. In a severe drought year, for example, small cultivators will not only lose their own crop, but will also find less work in other's fields. They will also receive scant assistance from neighbors and relatives, since the harvests of other village households will be no better than their own. Among the poor, the risk pool is small and it possesses few resources. Some covariant shocks, moreover, affect the poor more often or more severely than the non-poor. Poor households may be relegated to marginal lands that are flood or drought-prone or urban neighborhoods without safe water or adequate sanitation. Idiosyncratic shocks also may disproportionately affect the poor. A family whose members are malnourished due to poverty may suffer more illnesses, deaths, and disabilities than households that are wealthier and better-nourished.

5.10 The boundaries between idiosyncratic risk and covariate risk are often not clear in low income countries. An idiosyncratic risk or shock suggests that the event and problem are particular to the individual or household that faces them, while a covariate shock implies that the impact and response is affected by the fact that others are simultaneously experiencing the same shock. The threat, incidence, and impact of Zambia's most devastating idiosyncratic risks and shocks are respectively so widespread that they are becoming *de facto* covariate. For example, the incidence of HIV/AIDS is sufficiently large that people are experiencing its impact as part of a widespread epidemic, rather than as a unique and personal event.

5.11 Vulnerable Groups: The severely poor are always vulnerable. In addition, many countries identify individuals and households characterized by factors that are in addition to low levels of income/consumption poverty as members of *vulnerable groups* and therefore deserving of special assistance. In Zambia these include e.g.

- Orphans, street children, other at-risk children;
- female-headed households, particularly widows;
- households with disabled or ill individuals (including HIV/AIDS related illnesses), or recent deaths;
- the "incapacitated poor," identified as those "living in severe and chronic poverty and without members to carry out productive work" (PAG, 2004).

5.12 The presence of orphans or disabled persons may exert an additional economic strain on low-income households. Households headed by women may lack the physical capacity for heavy manual labor, particularly if they are caring for young children or individuals who are seriously ill. They may also not have skills in for essential tasks that are traditionally the role of men. They may face social stigmatization and other forms of discrimination. Households that have lost a male breadwinner may also have lost property rights or access to lands or assets that belonged to the deceased household head. In matrilineal communities that adhere to traditional inheritance patterns, the property of a deceased male is inherited by his matrilineal kin (usually his sisters and their children) rather than by his own children. The Government of Zambia has passed legislation aimed at protecting the inheritance rights of widows and orphans, but it has proven difficult to implement these new laws in practice.



5.13 This chapter looks specifically at the links between risk and poverty in Zambia, while Chapter 6 focuses on vulnerable groups and Zambia's emerging Social Protection Strategy.

### **Measuring and Analyzing Vulnerability: Methods and Sources of Information**

5.14 The chapter draws on information from a number of sources – the LCMS surveys, 1990 and 2000 Census of Population and Housing, Zambia DHS surveys, the Urban and Rural Participatory Studies, as well as other micro studies and qualitative field surveys, including those carried out by the Poverty Assessment Group (PAG) and CARE. Household surveys in Africa are increasingly likely to include special modules on vulnerability, risk, and risk-coping. The Zambia LCMS surveys in 1996, 1998, and 2002-03 included modules on self-assessed poverty and household coping strategies, which we use extensively in this chapter.

5.15 Attempts have been made in other countries to use information from household surveys to calculate a “headline” indicator of vulnerability, in the same way the poverty headcount is used as a headline indicator of poverty. While it is easy to define the concept of vulnerability – high risk exposure combined with limited capacity to manage risks – it is difficult in practice to develop quantifiable vulnerability indicators. Calculating the poverty headcount is more straightforward: the conventional approach equates poverty with material deprivation and defines the poor as those with a level of consumption below some minimally agreed level, i.e. the poverty line. In the case of vulnerability, however, we rarely know the full set of risks that households face, what strategies and resources they can use to manage these risks, and what would be the expected loss in welfare due to an uninsured shock.

5.16 Attempts to measure vulnerability directly have met with mixed success. Most studies aim to measure “vulnerability-to-poverty”, typically defined as the probability that a household will fall below the poverty line, based on the characteristics of the household, the community, and other risk factors such as rainfall. Efforts to calculate vulnerability-to-poverty using data from household surveys implemented in a single-year have been particularly problematic: information on risks and variations in household behavior over space (in a single time period) is not the same as variation in behavior over time (across multiple time periods). Studies based on panel data (repeated observations of the same household over time) have yielded more interesting results, but panel data are available for only a small set of low-income countries<sup>42</sup> and these surveys are rarely representative for the population as a whole. (see, for example, Chadhuri et. al., 2001; Pritchett et. al., 2000; Ligon and Schecter, 2003; Chadhuri, 2002)

5.17 Given methodological difficulties and data limitations, the report does not attempt to measure vulnerability directly but instead looks at outcome indicators, with the aim of developing a better understanding of (i) the extent to which risk contributes to Zambia's high and persistent levels of poverty, as well as (ii) its role in downward mobility and resulting levels of acute poverty and destitution. Consistent with the earlier discussions, poverty is assumed to include material deprivation as well as other dimensions of well-being, e.g. deprivations in human capital, lack of social capital and traditional systems of support. Shocks may have important adverse impacts on non-income dimensions of poverty: for example, the inability of poor households to cope with production shocks in rural areas may be reflected in higher levels of morbidity and malnutrition, particularly among young children, and lower school enrollment rates.

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<sup>42</sup> Panel surveys have been conducted in sub-Saharan Africa under the guise of research programs e.g. in Kenya, South Africa, Tanzania, and Mozambique.

## Overview of the Chapter

- 5.18 In this chapter, we draw on various data sources to demonstrate that:
- Exposure to risk and the incidence of shocks are extremely high in Zambia, and there are important links between risk, economic growth, and poverty reduction.
  - Nearly all households have viable strategies for managing risk, and in many cases these strategies have proven effective in preventing drastic shortfalls in welfare.
  - However, poor Zambians are more exposed to risk and largely depend on traditional support networks and informal risk management strategies. Many of these strategies, while successful in the short-run, may undermine their ability to manage shocks in the future.
  - There is disquieting evidence that exposure to risk is increasing for the poor and resilience is deteriorating. HIV/AIDS is an important factor. Given high prevalence rates and risky behavior, the likelihood of contracting HIV/AIDS is high and the effects of the disease itself undermine the ability of AIDS affected households to successfully manage other risks.
  - Many of the poor live in isolated regions characterized by pervasive market failures. Under these circumstances, market-based risk management strategies do not work well, and the onus is on the public sector to strengthen services and programs in these areas.
  - Public policies and programs designed to promote security and address the needs of the poor and vulnerable have low coverage and are under-financed and poorly implemented. Moreover, they are largely financed through aid flows, which are themselves uncertain. Current policies rarely include *ex ante* preventative measures, and the impacts of many of the major shocks in Zambia could be prevented and/or reduced if the Government of Zambia, working in collaboration with all stakeholders, would better anticipate and plan for these.

### C. What Risks are Common in Zambia?

5.19 The lives of the Zambia's poor are fraught with risk and uncertainty. At Independence, Zambia was one of the wealthiest countries in Africa. The economy has been going downhill steadily since the early 1970s, and the overwhelming majority of Zambians perceive themselves as poor and increasingly vulnerable to events over which they feel they have no control. Respondents gave voice to their fears and frustrations in the Rural and Urban Participatory Studies, (Box 5.2) and their views are also reflected in the recent 2002-03 LCMS survey. (Table 5.1 and

Table 5.2, based on the LCMS module on self-assessed poverty and coping strategies).

**Box 5.1 Consultations with Poor Men and Women—Shocks**

During the Rural and Urban Participatory Studies, informants were asked to describe shocks or catastrophic events that caused them to suffer a significant drop in earnings and welfare over the past 5-10 years. Notably, many listed changes in government policy as one of the major shocks they have experienced. In addition, rural informants frequently mentioned the following:

- Crop loss due to drought or flood,
- Damage to crops by wildlife or insect pests,
- Loss of livestock to disease or theft (and attendant loss of draught power),
- Chronic or serious acute illness or in the household,
- Death of the household head or main breadwinner,
- Household fires,
- Violent crime.

In contrast, urban informants were more likely to mention:

- Loss of formal employment
- Inflation, in particular sharp increases in food prices
- Death of the primary income earner
- Illness – including both chronic illness and acute illnesses (malaria, diarrhea)
- Social exclusion as a result of HIV/AIDS stigma and discrimination
- Droughts (urban and peri-urban agriculture are common sources of food or income)

Source: Rural Participatory Study

**Table 5.1: Self-reported Reasons for Poverty in 2002-03:  
Rural Households by Consumption Quintile**

<i>RURAL Households</i>	<i>Percent Reporting as Either 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> Reason</i>					
	<i>Quintile</i>					
<i>Self-reported Reasons for Current Poverty Level</i>	<i>Poorest 20%</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>Wealthiest 20%</i>	<i>All Households</i>
Economic decline of country	25	24	26	26	28	26
Access/price of ag. inputs	61	61	59	54	51	57
Low agriculture production	19	15	15	13	14	15
Low output prices, inadequate markets	15	14	14	12	12	13
Insufficient land	3	4	3	4	4	3
Too few cattle or oxen	22	29	30	32	36	30
No capital to start/expand farm or business, no credit	42	45	40	42	39	42
High debt	0	0	0	1	0	0
Lack of employment opportunities	9	10	8	10	9	9
Wages too low	3	5	6	8	12	7
Prices too high	22	16	20	21	16	19
<b><i>Shocks</i></b>						
Drought	7	8	11	9	10	9
Floods	2	3	2	3	2	2
Death of cattle or oxen	2	3	4	3	5	3
Disability in the household	3	1	2	1	1	1
Death of a breadwinner	9	6	7	6	5	6
Other causes	11	9	6	9	7	8

Source: 2002-03 LCMS tabulations

**Table 5.2 Self-reported Reasons for Poverty in 2002-03:  
Urban Households by Consumption Quintile**

<i>URBAN Households</i>	<i>Percent Households Reporting 1<sup>st</sup>/2<sup>nd</sup>/3<sup>rd</sup> Reason</i>					
		<i>Quintile</i>				
<i>Self-reported Reasons for Current Poverty Level</i>	<i>Poorest 20%</i>				<i>Wealthiest 20%</i>	<i>Total</i>
Economic decline of the country	60	69	68	65	58	63
Access/price of ag. inputs	9	8	7	5	3	6
Business not doing well	8	10	11	8	8	9
No capital to start/expand farm or business, no credit	38	35	34	32	22	30
High debt	0	1	0	1	0	1
Lack of employment opportunities	31	31	28	20	15	22
Salary, Pension too low	32	36	40	49	48	43
Prices too high	52	54	54	56	54	54
<b>Shocks</b>						
Retrenchment	8	7	4	5	3	5
Disability in the household	1	0	2	0	0	1
Death of a breadwinner	9	10	8	6	4	7
<i>Other causes</i>	8	6	6	6	4	5

Source: 2002-03 LCMS tabulations

5.20 These diverse sources of information paint a consistent picture: in rural areas households suffer from crop failure and its causes—droughts, flooding, damage to crops by wildlife, and crop destruction by insect pests. Livestock deaths were also mentioned frequently. Moreover, the likelihood of experiencing specific crop-related shocks was found to be greater in some agro-ecological zones, e.g. drought is far more common in the south. In the 2002-03 LCMS, 11 percent of rural households cited drought and floods as an important cause of poverty, although the survey period captured only the tail-end of a drought period. Additional tabulations by province (Annex Table 4.1) show that 30 percent of survey respondents living in drought-prone Southern Province ranked drought as the most important cause of poverty for their households. Not surprisingly, loss of secure employment and inflation were reported as the most common and devastating shocks in the Urban Participatory Study. Tabulations from the 2002-03 LCMS show that 20 percent of urban households in Zambia had at least one member who was unemployed and actively seeking work; in Lusaka alone, 28 percent of households had at least one unemployed household member. (Annex Table 5.1) Retrenchment is viewed as an important cause of poverty in Lusaka's cities and towns, and it has had a particularly adverse impact on the poorest households: 8 percent of the poorest households in urban areas cited retrenchment as a primary cause of their poor economic status as compared to 3 percent of the wealthiest households. (Table 5.2)

5.21 Although differences between urban and rural areas were striking, rural and urban respondents both reported one type of shock with high frequency – the illness and death of a breadwinner or other productive adult household members. While HIV/AIDS rates are higher in urban areas, the prevalence of HIV/AIDS in rural areas is still very high (an average of 12 percent). Other diseases such as malaria, cholera and typhoid also threaten members of rural households. The 2002-03 LCMS suggests that mortality risks have a greater impact on the poorest households: 9 percent of the households in the bottom quintile identified the death of a breadwinner as a major cause of poverty, as compared to 5 percent of the wealthiest households. (Table 5.1 and Table 5.2) While deaths, particularly those caused by AIDS, affect Zambians in all

walks of life, resource poor households are less able to cope, as are female-headed households. Across all wealth quintiles, nearly 18 percent of female-headed households reported death of a breadwinner as a major cause of their low economic status. (CSO, 2004).

5.22 While there is clear evidence that risk contributes to poverty in Zambia, it is important to keep in mind that not all poverty is risk-related. Structural factors linked to policies and institutions are enormously important. Chapters 2 and 3 discuss many of the structural factors in the economy that contribute to high and persistent levels of poverty. The tables above also demonstrate the high and pervasive impact across wealth quintiles of structural (longer-run) factors including overall economic decline, lack of capital for investment of business expansion and low access to credit, low salaries and limited opportunities for employment (urban), high agriculture input prices (rural), and high consumer prices (throughout Zambia). Both urban and rural households registered particularly concerns about access to agriculture inputs e.g. fertilizer and seeds.

**5.23** Drawing together the existing evidence<sup>43</sup>, the major risks in Zambia can be grouped into three categories: (1) climate risks, including droughts and floods; (2) health risks and animal and plant diseases; and (3) macro and related price shocks, including policy fluctuations and reversals.

### **Climate Risks**

5.24 Farming in Zambia is almost exclusively rainfed, which makes it inherently risky. As described in Chapter 3, much of the farming is done in arid and semi-arid regions, where climate variability is high, making climate risk an important source of income variability. Maize dominates cereal production in Zambia, accounting for about 85 percent of both area cultivated and production of cereals in 2000-04 (del Ninno, 2005 – Food Aid and Food Security). Zambia experiences periodic droughts and floods, and it has been particularly drought-prone over the past decade. The country suffered droughts in the 1991-92, 1994-95, 2000-01 and 2001-02 seasons (del Ninno, 2005; Tschirley et al., 2004; Chilangwa and Cromwell, 2004). Agricultural production has suffered as a result of drought, particularly in the Western and Southern Provinces, as well as other environmental shocks. In riverine areas, fields have sometimes been washed away by flooding associated with the siltation of Zambia's rivers.

5.25 Droughts and flooding have large impacts on farmers, due to the loss of crop production and livestock. They also harm consumers through increased prices of food commodities in general and maize in particular. Most rural households purchase maize and other staple foods during pre-harvest months and are thus vulnerable to price increases due to weather or other factors. Drought also tends to reduce employment opportunities in rural areas, which are an important source of additional income for smallholders and poorer households that cannot afford to cultivate their own fields.<sup>44</sup> While rural labor markets in Zambia are relatively underdeveloped (White et. al., forthcoming), many of the poorest households earn extra income by working on the fields of others.

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<sup>43</sup> "Social Risk Management in Zambia: A Working Paper Presented to the Conference on Dynamic Social Risk Management." Government of the Republic of Zambia. Paris, June 30 – July 4 2003.

<sup>44</sup> In the rural qualitative study, examples were cited of labor deficit households, also those caring for sick members, who could not cultivate sufficient land. Some households could not afford seeds and basic inputs.

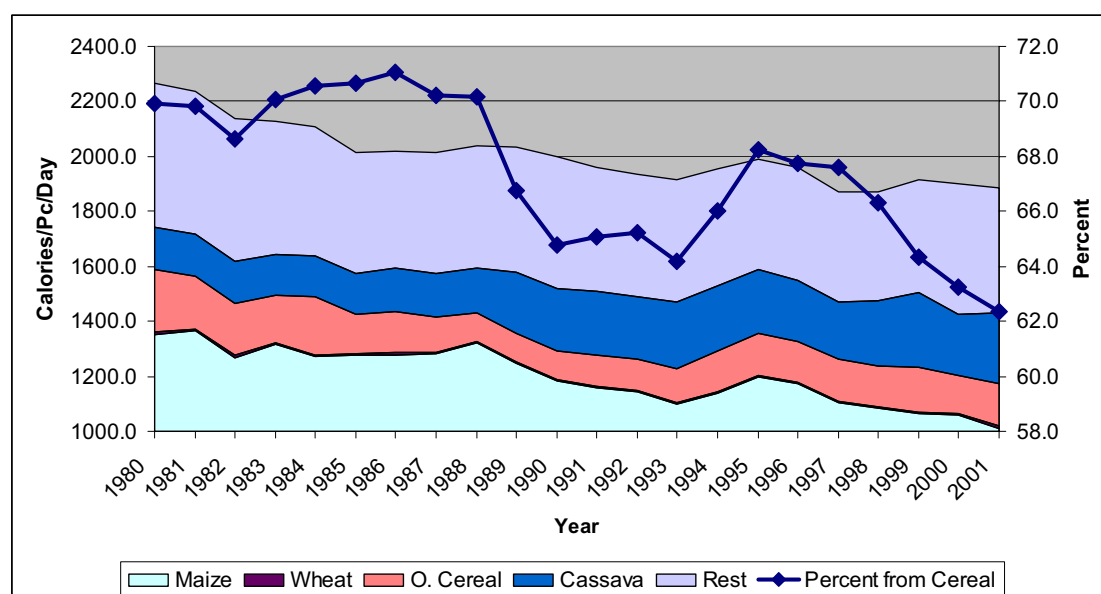
### Food Security and Drought in Zambia

5.26 Zambia experienced its last major drought between 2001 and 2003. Poor rains over two consecutive crop years (2000-01) and (2001-02) caused severe production and supply shortfalls in Zambia and elsewhere in southern Africa that were not relieved until the 2002-03 crop was harvested early in 2003. In 2000-01, prolonged dry spells in Southern and Western provinces, combined with excessive rains and flooding that destroyed crops in other areas to cause a 29 percent decline in cereal production relative to previous years. Cereal production was equally poor in the following cropping season due to a more extended drought that affected larger parts of the country. Maize prices increased up to 5 times the five-year average and in some southern regions, maize was not available on the market. (WFP 2003) At the peak of the crises, the Zambia Vulnerability Assessment Committee (VAC) estimated that 2.9 million (26 percent of total population) were in need of food assistance (VAC, 2003), although there was subsequent criticism of the methods they had used to make this assessment.

5.27 The severe famine predicted for the latter half of 2002 did not in fact materialize. Households coped, although staple food prices rose sharply and rural and urban families clearly felt the pinch. In rural areas, use of traditional wild foods helped many households to secure daily meals when no relief supplies were available. While levels of acute malnutrition<sup>45</sup> in young children did not rise in 2001-2003 as compared to earlier years (Table 1.X) and are still well below the levels observed when there is a famine or in ongoing conflict (e.g. in Darfur and other regions of Sudan), the DHS surveys document a steady increase in chronic malnutrition (low height-for-weight, or stunting) over the 1990s, which suggests growing levels of chronic vulnerability among young children. In addition, according to FAO (FAO, 2003) the dietary energy supply in Zambia (Kcal/day per person) has fallen in absolute terms over the past several decades (Figure 5.1), and the index of domestic food production was virtually stagnant between 1990 and 2000 (World Development Indicators, 2004). While poor men, women, and children coped in the short run with the 2001-2003 food crisis, it came at a cost to levels and security of future income streams and livelihood strategies.

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<sup>45</sup> Wasting, or low weight-for-height, is generally considered a measure of acute malnutrition. See Chapter 5 for a more detailed discussion of malnutrition.

**Figure 5.1 Levels and Composition of Food Consumption in Zambia**

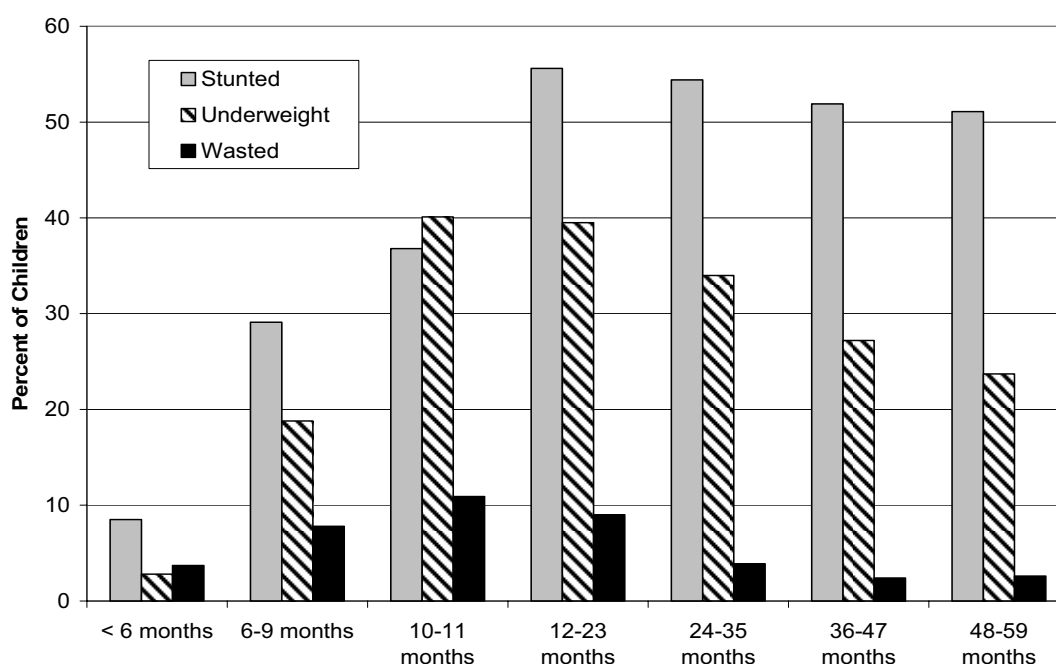
Source: FAO

### Health Risks

5.28 Health risks are pervasive in Zambia as a result of HIV/AIDS, TB, malaria, cholera and other life-threatening illnesses that are common to the country. The national HIV prevalence rate among adults aged 15-49 is about 16 percent (ZDHS 2001-02). Not only is the economically active population of HIV-affected households removed from the home, but a large number of orphaned children are left without parents. Agricultural production suffers as a result of the illness and death of productive adults, and because the healthy are preoccupied with the care of the sick. Health shocks also decimate livestock, particularly high-cost draught animals such as cattle, which have traditionally provided security in the drought prone Southern and Western Provinces.

5.29 The burden of disease is overwhelmingly carried by young children in Zambia. According to the most recent DHS (2001-02), 20 percent of children under five years old had diarrhea in the two weeks preceding the survey, 43 percent had fevers or convulsions, and 14 percent reported symptoms of acute respiratory infection (ARI). (CSO, Central Board of Health, ORC Marco, 2003). A much higher incidence of all these illnesses was reported for children between the ages of 6 and 23 months as compared with other age groups. This age group also evidenced higher levels of malnutrition (Figure 5.2) While wasting (as noted above, generally considered an indicator of acute malnutrition) is low on average in Zambia, it rises sharply when children are weaned. The proportion of underweight children also initially rises, but both measures begin to fall when children pass the two year mark. The same pattern is seen in the incidence of disease. Malnutrition is a common underlying cause of many illnesses, and chronic malnutrition reduces resilience to disease and can constrain intellectual development and learning. The causes, links with poverty, and recommended responses to malnutrition are discussed in Chapter 8.



**Figure 5.2 Levels of Stunting, Underweight, and Wasting, by Age**

Source: ZDHS, 2001-03

Note: For all anthropometric measures, percentage below -2 SD from the International Reference Population median.

5.30 Malaria is endemic throughout Zambia and is a major public health concern. It is the leading cause of morbidity and the second highest cause of mortality, particularly among pregnant women and young children. Malaria accounts for 50,000 deaths a year in Zambia and 37 percent of all out-patient hospital visits in Zambia. (CSO, Central Board of Health, ORC Marco, 2003) Malaria's economic impact in Zambia has not yet been quantified, but is likely substantial, with regional estimates suggesting a deficit of 1.5% of GDP. Malaria incidence rates in Zambia have tripled in the past three decades from 121 cases per 1000 in 1976 to 376 cases per 1000 in 2004, according to Health Management Information System data (HMIS).. Many factors have led to this deterioration including the spread of chloroquine resistance, decreased access to quality care, HIV, and increased poverty.

5.31 Despite high levels of malaria exposure, only 35 percent of urban households and 23 of rural households own a mosquito net and only half of these are insecticide treated (ZDHS, 2002-03). Many households do not use them on a regular basis, and many households that own nets do not own enough to cover all family members.

5.32 The Zambia National Malaria Control Program found a substantially higher prevalence of malaria infection among the population in the lowest wealth quintile in a recent survey (Zambia National Control Program, unpublished data). This can be explained by the inability of poor households to obtain a bed net for the prevention of malaria and treat it regularly. Also, the poor are more likely to live in rural areas where the concentration of mosquitoes is likely to be higher. Whether or not the risk of infection varies by quintile, current evidence suggests a much stronger correlation between wealth status and the consequences of malaria infection (Barat, et al, 2004). Figures in Chapter 3 show that the rural poor are much less likely to use a health facility than

those that are better off. Filmer (2002) examined data from DHS surveys in seven eastern and southern African countries to determine differences in treatment seeking for reported fever. Among those in the poorest quintile, 41 percent did not receive any formal treatment, as compared to just 21 percent in the top quintile.

5.33 HIV-positive individuals are more vulnerable to malaria. People living with AIDS are also more likely to be more susceptible to treatment failure of anti-malaria drugs. Acute malaria is also associated with an increase in the HIV viral load and with mother-to-child transmission. Studies from Malawi showed that acute malaria was associated with a 7-fold increase in HIV viral load in co-infected patients, a change that carries a risk of increased disease progression and greater potential of HIV transmission.

5.34 HIV/AIDS is by itself an enormous challenge for Zambia, given high prevalence rates (26 percent urban, 12 percent rural) (ZDHS, 2001-02) and the maturity of the epidemic: Zambia is now entering its third decade of double-digit prevalence. Many households, rich and poor alike, struggle to cope with AIDS-related illnesses and deaths. AIDS deaths are typically preceded by a period of prolonged illness, and rural households are increasingly carrying a larger share of the burden – AIDS victims often return home (to rural areas) when they can no longer look after themselves (Waller, 1997). HIV/AIDS also has consequences for the next generation: the number of orphaned children is high and growing and there is disquieting evidence that orphans (particularly girl orphans) are less likely to attend school than other children living in the household. (Section D) HIV/AIDS places a particularly heavy economic burden on poor families – affected households must pay for medicines to treat opportunistic infections, for frequent hospitalizations, and suffer a loss in earnings when adult members become too weak to work, or must stay home and care for an ill family member. While touched on briefly here, the links between HIV/AIDS, poverty, and vulnerability are discussed in detail in Chapter 7.

**Box 5.2: Shocks Experienced by the Household and the Living Conditions of Children**

Are children particularly at risk when their parents or other adults in the household experience shocks such as the loss of employment, severe illnesses, and death?

Analysis was carried using the most recent 2002-03 LCMS data to explore the links between shocks at the household level (i.e. recent adult deaths, illnesses, disability, unemployment) and the well-being of children, measured in terms of malnutrition and school enrollments. The links were not found to be strong (Annex Tables 5.2 and 5.3). Although chronic malnutrition rates were slightly higher for households that have experienced shocks, these differences were generally small. The highest rates of stunting were found among those who had lost either a breadwinner or another adult. Among those who had experienced loss of a breadwinner or adult aged 15-49, 55 percent of children were chronically malnourished in comparison to 47 percent of those who had not. This suggests a pattern in which loss of economically productive adults is linked to long-term nutritional stress in children of the household.

Acute malnutrition levels are also higher (6 percent) for those who have lost an adult household member than among those who have not (4 percent). Among households reporting all other types of shock, acute malnutrition levels were not significantly higher (and in some cases were even lower) than among households who did not report the shock. In the case of drought, for example, children who had experienced drought were marginally less malnourished (4 percent) than were those who had not been affected by drought (5 percent). Although this difference is small (and may not be statistically significant), it may reflect the impact of food distribution programs that operated in drought-affected areas during the period in question.

No clear relationship was found between household level shocks and school enrollments.

The weak link between reported shocks and child welfare could reflect a number of factors. As discussed later in the chapter, the primary cause may well be due to the wide array of coping mechanisms, both indigenous and external, used by Zambian households. While many of these coping mechanisms may damage the long-term recovery of the household, they nevertheless appear to be effective in allowing households to smooth consumption and protect their children – at least to the extent that relatively few poor children are acutely malnourished.

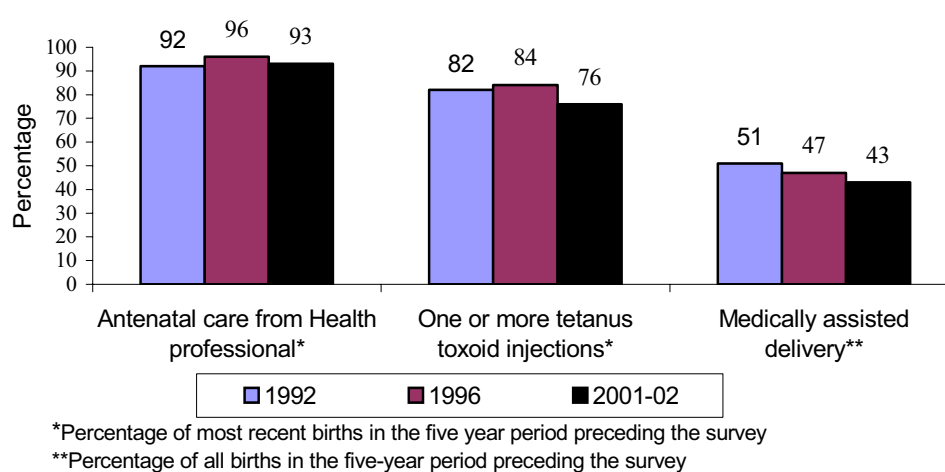
These findings also reflect difficulties in analyzing the impact of shocks using conventional household surveys. In contrast to the findings above, in the special module on self-reported poverty, 10 percent of poor urban households said they coped with shocks by withdrawing children from school.

Source: 2002-03 LCMS

5.35 Maternal mortality is also a serious health risk, particularly in rural areas. With only 28 percent of births attended by trained health personnel in rural areas, and 73 percent taking place at home (ZDHS 2001-02), often remote from any facility for emergency assistance, the risk of perinatal complications is high. In urban areas, in contrast, 23 percent of births take place at home, and access to trained health personnel is much higher. The number of pregnant women who do not receive a tetanus toxoid immunization rose between 1996 and 2001 in both urban and rural areas – from 17 percent to 26 percent of rural women, and 11 percent to 21 percent of urban women. Between 1996 and 2002, the overall maternal mortality rate rose from 649 to 729 per 100,000, and is likely to be very much higher in rural areas.

5.36 The costs of coping with the impacts of health shocks are very high and there is a great deal that can be done to prevent them from occurring. Mosquito nets reduce the transmission of malaria, but less than one-third of Zambian households own a mosquito net and even fewer (under 20 percent) reported they were using them at the time they were visited by ZDHS interviewers. Better antenatal care and measures put in place to ensure safe birth (tetanus toxoid coverage, medically assisted deliveries) would lower maternal mortality and other birth-related problems, and give children a better start in life. Unfortunately coverage and quality of maternal care has been deteriorating in Zambia.

**Figure 5.3 Trends in Maternal Care, Zambia, 1992-2001-02**



Source: ZDHS surveys, 1992; 1996; 2001-02.

5.37 Substantial efforts are being made in Zambia to make anti-retrovirals (ARVs) more widely available. This is very difficult in a country that still cannot ensure that government health centers have an adequate supply of basic drugs. Moreover, while ARVs can improve the quality and duration of life for AIDS victims, they do not cure the disease. The ARV treatment regime is difficult and only effective when there is high compliance; non-compliance creates drug resistant strains of the disease. Further, patients report problems in accessing the improved diet necessary for the drug treatment to be effective.

#### **Box 5.1 Cost Implications of Free ARVs**

Towela is a single mother living in Lusaka's Bauleni compound. She discovered that she was HIV+ about seven years ago. Although poor, she was well informed about HIV and managed to stay quite healthy. She supports her sons through selling tomatoes in the local market, and renting one of the three rooms in her house. She says that problems started when she started taking ARVs in 2004. Up until that time, her household budget had only been sufficient because her own appetite was so low. "I hadn't thought about it for so long", she complained, "but this medicine has brought back my appetite! I am so hungry now! I can't afford to buy enough food to feed myself and my boys, and also to buy their books. We must find a way out or else we won't manage to carry on".

Source: Harland (2005) Unpublished manuscript

5.38 Prevention – through changing sexual behavior – is essential. ARVs are only a partial and temporary solution of the HIV/AIDS. Drug resistance to ARV treatment will develop over time, making the drugs ineffective. Despite widespread knowledge of how AIDS is transmitted and current prevalence rates, only a small proportion of the Zambian population report using condoms in the 2002-03 LCMS (less than one-third for relations outside of marriage, and well under one-tenth for spouses and co-habiting partners – 2001-02 ZDHS). Given the extensive prevalence of HIV/AIDS in Zambia, this puts them at high risk of infection.

### Macro, Price, and Other Risks

5.39 The Zambian economy has been damaged by macroeconomic fluctuations that are experienced as shocks at the individual and household levels. Primary among these has been the collapse of the copper market and the continuous downward trend in the price of copper over the past three decades. (Figure 5.4) This change has been experienced by individuals and households in Lusaka and the Copperbelt as the loss of employment, and in rural areas as the loss of remittances. The rise in oil prices has exacerbated this situation.

**Figure 5.4 Trends in World Copper Prices, 1964-2001**



Source: US Geological Service (<http://minerals.usgs.gov/minerals/pubs/of01-006/copper.pdf>)

5.40 Should the long-run fall in copper prices really be considered a risk? Local and international researchers, including the World Bank, have been raising concerns about Zambia's heavy dependence on copper at least since the early 1970s. Inaction on the part of the government has created a policy environment where many Zambians experience copper prices fluctuations as a risk. For example, there were a number of informants in the urban participatory who had been retrenched in the mid-to-late 1990s but were still waiting for the mining companies to hire them back.

5.41 More generally, Zambians in both urban and rural areas described policy fluctuations as a major risk. For example, when fertilizer subsidies were removed over a decade ago, many cultivators found themselves committed to a crop (hybrid maize) they could no longer afford to cultivate. In theory, this change is so long-standing that it is not within the range of events

normally considered to be a catastrophic occurrence or shock. However, policies on fertilizer subsidies (and agriculture subsidies more generally) have not remained stable since government has re-introduced partial subsidies, targeted subsidies, and other modifications over the course of the 1990s. As a result, small holder farmers perceive agricultural policy to be as unpredictable and potentially calamitous as changes in the weather.

### Multiple Shocks

5.42 Despite seeking to avoid shocks or to prepare for them, all households will experience shocks, and many experience multiple shocks. In Zambia, the advent of HIV/AIDS as well as widespread poverty in rural and urban areas combine to ensure that shocks are common. Table 5.3 shows that while all households experience shocks, poor households suffer more shocks than richer households.

**Table 5.3 Average Number of Shocks Reported by Quintile, Urban and Rural**

	Quintile of National Distribution				
	1	2	3	4	5
<i>Urban</i>	1.4	1.3	1.2	1.2	1.0
<i>Rural</i>	1.3	1.3	1.2	1.2	1.1
<i>Total</i>	1.3	1.3	1.2	1.2	1.0

Source: 2002-03 LCMS<sup>46</sup>

5.43 When households endure multiple shocks, coping becomes progressively more difficult, and it is impossible to disentangle their respective impacts. For example, even if a household affected by the death of a breadwinner is able to avoid acute malnutrition and resist withdrawing children from school, they are less likely to be able to cope effectively with additional shocks. Downward mobility – often experienced as food insecurity and the inability to meet school-related expenses or to cope without utilizing child labor – is almost certain to be the result of multiple shocks. Many households in the Rural Participatory Study reported that they had been affected by more than one shock (Box 5.3). HIV/AIDS has further undermined household's ability to cope. (Box 5.4)

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<sup>46</sup> Shocks were counted based on a responses to a question in the LCMS which asked respondents to identify the reasons for their poverty. The counts do not correspond to any particular time period

### Box 5.2 The Impact of Multiple Shocks

Godfrey is a 67-year old man who is blind. He has been married 37 years and has had a total of 12 children. His household produces cassava and millet, and Godfrey weaves baskets to make extra income. He feels his household has lost ground significantly in the past five years. First, thieves ransacked his house two years ago, stealing all the family's clothes, bedding, money and other assets. He has not been able to replace these items, in part because he suffered additional set-backs when his two daughters died within the space of a year. The household had been accustomed to relying on remittances sent by these adult daughters, both of whom were employed. Now, the household has not only lost its source of cash income, it has been burdened with the care of several orphaned children left by the two deceased daughters. As a result of multiple shocks and setbacks – blindness, theft, death of income earners, and the necessity of caring for orphans – this elderly man's household is barely surviving, is often food-deficient, and has had to withdraw some of the orphaned grandchildren from school.

Source: Rural Participatory Poverty and Vulnerability Study

### Box 5.3 : HIV/AIDS as One Among Many Shocks

Bintu, a widow aged 61, came to live with and care for her 92 year old father in 1993, after her own husband died. That same year, Bintu's daughter who was chronically sick with HIV/AIDS came to live with her, and also brought her own four children.

Bintu's daughter was bedridden for two months during the planting season, and Bintu struggled to be a caregiver for her daughter as well as to look after the fields. She was only able to plant 1.5 hectares of maize and beans, less than the previous year, and was emotionally and physically exhausted from trying to juggle the tasks of caring for her elderly father, her daughter, and four small grandchildren.

When her daughter died, Bantu was unable to afford a coffin. In order to feed the mourners, she used a tin of maize given as food relief during the previous droughts. After the funeral, she continued to work very hard to catch up on cultivation.

Compounding this episode of long-term illness, since her daughter died Bintu has lost 23 cattle to corridor disease, and her family was hit hard by the 1994/95 drought. They starved during the rainy seasons. Now Bintu is struggling to raise her four grandchildren and look after her elderly father without any outside help.

Source: case studies from "The Impact of HIV/AIDS on Farming Households in the Monze District of Zambia", draft paper by Kate Wallen, University of Bath, 1998

## D. Coping With Risks

5.44 Faced with a risk or shock, individuals and households have to adapt their normal activities and practices to encompass the impacts or demands of their new circumstances. The adaptations they make – termed coping strategies – can be effective or less so. They can come at a great cost to household members or not. They can facilitate a quick recovery or further entrench the household's vulnerability and poverty.

5.45 In this section, we examine how Zambian households and families cope with different risks and shocks, where they turn to for support in the community and beyond, and what is the impact of their coping strategies are on their present and future prospects. In Chapter 6, this

theme is addressed again from the perspective of service provision, examining Government's new social protection strategy.

### **Avoiding Risk**

5.46 For the very poor, coping with the impact of shocks can be devastating. With few assets or opportunities to reduce or shorten the impact, the very poor and vulnerable may suffer the full impact of the shock, losing productive assets, food, education, health and housing. For many very vulnerable people, therefore, the first strategy is to avoid exposure to risk.

5.47 As a result, many poor rural farmers mistrust new horticultural cultigens and prefer to continue planting the familiar staple crop, maize, supplemented by low-value traditional crops such as cassava, millet and sorghum. This strategy is likely to trap them at a bare subsistence level. In comparison with households in the highest income quintiles, households in the poorest quintile are more likely to grow both cassava and millet but less likely to grow cash crops such as cotton, tobacco and sunflowers. Growing high-value and marketable crops such as cotton or vegetables is potentially profitable, but risky for a number of reasons. Besides inexperience and uncertainty, structural weaknesses (such as lack of infrastructure and unpredictable markets) expose poor households to a higher than acceptable risk of failure.

5.48 In urban areas, the poor may be equally reluctant to make bold but risky choices about their livelihoods. Sticking with a minimal but familiar livelihood offers less risk of a disastrous failure, even if it guarantees continued poverty. The end result is that the poor tend to limit themselves to static, unproductive and low-paying occupations, which nonetheless offer a shield against risk. This behavior can trap risk-averse individuals and households in a subsistence-level means of livelihood and perpetuate the cycle of poverty.

5.49 If risk-aversion governs the behavior of the majority of low-income households, then the potential growth of the country as a whole will be less than optimal. On the other hand, either formal or informal safety nets might provide the cushion against failure that would encourage the poor to invest in potentially profitable but uncertain enterprises.

### **Preparing for Shocks**

5.50 Despite attempts to avoid risks, inevitably shocks occur. At different levels, people make various preparations in the expectation of future shocks.

5.51 In rural areas, the most common means of preparing for the impact of shocks reported in the participatory rural PVA study include the following:

- saving or stockpiling grain or other resources,
- breeding small animals for sale during crises or lean periods
- multiple plantings or planting in several locations (e.g. riverbank and arid highland) in anticipation of flooding or drought
- diversifying crops by planting some low-value low-input crops (such as millet, sorghum or cassava) in addition to the staple crop (usually maize)
- sending someone to seek work in town, or on a commercial farm or tourism venture
- contributing to the extended family network to ensure that relationships of mutual assistance are maintained and that informal aid will be available.



5.52 Groups of farmers often engage in measures to reduce the impact of future risk, particularly crop failure and drought. These include diversification of farming activities, seed banks, and adoption of risk-reducing husbandry techniques such as conservation farming, green manuring, soil improvement etc. Participants are often highly motivated to improve on their food security and agricultural production, although deterred to an extent by the obligations to share with others who may not have taken such measures to secure their production. Often the strategies adopted are being promoted through an external agency, including the national extension service as well as other NGOs, projects and programs. There are a number of examples of such advice being technically inadequate, resulting in damage to livelihoods. This demonstrates the imperative of careful technical review, rather than misplaced enthusiasm and hasty implementation.

5.53 While rational strategies of diversification, savings and investment help maintain livelihoods through periods of crisis, it must be recognized that not all households can engage in them. These strategies depend on access to labor, land, capital and/or knowledge that may be lacking in the most vulnerable households. While building the defenses of the poor to adopt such strategies is critical, the needs of those that are unable to adopt them should also be recognized. Support to build and maintain healthy livestock, for instance, may require a degree of subsidy at the outset but may save households from precipitous decline in the long run.

5.54 In urban areas, parallel opportunities to diversify livelihoods or to save against the event of shocks is less easy for many people to access or maintain. The expense of investing in diversified livelihoods and the difficulty of saving means that preparations for crisis are very limited among the poorest. The high demand for cash means that many small shocks and contingencies absorb savings, with little or nothing remaining for times of crisis.

5.55 Saving or investing against an unknown future shock often involves deciding to reduce consumption today in order to avoid a bigger reduction in the future. For the rich, this makes little fundamental difference to their daily domestic consumption, and in any case buying the commodity of security is an obvious good. For the poor this choice can be difficult. A good example of this is the difficult experiences in running the Zambian medical “scheme”, which required a small monthly per capita payment in return for unlimited access to clinics and hospitals. Although set at a low level that made the scheme a good bargain compared to case-by-case medical fees, many poor people could not accept making a regular payment, perceiving the money to be wasted if they did not get sick that month. Since an average family would pay the price of 1 kg of meat per month – a commodity which they rarely afford – the notion that unredeemed insurance is a waste of money is understandable.

### **Responses to Shocks**

5.56 Faced with shock events, households can take one of three routes:

- Adopt a coping strategy, often prepared for, that will enable the household to survive the current crisis without disintegration, or significant damage or cost. These viable strategies include getting help from family, church or neighbors, securing a school bursary, accessing free food, getting a loan from the employer, using savings/insurance.
- Adopt a coping strategy that enables the household to survive the current crisis, but may increase future exposure to risk and precipitous decline. These damaging strategies include selling productive assets, withdrawing children from school, engaging in commercial sex work, over-exploiting natural resources etc.

- Fail to find an effective strategy to protect well-being in the short term. Instead the household may drastically reduce consumption and suffer increased morbidity and mortality as a result. The household may lose their dwelling unit, live in a temporary shelter, individuals resort to begging or living on the streets, or even break-up.

5.57 We will now examine the diversity of coping strategies, identify key actors in supporting coping mechanisms, look at patterns of coping in rural and urban areas, in response to specific shocks, and also at migration. While not definitive and tending to merge at the extremes, all these perspectives are useful in thinking about how households respond to shocks, and where intervention might be most usefully directed.

5.58 Several things come out clearly in our analysis. First, households at all income levels are affected by risk and employ coping a range of coping strategies. Second, however, there are too few instruments to support *ex ante* risk coping, with the result that most poor men and women in Zambia depend on costly *ex post* coping instruments. The Government speaks the language of risk prevention but relevant policies and programs have not been effectively implemented. As a result, many of the poor have chosen low-risk, low-return livelihood strategies, which further perpetuates poverty.

### Seeking Diverse Solutions

5.59 Even while it is convenient to look at risk prevention, mitigation and coping, it is important to remember that coping strategies are not isolated responses to exceptional circumstances. At any time, a household may be protecting themselves against predicted or unexpected risks, dealing with another shock and/or suffering the impact of others. Coping strategies are similarly diverse, drawing on domestic and family resources, social and community networks, and on private<sup>47</sup> and public services available locally or at further remove.

5.60 The following table illustrates the diversity of possible ex-ante and ex-post coping mechanisms that can be accessed in Zambia outside the immediate family. The table is illustrative of coping strategies that may be sought both to manage risk and to cope after a shock has occurred. It also highlights the role of different actors at community, private and public level and illustrates the fact that in reality, people adopt coping strategies within a broad environment, and this environment affects how they perceive risk and experience shocks, and offers many different types of support.

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<sup>47</sup> Private includes market-based, and also Churches, NGOs and other private service providers.

**Table 5.4 Coping with Shocks: Mechanisms Accessed Outside the Household**

Shocks	Ex-Ante			Ex-Post		
	Community	Private	Public	Community	Private	Public
Agriculture failure	Diversification Conservation farming Farmers groups Cattle clubs Community 'bare-foot' vet	Insurance for commercial farmers & outgrowers	Famine Early Warning; DMMU monitoring Food security packs Fertilizer support program	Assistance from churches Food from relatives and neighbors Piece work	Private charitable responses Donations from local businesses	Emergency drought response Food relief interventions Drought Recovery Program
HIV/AIDS	Preventive messages from local leaders Churches Peer educators	Workplace preventive programs VCT services Better-parenting interventions by churches Popular music	AIDS education Youth-friendly clinics School curriculum & anti-AIDS clubs TV and radio education PMTCT interventions Safe blood	Home based care programs Church groups visiting patients	Hospices Work place programs provide access to treatment / ARVs VCT services	Provision of ARVs Training & interventions with health staff Legal protection against discrimination in employment PWAS
Disability	Trained CHWs and TBAs "Buddy" system to ensure TB treatment compliance	Supply of iodized salt & fortified sugar Health and safety at work	Ante-natal care (rubella vaccinations, malaria prophylaxis) Under 5 vaccinations Health-facility based deliveries Vitamin A program TB treatment Legislation to ensure iodination of salt Health education	Rural communities accommodating and helpful to people with disabilities Begging	Donations of wheelchairs, prostheses from service clubs, churches, private business Sheltered workshop and other employment in urban areas	Special education facilities Supply of wheelchairs, prostheses, etc Targeted employment opportunities in the civil service PWAS National Trust Fund for the Disabled
OVC	See HIV/AIDS	Community based 'good parenting'	Free basic education Victim	Community mobilization to support OVC	Psycho-social support	Free basic education Policy

		programs Civic education programs Income generation for widows	Support Unit Improved legislation to protect children See HIV/AIDS	Community schools Assistance from church groups	Better- parenting interventions NGOs and CBOs Orphanages Bursary support Street children programs Home based care groups	revisions PWAS Victim Support Unit Re-entry policy for pregnant school girls School feeding programs Bursary support
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### Self-insurance: Migration and Remittances

5.61 Migration serves many purposes – it can be means for individuals to seek new economic opportunities, for households to diversify earnings portfolios and insure against risk, and as a way of responding to a specific shock. Remittances are often related to migration, and have an important redistributive and protective role in Zambia.

#### Migration

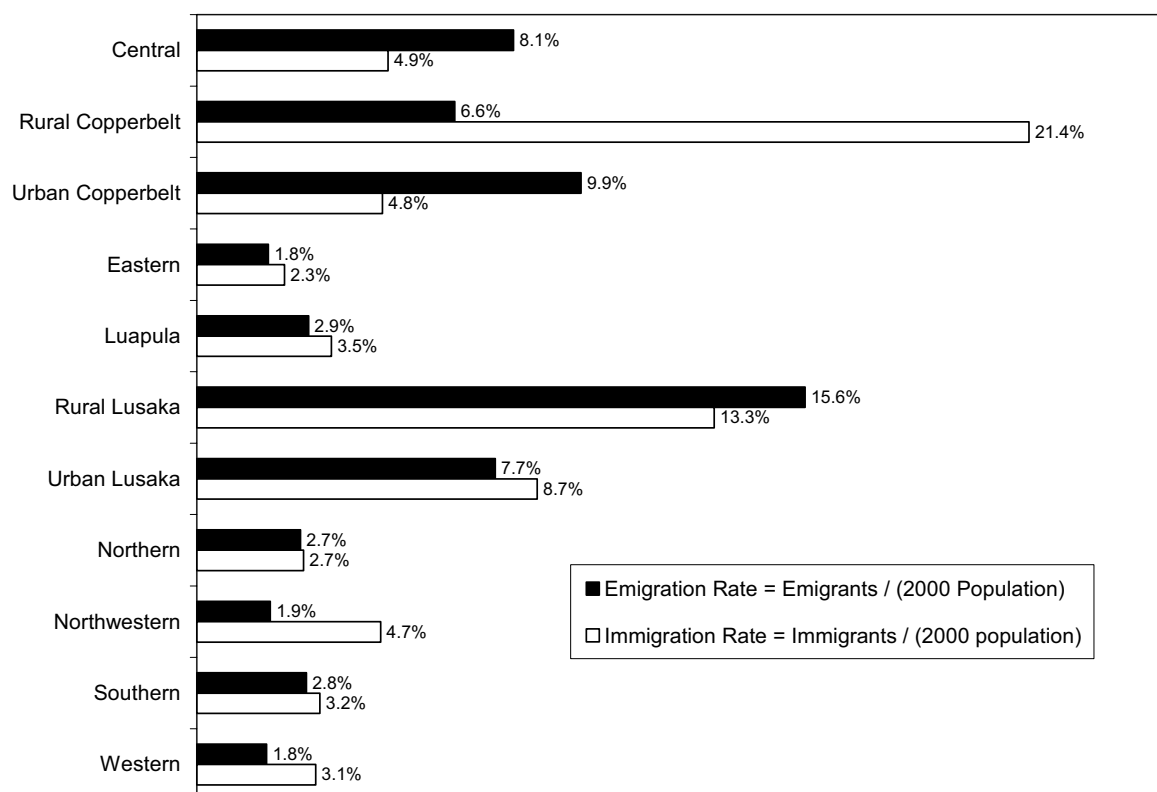
5.62 One means of responding to risks and shocks is to relocate to a setting that offers lesser exposure and/or a better possibility of recovery. For many years, rural households have been sending members to Zambia’s cities and towns to seek their fortune in the formal sector (mining and manufacturing, as well as related activities). The employed relative traditionally is expected to send remittances that will support the household through a crisis period. Less commonly, an entire household would migrate to an urban or peri-urban area. These migration patterns would very often be between specific rural and urban locations, meaning that migrants would often move to join an area where they have family members, other relatives or members of the same traditional community. These patterns are certainly detectable in Lusaka, where certain compounds have strong links with specific provinces, districts and Chieftaincies.

5.63 According to informants in the Rural Participatory Study the pace of rural-urban migration has slowed considerably in recent years because there is now a perceived dearth of employment opportunities in towns and cities. Traveling to town is perceived to be expensive and risky, with no guarantee of generating enough surplus to send home.

5.64 A snapshot of migration that took place 1999-2000 shows that while there is still considerable movement of people between urban and rural areas, there is no longer strong net migration to urban areas. Figure 5.5 shows annual migration rates by province. These figures are based on individuals’ reports in the 2000 census of where they were residing one year earlier. Rural and urban areas of both Copperbelt and Lusaka Provinces—the two provinces with substantial urban areas—are treated as separate areas for this analysis. Overall, 4.0 percent of Zambians were living in a different province the previous year. There is substantial in- and out-migration to and from the rural and urban areas of Lusaka and Copperbelt. There was large net migration from urban Copperbelt, a clear response to the decline in mining and manufacturing employment in the region during the 1990s. While the large drop in employment occurred in the mid-1990s with the privatization of the Zambian copper industry and other parastatals, large scale relocation away from urban Copperbelt was still taking place in 1999-2000, indicating a delayed

response to the employment shock. Many urban Copperbelt residents relocated to rural areas of the province. This is reflected in the substantial immigration rate for rural Copperbelt.

**Figure 5.5 Annual Immigration and Emigration Rates by Province for Population Age 15 and Older**



Source: 2000 Census

5.65 Among those who did migrate in 1999-2000, urban-to-urban migration was most common, followed by rural-to-rural migration. Urban-to-rural migration exceeded rural-to-urban migration. (Table 5.5)

**Table 5.5 Direction of Migration by Quintile for Individuals Aged 15 and Above**

Migrant status	% of Total
Non-migrant (living in same district as previous year)	93.7
Urban-to-urban migrant	2.2
Rural-to-rural migrant	1.8
Urban-to-rural migrant	1.5
Rural-to-urban migrant	0.8

Source: 2000 Census

5.66 The pattern of migration data from the census is compatible with reports from the Rural Participatory Study that migrants from urban areas are often found in rural communities. They include retrenchees, retirees, people who are chronically ill as a result of HIV/AIDS, widows,

divorcees and orphans. These individuals may be a net drain on the resources of their rural kin, with needs for care and food that exceed their capacity to contribute to the household.

5.67 Alternatively, migrants into villages can strengthen the local economy and the human and social capital of the community. Retirees and retrenchees may arrive in the village with capital to invest in agriculture, horticulture, or livestock, and may have cash to spend on locally produced goods and services. Some offer employment or other useful resources (such as a grain mill or shop). The experience of migrants into rural areas can offer invaluable help to local committees, and it is not at all unusual to find retirees engaged in development initiatives, or serving as headmen or even traditional chiefs.

5.68 The 2002-03 LCMS examined reasons for migration, and found that most migration was in fact not in response to economic stress. An exception is migrants who reported migrating because their previous household could not afford to keep them. Among those 85 percent were ill, including 100 percent of those who migrated from urban to rural areas. This is consistent with the remarks of the rural PVA study informants, who complained of the economic drain caused by the return of people living with HIV/AIDS for care and support during their final months of life.

### Remittances

5.69 Remittances between households are substantial in Zambia, and have an important role in ensuring the well-being of elderly and female-headed households. Overall, remittances flow principally to rural areas from wealthier households in both rural and urban areas. Table 5.6 shows the percentage of households within each quintile that send remittances, by urban/rural origin and destination. Twenty-nine percent of all households in the top quintile send some form of remittance, as compared to just 13 percent of households in the bottom quintile. The traditional flow of resources from urban to rural households, which was common during the years when the copper industry boomed, still occurs, overwhelmingly from better off urban households. Many transfers also take place between rural households; 21 percent of all rural households send something in cash or in-kind to other rural households.

**Table 5.6 Percentage of Households Sending Remittances  
By Quintile, Urban/Rural Source and Urban/Rural Destination**

	All Quintiles	Quintile of National Distribution				
		Poorest 20%	2	3	4	Richest 20%
% of Rural Households in Quintile Sending ...						
to Rural Households	21	14	20	20	22	26
to Urban Households	4	3	3	5	4	6
% of Urban Households in Quintile Sending ...						
to Rural Households	14	5	7	9	13	22
to Urban Households	9	2	3	5	7	15
% of Households in Quintile Sending Any Remittance	21	13	18	20	22	29

Source: 2002-03 LCMS

Note: Remittances included here are both cash and in-kind.

5.70 While remittance *sending* households are generally wealthier, remittance *receiving* households are spread evenly across the distribution, as can be seen in Table 5.7. Across quintiles, about 34 percent of rural households and 20 percent of urban households receive some form of remittance. The poorest urban households (among those receiving remittances) receive 23 percent of total income through remittances, and the poorest rural households receive on average 16 percent of total income. Note that wealthy recipients also get a considerable share of income through remittances.

**Table 5.7 Who Received Remittances in 2003-04?**

	All Quintiles	Quintile of National Distribution	
		Poorest 20%	Wealthiest 20%
Percent of Households receiving remittances living in			
Urban	20	24	20
Rural	34	33	34
Urban & Rural	30	31	27
For those receiving, percent of total income from remittances			
Urban	18	23	13
Rural	12	15	9
Urban and Rural	13	16	11

Source: 2002-03 LCMS

5.71 Remittances flow largely from households that are better off in terms of their productive resources to those that are more vulnerable. Table 5.8 shows that remittance income is substantial enough to affect the poverty rate. If remittance income were excluded, the national headcount rate would be 58 percent rather than 56 percent. Table 5.9 shows results from multivariate probit regressions for household remittance receiving and sending. The regression figures show that households are more likely to receive remittances if the household head is older and/or a woman, if there are no male adults in the household, if a larger share of the household is over age 50, and if there is a disabled person in the household. Households are more likely to send remittances if they have higher consumption levels, if the household head is younger and/or a woman, if the household head is more educated, and if the household is larger.

5.72 Overall, remittances are an equalizing force in Zambia. Because they flow predominantly from wealthier households to households across the distribution, the net effect is to reduce inequality in Zambia and help the most vulnerable survive. The fact that the probability of receiving remittances is nearly equal across the distribution is partially a consequence of this equalizing effect; some households that would otherwise be in the bottom quintiles are given a boost up the distribution by the remittances they receive.

**Table 5.8 Headcount Poverty Rate Simulations: With and Without Remittance Income**

	<b>Actual Headcount</b>	<b>Headcount w/o Remittance Income</b>
National (%)	56	58
Urban (%)	45	48
Rural (%)	62	64

Note: Headcounts w/o remittance income were calculated by subtracting remittance income received from household consumption and recalculating each household's consumption per adult equivalent.



**Table 5.9 Correlates of Remittance Sending and Receiving:****Probit Estimates**

	(1) 1=hh received remittance	(2) 1=hh sent remittance
Log consumption per adult equivalent	0.009 (0.59)	0.106** (8.16)
Log age of HH head	0.109** (3.57)	-0.042+ (1.66)
HH head is woman	0.100** (5.16)	-0.033* (2.11)
No male adults in HH	0.052* (2.47)	0.026 (1.16)
Max years education in HH	0.006 (1.59)	0.009* (2.55)
Years education of HH head	-0.004 (1.48)	0.003 (0.99)
Share of HH members age 50+	0.079+ (1.75)	-0.049 (1.08)
Share of HH member age under 15	0.020 (0.49)	-0.010 (0.29)
Log HH size	0.018 (0.78)	0.099** (5.39)
Child in HH with both parents dead	0.029 (1.45)	-0.006 (0.34)
Disabled person in HH	0.046* (2.18)	0.022 (1.15)
Drought or flood	-0.045 (1.11)	-0.030 (0.86)
Death of cattle	-0.022 (0.49)	-0.009 (0.22)
Retrenchment	0.010 (0.18)	-0.041 (1.12)
Death of bread winner	0.007 (0.25)	0.002 (0.06)
Urban	-0.029 (0.92)	-0.033 (1.26)
Observations	9225	9225

Estimates shown are marginal effects from probit regressions.

Robust z statistics in parentheses.

significant at 10%; \* significant at 5%; \*\* significant at 1%+

Regressions also include province dummies (not shown).

### **Sources of External Support**

5.73 A number of key actors external to the community have a significant role in helping households prevent, mitigate, or cope with shocks. These include churches, NGOs, private sector actors, and the public sector.

5.74 The majority of Zambians are church members, and many churches offer support to people suffering in the community. Church outreach activities are often directed to people affected by poverty, age, ill health or being widowed or experiencing a death in the household. The mainstream churches, which often have links to funding from other countries, are usually members of active umbrella organizations that provide extensive advice to improve the quality of social outreach programs.

5.75 There is a large number of diverse churches in urban areas. The extensive community services, including home based care and hospices, run by the Catholic Church, Salvation Army and Seventh Day Adventists comprise a significant proportion of urban social assistance provision. In rural areas, particularly around long-established missions, churches provide comprehensive services for the whole community commonly include hospitals and hospices, home based care, AIDS education, support for schooling, livelihood development, rural infrastructure and water supplies.

5.76 The impact of the church on HIV/AIDS has been somewhat mixed. Some Church attitudes towards extra-marital sex, sin and punishment have deterred people from addressing issues of sexual behavior, reduced willingness to go for testing, and at times directed public condemnation to the sick and their families. Many churches have only engaged in HIV prevention activities to the extent of preaching a strong message of abstinence before marriage / faithfulness within marriage. In contrast, Churches have been in the frontline of the response to HIV/AIDS, developing community services, supporting OVC and pioneering work with traditional leaders.

5.77 There are many registered NGOs, associations and societies working with vulnerable groups and people suffering from shocks. They range from small community groups to large organizations that operate in several locations and receive funds from diverse sources. While the combined efforts of NGOs are clearly very significant, it is difficult to estimate their activities, coverage and budgets. While registration requirements might suggest that information on NGOs is available, in fact this is complicated by the fact that there are several routes for legal compliance, and requirements to lodge annual accounts and reports are rarely observed. Further, outreach activities undertaken by churches or from health facilities are not separately registered, and are therefore hard to track.

5.78 The 2004 Situation Analysis included an attempt to assess the extent of NGO engagement with orphans and vulnerable children, focusing on organizations that have an annual budget of \$5000 or more – thus excluding the myriad of registered CBOs and associations. The study found over 400 registered organizations that stated their purpose of working with OVC, representing a substantial increase over the last five years. Activities are largely focused on urban centers, perhaps because awareness of issues is greater, or access to funding is better. Table 5.10 shows the number of registered organizations, and the ratio of organizations by population.

**Table 5.10: Number of Registered Organizations and Ratio of Organizations to Population by Province**

Province	# of registered organizations	Provincial population	Ratio organizations/ population
Central	45	1,012,227	22,494
Copperbelt	244	1,581,221	6,480
Eastern	65	1,306,173	20,095
Luapula	29	775,353	26,736
Lusaka	228	1,391,329	6,102
Northern	20	1,258,696	62,935
North-western	25	583,350	23,334
Southern	83	1,212,124	14,604
Western	42	765,088	18,216

Source: Situation Analysis of OVC 2004

5.79 The performance of the smaller NGOs is often enhanced by membership of umbrella organizations, which also provide an opportunity to coordinate and learn from more established organizations. Effective umbrella groups exist for organizations working with OVC, HIV/AIDS, livelihoods development, hospice care, women's groups and so on.

5.80 There is little available information on the scale of support for vulnerable groups and people suffering from the impact of shocks from the formal private sector. There is no doubt a significant demand on any profitable entity, although many businesses focus on meeting the contingency needs of employees and their families, or the immediate community in which they work, before making donations on a wider scale. Small business owners undoubtedly face significant demand from their own extended families, which further reduces capacity to support general assistance programs. Large scale companies use donations as a form of public relations, generating publicity from support to orphans, urban clean-up campaigns, education projects and similar initiatives. The numbers that use this strategy are very limited. There are no tax incentives for the private sector to make charitable donations.

5.81 People working in the formal sector are often able to access support from their employers. Notably, while workplace programming for HIV/AIDS was until recently unusual, employees are increasingly able to access such services. The availability of affordable ARVs has now presented a clear reason for employers to engage with the issue of HIV, so as to increase productivity and reduce expenditure on sick pay and other costs associated with having a debilitated workforce.

5.82 Low-paid employees traditionally expect support for school expenses for all their dependents (including dependent orphans). For many, the number of children from their households that can attend school depends upon this workplace policy. Education allowances are taxable, and there is no incentive for employers to consider supporting increased education costs for workers' children.

5.83 Formal sector workers usually expect to be able to access substantial interest-free loans from their employers, either for investment (e.g. building a house), to spread significant expenses over several months (e.g. the annual January demand for uniforms and school fees), and to meet emergency expenditures (e.g. the hospitalization of a family member).

5.84 Market based insurance and pensions are easily available through a range of companies and brokers. The range of insurance products includes health policies, death and funeral

insurance, life cover and business insurance. Life cover policy subscriptions can be cashed early, making them attractive to medium income customers who worry about tying up their money in case of shocks that go beyond their usual coping capacity.

5.85 The public sector explicitly engages in a range of risk prevention and coping mechanisms in many sectors, with particular emphasis on livelihoods, health, and education. Other risk management decisions are encompassed in macro-economic, agricultural, labor, investment and industrial policy, but rarely in clear-cut terms. Since Zambia suffers from widespread risk and shock, which entrenches poverty for the majority of the population, using a risk management framework could provide a useful approach for national development planning. Poverty reduction and risk management is seen as a sub-component of GRZ responsibilities, and hence usually addressed from a sectoral perspective.

5.86 Interventions to prevent risk and shocks are usually cited as Government's principle goal. Ideologically and politically, preventive action has appealed to the current and previous Governments, which have spoken of the need to prevent HIV/AIDS and malaria, monitor food security and strengthen rural livelihoods, and promote business development amongst the urban unemployed and retirees. In contrast, actions to support people suffering from the worst impacts of shocks are subject to scrutiny, with a reluctance to support consumption or create dependence on "hand-outs". Coping strategies that enjoy political support are usually those that promote a sustainable outcome, often associated with loans or subsidies intended to provide a kick-start for a new livelihood.

5.87 Many public sector interventions tackling risk reduction suffer from impractical planning, a lack of political prioritization, chronic under-funding and poor implementation. The nature and extent of intervention needed to reduce the major risks far exceeds the growing crises of HIV/AIDS, OVC, agriculture, employment, infrastructure and so on. The resulting lack of performance is subsequently attributed to defects in policy and capacity, thus triggering a further round of assessments, strategies, reviews and reform – but little in terms of improved performance. As a result, many actual interventions are donor-driven, through NGO funding, projects or local level sectoral intervention, resulting in inconsistent service delivery, lack of sustainability and a lack of clear information of either problems or solutions.

### **Coping with Shocks**

The LCMS III module on self-reported poverty and risk coping provides an interesting view of how different types of households in Zambia cope with shocks. Table 5.11 shows the diversity of coping strategies used by households at different levels of income.

5.88 The poor resort to coping strategies more intensively than the better off, and are more likely to use destructive coping strategies in response to shocks e.g. with draw children from school, reduce consumption and resort to wild foods. While all households report selling assets, wealthier households have greater access to credit and other market-based smoothing methods. It is encouraging to note that in 2002-03 the poor also were more likely to receive relief food and support from food-for-work programs.

**Table 5.11 Coping Strategies Used by Zambian Households, 2002-03, By Per-Capita Consumption Quintile**

Coping Strategies	Quintile of National Distribution					Total
	Poorest 20%	2	3	4	Wealthiest 20%	
Farm piecework	29	21	16	10	5	13
Other piecework	44	34	33	23	16	26
Food for work programs	11	7	5	4	1	5
Relief food	7	6	4	3	1	3
Eating wild food only	17	12	8	5	3	7
Sub. ordinary meals with mangos, etc.	73	69	63	58	41	56
Reducing number of meals	82	78	76	70	53	67
Reducing other purchases	77	76	75	69	58	68
Informal borrowing	45	46	45	43	38	42
Formal borrowing	7	9	9	12	18	13
Church charity	7	8	7	4	3	5
NGO charity	5	5	4	3	1	3
Pulling children out of school	18	12	10	7	4	8
Sale of assets	17	20	18	15	13	16
Petty vending	27	27	19	15	10	17
Asking from friends, neighbors, relatives	71	74	70	65	56	65
Begging from streets	2	1	1	1	1	1

5.89 The next two sections look in detail at urban and rural coping strategies, drawing on the LCMS III as well as rural and urban participatory studies. Before doing so, however, it is important to note that the percentage of households using various coping strategies has been increasing over time, which suggests rising vulnerability and greater inability to cope. The use of these strategies has become more common over the past six years, possibly as a result of the widespread impact of HIV/AIDS and entrenched conditions of poverty.

**Table 5.12 Percentage of Households Who Report Having Used Each Coping Strategy For Times of Need in Past 12 Months**

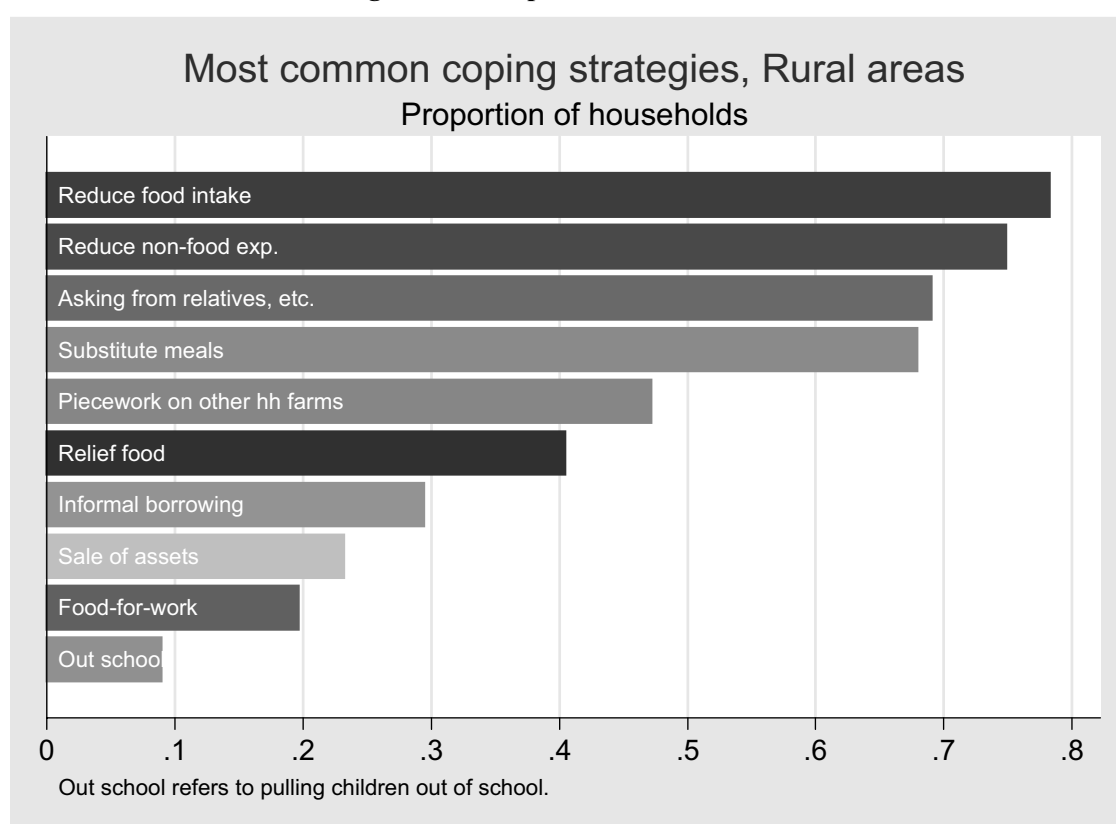
	1996			1998			2002-03		
	All	Rural	Urban	All	Rural	Urban	All	Rural	Urban
Any coping strategy	84.6	87.8	78.7	90.4	91.6	88.2	94.63	97.08	89.83
Sold assets	10.6	11.9	8.3	15.5	16.7	13.4	18.61	20.0	15.9
Borrowed informal	22.6	17.3	32.4	28.8	23.8	37.7	33.67	29.3	42.3
Reducing number of meals or food intake	54.8	57	50.6	63.8	65.7	60.4	74.76	78.5	67.4

Source: LCMS 1996 and LCMS 1998 (Filmer and Hammer, 2000), LCMS 2002-03.

## Rural Coping Strategies

5.90 In rural areas, the most common coping strategies involve a reduction in consumption. Reducing food intake, reducing non-food expenditures and substituting meals<sup>48</sup>, all of which deplete access to basic needs for all or most household members. This is most certainly a matter for concern; these strategies, either singly or in combination, are a potential threat to the nutritional status of household members (particularly to children of the household). In the long term, the physical and mental development of children will be compromised by a poor diet and insecure access to food, which has a significant impact on the future of those individuals, as well as in sum on the prospects for national development (discussed further in Chapter 7).

**Figure 5.6: Proportion of Households**



5.91 Reverting to foods and sources of income derived from natural resources is a long-standing traditional coping mechanism. Often based on a detailed knowledge of local plants and other resources, households gather wild foods and other products for consumption or sale. In many places, the bush can yield reliable sources of carbohydrates, fruits, vegetables, mushrooms, honey and protein. Rather than valuing such reliable supplementary sources of food, external agencies and the media often decry these strategies as primitive and undesirable (“*local people are eating grass and roots*”). These sentiments have reduced the degree to which younger generations are learning about wild food from their parents and grandparents.

<sup>48</sup> Changing the content of meals to a cheaper foodstuff, such as eating mangos instead of nshima.

5.92 Other natural resources have long since provided a reliable source of income in times of crisis. Fish, charcoal, poached meat and timber products can all be sold into a ready market. To the extent that the off-take is sustainable, these strategies are reliable if not always legal<sup>49</sup>. With widespread poverty, multiple shocks and the need for cash to access school and health services, in many places the off-take of natural capital has become unsustainable.

5.93 In the event of shocks, the poor will often seek piecework, often in agricultural labor. Even in the event of a drought, which usually reduces yields rather than wiping out a crop (thereby affecting the poor more than the rich), the poor often secure piecework to help them cope. Piecework may be sought from commercial sources or employers external to the community, in which case the transaction will be uncomplicated, but poorly paid.

5.94 Seeking piecework or gifts of food or money within the community is more complex. Traditionally, the rich are usually obliged to provide support for the poor in times of crisis, by giving them food or meals, or payment in cash or kind for labor. In some areas this obligation may be explicit and systematic; in others it is simply understood. Although they will eat, such arrangements can be humiliating for the recipients, as the donors often loudly highlight their status and kindness, provide poor food, or insist on very laborious work in exchange for the most basic food supplies. From the perspective of more progressive farmers, the obligation to support the poor in this way is cited as a deterrent to take up labor-intensive conservation farming (which increases security of production in poor rainfall conditions) and other new technologies, since their own household security is compromised by the poor yields of others. Indeed, such obligations act as a deterrent for wealthier urban retirees to return to their home villages, and such people often seek land on resettlement schemes instead.

5.95 Selling assets may be a viable strategy or not, depending on the timing and scale of the sales. Where assets such as livestock herds are built up as a buffer against shocks, selling in times of need can demonstrate the benefits of preparing for contingencies. Problems arise when the shock is co-variant (e.g. drought) and a great many households seek to sell the same assets, thereby flooding the market and reducing prices. Further, a drought may affect the condition of livestock, further reducing the value of stocks as the animals become thin and weak. Where sales of accumulated asset reserves are not sufficient, households may go further than anticipated, selling breeding stock and other productive assets, that have long term effects on their capacity to recover.

5.96 Figure 5.6 indicates that 40 percent of rural households reported having accessed relief food as a coping mechanism during the previous twelve months, with nearly 20 percent saying they had participated in food-for-work. The research period for the LCMS was coincident with the emergency drought relief program that followed the widespread 2001-2002 Southern African drought. With 45% of the national rural population targeted for food relief, the high prevalence of households reporting food relief as a coping strategy is likely to be unique to that year. Indeed, a higher proportion of richer households reported accessing relief food and food for work during the LCMS period, suggesting that the better are better at connecting with sources of external aid.

5.97 Pulling children out of school is one of the least common reported coping strategies in rural areas. This offers little reason for comfort, however. With a primary net attendance rate in rural areas of only 53% (Census 2000), it is likely that many children from households most vulnerable to risks and shocks do not attend school in any case – and therefore can't be pulled

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<sup>49</sup> For activities that are illegal, people who engage in them risk being caught, necessitating a bribe or leading to a fine or imprisonment. Illegal activities therefore pose an addition risk to the household.

out. With few other buffers to shocks and contingencies, withdrawing children from school is more common amongst poorer households than richer households, suggesting that where other strategies can be employed, households will protect children's access to education.

5.98 The highest rural quintiles reported more informal borrowing and more sales of assets, which is because they had better access to sources of credit and more assets to sell. Informal credit (kaloba) is discussed at greater length the discussion on urban coping strategies, below.

5.99 The question of whether specific shocks tend to result in particular coping strategies can be examined using the LCMS data. The data is somewhat indistinct, because over one-third of households experienced more than one shock, while the one-third households that experienced no shocks also used coping strategies. Some observations that can be made.

- Suffering the effects of a drought makes households particularly likely to access relief food or support from an NGO, sell assets and cut consumption.
- Becoming unemployed makes households more likely to pull children out of school and seek piecework, and access support from a church. Unemployment reduces access to informal credit, presumably because of the known bad risk.
- Having an orphan in the house does not increase the likelihood of adopting any of the coping strategies identified in the research.
- Having a sick person in the house increases the chances of seeking piecework, taking informal credit, and asking for support from friends and neighbors
- Being disabled means that the household is more likely to resort to begging, or to access relief food
- Having a recent death of an adult or breadwinner in the household increases the chances of begging, informal borrowing, seeking piecework and reducing consumption.

5.100 In rural areas, support may be sought from within the community. Help with caring for the sick would traditionally be offered by the extended family or community social networks. Households with more resources, including more social capital, may attract more help and material support from their peers than households with less resources or capital, as others have greater obligations and greater future expectations from the wealthier households. The spread of HIV/AIDS has reduced the number of offers of help that any household may expect to receive when caring for a patient, and in particular restricted the chance of being assisted by a distant relative or non-relative.

5.101 Communities traditionally provide material support when some dies. There will be a clear understanding of who should contribute food, money, firewood, transport, labor, a coffin or simply time for making arrangements or spending with the bereaved. Other than in the smallest villages, the allocation of responsibilities will depend on the family's social networks and status. Unless there is a clear reason for doing so, failing to fulfill expectations will damage a person's standing in the community, or even expose them to superstition and accusation.

#### Urban Coping Strategies

5.102 In urban areas, people usually derive their income on a daily, weekly or monthly basis. For most people, the need for cash is daily, for food, fuel, rent, transport and other basic needs<sup>50</sup>.

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<sup>50</sup> In strong contrast with rural households, where cash income is sometimes no more than annual, and many households may exist for months without any actual money.

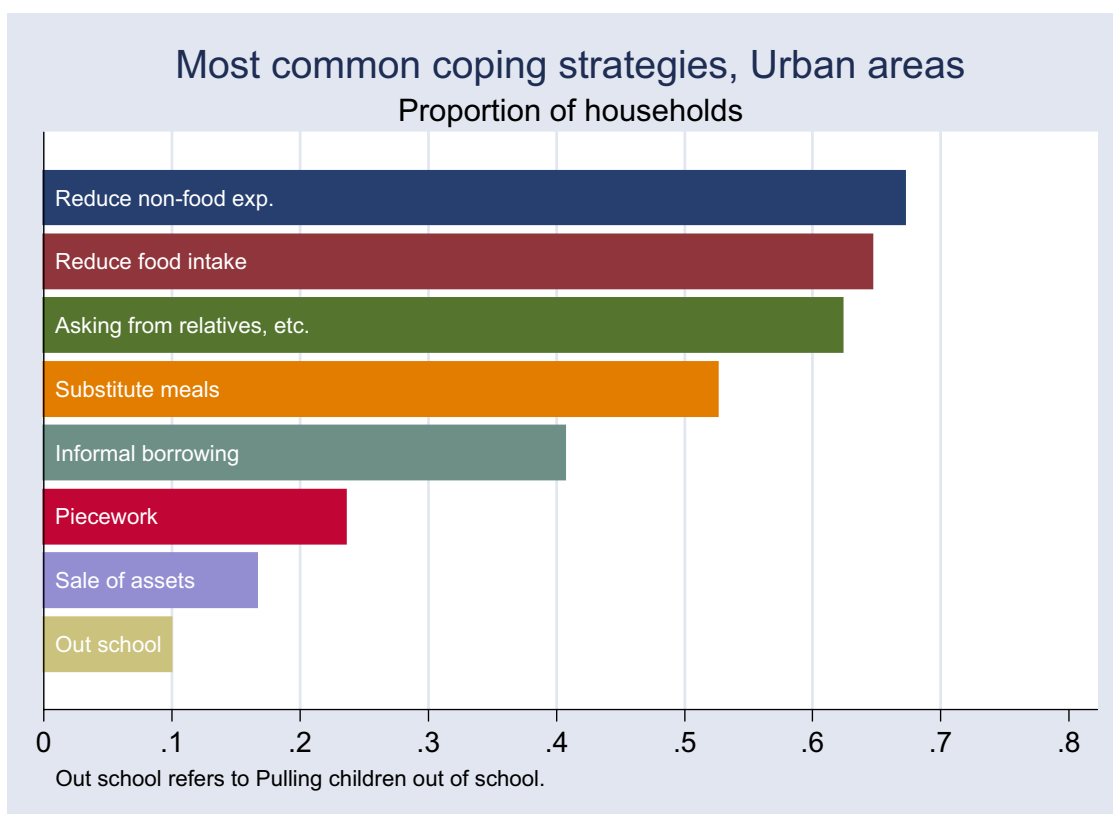


Because of the daily need for cash, people often find it hard to accumulate savings or assets against future shocks.

5.103 When shocks occur, either the opportunity to engage in livelihood activities is reduced, or the demand for cash increased. Coping with shocks therefore demands an adjustment to livelihoods, accessing cash from elsewhere, or decreased consumption. It could be said that poor households continually adapt to the presence of shocks by building these measures into daily activities and routine decision-making. Even the most careful and risk-averse household, however, is likely to experience adverse events from time to time.

5.104 Figure 5.7 below shows that the most common coping strategies involve reducing consumption of food and non-food items. Asking from relatives is also common, although it would be unrealistic to assume that relatives who respond are able to meet more than a small proportion of the contingency needs their extended family.

**Figure 5.7: Most Common Coping Strategies, Urban Areas**



5.105 In urban areas, there are opportunities to diversify and supplement normal income and thereby avoid the worst impacts of shock. In Lusaka's informal settlements, most people work in the provision of unskilled services as small-scale traders of building materials, charcoal, foodstuff, and petty household items. Those with more skills or capital run small restaurants, cinemas or hair salons, recharge batteries, or work as traditional healers. A few lend money on the markets, and most house-owners rent out rooms. In Copperbelt towns, services are mostly in trading, either on local markets, or across the border. In non-metropolitan towns such as Kasama, economic activity is more limited to the processing and trading of agricultural produces. In all

places, the young and the poorer provide unskilled labor carrying goods in wheelbarrows or water atop their heads, working as domestic helpers, or washing cars.

5.106 Groups of community members earning a regular income in urban communities often run 'chilimba' clubs. Under this arrangement, people pool a fixed sum from their income each month, giving the combined amount to each member in turn. This enables each person to enjoy a periodic 'jackpot', which is often used to make productive investments. This system is quite common amongst low paid workers. The group nature of chilimba introduces pressure to hand over the agreed sum each month, and means that the capital sum is immediately available without the problems of preserving capital against the demands of all kinds of contingency.

5.107 In urban centers outside Lusaka, most households supplement their income and food consumption by growing produces and raising livestock in their backyards or on vacant land. Agriculture is indeed a main element of poor urban dwellers' livelihoods, except maybe in Lusaka, where the shortage of land forces people to walk long distances to find cultivable land.

5.108 Although some mechanisms to cope with degrading urban living conditions and poverty have negative effects in the long run,<sup>51</sup> most are constructive and demonstrate the ability of the urban poor to provide for themselves, even if, in many cases, their individual coping mechanisms can only be considered as short-term, leaving them vulnerable to further shocks.<sup>52</sup>

5.109 Some of the urban informal economic activities indeed have potential for growth, such as the production of building material, which ranges from low-skill jobs making and transporting cement blocks, aggregates, or timber, to the more skilled manufacturing of window, doorframes, and furniture. These activities were in high demand in all settlements visited. Some skilled informal producers even had contracts with formal resellers in Zambia and in neighboring countries.

#### **Box 5.4 Community-based Organizations and Support for Vulnerable Groups**

Bwafwano community association was formed in 2000 to educate orphans and disabled children in Chazanga (Lusaka), and to provide life skills to widows and widowers. Its executive committee is composed of a chairperson, seven women, and five men. By early 2004, it was running programs for vulnerable community members: a community school for orphans and disabled children, a training program for women in tailoring, knitting and flowerpots making, a theater course to out-of-school children, the distribution of food to child headed-households, the referral of neglected children to the welfare department, and of abused women to the police's Victims Support Unit. Its beneficiaries were 20 disabled children and 25 adults, 500 children attending the community school, 150 widows, and 20 persons attending adult education. They have a team of forty home-based caregivers, and derives support from a range of private donors and international NGOs.

<sup>51</sup> For instance removing children from school to work when parents cannot afford their education and need them to provide an income. An other prevalent approach is for poor women (often widows or teenagers) to engage in commercial sex to make ends meet, an extremely risky activity given the high prevalence of HIV/AIDS and their lack of bargaining power to protect themselves. Some coping strategies destroy the environment, such as the extraction of sand and stones sold as building materials, which leaves holes in common areas, in which people fall and where garbage rot in stagnant water.

<sup>52</sup> A main problem of most activities is that their low returns do not allow people to build savings to fall back on in the event of shocks, or to invest in more profitable activities. Engaging in multiple jobs does supplement a low income, but does not provide opportunities to increase earnings durably. It does not seem to help people get out of poverty or to protect them from shocks that could push them into poverty.

5.110 For many years, community groups and clubs have been formed to address specific issues, and are now common, particular in urban areas. The purpose of these groups may be to serve other members of the same community, or to benefit or support its members. Groups that serve other members of the community have often been formed to provide home based care for people suffering from HIV/AIDS, and enhance care for orphans and vulnerable children. Such groups may be formed from a church congregation, or as components of existing groups such as the Neighborhood Health Committees. Active volunteers providing direct care for the needy usually mainly comprise women, since cultural traditions reinforce the idea that care and service are principally women's responsibility. Where community groups have decision making authority over resources, or where status may be derived from its leadership, women are marginalized and men become dominant.

5.111 The number of groups of widows and other single women heading households has increased in recent years, as incidence of female headed households increases, and with greater recognition of their marginalization and the vulnerability of children growing up in these circumstances. The groups often promote income generating activities for their members, combining training to strengthen their capacity to manage their ventures with microcredit to provide access to capital. Successful initiatives all emphasize close engagement by the group with the business of each member, through regular sharing of experience, joint liability for loans, or even cooperative ventures. Groups are more successful where at least some of the members have had previously been economically secure, usually prior to being widowed. Such members provide leadership and guidance for uneducated and inexperienced members. Indeed, reaching the poorest members may only be possible through such intermediaries.

5.112 Many people suffering from the impact of shocks resort to the informal sector private money lenders, or *kaloba*. Loans of several hundred thousand kwacha (often up to \$100; less often above that) can be obtained even in poor communities, usually repayable within one month at 100% interest per month. Loans are secured by threats, as well as by the prospect of having household items grabbed, even beyond the value of the loan and interest. Taking credit on *kaloba* is very expensive and risky, but may be the only solution to unforeseen contingencies and illness. The poor are most dependent on this system, while richer people use their social networks to borrow money from their peers when necessary.

5.113 A considerable perk of being employed in the formal sector is access to emergency loans, which protect workers from hazardous *kaloba*. Formal sector workers usually expect to be able to access substantial interest-free loans from their employers, either for investment (e.g. building a house), to spread significant expenses over several months (e.g. the annual January demand for uniforms and school fees), and to meet emergency expenditures (e.g. the hospitalization of a family member).

5.114 The diversity of livelihoods, shocks and coping mechanisms is greater in urban areas than rural areas. It is thus harder to make strong connections between specific shocks and coping mechanisms. Some statements can be made in this respect:

- Unemployment is a shock that affects urban people more frequently than rural people. Besides depending on any diversification and alternative incomes that may already have been developed, people facing unemployment are very likely to seek piecework and engage in petty vending. People facing unemployment are less likely to secure informal credit, presumably because they are seen as a bad risk.

- Households caring for the sick are more likely to secure informal credit. While this may provide resources to meet short term needs, *kaloba* can create more problems in the long term.
- The likelihood of pulling children out of school is twice as great when a death occurs as for any other shock.
- The highest probability of formal borrowing is for households affected by disability. This probably reflects the number of programs extending livelihood development with accompanying micro-credit services to the disabled.
- All types of shock result in high levels of consumption reduction.

## E. Conclusion

5.115 Risk and shock present major problems to the majority of Zambia's population, undermining growth and development and more deeply entrenching poverty. While these shocks may be covariant or idiosyncratic, idiosyncratic shocks including HIV/AIDS, health problems, poor access to education, unemployment and other livelihood shocks are so common that they are both predictable and widespread.

5.116 While households find ways to cope with risk and shock, this is often at the expense of consumption, or at cost to investment in future opportunities and welfare. The poorest and most vulnerable people face more shocks, and have least capacity to cope with them effectively. Many people can only access limited assistance from traditional support networks, which have themselves become burdened by multiple demands.

5.117 In rural areas, where crop failure and market failure are common, many households suffer from repeated shocks. While rural livelihoods should be able to accommodate shocks through the accumulation of surplus and the use of natural resources, shocks have become so harsh and frequent that these fall-backs are depleted and unreliable.

5.118 In urban areas, where the need for cash is daily and the incidence of minor shocks and contingencies is high, it is hard to accumulate enough cash against major contingencies. The cost to today's consumption is too high for many people to save or invest. Hence, despite the more diverse range of low-income livelihoods in urban areas, there is little resilience to the impact of risk and shock.

5.119 Some people secure help in preventing or coping with risk and shock from diverse external sources. Churches and NGOs offer substantial services in some areas. Public responses have low coverage, and suffer from low political priority, poor planning, under-financing and poor implementation. As a result, responses by other actors are hard to monitor or guide, and often operate in isolation. Moves to strengthen umbrella organizations reflects a felt need amongst other actors to be better coordinated and to improve practice, and an attempt to achieve these goals in the absence of support from Government.

## 6. ADDRESSING THE NEEDS OF VULNERABLE GROUPS

### A. Introduction

6.1 All poor households are vulnerable. But there are some individuals and households in Zambia that are very poor, and many lack the skills and assets to provide for themselves. Some became destitute as a result of shocks they have experienced in the past, while others were born into extreme poverty and have remained so throughout their lives. Regardless of the etiology, vulnerable groups are characterized by *chronic impoverishment* because they have low endowments (few private assets, limited access to public goods and services, and weak social capital) and few opportunities for advancement. Risk and its consequences are not necessarily of central importance when studying vulnerable groups. However there is considerable overlap in these two areas of attention, because their limited resilience and opportunities will make vulnerable groups especially liable to further impoverishment in risky environments. There is also considerable overlap in the policy arena, whereby 'traditional' instruments for social protection, such as targeted transfers, can both be used as a *springboard*, that allows households to take advantage of opportunities for wealth creation while being protected against risk-induced hardship, as well as for the *protection* of vulnerable groups suffering chronic impoverishment.

6.2 Zambia has only a few Government programs designed to address the needs of the chronically poor and other vulnerable groups, and, despite recognizing the problem of "poverty-induced destitution" in the PRSP,

*"In recognition of the high level of poverty-induced destitution, particularly among the aged and disabled, and taking into account those affected by the collapsing 'traditional' social security system of the extended family (e.g. street children and the blind), the PRSP explores how best social security-related aspects pertaining to, inter alia, state-funded safety nets are to be managed and financially supported"*<sup>53</sup>

Since the early 1990s, Zambia has been reluctant to allocate funds for social assistance. Instead, there is a stated preference for spending on subsidies and programs that promote self-reliance, or at least graduation into self-reliance, such as fertilizer and other inputs subsidies, also food packs (these include seeds and fertilizer). Whether these programs have been effective at doing this remains to be shown; some have argued that Zambia's production subsidies are just another form of welfare spending albeit targeted at farmers. But within organizations and Ministries that work with the poorest and most incapacitated people, the prevailing ethos has been heavily against "creating dependency", instead favoring any attempt to build livelihoods, even when they are clearly unsustainable. The idea of providing social assistance even to child-headed households or the very elderly and incapacitated has until recently not been popular.

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<sup>53</sup> PRSP, p. 15

6.3 However, a Social Protection (SP) Strategy is being formulated under the leadership of the Ministry of Community Development and Social Services (MCDSS) as part of the preparation for the National Development Plan. The challenge will be to make difficult decisions about how to prioritize and allocate scarce resources across competing needs. There is a temptation is to avoid this by including a very broad range of activities and objectives under the SP Strategy, which threatens the viability of the strategy, and risks burying key priorities for the most vulnerable under a morass of fragmented and competing programs. Even in the best of worlds and building on considerable support provided by the churches, NGOs, and the donor community, there will not be enough to provide even for all those who are in need. The SP strategy must be focused, well-targeted and achievable – and work to strengthen the capacity of the poorest and most vulnerable Zambians to better look after themselves.

6.4 This chapter draws on the data sources described in Chapter 5, augmented by findings from the qualitative surveys, to argue that:

- Certain types of households and individuals are more likely to be poor and shocks are an important cause of downward mobility and destitution. A substantial number of Zambians survive with great difficulty; they face significant barriers to rising out of poverty, and have few opportunities to improve their lives.
- The causes of chronic impoverishment and destitution are complex. In order to design effective policies, it is important to understand the causes and processes of downward mobility that lead erstwhile self-sustaining households into destitution. This will help to identify periods when individuals and households are most vulnerable and thus indicate possible points of intervention.
- Public resources are limited and Zambia must make hard choices about whose needs will be met and whose will not. It is difficult to identify the most vulnerable and even more difficult to design social assistance programs that will actually reach them. Crude targeting based on characteristics such as headship or orphan status will not be adequate.
- Better forms of social assistance are needed. These should be targeted using local knowledge and institutions, and aim to complement rather than replace indigenous systems of support. The latter continue to play an important role in Zambia. Recent efforts to identify the most destitute or “incapacitated poor” show promise (e.g. the Public Welfare Assistance Scheme, PWAS, and Pilot Social Cash Transfer Assistance Scheme). They highlight the value of local knowledge and decentralized approaches in identifying those most in need of assistance.
- Zambia’s emerging Social Protection Strategy focuses on the needs of the most vulnerable. In addition, many of the proposed transfer programs have the potential to serve both as a *springboard* (to help households take advantage of new opportunities) and a *social transfer* (to protect the living conditions of destitute and chronically poor). As the work progresses, it will be important for Zambia’s SP Strategy to focus more on prevention and *ex ante* risk management policies and instruments.

## B. Identifying Vulnerable Groups

6.5 Better information is needed on the characteristics of households and individuals that among the poorest and most vulnerable. There is a tendency, particularly among the international community, to identify almost everyone in Zambia as vulnerable and thereby deserving. This runs the risk of creating a strategy and set of programs that are too costly, too difficult to implement, and not sustainable.

### Box 6.1: Who is Vulnerable in Zambia?

A recent study by USAID *Analysis of Food Security, Health and Nutrition in Zambia (2003)*, which aims to help the agency determine program priorities, identifies the following vulnerable groups:

- Young children
- Pregnant and lactating women
- People living with HIV/AIDS
- Orphans and vulnerable children
- Households caring for people with AIDS and OVCs
- Smallholder farmers

Based on this list, nearly everyone in Zambia is considered vulnerable. Other agencies and international NGOs have developed similar lists. While no doubt many individuals in these groups are indeed vulnerable (i.e. more exposed to shocks and less able to cope), it is important for the aid community in Zambia to work together with Government and other stakeholders to move from broad lists of vulnerable and deserving groups to a prioritized list, and then consider what policies and programs are needed to address their needs. The Roadmap and process of consultation laid out for the preparation of the Fifth National Development Plan/PRSP provides an important opportunity to do this.

6.6 Using the LCMS III data, this section examines a number of groups that have been identified in previous studies as being very poor/vulnerable i.e. (1) orphans, particularly AIDS orphans; (2) female-headed households, including widows; (3) households that depend on female and child labor; and (4) households that include disabled members. It also discusses some 'emerging' vulnerable groups i.e. households headed by elderly persons, particularly those living alone or raising the orphans and deserted children left by their own deceased children, nieces, and nephews. While not found in the survey, street children were mentioned frequently in the Urban Participatory Study as being among the poorest, as were deserted or recently widowed women, who were reported to sometimes turn to prostitution or other destructive coping mechanisms in order to support themselves and their families.

6.7 LCMS III tabulations provide some insight into the economic status of these vulnerable groups in relation to the Zambian population at large. (Table 6. 1) Elderly (65 years and older) and female-headed households are more likely to be poor compared the rest of the population, particularly among urban households: over 10 percent of households in the poorest quintile are headed by an elderly person (one-third third of whom are female-headed) in contrast to 1.9 percent of households in wealthiest urban quintile. In contrast and somewhat surprisingly, households with no working-age males living in the household were wealthier on average than other households. This is in large part due to remittances received e.g. from spouses and other erstwhile family members living and working outside the household (Chapter 4).

**Table 6. 1**  
**Percentage of Vulnerable Groups in Zambia,**  
**by National Welfare Quintiles and Urban/Rural Location (2002-03)**

	National Quintile Distribution (Percent)		
	Poorest 20%	Wealthiest 20%	Total
Rural			
Orphans	19.0	19.0	18.0
Disabled in household	2.8	2.2	2.4
Female-headed households	26.6	23.5	24.1
Female labor dependent (no working age males)	12.8	18.1	14.2
Elderly-headed households	14.8	13.1	12.9
Urban			
Orphans	22.0	20.0	21.0
Disabled in household	1.9	1.2	1.5
Female-headed households	26.5	20.7	21.3
Female labor dependent (no working age males)	8.5	13.2	10.6
Elderly-headed households	10.3	1.9	4.8

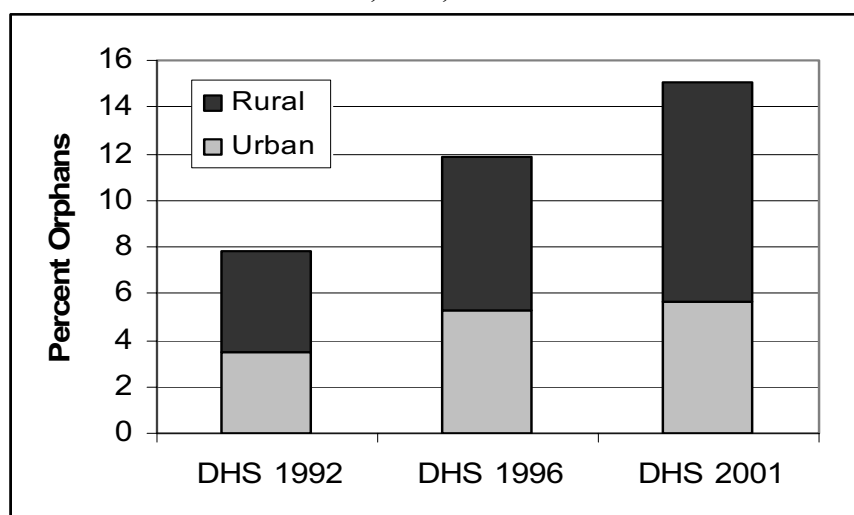
Source: LCMS III tabulations

### Orphans and Vulnerable Children

6.8 The second Situation Analysis of Zambia's orphans and vulnerable children was completed in 2004 (MSYCD, UNICEF, DFID, USAID, 2004). Its findings are no surprise to those living in Zambia: the orphan crisis continues to grow and families are struggling to cope with an ever growing number of orphans. The prevalence of orphans in Zambia is high even by African standards. By 2001, one-fifth of Zambian households were raising one or more orphans, and orphans comprised 15 percent of all children (under 15 years) as compared to 7.8 percent in 1992. By the age of 18, it is estimated that over one-third of children have lost one or both parents. These rates are higher than in most other countries of the "AIDS belt" that extends from East into Southern Africa: Uganda, Kenya, Tanzania, Malawi, Mozambique, Zambia and Zimbabwe. All of these countries have orphan rates of excess of 9 percent with Zambia, Uganda and Zimbabwe in the lead with over 12 percent (Case, Paxson and Ableidinger, 2004). Notably, although the HIV/AIDS prevalence is substantially higher in Zambia's cities and town, there are almost twice as many orphans living with rural households as with urban households.



**Figure 6.1**  
**Orphans as a Percentage of Children Aged 15 Years and Under:**  
**1992, 1996, and 2001**



Source: ZDHS surveys

6.9 This section addresses four specific questions that have been raised with respect to the vulnerability of orphans:

- (1) Are households that have absorbed orphans more likely to be poor than households without orphans?
- (2) Are orphans themselves less likely than other children to be enrolled in school? Are orphans educationally disadvantaged in relation to other children in the same household; e.g. do they exhibit lower intra-household levels of school enrollment?
- (3) If orphans are educationally disadvantaged in relation to other household children, is the presence or degree of disadvantage related to factors such as which parent has died and the particular living arrangement provided for the orphan (e.g. the relationship of the orphan to the household head)?
- (4) Is gender a factor that exposes some orphans to intra-household discrimination – i.e. are girl orphans less likely to be enrolled in school than boy orphans or non-orphans in the same households?

6.10 The programmatic implications of these questions are significant. Should food security and social support programs target households caring for orphans, or should orphans be targeted as individuals? If orphans themselves are at higher risk of failing to attend school, then programs aimed specifically at fostering and supporting the education of orphans should be prioritized. If, on the other hand, the entire household is more likely to be poor when an orphan is present, then caregiver households should be targeted. If neither is the case, then is there justification for singling out either orphans or the households caring for them for special assistance? These issues were explored drawing on the results of two recent surveys with information on orphans – the LCMS III and the 2001-02 ZDHS. Four types of orphans were defined for this purpose: maternal

orphans, paternal orphans, double orphans, and orphans of any type. The analysis includes only children of school age (7 through 16) who have lost respectively their mother, father, both parents or either parent.<sup>54</sup>

#### Well-being of Care-giver Households

6.11 Since Zambia is host to a mature HIV/AIDS epidemic of long standing, adult death rates have been high for a decade or more. As a result, a very large proportion of Zambian households are currently caring for orphans. Regression analysis performed on the results of the LCMS III confirms what we see in Table 6. 1: in rural Zambia, households caring for orphans are no more likely to be poor than those without orphans. The implications of this are either that households at all welfare levels are equally affected by high mortality levels in the reproductive age groups, or that even if poor children are more likely to lose their parents, they are absorbed by related households that are as likely to be well-off as to be poor. In the early days of the epidemic, the wealthier relatives were more likely to take in orphans. As the epidemic has progressed however, orphans are increasingly likely to live with grandparents or other elderly relatives, often located in more distant rural areas. Wealthier relatives have begun to disassociate themselves

6.12 These survey findings are consistent with the findings from the rural and urban participatory studies. There is no clear evidence that the presence of orphans has systematically depressed the economic well-being of rural households. In fact, in many cases orphaned children were providing assistance in rural households headed by elderly grandparents or other relatives. In the urban areas, slightly more households caring for orphans were found in the lowest than in the highest quintile (27 percent in contrast to 24 percent). Although this difference is small, it suggests either that urban orphans are slightly more likely to be absorbed by poorer households, or that the presence of an orphan may have a small negative impact on the economic standing of urban caregiver households.

#### Types of Orphans: Maternal, Paternal and Double

6.13 The ZDHS 2001-02 has provided information as to the living arrangements and the presence of a parent in the household where the orphan is raised. First, it is clear that paternal orphans far outnumber maternal orphans, despite the fact that HIV rates are currently higher among women. The results of the LCMS III substantiate this finding, in that paternal orphans account for more than two-thirds of all. This pattern is found in a number of high-prevalence countries in Africa. There is no clear single explanation for this phenomenon, and it is likely that there are many causes interacting to produce a greater number of paternal orphans. One explanation is the higher mortality rate for men (apart from HIV/AIDS): according to the LCMS III, there is an average age gap of 5.7 years (rural) and 6.6 years (urban) between heads of household and their spouses in Zambia<sup>55</sup>. Men marry younger women and have lower life expectancy; thus there are more widows than widowers in the population. Another possible explanation is the selective mortality rate of orphans. Children with mothers who die are less likely to survive themselves, either because of direct transmission of HIV or simply because children without mothers may have higher mortality from all causes. A child's mother had to be alive and relatively healthy at the time the child was born; whereas his/her father might die very

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<sup>54</sup> According to Ainsworth and Filmer (2005), 12.9 percent of 7-16 year olds are paternal orphans, 4.6 percent maternal orphans, and 5 percent are double orphans (ZDHS, 2001-02)

<sup>55</sup> This number may not include (younger) married couples living in multi-generational households. In addition many household in rural areas are polygamous; the age-gap is estimated based on the senior wife living in the household.

soon after or even prior to their births. In addition, there is a possible enumeration error, resulting from the fact that men are more likely to remarry than women, and subsequently the new wife would be accepted as the mother of the children – who are hence culturally no longer considered orphans. Unless translation and enumeration are very thorough, this mistake could occur frequently. It is likely, however, that the preponderance of paternal over maternal orphans reflects the fact that more males than females were infected early in the epidemic. For children of school age, the mortality rate for their parents will reflect the infection rates of 5 –10 years ago. Most of the males infected at that time would have died, leaving paternal orphans, while the majority of infected women may be still living. If so, then we can expect a reversal of maternal and paternal orphanhood rates in the decade to come. This is an alarming because children whose mothers have died are themselves extremely vulnerable.

6.14 Maternal orphans are less likely to live with either parent than are paternal orphans. The ZDHS for 2001-02 found that 3 percent of all children (less than 15 yrs) are maternal orphans; and only 36 percent of these maternal orphans are likely to live with their father. Paternal orphans account for 9 percent of all children less than 15, but 67 percent of them are likely to live with their mother. Therefore, while paternal orphans are more likely to suffer disadvantage as a result of being members of a female-headed household, maternal orphans are more often deprived of the presence of a biological parent in the home. The impact of this absence on the economic well-being of the orphan depends to some extent upon whether or not the recipient households provide them with resources and opportunities equal to those offered to the household's own children. As the discussion below will demonstrate, orphans (particularly female orphans) may not be given equal treatment within recipient households.

#### Well-being of Orphans and Vulnerable Children as Individuals Within Households:

6.15 As in other countries of the region, Zambia's traditional kinship networks function as safety nets at times of crisis such as the death of parents. While this network might work effectively under normal circumstances, its carrying capacity is limited. The number of orphans has been steadily rising since the inception of the AIDS epidemic in the mid-1980s and these numbers will increase: according to the 2001 ZDHS, 23 percent of adults in urban areas are living with HIV/AIDS and 11 percent in rural areas. Infection rates among women are even higher.

6.16 The resulting death rates are extraordinary in the history of human experience, and the number of orphans that must be absorbed has burgeoned as a result. Under these unusual conditions, it is possible that this pressure might lead to weakening and dismantling of the informal system of care. Neglect of or discrimination against orphans within extended family households might be one early symptom of the deterioration of the system. When the number of orphans is unusually high, orphans might experience intra-household discrimination because the limited resources of substitute caregivers are strained by the presence of several additional children. When choices must be made, substitute caregivers may be more willing to invest in their own children; both because of a natural affinity with their own children, and because they are more likely to receive transfers from them later in life (Case, Paxson, and Ableidinger, 2004).

6.17 The problem of orphan neglect might be especially common in Africa, where even the death of one parent often results in a change of living arrangements, even if the death is not accompanied by an immediate decline in income. For instance, it has been shown that household expenditures on "child-related goods" – in particular, on healthy foods – is lower when a child's birth mother is absent (Case, Lin and McLannan, 2001) and that mothers invest more than stepmothers in children's health (Case and Paxson, 2001). Bishai et al (2003) finds that

biological relatedness is an important predictor of quality of care offered to Ugandan children, for instance. In addition, the literature has also offered evidence that female orphans are even at a further disadvantage. World Bank (2002) states that “girls are more likely than boys to be retained at home for domestic work when household income drops due to AIDS death or to care for sick relatives.”

6.18 How serious, then, is the problem of intra-household neglect of orphans and vulnerable children? To address this question, a series of regression models were run on the LCMS III data. The overview of the key results is given below (details are provided in Annex Tables).

**Table 6. 2**  
**Impact of Orphans on Household Consumption and Determinates**  
**of Enrollment Rates (Children 7-15 years)**  
**Maternal, Paternal, Double, and Total Orphans (2002-03 LCMS III)**

	<b>Model 1</b> Effects of Orphans on Household Welfare (inter-hhold)	<b>Model 2</b> Enrollment Rates by Orphan Status (inter-hhold)	<b>Effect on ...</b> <b>Model 3</b> Within Household Enrollment Rates by Orphan Status (intra-hhold)	<b>Model 4</b> Within Household Enrollment Rates by Orphan Status, Gender (intra-hhold)	<b>Model 5</b> Within Household Enrollment Rates by Orphan Status, Gender, Wealth (intra-hhold)
<b>Dependent Variable:</b>	Household consumption per adult equiv	Enrolled in School	Enrolled in School	Enrolled in School	Enrolled in School
<b>The effect of being an .....:</b>					
<b>Orphan</b>	not significant	-3%**	-6.7%***	not significant	-7.6%***
Orphan in wealthier household					Not significant
Female orphan				-7.2%**	
<b>Maternal orphan</b>	Not significant	-6.8%***	-11.4%***	not significant	-12.3%***
Maternal orphan in richer hh					Not significant
Female maternal orphan				-10.5%***	
<b>Paternal orphan</b>	Not significant	not significant	-4.6%**	not significant	-5.3%**
Paternal orphan in richer hh					Not significant
Female Paternal orphan				-7.3%**	
<b>Double orphan</b>	Not significant	-5.3%***	-8.4%***	not significant	-9%**
Double orphan in richer hh					Not significant
Female Double orphan				-12.8%***	

Notes: "Not significant" refers to coefficient in estimation not being significant at 10 % confidence level. \*\*\* significant at 1%, \*\* significant at 5%, \* significant at 10%. Refer to Annex A for full presentation of results from the estimation.

6.19 The regression analysis confirms that households caring for orphans are no more likely to have low consumption levels than are those with no orphans. (Model 1) However, the table also indicates (Model 2) that, controlling for age and sex, orphans are significantly less likely to be in school than are non-orphans. In particular, maternal and double orphans are at greater risk of not being in school than are non-orphans when looking across households.

6.20 A series of fixed effect models were estimated to determine whether orphans receive equal treatment compared to non-orphaned children living in the *same* household. Before looking at these results, it is important to note that outcomes differ according to which parent has died. For example, paternal orphans are more likely to live in poorer households than are maternal orphans. This difference is related to the fact that children usually remain with the mother after the father has died; and female-headed households are on average less wealthy than male-headed households. Maternal orphans are usually absorbed by the households of either their grandparents or their parents' siblings. The same is true of double orphans, though they more commonly live with grandparents. (Table 6. 3)

**Table 6. 3**  
**Children's Living Arrangements, by Orphan Status (2002-03)**

Relationship of Child to Household Head	Orphan Status (Percent)				
	Not <sup>56</sup> Orphan	Maternal Orphan	Paternal Orphan	Double Orphan	Total Children
<b>Own child, Step Child</b>	<b>83.3</b>	<b>36.8</b>	<b>57.7</b>	<b>5.7</b>	<b>73.2</b>
<b>Grandchild</b>	<b>8.8</b>	<b>30.7</b>	<b>22.5</b>	<b>41.3</b>	<b>13.5</b>
<b>Brother/Sister</b>	<b>1.2</b>	<b>4.8</b>	<b>2.4</b>	<b>9.4</b>	<b>2.1</b>
<b>Niece/Nephew, other</b>	<b>6.7</b>	<b>27.7</b>	<b>17.4</b>	<b>43.6</b>	<b>11.3</b>
<b>Total (percent)</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Note: Children are defined as all individuals less than 15 yrs

Source: LCMS III survey tabulations

6.21 Clearly, maternal orphans are less likely than paternal orphans to be the biological child of the household head, and both maternal orphans and double orphans are more likely than paternal orphans to be living with aged grandparents. The pattern with respect to school enrollment differs noticeably in consequence. Overall, the enrollment rate for orphans is 3 percent lower than for non-orphans of the same age and sex. Paternal orphans, however, are just as likely to be enrolled in school as are non-orphans living in the same household; while maternal orphans and double orphans are much less likely than household non-orphans to be enrolled. Double orphans are 5 percent less likely than non-orphans in the household to be enrolled, and the difference may be as high as 11.4 percent for maternal orphans.

<sup>56</sup> Children may be living with their parents in multi-generational households but still not be the child/stepchild of the household head.

6.22 These discrepancies are in part explained by the residence patterns of different types of orphans. In general, the degree of discrimination experienced by an orphan is higher the more distant the relationship of the orphan is to the household head. Since paternal orphans are more likely to be living with their mothers, it appears that the presence of the mother in the home is sufficient to protect the child against the loss of educational opportunities; despite the fact that female-headed households are more likely to be poor. When orphans are living with grandparents or aunts/uncles, however, (as is usually the case for maternal and double orphans), then educational investment in the orphan tends to be lower than investments for other children (not orphaned) living in the same household. This suggests that, when they are not living with a natural parent, orphans suffer an intra-household educational disadvantage. These factors should be taken into account when designing policies to ensure that all children have adequate levels of schooling. It may be necessary in Zambia to target maternal and double orphans in particular to ensure that adequate levels of school enrollment are maintained for the growing orphan population.

6.23 The educational disadvantage experienced by orphans is particularly acute if the orphan is female. The LCMS findings indicate that girl orphans are at significantly greater risk of not being enrolled in school, particularly if they are double orphans. Male orphans are 7 to 14 percent more likely to be enrolled than are girl orphans. The disadvantage to maternal and double orphans is compounded by gender: female double orphans are even less likely to attend school than are male double orphans. Girl orphans who have lost their mothers or both parents, therefore, should receive special priority in educational support services, regardless of the wealth of the caregiver household

### **Female Headed Households**

6.24 Nearly one-quarter of all households in Zambia are headed by women, and many of them have been widowed or deserted by spouses. For purposes of this chapter, the question is whether female-headed households are significantly worse off than male-headed households on key indicators of well-being such as income levels, school enrollments, and the health status of children.

6.25 Turning to the results of the LCMS III, it is clear from Table 6. 1 that, of all the groups identified, female-headed households are among the most disadvantaged. In urban areas, 27 percent of households in poorest quintile were female-headed, while only 21 percent of those in the wealthiest quintile were found to be female-headed. In rural areas, these figures are 27 percent and 24 percent, respectively. Female-headed households, then, are more likely to be poor, though the difference is not large in rural areas. Table 6. 4 presents information on additional indicators of (child) deprivation in female and male-headed households. The results are much in line with the consumption-poverty results: children (71.1 percent) living in male-headed households is somewhat more likely to be enrolled in school than children living in female-headed households (67.6 percent). Children in male-headed households are less vulnerable to malnutrition; particularly chronic or long-term malnutrition. Among female headed households, 57.9 percent of children were found to be stunted, while 50.2 percent of children in male-headed households were stunted. Female-headed households also had more children suffering from acute malnutrition (5.3 percent) than did male-headed households (4.2 percent), but this difference is less pronounced. The implication is that, while children in female-headed households are generally less well-nourished overall, it is the long-term or cumulative impact of poor nutrition that is of greatest concern.

**Table 6. 4**  
**Impact of the Gender of the Household Head on Nutrition Levels and School Enrollment,**  
**Urban and Rural Areas (2002-03)**

	Headship	
	Male Headed	Female Headed
<b>RURAL</b>	75.9	24.1
<b>School Enrollment, Children 7-16 (percent)</b>		
Enrollment Rate, Children 7-16	71.1	67.6
<b>Nutritional status, Children 0-5</b>		
Chronic Malnutrition, Stunting	50.2	57.9
Acute Malnutrition, Wasting	4.2	5.3
Underweight	24.0	28.7
<b>URBAN</b>	78.7	21.3
<b>School enrollment, Children 7-16 (percent)</b>		
Enrollment Rate, Children 7-16	85.8	82.2
<b>Nutritional status, Children 0-5</b>		
Chronic Malnutrition, Stunting	38.3	40.5
Acute Malnutrition, Wasting	5.1	4.0
Underweight	17.2	18.7

Source: 2002-03 LCMS

### **Female-labor Dependent Households**

6.26 In a number of low-income countries, households that depend on women's earnings – i.e. that have no working age males living in the household – are among the poorest. Based on analysis of the LCMS III data, this is not the case for Zambia: in fact, households without working age males are better off on average than other households! (Female-labor dependent households tend to be smaller, obtain a higher proportion of income from farming, and – most importantly – receive substantial remittances. (Table 6. 5)



**Table 6. 5**  
**Household Structure and Sources of Income**  
**How Do Households Manage Without Working-age Men?**

Living Conditions	Structure of Household	
	Female-labor Dependent*	Not Female Labor Dependent
<b>RURAL</b>		
Average household size (persons)	4.0	5.5
Average number of children living in the household (aged less than 15 yrs)	2.1	2.6
Average number of orphans living in the household (aged less than 15 yrs)	0.9	0.5
Sources of Income (percent)		
▪ Salaries	1.7	7.3
▪ Business income	6.2	11.6
▪ Sales of crops and ag products	4.8	6.4
▪ Livestock sales	1.8	2.3
▪ Own consumption of agriculture production	63.2	53.1
▪ Rents	0.1	0.1
▪ Pensions	0.1	0.1
▪ Remittances	12.2	5.4
▪ Other income sources	9.9	13.7
Total	100	100
<b>URBAN</b>		
Average household size (persons)	3.8	5.8
Average number of children living in the household (aged less than 15 yrs)	1.9	2.4
Average number of orphans living in the household (aged less than 15 yrs)	1.0	0.6
Sources of Income (percent)		
▪ Salaries	32.2	52.2
▪ Business income	28.5	22.9
▪ Sales of crops and ag products	1.5	1.5
▪ Livestock sales	0.2	0.3
▪ Own consumption of agriculture production	6.9	5.1
▪ Rents	3.1	2.6
▪ Pensions	0.9	0.7
▪ Remittances	13.5	4.7
▪ Other income sources	13.2	10.0
Total	100	100

Note: Female labor dependent households are defined as all households that have no male members aged 15-64 residing with the household for 6 months or more

Source: LCMS III

### **Households Dealing with Disabilities**

6.27 Many Zambians struggle with disabilities and existing statistics understate the extent of the problem. Although the LCMS III tried to collect information on whether members were disabled, reporting was low. Our analysis using this limited information suggests that (i) households with disabled persons were not more likely to poor; however (ii) children living in these households did tend to have somewhat lower school enrollments and higher levels of chronic malnutrition. Thus, it appears that children in households caring for the disabled may be at higher risk of long-term and chronic nutritional deprivation (or of higher disease rates).

6.28 Until recently information on disability and poverty in developing countries has been limited and of questionable quality. However, this is beginning to change. Based, in part, on the WHO's recently established International Classification of Functioning, Disability, and Health (ICF) a number of countries are upgrading their data collection systems to better capture disability. Previously, many developing countries reported disability prevalence rates of about 1 to 2 percent, but studies using an ICF-based approach are finding rates in the 10 to 15 percent range, which is closer to disability rates reported in developed countries. The UN has established a group on disability measurement (viz. The Washington Group on Disability Statistics) and it is currently piloting a series of census questions on disability and developing an extended survey module. In June, 2005, they will conduct regional training in Nairobi, where 14 African countries that have agreed to take part in the piloting work will participate. Similarly, UNESCAP is piloting an extended set of disability questions in several countries in South and East Asia. Major disability surveys have recently been completed or are underway in such countries as Kenya, Ecuador, Nicaragua, Afghanistan, and Vietnam. It is unfortunate that Zambia is not a part of the various pilot efforts; hopefully this would be rectified in the future.

### **Households Headed by the Elderly**

6.29 The elderly informants in both the Urban and Rural Participatory Studies voiced a growing sense of insecurity and fear about the future. Many of them remembered the excitement and sense of endless possibilities in the 1960s, the rapid expansion of access to schooling and good jobs in the 1970s, and the subsequent decline in the Zambian economy, loss of jobs, sharply reduced pensions, and the government's withdrawal of subsidies and other supports for agriculture in the years that followed. Many witnessed the decline in education and health services in the 1990s; a significant number were better educated than their own children. Many of the elderly informants described how they had nursed their own children or other relatives through the final stages of HIV/AIDS, growing problems with other infectious diseases, and commented on the irony of raising their grandchildren when they had always expected to be looked after by their own grown children.

6.30 Analysis of the LCMS III and other survey data indicates that elderly-headed households are emerging as a new and significantly vulnerable group in Zambia, and their situation will certainly worsen over time. (see also Kakwani and Subbarao, 2005) The Zambian traditional respect for the elderly extends through "normal" old age, with respect and status derived from being an old person. However, being very elderly treated with great superstition, often associated with witchcraft, creating social exclusion and even threats to life from community and even family members. The State provides very limited assistance, traditional forms of support are breaking down, and elderly men and women are increasingly being called on to look after orphans and other family members who are in need. At present, over 13 percent of all children in

Zambia are living with one or both grandparents, and roughly one-third of Zambia's orphans are being looked after by grandparents. (Table 6. 6)

**Table 6. 6**  
**Income Sources and Household Structure:**  
**The Living Conditions of Elderly Headed Households**

Living Conditions	Structure of Household	
	Elderly-headed*	Not Elderly Headed
<b>RURAL</b>		
Average household size (persons)	4.9	5.3
Average number of children living in the household (aged less than 15 yrs)	1.7	2.6
Average number of orphans living in the household (aged less than 15 yrs)	0.8	0.5
Sources of Income (percent)		
▪ Salaries	1.6	7.2
▪ Business income	5.9	11.6
▪ Sales of crops and ag products	5.9	8.4
▪ Livestock sales	3.5	2.1
▪ Own consumption of agriculture production	62.9	53.3
▪ Rents	0.1	0.1
▪ Pensions	1.3	1.2
▪ Remittances	11.0	5.7
▪ Other income sources	7.8	10.4
Total	100	100
<b>URBAN</b>		
Average household size (persons)	3.8	5.8
Average number of children living in the household (aged less than 15 yrs)	1.9	2.4
Average number of orphans living in the household (aged less than 15 yrs)	1.0	0.6
Sources of Income (percent)		
▪ Salaries	20.9	51.5
▪ Business income	24.7	23.5
▪ Sales of crops and ag products	2.5	1.4
▪ Livestock sales	0.0	0.0
▪ Own consumption of agriculture production	13.0	4.9
▪ Rents	6.6	2.5
▪ Pensions	3.1	0.6
▪ Remittances	18.0	5.0
▪ Other income sources	11.2	10.6
Total	100	100

Note: Persons 65 years and older are categorized as elderly

### C. Responding to the Needs of the Most Vulnerable

#### Rural Areas: The Role of Non-State Actors

6.31 Social assistance programs targeting incapacitated and highly vulnerable families exist at local and national levels. At the local level, substantial numbers of households receive support from programs run by international NGOs, often based on a “sponsored child” model. International NGOs including Christian Children’s Fund, World Vision and Plan International seek to combine development interventions with direct assistance for schooling and other household basic needs. There is no overall monitoring of the number of households covered through this strategy, although a national figure of 70,000 households may be a good estimate. Targeting of beneficiary households is usually based on the detailed knowledge of the local community by local committees, applying criteria such as households headed by elderly or sick people, orphan status or widows.

6.32 A diverse range of NGOs, FBOs and CBOs base their social assistance programs on the distribution of free food supplied through the World Food Program. WFP seeks to distribute around 50,000 MT per year, although problems in meeting their intended targets mean that just over 30,000 MT seems a more realistic estimate for 2005<sup>57</sup>. Most of this food is distributed through community schools, home based care programs, hospitals and hospices. School feeding programs reach 48,000 children (shortly to expand to 60,000) in 120 GRZ schools in chronically food insecure areas, and a further 81,000 children in 335 community schools in urban and rural areas. Around 60,000 family members have access to take-home packs distributed through the community school feeding program.

6.33 Food distributed through the WFP typically amounts to around 3 percent of national food requirements. Targeting of the food is in part at individual households affected by HIV/AIDS or malnutrition, and in part through geographical targeting. While the former is – at the extreme end of helping people to cope with shocks – usually very appropriate, the latter is subject to debate. A number of regions that have been demarcated as chronically food insecure because they are poor and subject to repeated drought. However, most of these regions are in agro-ecological zone I, which covers Zambia’s hot, dry, low altitude valleys – not good conditions for maize cultivation. The fact that free food is regularly available in these areas may work to maintain poverty rather than helping to reduce it. It creates a poverty trap, characterized by inappropriate cropping patterns supported by subsidized or free inputs; regular crop failures; relief food; and drought ‘recovery’ promoting the same inappropriate farming systems. Hence while geographical targeting is appropriate for locating areas where there is most certainly chronic food shortages, it is ultimately counterproductive to provide food aid to help households cope with food deficits without giving equal or greater attention to improving livelihoods.

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<sup>57</sup> WFP Lusaka, Personal Communication – estimate provided *before* the rainfall shortages & subsequent crop failures of the 2004-05 rainy season.

## State-run Social Assistance Programs

### Public Welfare Assistance Scheme (PWAS)

6.34 The national social assistance program is the Public Welfare Assistance Scheme (PWAS). Redesigned in the late 1990s, PWAS uses community committees to identify likely beneficiaries and to allocate resources according to local needs. Selection is assisted and made more transparent by the use of a matrix, which enables committee members to consider the various cases before them and explain the choices they make. The matrix incorporates a range of qualifying characteristics, based on the judgment that greater vulnerability results from exposure to multiple factors.

#### Box 6.2: Qualifying for PWAS

1. **Social qualifiers:** In order to be considered for PWAS assistance, the client *must* fall into one of the following categories:
  - The client is a household headed by someone who is aged, or a child, or disabled, or sick, or female
  - The client is an orphan or vulnerable child, who may be considered as an individual regardless of the status household head
  - The client is the victim of an idiosyncratic (personal or household) disaster (e.g. their house has burned down)
2. **Economic qualifiers:** The client must then be established to be facing at least two of the following problems
  - No support can be realistically expected from their relatives
  - They are unable to work, or should not work (e.g. they are still a child)
  - They have no productive assets that they can use to earn an income
3. **Other qualifiers:** Potential clients are then ranked according to other criteria. PWAS committees can add other criteria that reflect local norms and conditions to this list.
  - There is not enough food for the family to eat
  - The children do not attend school
  - Housing is below average standard
  - They have suffered the recent death of the household head
  - They cannot access health services
  - Other....

6.35 When the community makes decisions about PWAS beneficiaries, the matrix is shown as a table, with potential clients listed in rows and the criteria for qualification are ticked off in columns. Experience with the matrix suggests that having a clear visual and transparent system helps local committees discuss options, and it is not unusual to find a rural committee assembled around a school blackboard using the matrix structure to discuss their choices.

6.36 That said, community committees often find it easier to work on absolute rather than relative criteria. They report that in this case, their choices will be widely understood and accepted, even if the targeting is less accurate. An example of this problem was highlighted in a PWAS pilot program seeking to identify orphans and vulnerable children – communities reported that identifying orphans was easier, whilst the common sentiment that “*we are all vulnerable*” tended to make the latter choice more difficult. Community members are more willing to forego benefits in favor of others when the selection criteria are unequivocal.

6.37 The PWAS program seeks to target 200,000 households, 10% of the national total. This figure has often been mistaken with 200,000 individuals, or just 2% of households. However, most PWAS clients are households, with one individual listed on behalf of the whole household, who may receive diverse benefits according to need.

### **Building on PWAS: the Pilot Social Cash Transfer Scheme**

6.38 The PWAS program has undertaken a number of pilots in limited areas, seeking to improve service delivery through various programmatic adjustments. One significant example of this is the Pilot Social Cash Transfer Scheme (SCT), targeting around 100 households in part of Kalomo district. The scheme uses the criteria of the PWAS matrix to target clients, adding a further consideration of the household dependency ratio. Households qualifying under these criteria are judged to be incapacitated, having no immediate prospect for generating a reliable income. In each community, the scheme targets 10% of households, which was estimated by the program designers to represent the extent of incapacitated households<sup>58</sup>.

6.39 There are two key differences between the mainstream PWAS and the SCT. The first relates to regularity of benefits. In the PWAS, beneficiaries may change from month to month, and as their needs and status changes. This has the advantage of being able to respond to short term or seasonal needs, or to assist with specific needs e.g. the cost of sending children to school. However, it can mean in practice that the resources are spread too thinly, and that people with chronic needs receive only periodic assistance. The SCT guarantees monthly payments to the identified households, providing income support that can be allocated at the household's discretion.

6.40 The second important difference relates to the role of the community in determining benefits. The PWAS approach seeks to put decision making power in the community, and to build the understanding that the Government is providing resources to communities to solve their own problems of destitution and extreme poverty. The principle relationships are between Government and communities, and subsequently between communities and clients. This encourages community leaders to address local problems of the most vulnerable, and to use money thriftily and effectively. There are a number of examples of leverage, where community committees have generated additional resources (usually labor or food) to supplement PWAS funds. The SCT approach uses the community committees to identify the clients, but thereafter the principle relationship is directly between the scheme and the beneficiary. There is a risk that this will weaken rather than strengthen community engagement with those households, creating passive attitudes among community leaders towards the problems of the destitute. For beneficiary households, as long as the scheme continues and assuming that the monthly payment of \$6 per household is sufficient, this may not be a problem. However, since neither of these conditions are by any means understood or certain, caution should be exercised in the current enthusiasm for the SCT model.

6.41 There is widespread experience in Zambia to show that effective social assistance requires the full participation of local communities, supported by adequate training, clear criteria and support for transparency. The belief that social assistance is really just "hand-outs" is supported by negative experiences, where the benefits may have been inappropriate targeted, or

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<sup>58</sup> However, analysis based on the LCMS III suggests these estimates may be too high. The Pilot Cash Transfer Scheme was only recently initiated and currently covers 1000 households. It is too early for there to have been a formal evaluation to assess whether the targeted households were indeed the most needy, or whether the selection process was influenced by local leaders or people with power.

appropriated by the powerful, or clothed in rhetoric designed to build political support or other allegiances. For social assistance to be used more positively, and to protect and promote the livelihoods of the poorest and most vulnerable, schemes need to be well designed and well delivered using local knowledge and with the help of community based organizations. Communities have traditional responsibilities for the genuinely incapacitated, and have access to more knowledge about the real circumstances and needs than any outsider can ever hope to learn. Therefore building and supporting community engagement with the target group is a more promising strategy than seeking to replace it.

6.42 It is important for the international community to think carefully about and accept the legitimacy of indigenous institutions and the importance of the community in the lives of Zambian people, even when, in the short term, resources appear to flow in less than ideal ways (at least from the perspective of a donor agency). Despite the strength of local knowledge and institutions, it remains important to support good local monitoring and strengthen local accountability systems.

### **Box 6.3: Indigenous Systems of Support**

In Chawama compound in Lusaka, a church based-program provides free food on a monthly basis to the most destitute households. Among the beneficiaries identified was the household of an elderly woman, living with her two young granddaughters. Until the food program started, they survived by begging from friends or attending funeral gatherings in order to eat. In a periodic monitoring exercise, staff visited the household to find out what had happened. To their shock, they found that at the beginning of each month when the old lady received her ration, she welcomed all her neighbors to eat and the food was finished in just a few days. The staff told her that she was wrong, that she should save the food to feed herself and the girls through the whole month. The old lady listened to them, but did not agree. She explained that using the food in the way that she did gave her more security than keeping to look after only when the free food program came to an end.

Source: Harland, 2005: Unpublished Manuscript

### **The Role of Urban Communities**

6.43 In large urban areas, however, these assumptions about community engagement are sometimes questioned. With more movement of people and mixed cultures and traditions, mutual knowledge, responsibility and care are less common. However, urban areas do offer some advantages as well, and experience suggests that these are best accessed by breaking down social assistance programming into sub-sections.

### Box 6.2 Successful Committees in Urban Areas

Many development and social assistance activities in urban areas depend on a functioning community committee. Whilst there are many examples of failed committees, there are some outstanding successes. But what makes a successful committee?

“The community” is a heterogeneous mix of people, but always includes leaders, influential people, and people with pre-existing capacity, experience and commitment. A successful committee will usually have the active participation of some of these people to support them. For example, many successful widows groups supporting income generating programs for their members include at least some women who before their husbands died enjoyed a higher standard of living. Other committees benefit from the membership of retirees, teachers, church leaders and other similar leaders. They provide guidance to others, and give them confidence to make the decision to take up new activities.

Successful committees often focus on only one activity, or two at the most. The chosen activity depends on specific local needs, and on the interest of the committee members. Most successful committees have future plans that involved elaborating on what they had chosen to do, but not moving sideways into other types of activity. Observations at national level that there are too many diverse committees are not necessarily supported by community members.

Community committees often occupy a place of tremendous significance to members: people express love for their committee, and draw analogies to being a family. Members are often very dedicated to their agreed ends, driving community committees to achieve the results described in this study. They are often motivated by their personal experience, and will work very hard to organize their neighbors.

Source: Harland & Mlewa (2004) Case Studies of Success in OVC Programming *Family Health International, Lusaka*

6.44 Compared with rural areas, urban interventions are more able to draw on people with appropriate capacity and experience to help build local initiatives. Larger communities also enable members of specific vulnerable groups to link with successful peer groups – whereas in rural areas, the population may be so low that, for example, widows and disabled people have no peers in the community.

#### D. Zambia’s Emerging Social Protection Strategy

6.45 Assessments of the 2002-2005 PRSP identified social protection as an important gap, and a Social protection Sector Advisory Group (SPSAG) was created in mid-2004 with a mandate to assess past experiences with social protection in Zambia, and to develop a new SP strategy. The SP strategy would provide an overarching framework for developing a five year action plan that could be integrated into the 5<sup>th</sup> NDP.

6.46 The SP-SAG is chaired by the Ministry of Community Development and Social Services, and draws its membership from most key ministries, NGOs, advocacy groups and the international community. Representation from the donor community is strong and has sometimes lacked coordination. Mechanisms for improved communication and harmonization would reduce the extent to which the SP strategy risks being driven by a wide range of external agendas.

6.47 A study to examine experiences of social protection in Zambia was carried out between June 2004 and March 2005, which included twelve case studies of existing programs. The study identified two key deficits in existing social protection programming – a lack of monitoring and



evaluation data, or even basic financial data (both of which significantly constrained analysis); and a lack of awareness of issues and debate about social protection among the programs studied, contributing to a lack of critical or reflective self-assessment. The box overleaf highlights the key lessons from the study.

6.48 Based on a careful assessment of existing work on risk and vulnerability, the SPSAG identified key risk and key vulnerable groups. The risks listed affect each of the vulnerable groups, who characteristically face multiple risks and shocks (see chapter 3):

Key risks	Key vulnerable groups
HIV/AIDS Lack of access to education and training Lack of access to health services Child malnutrition Lack of secure livelihoods in urban and rural areas Lack of access to social security Exposure to violence and abuse	Households with deficits in human capacity to generate a secure livelihood: significantly affected are widows, the disabled and other marginalized households  Households with insufficient human capacity to generate a secure livelihood: similar types of households are affected, usually with no fit adult, or an unsupportable dependency ratio  Children living without an adult care-giver: either in child headed households, on the street

**Box 6.4: Lessons from Past Experiences with Social Protection in Zambia**

1. Social protection programs that involve active community participation are more likely to have sustainable impacts. For this to happen, capacity building at the community level is often required;
2. Social protection programs may benefit from collaboration with other institutions or organizations. For this to be effective, realistic capacity assessment and appropriate capacity building measures are required;
3. Social protection is not easy to plan or implement. Hasty or ill-thought out programs may simply waste money and channel resources in an ineffective manner, or to the wrong people;
4. Programs that are spread too thin or have irregular funding have only a poor impact.
5. Situations of vulnerability change, often getting worse over time. Timely interventions in targeted situations may help prevent the occurrence of deeper vulnerability and deprivation;
6. Clear and carefully defined objectives and practical implementation methods are necessary to prevent social protection programs being used to provide untargeted general consumption subsidies for 'the poor', seeking to build political influence or simply avoiding making difficult choices.
7. Communities can participate in identifying incapacitated and low capacity households for assistance, without significant incidents of misappropriation. However, communities work better when clear guidelines and criteria that enable them to be transparent are provided. The circumstances of clients need to be reviewed regularly, to ensure that programs continue to target the most appropriate households. Communities will also mobilize themselves to assist the most vulnerable and incapacitated, although not usually with financial resources;
8. The success of social protection may be hampered by deficits in core services and other sectoral interventions. Spending on social protection may not have the desired impact in the absence of other more broadly targeted programs addressing poverty reduction and livelihoods development;
9. Effective social protection requires reliable and timely disbursement of adequate and known levels of funding, which will only come if there is high political commitment to implementing SP measures;
10. Monitoring social protection has been a low priority, and there is little useful information on the outcomes and impacts.

Source: RuralNet Associates (2005) *Experiences with Social Protection* Research study for the Social Protection Sector Advisory Group

6.49 The SP-SAG also agreed the following parameters for an initial social protection program in Zambia:

- Social protection must focus on addressing the needs of the *poorest and most vulnerable* people, and not allow the special needs of these groups to be lost in a more general program addressing any aspect of risk and vulnerability
- Zambia's initial SP program is principally *protective* – it chiefly targets mitigation and coping activities
- Social protection programming must remain a manageable size with achievable goals and a realistic budget

6.50 Nonetheless, maintaining a focus on core social protection activities for the key target groups has not yet been achieved. Two key factors create uncertainties. First, the ascendance of social protection on the development agenda has created multiple interpretations of how different sectors and interests can be presented as part of the social protection agenda. This creates a pressure to incorporate all possible approaches and activities that could be argued to be social

protection. Second, statements from Government and the approaches taken by many members of the international community has led to a realization that only activities included in the forthcoming NDP/PRSP will be funded – and hence social protection is becoming a home-of-convenience for a wide range of initiatives that otherwise risk exclusion.

6.51 Based on agreements thus far, the proposed SP program is intended to provide social assistance to the most needy; to assist low capacity households to develop more robust livelihood strategies; and to provide integrated services targeting preventive, mitigation and coping support for the groups identified as *most critically vulnerable*.

6.52 Many other possible aims and objectives have not been incorporated into the current SP strategy, in order to maintain a realistic and manageable set of activities. Critically, actions that deal with structural causes of risk and poverty – and that remain high priority for poverty reduction – are not included in the draft strategy. Broad based poverty reduction and risk prevention and mitigation activities (e.g. sustainable livelihoods development; national drought and disaster response) are also currently outside the remit of SP strategy. While these decisions may be revisited in the longer term, keeping a narrow focus in the shorter term will ensure that proposed actions remain manageable, and prioritize critical action for the poorest and most vulnerable.

6.53 The activities required for the implementation of the SP strategy are – to a greater or lesser extent – already in existence. They include both Governmental and NGO activities, with a strong emphasis on community based programming. Nonetheless, even existing component programs need to be strengthened, expanded and coordinated, with improved monitoring, and adequate and reliable budgetary allocations.

## 7. THE IMPACT OF HIV/AIDS ON POVERTY AND VULNERABILITY IN ZAMBIA

### **Margery aged 72, whose son died of AIDS (1996):**

It started three years ago. Over these years, we had never had enough food. But before all the deaths and drought, my husband and son had a shoe-making business and we hired laborers to help plough and plant our fields. We used to sell 40 bags of maize in June and July. I was crocheting and making baskets for extra money.

I had eight children; three left and went to town. They never send us money or food. The others stayed: three of them married and left home, my other two sons stayed at home. One of my sons later returned home, but he does not help much because he is mentally ill.

My fifth son, the one working with his father, started getting very weak in 1993. Over time my son's illness grew worse and he was admitted to Monze hospital in 1996. I would walk 15 kms from the hospital to my fields to make sure my crops were growing. I also went to a traditional healer with my son. I tried every treatment available. I was responsible for the farm alone because my husband was also ill and my youngest son injured his leg. All three sons and my husband became my patients. It was very hard.

My son died alone in the hospital in March of last year. I could not come to the hospital before his death because my husband was very ill. My son's body stayed in the mortuary for a few days. My remaining two sons and I removed the doors from our three huts in order to make a coffin. I carried the doors on my head from my home to the hospital. But then the HBC (home-based care) team came to the hospital to find me and help build a coffin. My sons with the help of the HBC driver dug a pit for the burial. My relatives never came to the funeral.

After my son's death, my husband became very depressed and got much weaker. He was sick for another two months then died in June at home. I spent all my savings on the funeral. As my son never got a proper burial at the hospital, I wanted my husband to have a proper one.

One of my daughters passed away soon after her father and she left four children. The children are staying with their father, except for the granddaughter who is staying with me. I want to send her to school but there is no money. I want to send her to Lusaka where we have lots of relatives.

Now I live off begging for food. I am too tired to earn money. My elder son who is mentally disturbed disappears for two weeks at a time. My neighbors never help me look after him. I am always worried he might disappear again. He is unable to work and just sits there talking to himself.

My youngest son and I managed to plant less than a hectare of maize and beans this year. We will use these crops for our own survival. But they are not enough. January and February will be the worst months, we will be without any food supplies. We will eat one meal a day. Perhaps by March we will have some pumpkins to eat, and we will try to get help from neighbors.

Three years ago we were well off. We planted 4-5 hectares of land and had farm animals. Now we have no cattle, no goats, and no chickens. I don't know how I will manage.

Source: case study quoted from "The Impact of HIV/AIDs on Farming Households in the Monze District of Zambia", draft paper by Kate Waller, University of Bath, 1997

#### **Mary aged 70, and her granddaughter Loveness (aged 14 yrs)**

Mary was sitting in an open hut warmed by a small fire. She looked thin and tired. She was anxious about her and her granddaughter's persistent poverty and growing hunger. She did not know what they would eat that day.

Mary's husband died of AIDS and she is herself seropositive. Her son also died of AIDS last year, leaving behind her granddaughter Loveness, who is now a double orphan. Loveness' mother died of AIDS several years earlier. Her father remarried and had more children. But the second wife, who is also seropositive, left Mary and Loveness after her husband died.

Mary and Loveness live in a small unkempt grass-roofed hut. They have no cattle or small livestock. They have a small plot of land nearby that Mary's other grandchildren have planted for her. But their mother (Mary's other daughter) is overburdened caring for her own seven children and is unable to provide Mary with financial support because of her husband's debt. He borrowed a large sum of money last year and because they could not pay it back, the credit institution took all their harvest and farming implements.

Mary feels lost and has no energy to maintain her fields. She has no money for fertilizer or to hire laborers. Her granddaughter is currently enrolled in 7th grade but Mary does not have the money to pay for school fees and other costs. She explained "I feel so useless. I used to be very strong and independent, selling my own vegetables and livestock. Now I can do nothing. I am ready to die."

Source: case study quoted from Waller, 1997.

### **A. Introduction**

7.1 Zambia is facing one of the world's most severe HIV/AIDS pandemics. Since the first case of HIV/AIDS was diagnosed in Zambia in 1984, HIV/AIDS prevalence rates have grown to the proportions of a major pandemic. Sixteen percent of all adults are infected with the AIDS virus, and infection rates are particularly high in Zambia's cities and towns: more than 40 percent of urban women in their 30s are HIV-positive. Life expectancy in Zambia has fallen from 51 in 1990 to 37 in 2002 (Chapter 2) and adult mortality rose by 17 percent between 1996 and 2002. The disease has had a devastating impact on the lives of Zambian people and no one is immune from its effects. Despite the widespread suffering cause by the disease, the government has been slow to adequately commit to the fight against HIV/AIDS. This is in contrast to countries like Uganda, where strong leadership from the country's president, allied with civil society, helped to sexual behavior and beat back the disease. Zambia desperately needs a similar commitment from

the nation's political leadership coupled with public health education and other measure designed to reduce transmission and treat those who currently suffer from the disease.

7.2 While the direct effect of HIV/AIDS on its victims is immense, its effects are far more widespread. Victims' families spend enormous time and resources caring for the ill. Following the death of a family member, the household may suffer from the loss of a breadwinner and the burden of paying funeral costs. Orphaned children in particular bear the impact of HIV/AIDS. The consequences do not end there. Zambian society is comprised of a system of overlapping kinship networks whose members are morally obliged to offer each other assistance and support in times of stress. This assistance can include sharing of food and other resources, or daily care for the sick and for orphans. The burden of these obligations has often fallen disproportionately on better-off households in the network. A study of the impact of HIV/AIDS in rural Monze district found that:

*On one hand, larger wealthier households...have the human resources to absorb labor shortages, yet because they are seen as wealthier, they also have the highest numbers of ill persons and orphans coming to stay with them. (Waller, 1997)*

7.3 Thus, economic damage resulting from HIV/AIDS is not limited to the poor or even to those households with infected members. Wealthier households also suffer economic losses when related households are affected by HIV/AIDS.

7.4 For households whose economic standing already is insecure, the increased dependency ratio and added financial burdens caused by illness and death in related households can push them below the poverty line. If they fully meet their traditional social obligations, then the requirements of HIV/AIDS-affected relatives may drain their savings and render them more vulnerable to impoverishment as a result of any shocks that they themselves might experience. Added to the host of common shocks that have afflicted Zambian households historically, HIV/AIDS threatens not only to prevent many poor households from escaping poverty, but also to propel a number of marginal and insecure households into destitution.

7.5 Ripple effects from the pandemic further undermine the society and threaten the welfare of the next generation. The ranks of both private and public sector professional employees have been decimated by the disease; many teachers and health care personnel in particular have fallen victim. Workers are frequently absent from their jobs to care for sick relatives or to attend funerals. The disease undermines nascent private sector development because firms find long-term planning impossible in the face of high employee mortality rates. Finally, small-scale agriculture production suffers as many families find cultivation limited by the loss of working age individuals. Because of all these effects and the traditional system of inter-locking obligations among families, HIV/AIDS threatens the well-being of the whole of Zambian society.

## **B. The HIV/AIDS Epidemic**

7.6 HIV/AIDS in Zambia is not uniformly distributed across geographic and demographic categories. The evidence suggests that, while males were disproportionately affected during the early phases of the epidemic, the preponderance of new infections now occur among Zambian women; particularly in younger age groups. Only in the cohort aged 40 and above do male prevalence rates equal and exceed female rates. The highest HIV rates among women are found in the 30-34 age group, while the peak for males occurs in the 35-39 age group. This suggests a social pattern in which it is common for older men to have sexual contact with younger women.

The table below displays HIV/AIDS prevalence rates, knowledge levels, and condom use for various age groups, based on the results of the Zambia Demographic and Health Survey (ZDHS):

**Table 7.1 Selected HIV/AIDS Indicators for Zambia – 2001/02**

Background Characteristic	HIV Prevalence Rate (%)			Knowledge of AIDS (%)		Use of Condoms (Spouse or cohabiting partner) (%)		Use of Condoms (Non-cohabiting partner) (%)	
	Female	Male	Total	Female	Male	Female	Male	Female	Male
<b>Age</b>									
15-19	6.6	1.9	4.6	98.4	94.7	9.5	17.8	28.0	32.5
20-24	16.3	4.4	11.4	99.4	99.4	8.5	16.0	36.0	51.9
25-29	25.1	15.0	20.4	99.6	100.0	6.7	15.0	39.7	46.7
30-39				99.8	99.8	5.1	9.9	31.8	49.3
30-34	29.4	20.5	25.1						
35-39	22.6	22.4	22.5						
40-49				99.3	100.0	2.2	5.3	15.4	40.1
40-44	17.3	20.5	18.9						
45-49	13.6	20.2	16.5						
<b>Residence</b>									
Urban	26.3	19.2	23.1	99.9	99.7	8.2	12.2	45.4	52.1
Rural	12.4	8.9	10.8	98.9	98.0	5.1	8.0	20.4	37.2
<b>Province</b>									
Central	16.8	13.4	15.3	99.8	99.6	6.1	7.5	25.5	44.8
Copperbelt	22.1	17.3	19.9	99.7	98.9	5.1	12.9	41.3	52.8
Eastern	16.1	11.0	13.7	99.4	98.8	6.5	10.5	34.7	54.7
Luapula	13.3	8.6	11.2	99.4	98.9	1.4	1.6	16.7	18.9
Lusaka	25.0	18.7	22.0	100.0	100.0	12.7	15.8	48.2	55.6
Northern	10.0	6.2	8.3	99.1	98.8	6.8	9.7	22.4	47.1
North-Western	8.8	9.5	9.2	99.3	99.6	4.1	6.3	26.6	40.0
Southern	20.2	14.6	17.6	99.4	95.6	3.8	5.5	30.1	33.7
Western	16.9	8.3	13.1	96.5	97.5	6.0	5.7	14.5	23.3
<b>Total</b>	17.8	12.9	15.6	99.3	98.6	6.2	9.5	31.2	44.1

Source: Zambia Demographic and Health Survey, 2001-2002, Central Statistical Office, Central Board of Health Lusaka, Zambia and Measure DHS+, ORC Macro, U.S.A

7.7 As Table 7.1 demonstrates, while knowledge of HIV/AIDS is nearly universal in all age groups, HIV/AIDS-related behavior is less satisfactory, at least as measured by condom use. Use of condoms with cohabiting partners is very low, particularly for women. Even with non-cohabiting partners, condoms are used by less than half of most age categories. Males aged 20-24 use condoms more often (51.9 percent) than do women or men in other age groups. Only 36 percent of females in the same age group do so, however. The finding that fewer females in all age groups use condoms may partially explain the fact that HIV prevalence rates among women have overtaken and begun to surpass those among men.

7.8 In addition, HIV/AIDS rates vary by location. Rates are much higher in the urbanized provinces of Copperbelt and Lusaka, while they are relatively low in the Northern and North-Western provinces. The rate of infection in urban areas is double that of rural areas. The Zambia Demographic and Health Survey (ZDHS) of 2002 found 23 percent of urban residents to be HIV positive. The most severely affected are Zambians who are both urban and female: 26.3 percent of urban women are infected by HIV, according to the ZDHS 2001-2002. In view of the fact that about 38 percent of Zambia's population is urban, the consequences of this soaring infection rate among urban women are difficult to overestimate. Up to 40 percent of the children born to these

HIV positive women will be themselves infected by HIV. The remainder will lose their primary caregiver, probably in early childhood.

### **C. The Relationship Between Poverty and HIV/AIDS**

7.9 The causative relationship between HIV/AIDS and poverty is an ambiguous one. On one hand, it has been observed that, at the global level, “Cross-country evidence indicates a strong statistically significant association between high HIV prevalence and poor socio-economic performance.”<sup>59</sup> This association is present whether socio-economic performance is measured by per capita income, income inequality, absolute poverty or the UNDP Human Development Index. On the other hand, within Africa itself the opposite pattern prevails. The countries with the highest HIV/AIDS rates within Africa are among the richest

7.10 Similarly, at the individual level, better-off Africans appear to be at greater risk of HIV infection than are the less affluent. One possible explanation of this pattern is that, at least in the early stages of the epidemic, affluent individuals experience higher exposure to HIV/AIDS because they are better able to purchase commercial sex and have greater geographic and social mobility. There are suggestions that, at a later stage of the epidemic, HIV/AIDS rates among the better-off (and particularly the better-educated) begin to level off and decline as a consequence of good access to information and to commodities such as condoms. For example, the documented drop in prevalence among females aged 15-19 during the late 1990s was more pronounced among girls with higher educational attainments. (Loewenson et. al, 2004). HIV prevalence rates among the poor, who may have acquired HIV through contact with the affluent, continue to rise during later phases of the epidemic as a result of poor access to information or, among those with adequate awareness of HIV/AIDS and its modes of transmission, the inability to take appropriate action to protect themselves. (UNAIDS, 2000).

7.11 That poverty maintains and promotes the existence of high-risk groups within society is an inescapable conclusion. It is widely acknowledged that extreme poverty fosters the propensity to engage in high-risk sexual behavior. Many Zambian women are forced into commercial sex by destitution – which often occurs when they lose a breadwinner to chronic illness and death as a result of HIV/AIDS. Since even their regular partners are expected to provide women with gifts of food or money in this society (Zambia MOH, 1999), the line between transactional sex and non-transactional sex may not be clearly drawn among the poor, and hence the slide into commercial sex work under conditions of economic stress may be all too easy. The PVA’s urban participatory study noted that, in urban households, commercial sex work is a common coping mechanism after destabilizing shocks. During a study of street and nightclub-based sex workers in Lusaka (Agha and Nchima, 2001), informants said they resorted to sex work because they could not find formal sector employment due to poor educational qualifications. They described available employment options (such as braiding hair in a salon) as too low-paying to cover basic rent and food costs. These women, then, are exposed to HIV/AIDS, and expose their sexual partners to HIV/AIDS, primarily as a consequence of severe poverty.

7.12 Among disadvantaged men, poverty propels the unemployed towards migratory labor, which is a well-known risk factor for HIV/AIDS. The 2003 Zambia Sexual Behavior Survey found a high level of mobility among the Zambians sampled – during the four weeks preceding the survey, 22.7 percent of women and 16.9 percent of women had spent at least one night away

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<sup>59</sup> Bloom, David E., and Sevilla, Jaypee. Health, wealth, AIDS and poverty. River Path Associates, January 2002. p. 6.



from home. In the year preceding they survey, 18.8 percent of men and 18 percent of women had spent at least one month away from home (CSO, MOH, and MEASURE, 2003). Many of these journeys were undoubtedly associated with the search for temporary or seasonal employment. Men who are separated from their families and in temporary employment situations often go alone or with other men to bars and nightclubs, where they encounter commercial sex workers. Engaging in 'temporary marriages' is also common for people who regularly travel, and the epithet provides an aura of respectability for the women who regularly 'marry' temporary visitors to the area.

7.13 In the formal sector, the largest migrant labor force is the sugar cane cutters, although truck drivers, bus drivers and private sector drivers also form a significant group of formal sector migrant workers. In recognition of their high risk status, active HIV education and STI treatment programs have been aimed at sugar cane workers and truck drivers. Migrant labor, however, is now chiefly in the informal sector (particularly cross-border trading and charcoal selling) where migratory workers are less likely to be reached by HIV/AIDS prevention programs and services. Informal sector workers may also be poorer than those in the formal sector, and low-income men are less likely than others to use their scarce resources to purchase condoms, or to secure medical treatment for sexually transmitted infections (STIs).

7.14 What is more, the constant barrage of shocks and misfortunes that afflict the poor (including the high rate of mortality caused by other diseases) has blunted the popular awareness of and sense of urgency surrounding the problem of HIV/AIDS. Informants who were consulted during the rural participatory study commented that "This is just another disease to us." Although every community agreed that the frequency of economic losses associated with chronic disease and premature death had escalated in recent years, many felt they had much more immediate and pressing worries than HIV/AIDS. The very poorest may be forced to chance exposure to HIV/AIDS (through transactional sex) in order to meet their children's minimum nutritional requirements. An analysis of the conditions that intensify the growth of HIV/AIDS would suggest, then, that when poverty is extreme and shocks are frequent, individuals are poorly motivated to take the steps necessary to protect themselves against HIV infection.

7.15 While poverty fosters exposure to HIV/AIDS at the individual level, it is clear that the existence of a high number of infected individuals in turn exacerbates poverty at the household level, the community level and beyond. Although the primary economic impact of HIV/AIDS is felt at the household level, there is an aggregate impact at the community and national levels, particularly in later stages of the epidemic. First, households may lose their ability to function independently after the death of a breadwinner. According to African tradition, these households are entitled to assistance from within their larger kin groups. They may therefore become a net drain on the resources of related households; particularly when these households are required to absorb orphans who are too young to contribute economically.

7.16 Second, the presence of chronically ill individuals increases the stress on communities by straining the capacities of health services and, in some cases, by fostering a rise in the prevalence of opportunistic infections even among those who are not infected. This is of particular concern with respect to the spread of tuberculosis (TB). Zambia is currently experiencing a TB epidemic, primarily caused by HIV/AIDS. TB is the proximate cause of death of one third of AIDS patients. By increasing the likelihood of exposure to TB for members of the general population, HIV/AIDS may also be responsible for a quarter of all TB deaths among HIV-negative people. (World Bank, 1997) HIV/AIDS, therefore, is increasing the disease burden for both infected and uninfected community members.

7.17 At the national level, HIV/AIDS poses a clear obstacle to strong economic growth and poverty reduction strategies, first by decimating the skilled labor force and second, by straining public services. Because the affluent and better-educated are at higher risk during the early phase of the epidemic, a large number of public servants and health professionals may already have been removed from the labor force as a result of HIV/AIDS by the time that the need for services rises significantly among the poor. UNDP reports that, in Malawi and Zambia, health care personnel have been reduced by a five-to-six-fold increase in illness and death rates. (UNDP, 2001) In the private sector, profit margins will suffer losses as a result of higher absenteeism and turn-over (including increased training and recruitment costs). Among smallholder agriculturalists, the acreage under cultivation is likely to be limited by the loss of able-bodied laborers. For these and other reasons, UNDP has concluded that “In much of Africa and other affected regions, the epidemic will prove to be the biggest single obstacle to reaching national poverty reduction targets and the development goals agreed on at the United Nations Millennium Summit.” (UNDP, 2001)

#### **D. Poverty and Vulnerability in Zambia**

7.18 Zambia is one of the world’s poorest countries. The 2003 Human Development Report ranks Zambia’s Human Development Index at 163 out of a total of 175 countries. Results of the 2002-2003 Living Conditions Monitoring Survey (LCMS) indicate that approximately 56 percent of the population is existing at a level of consumption that is below the poverty line, while 36 percent fall below an even lower “core poverty” line. Zambia’s HDI is reported to have declined from 0.448 in 1975 to 0.427 currently; and its GDP per capita fell by 1.5 percent between 1991 and 2002. This decline is in part a consequence of lack of diversification and over-dependency on the copper mining industry during the post-independence period. The collapse of the copper industry after the 1970s led to a dramatic rise in unemployment and a general decline in economic well-being, both at the macro and household levels. This parallels the period in which the HIV/AIDS epidemic took hold and began growing to crisis levels.

7.19 Global comparisons have led some analysts to conclude that, although the relationship between poverty and HIV/AIDS is ambiguous at the level of the individual as noted above, at the societal level there is likely to be a mutually reinforcing cycle of causation between the growth of poverty and increases in the prevalence of HIV/AIDS. If so, then the rise of poverty attendant upon the failure of the copper industry may have been one of several factors that have pushed HIV/AIDS rates to their current levels. High rates of HIV/AIDS, in turn, constitute one of the barriers Zambia is confronting in its attempts to achieve sustainable growth and improve household incomes among the poor and vulnerable.

7.20 The HIV/AIDS crisis, which is now entering its third decade, thus presents a major challenge to poverty reduction strategies developed by government, donors and international agencies. Drawing on existing information and on qualitative studies of rural and urban poverty carried out in 2004, this paper will examine the contribution of HIV/AIDS to poverty and vulnerability in Zambia. It assumes that poverty is a complex and multi-faceted phenomenon that encompasses various types of deprivation in addition to income and consumption poverty. It will therefore examine the role of the HIV/AIDS epidemic in supporting or exacerbating three essential components of poverty: *poverty of private assets, poverty of access to public goods and services, and poverty of social relationships.*

7.21 Poverty may be defined as an unacceptable level of deprivation. There are many components to deprivation, however. These components can be grouped into two broad

categories: 1) low incomes and inadequate consumption, and 2) deprivation of human capital and capabilities in terms of skills, education, health, and nutrition. Material and human capital deprivations are closely related, in that material poverty undercuts the household's capacity to develop and utilize human capabilities, while lack of human capital is a prime barrier to securing employment or other means of accumulating material wealth. Households with little access to public services (clean water, sanitation, education and health care services) suffer an added disadvantage, since effective basic services provided by government can compensate for the inability of the poor to purchase these services. What is more, material and human capital deficiencies are often compounded by social deprivations. An economically disadvantaged household is under greater strain when it suffers from discrimination, social exclusion or insufficient social capital (i.e. a lack of useful relationships of mutual assistance).

7.22 During the 2004 Zambia Rural Poverty and Vulnerability Study, the various dimensions of poverty were examined at the community and household levels using a set of qualitative methods and instruments. These interviews, discussions, and exercises revealed that, because chronic illness of or loss of a breadwinner is one of the most serious and common shocks that affect poor households, there is a clear relationship between high HIV/AIDS rates and poverty for many individuals and households. In addition, both government and traditional informal safety nets and services are under strain due to the increase in demand, and they are threatening to fail in their role of providing both emergency and routine assistance to impoverished Zambians.

### **HIV/AIDS and Poverty of Private Assets**

#### Material Deprivation

7.23 The centrality of material deprivation as the fundamental factor in poverty was underlined during discussions with rural Zambians. When asked to rank the village population into categories based on relative wealth, Zambian informants in the rural qualitative poverty and vulnerability study generally cited various aspects of material deprivation as definitive of the very poor. Food insecurity and malnutrition were described as the most important indicators of extreme poverty, and paucity of clothing, bedding, stored grain and livestock were also mentioned as key characteristics of the very poor. In the companion urban study, although inability to send children to school was also mentioned, the household's inability to eat more than one meal a day was viewed as a clear sign of extreme poverty. In both rural and urban settings, then, failure to meet basic nutritional requirements was described as the key defining characteristic of extremely poor households.

7.24 In consultations with urban informants, they identified households headed by orphans, elders, widows and the terminally ill or disabled as the poorest and most vulnerable. While a wide variety of factors were advanced to explain the differences in economic standing between the poor and the better off in the rural areas, rural informants commented that the very poorest were often the "new poor"—which include households that have lost a breadwinner or are elder- or female-headed as a result of HIV/AIDS or other diseases, as well as individuals returning to their natal villages for care because they are chronically ill from TB or active AIDS. These households are the most disadvantaged because they have simultaneously suffered losses in both of the essential components of economic well-being: material and human capital. The incomes and material assets of these households are rapidly depleted because they experience loss of earnings, while expenditures are simultaneously increasing due to high treatment costs incurred for drugs, transport and hospital user fees. UNDP estimates that the incomes of AIDS-affected households can be reduced by up to 80 percent; and a 1999 study of AIDS orphans reported that, for 2/3 of

Zambian households that have suffered paternal death, disposable income fell by 80 percent in the first year alone. (Serpell, 1999)

7.25 When income-earners are incapacitated and household expenses have burgeoned, poor households quickly exhaust any savings and stored foodstuffs they managed to accumulate before illness struck them. Once this has occurred, the second-line coping strategy is usually to sell any material assets the household may possess, in order to meet immediate consumption needs and to purchase medicines for the ill family member. In the case of the poorest, this is not an option since they have no saleable assets. In slightly better-off households, items such as metal roofs, bicycles and livestock are likely to be sold off.

7.26 The emergency sale of household assets is a significant threat to the ultimate viability of the household. The sale of livestock is particularly likely to damage the household's long-term economic well-being. The loss of an animal may remove the household's access to plough cultivation if the lost animal is a draught animal. Because households rely on the sale of smaller livestock to see them through periods of food shortage, the loss of any domestic animal is perceived to be actually life-threatening by members of very poor households. At the very least, the household has lost a productive asset when a breeding animal must be sold to support shortfalls in consumption. Sale of a bicycle may also remove a productive asset from the household, since bicycles may be used to access centers of employment or, more commonly, markets where horticultural surpluses can be sold. The decimation of household assets in response to chronic illness or death can lead the household into a downward spiral from which it may be unable to recover.

#### Deprivation of human resources

7.27 The elements of human capital – particularly good health and higher education – are benefits in themselves that should be pursued and supported on humanitarian grounds. In addition, however, good health, education, and work-related skills also function as productive assets that can improve the capacity of the individual to earn income and accumulate wealth. The productive asset that impoverished households can least afford to lose, in fact, is its capacity to labor. Physical labor may be the only private asset that is possessed by the very poor. Labor may also constitute the household's main coping mechanism during shocks. Rural informants stated that, during economic emergencies caused by drought, crop failure, etc., a common coping strategy among the very poor is to seek employment as casual agricultural day laborers in the fields of well-off households (called *ganyu* labor). These opportunities are available only in the peak growing seasons, however, and what is more, this strategy is not available to many AIDS-affected households. The household member living with HIV/AIDS – usually an adult in the most productive age group – will pass through an extended period in which s/he is not only too ill to provide physical labor but also requires constant physical care. A study of the impact of HIV/AIDS on livelihoods found that this period averaged 19.1 months in female-headed households and 15.5 months in households that are male-headed. (Development Cooperation Ireland, FAO, and GRZ)

7.28 During this period, other household members will be compelled to provide full-time care to the person living with HIV/AIDS in the household. In almost every case, the caregiving burden falls primarily upon girls and women. Even under normal conditions, women work longer hours in both the home and the agricultural fields than do men. (Araki, 1996) When women face the added responsibility of providing full-time nursing care to a chronically ill family member over a period of several months, their ability to carry out these routine duties – which include tasks essential to successful cultivation -- is seriously undermined. In the worst case, all adult

labor of the household is absorbed by the crisis. This is a catastrophe for the poor household. The better-off are also likely to lose ground economically when affected by HIV/AIDS, but they can compensate for the loss of productive household labor by hiring *ganyu* labor as needed. In consequence, the better-off can continue to cultivate and produce food while caring for the chronically ill – but the AIDS-affected poor may be forced to leave their fields uncultivated and unproductive. Some households have left crops unharvested because the only healthy adult – a woman – was busy providing nursing care for a family member in the last stages of HIV/AIDS. In some households, older children are withdrawn from school to compensate for the loss of adult labor. Since women share caregiving and other tasks among themselves, teenaged girls may curtail their education in order to assist (or to serve as) the primary caregiver.

7.29 In its analysis of the causes of poverty at the household level, the rural participatory study concluded that the primary obstacles faced by various impoverished households differ, and that the same assistance strategy will not work for all. Although production in most small-holder households is constrained by lack of agricultural inputs or water, there is a distinct subset of poor households whose greatest constraint is lack of labor. Most of these labor-deficient households have lost productive adult members to fatal illnesses such as HIV/AIDS, and many are headed by the elderly or by mothers of small children. They are likely to be food-deficient, particularly if there is no healthy adult capable of cultivation within the household. These labor deficient households will not be able to benefit from poverty reduction or agricultural improvement programs aimed at improving access to inputs or irrigation; or from other programs that require physical labor, such as food for work (FFW).

7.30 In addition to losing productive labor in the short-term, HIV/AIDS-affected households may also suffer from the lowering of its human capital stocks in the future. There is pressure on overcrowded Zambian schools to meet the needs of a growing population; and children affected by HIV/AIDS may be poorly positioned and under-motivated to compete for scarce spaces in these schools. Even though user fees for primary education have been removed, households confront educational expenses in the form of school supplies, transport and, in some areas, PTA fees. At the secondary level, school attendance entails both the payment of fees and an opportunity cost to the extent that it absorbs the time of a household member who could otherwise earn income for the household. When the household is under stress as a result of chronic illness or the death of a breadwinner, therefore, one or more children may be withdrawn from school as a coping mechanism. This is especially likely to occur when there is no physically able adult left in the household, and older children are the only household members who are capable of physical labor. In this connection, a recent study concluded that HIV/AIDS would significantly reduce Africa's supply of human capital:

*The epidemic will have this effect not only from the supply side by reducing the capacity of the educational system to train the next generation, but also from the demand side by making investments in schooling less attractive by foreshortening time horizons and increasing the opportunity costs of children's time. These effects will slow the rate of Africa's accumulation of human capital.<sup>60</sup>*

When the HIV/AIDS epidemic touches an already-poor household, it may halt the household's efforts to improve its human capital resources through education.

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<sup>60</sup> Hamoudi, Amar and Nancy Birdsall. AIDS and the Accumulation and Utilization of Human Capital in Africa. Presentation at the 2001 meeting of the African Economics Research Consortium, Nairobi, Dec. 2001.

7.31 Although the evidence is mixed, the education horizons of low-income children whose parents have died are particularly likely to be lowered. A World Bank study on educational targeting in 28 countries reports that, although the greatest differentials in school attendance are found between poor and non-poor children, nevertheless orphans are less likely to attend school in both the highest and lowest income groups. The orphan effect was found to be particularly strong among the poorest 40 percent of the population. (Ainsworth and Filmer, 2002) Analyses done specifically for Zambia (Chapter 5) show similar patterns for orphans living in lower income households, and moreover find that girls and double orphans are particularly at risk of low school attendance. Low-income orphans, then, are disadvantaged in the competition for scarce educational resources. The higher propensity of orphans to withdraw from school could have a number of explanations, including grief and emotional turmoil. It is likely, however, that the poorest orphans are either without adult support or are under the care of equally poor relatives: many live with elderly grandparents, who not only look after their orphaned grandchildren, but manage without the support traditionally provided by their own (grown) children. These low-income caregiver households may be unable to support orphaned children beyond the provision of the basic food and clothing that are required for survival. Under these circumstances, the human capital resources of these orphans are likely to be limited lifelong to unskilled physical labor. Manual labor, particularly when it is casual agricultural labor, usually provides the lowest returns of any type of work. Low-income children who lose their parents to the epidemic, therefore, have poor prospects for escaping poverty during adulthood.

#### **HIV/AIDS and Poverty of Access to Public Goods and Services**

7.32 It is usually a challenge for essential public services to keep pace with the growth of public needs in developing countries, due to the fact that populations are increasing faster than the revenues available for collection by government. In a country heavily affected by the HIV/AIDS epidemic, this problem intensifies dramatically. As is the case at the household level, HIV/AIDS poses a double and self-reinforcing problem for governments: AIDS-related increases in morbidity and mortality push up the demand for services (particularly health services) while they simultaneously reduce the supply of public servants and professionals who are trained and available to meet these escalating needs. Because better-off households can normally turn to costly private services when public services prove inadequate, the impact of failing public services is felt primarily by the poor.

#### Health Services

7.33 The most obvious strain on public services occurs through the stress placed on the health system by opportunistic infections associated with the deterioration of persons living with HIV/AIDS immune systems. In 1996, it was reported that 25 percent of the Zambian population was sick within any given two week period; that 10 percent of the population was chronically ill; and that 23 percent of the sick receive no treatment from any source. (Diop, Sheshaani, and Mulenga, 1997) This suggests that access to health services was poor at that time; and levels of chronic illness may have increased in the period since. A 2003 survey in four zones of Zambia found that 29.7 percent of the sample households included at least one chronically ill person. (CARE International, Catholic Relief Services, and World Vision, 2003) Particularly alarming is the resurgence and rapid spread of TB as a consequence of HIV/AIDS. The MOH/CBOH (1999) reported a five-fold increase in TB between the advent of the AIDS epidemic and 1996. Although HIV/AIDS cannot be transmitted by casual contact, TB can be. As a result, the TB epidemic may spread even faster than has the HIV/AIDS epidemic – particularly among the lowest income groups, who are more likely to go untreated for longer periods. What is more,

antibiotic-resistant strains of TB are now appearing in Africa as a result of incomplete or insufficient drug treatment.

7.34 The loss of health care personnel to illness is only one aspect of the human services dilemma. Because the health system is poorly funded, skilled personnel are underpaid and easily persuaded to relocate to developed countries with far better pay scales. Although Zambia's schools of nursing are still training more nurses than are being lost, the number of qualified physicians in Zambia is dropping. The supply of physicians (as well as nurses, technicians and other skilled health workers) is under strain as a result of the "brain drain" that affects most poor countries. The problem is compounded, however, by the loss of health workers to HIV/AIDS.

7.35 Even if it is able to maintain current staffing levels, however, the health system's ability to respond to the crisis will be far below optimal. If it is to move beyond a purely defensive response to the epidemic, the health system must do more than treat opportunistic infections as they arise. To make inroads against the spread of HIV/AIDS, a number of additional services must be put in place. These include intensified HIV/AIDS prevention initiatives, voluntary counseling and testing (VCT), the prevention of mother-to-child-transmission (PMTCT), and anti-retroviral (ARV) therapy. The government of Zambia is offering these services in a few pilot sites throughout the country, but scaling them up to the national level will require a significant increase in drugs, personnel and other resources.

7.36 Although the bulk of the required drugs and reagents may be supplied by external donors, the additional personnel and staff time burden will fall upon the health system. A study (University Research Company, 2004) of the health system personnel requirements for scaling up these services has recently been implemented. The report noted that delivery of many HIV/AIDS services relies on midwives and laboratory technicians; and that qualified staff in both of these categories are in extremely short supply. What is more, the quality of existing services is questionable, and supervision is weak to nonexistent at many of these sites. Looking to the future, the researchers estimate that, depending on the level of scale-up anticipated, either 379 or 573 full-time positions will need to be created and staffed. Under the higher scale-up scenario, the annual salary cost of these additional positions would be US \$1.3 million – a significant challenge to a health system that is not only poorly funded but is also losing personnel to the epidemic on an ongoing basis.

7.37 Ensuring that health care services are fully staffed is not the only challenge facing the health system, however. Even if the government health system is able to find the resources to respond adequately to the needs of low-income PLWHA, there is evidence that resources alone will not provide the needed care. A study of HIV/AIDS-related stigma in several countries found that, in Zambia, the most extreme forms of discrimination and stigmatization of HIV/AIDS sufferers occurred in health care settings:

*This included denial of drugs and treatment; being left in the corridor; being dealt with last; being labeled or called names; being subjected to degrading treatment and breaches of confidentiality. Care providers themselves claimed they found patients with HIV/AIDS more difficult because of their multiple infections, their "hysteria," their "attention seeking" and their "many thoughts" (i.e. the need for psychological as well as medical support). They also admitted that HIV/AIDS patients were often not given the same services because doctors know they are going to die and, therefore, spent less time on them.<sup>61</sup>*

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<sup>61</sup> Stigma, HIV/AIDS and prevention of mother-to-child transmission: A pilot study in Zambia, India, Ukraine and Burkina Faso. The Panos Institute, London, and UNICEF.

7.38 One of the study's Southern Province informants had witnessed an incident in which an HIV/AIDS patient had been left outside the hospital in a wheel chair, where he was taunted by health workers and deprived of food because health workers did not want to clean him of excrement. Clearly, most government health workers do not have the training or support necessary to provide acceptable care for people living with HIV/AIDS. They have not been trained to cope with HIV/AIDS, they are overworked due to the increased disease burden, and many of them fear their medical duties will expose them to infection. For low-income and impoverished PLWHA, there is little or no possibility of accessing private sector health care services as an alternative. Tabulations of the results of the 2002-2003 LCMS reveal that government health care providers were consulted most often by members of all income quintiles. The better off, however, more often utilized government hospitals, while the lower income quintiles used government clinics. Of those utilizing private health care institutions, most were in the highest two income quintiles. Government clinics and home care (including self-medication, which is common among the poor) are usually the only options for the poor. The poor, therefore, suffer diminished access to public health care services when they are afflicted with HIV/AIDS -- caused at least in part by discrimination and stigma within the government health system.

#### Educational Services

7.39 Access to and quality of education for low-income households is deteriorating as a consequence of HIV/AIDS. This decline is a result of the diversion of public sector resources to the health sector and other sectors that are coping directly with the epidemic, plus the reduction in force among personnel in the education sector itself. For reasons that are not entirely clear, educators appear to constitute a high-risk group in some countries of southern Africa. The World Bank has estimated that mortality rates among Zambian teachers are 70 percent above those in the population at large. (World Development Indicators, 2001) The number of trained teachers in Zambia is declining, therefore, at a time when the number of students is growing due to increases in population. Based on CSO projections, the rate of growth among the school-aged population is expected to remain around 2.1 percent per year during the 2000-2007 period.

7.40 What is more, the many demands upon the federal budget have made it difficult to hire or replace teachers. The task of training a large number of teachers to replace those lost to HIV/AIDS will be costly; and in addition, the supply of personnel qualified to train the next generation will also be reduced by the epidemic. This dilemma is an instance of a larger pattern, whereby "By skimming off the most skilled workers in the economy (at least in the first wave), HIV/AIDS threatens to forestall the emergence of a critical mass of the more skilled workers."<sup>62</sup>

7.41 The MOH/CBOH (1999) has predicted that the HIV/AIDS epidemic will have the following impacts on education in Zambia:

- Reduction in the number of trained teachers
- Increased teacher absenteeism
- Reduction in the number of education officers
- Reduced public finance for schools
- Reduced family resources for schooling
- Fewer children, especially girls, able to attend school or afford education
- Fewer children able to complete schooling

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<sup>62</sup> Hamoudi and Birdsall, 2001. p. 27.



- More orphans with less access

7.42 Even in schools that are fully staffed, teacher absenteeism caused by HIV/AIDS can have a negative impact on learning. A 2002 survey of education and service delivery in Zambia (Das, 2004) revealed that absenteeism is high – 17 percent of all teachers were found to be absent during random checks; and teachers who were absent for personal reasons lost an average of 3 days of work each time. The same study found that frequent negative shocks to teachers had a negative impact on student learning, at least among students who remained with the same teacher for two or more subsequent years (a common practice in the Zambian educational system.)

7.43 Although the education of all Zambian children other than the wealthiest will suffer as a result of the impacts of HIV/AIDS, some of them affect the poor disproportionately. Fewer poor children will complete school when their parents are chronically ill or deceased, because the loss of adult labor and the high price of treatment has placed school supplies or secondary education fees beyond the economic reach of their households. Some of these children will be withdrawn from school to earn an income in compensation for the lost earnings of chronically ill adults. Girl children in particular are likely to drop out of school when a family member (particularly the mother) is ill, since home care of the sick and disabled is traditionally the task of girls and women. Orphans living in low-income households are more likely to withdraw from school because the household caregivers may be unable to support both the subsistence and educational expenses of additional children. What is more, they may be unwilling to educate the orphan (usually a niece or nephew) at the expense of their own children. The access of many impoverished children to educational services, already lower than that of well-off children, is therefore likely to diminish further when they are affected by HIV/AIDS.

## **HIV/AIDS and Poverty of Social Relationships**

### Weakening of the Extended Family Welfare System

7.44 As in many other countries of southern Africa, Zambian society is characterized by an ethic of economic equality, particularly among kin group members. A number of social traditions and practices – such as communal meals and voluntary labor-sharing -- have an equalizing function, but most common among them is the expectation that better-off households will share “excess” resources with other extended family households that are in acute need.

7.45 This is an effective safety net during periods in which the kin group is prosperous. Its effectiveness, however, relies on the ability of some households to achieve surplus production that can be diverted to a smaller number of deficit households during shocks or shortfalls. The results of the rural participatory study indicate that this system is now under serious strain, and in some cases is unable to meet the needs of the most impoverished. The 2004 OVC Situation Analysis found that extended family obligations were “narrowing” in a variety of ways:

*The first “narrowing” is the increased emphasis on close family, and blood relatives. People are increasingly likely to offer care to children only when they are directly related to them, and for married households only where the relationship is through the wife. Women in particular appear to be more and more reluctant to offer care to children unless they are their own, or their*

*immediate brother's or sister's children – this reluctance even extends to caring for the previous children in a new marriage.*<sup>63</sup>

7.46 A second type of narrowing was observed in so far as the richest Zambian households appear to be distancing themselves from their extended families. While middle-income households still attempt to meet their extended family obligations in so far as is possible, the wealthiest are now less likely than formerly to accept indigent orphans and remnants of AIDS-affected households, even when these are close kin.

7.47 Rural PVA Study informants commonly attributed the erosion of the traditional family support network to a generalized increase in poverty – extended family members were said to have fewer resources to spare for relatives experiencing economic stress. However, although national statistics indicate that poverty may have increased slightly in recent years, the increase has not been dramatic enough to bring about a significant social transformation. HIV/AIDS, on the other hand has increased significantly in both urban and rural settings. Chronic illness and death of male breadwinners has left a growing number of households with no adult other than a mother or grandmother. These households were described as among the most impoverished in the villages; and they are almost by definition deficit households in the extended family redistribution context.

7.48 What is worse, if one parent dies of AIDS, it is likely that before death he/she will have transmitted the infection to the other parent. The household will then be left with no adult in charge. Very large families are the norm in Zambia; and so some who die leave behind as many as 6-8 children. These children must be absorbed by other (extended family) households that may already be supporting an equal number of children of their own. Providing for the food, clothing and educational expenses of these additional children can have an impoverishing impact on economically precarious households. If several households within a kin group have lost breadwinners, then the capacity of the group to serve as a safety net is certain to be further eroded. In the words of the MOH/CBOH, “This surge in the number of orphans comes at a time when the traditional roles of the extended family have already been breaking down with urbanization and prolonged economic pressures.”<sup>64</sup>

7.49 The rise of single-parent households has led to a partial breakdown of traditional gender roles in rural settings. When their husbands are ill or have died, women are forced to take on the rougher work and heavy labor that is normally reserved for men. These tasks usually include clearing fields for cultivation, re-thatching the roof of the house, building animal pens or other outbuildings, etc. A woman who is caring for a chronically ill person or small children faces an escalating challenge when she must assume these additional tasks. In some cases, even necessary work is neglected due to an absolute labor shortage in the household.

7.50 While freedom and flexibility in assigned gender roles may be desirable, the practical outcome of the decline of gender-specific tasks is often that a widowed or deserted mother will be required to assume the heavy labor of absent men in addition to her own traditional tasks. On the other hand, the dissolution of traditional gender roles may ease the burden of women in a family with adult males. In 2004, when rural focus group participants were asked whether men or

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<sup>63</sup> Harland, Charlotte. Orphans and Vulnerable Children in Zambia: 2004 Situation Analysis. Summary Report. GRZ: Ministry of Sport, Youth and Child Development. December 2004. p. 13.

<sup>64</sup> Ministry of Health/Central Board of Health, 1999, p. 35.

women should be responsible for common agricultural tasks (many of which were known through the ethnographic literature to be traditionally gender-specific), they unanimously responded that the entire household would share responsibility for all agricultural tasks. In a few cases, men have been found caring for small children and/or nursing sick wives – in clear violation of traditional gender role expectations. This was reportedly due to the fact that, with increasing illness burdens in so many households, there may be no appropriate caregiver (a female relative) who is free to provide care. In most cases of maternal disability or death, however, it is the children who assume the tasks, such as cooking, drawing water, and processing cassava and millet, which would otherwise be undertaken by an adult female. Since the epidemic infected men disproportionately in its early stages, however, the greater number of existing single-parent households are headed by female rather than male parents.

7.51 Informants commented that the rural widow is now less likely to remarry than in the past. A number of explanations were offered, most of them related to the rise of HIV/AIDS:

- Because more men were infected in the epidemic's early phase, there is now a shortage of men (HIV infection rates have since risen more rapidly among females than among males).
- Widows are now less attractive as wives because prospective mates are aware that the deceased husbands may have died of AIDS.
- Polygamy is also on the decline, for economic reasons and from fear of HIV/AIDS.
- Inheritance of the widow by her deceased husband's brother (levirate) is a traditional practice that once served the function of ensuring that surviving dependents would continue to have a social and economic position within the extended family of the deceased. This practice is now thought to be conducive to the spread of HIV/AIDS; and so it is being discouraged by traditional leaders at the behest of the GRZ and international organizations.
- A growing number of men have abandoned their families because they feel unable to meet the responsibilities of a breadwinner.

7.52 Low-income widows, therefore, now have no assurance that they will ever find a second partner or breadwinner. Women in matrilineal social systems (which are characteristic of many of Zambia's tribal groups) could once rely on their brothers and other matrilineal kin as an emergency back-up support system throughout life. Now, matrilineal systems of inheritance are breaking down, in part because of legislation aimed at protecting the property rights of widows and children. Under traditional matrilineal inheritance systems, a deceased man's goods and lands are expected to be distributed among his sisters' children rather than to his own. The HIV/AIDS epidemic and equal rights campaigns have drawn national and international attention to these traditions; and they have been interpreted as a form of "property grabbing" that disinherits orphans and widows.

7.53 Zambia has therefore created legislation that protects the widow and orphan from loss of goods and property upon the death of their male breadwinner. In all villages visited by the rural participatory study teams, villagers asserted they are obeying the new legislation. The legal system of inheritance may protect the widow from being disinherited, but it effectively relieves her brothers of the responsibility of providing a lifelong safety net. The danger is that some widows and orphans will fall between the two systems – deprived of the husband's property on the basis of matrilineal traditions, while being rejected by the brother on the basis of modernity. The breakdown of traditional social practices that once provided safety nets for widows and orphans may be occurring independently of HIV/AIDS to some extent. Nevertheless, there is

strong evidence that fear of HIV infection and HIV/AIDS stigma are certainly contributing factors.

#### Stigma and Discrimination Associated with HIV/AIDS

7.54 One of the most pernicious and persistent aspects of the social response to HIV/AIDS worldwide is the continuing HIV/AIDS stigma problem. Contempt for and avoidance of people living with HIV/AIDS are common to virtually every country affected by the epidemic. These attitudes are linked to discrimination in hiring, promotion, educational access and even access to good health care. In addition, HIV/AIDS stigma and discrimination can damage social capital networks. The common tendency to stigmatize and avoid HIV-positive family members, neighbors and friends can undermine the willingness of the household and extended family systems to provide traditional economic safety nets for members who are in distress.

7.55 In Zambia, HIV/AIDS stigma is a surprisingly persistent phenomenon, in view of the fact that nearly every family has been affected at some level by the epidemic. It appears to be a complex system of fears and attitudes, including the fear of contamination or infection, the fear of death, and unfavorable views of the types of behavior that are thought to cause HIV infection. In Zambia, the latter are particularly important. A 2001 study of HIV/AIDS stigma in four countries (UNICEF and Panos Institute, 2001) notes that in rural Zambia, the discourse on HIV/AIDS is dominated by blame and condemnation. It is assumed that HIV/AIDS is transmitted only through promiscuous or inappropriate sexual behavior; and the study notes that it is common for the blame for HIV/AIDS to be placed on women rather than men. Because of the near-universal stigmatization of people living with HIV/AIDS, most sufferers take advantage of the fact that lingering, degenerative illnesses are commonly thought to be caused by witchcraft. Victims of witchcraft are not socially condemned, and there is no shame associated with chronic illness if it is supernaturally caused. Households will claim that that a person living with HIV/AIDS is a victim of witchcraft, therefore, even if they suspect HIV/AIDS. They may even continue to visit traditional healers (perhaps wasting scarce household resources in doing so) to demonstrate their conviction that the cause of illness is witchcraft, not HIV/AIDS.

7.56 Although HIV/AIDS stigma and discrimination may be best documented at the health system level, there is evidence that people living with HIV/AIDS also encounter neglect and disdain within their communities and households. Household and community members may have heard HIV/AIDS information messages assuring them that HIV cannot be transmitted by casual contact, but the behavior of many caregivers and household members demonstrates that they are not convinced. Persons infected with the virus have reported being forced to stay physically distant from other household members or relatives, and having to eat alone using a separate spoon, cup, and plate that no other family member will touch. Chronically ill people living with HIV/AIDS have also commented that they have lost the respect of other family members by virtue of being unable to participate in the exchange of labor and favors that constitutes and maintains the household and extended family network. Commitment to the social obligation of assisting and caring for a chronically ill relative may be undermined by the knowledge that the HIV/AIDS sufferer will be never be able to reciprocate or return the contributions and services rendered.

7.57 In some urban communities, NGOs and CBOs and are attempting to fill the gap. The urban participatory study describes a wide range of urban community groups and organizations that have sprung up in response to the AIDS crisis. Many of them offer home-based care to AIDS victims and their families, while others organize support groups for widows and HIV/AIDS-affected children, or establish income-generating activities. Some of these activities

are under the leadership of NGOs, some are church-based, and some have developed spontaneously. These small programs cannot be expected to meet the needs of the majority of people living with HIV/AIDS, however. They lack the resources that would be required to significantly expand their operations and reach a larger proportion of AIDS-affected households. What is more, rural communities remain largely uncovered by these initiatives, since rural CBOs do not appear to be developing in response to the rising level of assistance needs associated with HIV/AIDS. The need for home-based care and orphan support groups may be lower in rural areas, however, because the rural HIV prevalence rate is lower and because there may be more extended family members on the scene to provide care and assistance.

7.58 The burden of HIV/AIDS stigma and discrimination also falls upon the children of people living with HIV/AIDS. Even before the death of their parent(s), children of the chronically ill may be taunted and socially excluded if the community has begun to suspect that the parent's illness is caused by HIV/AIDS. HIV/AIDS orphans often are isolated or bullied at school, which may increase their propensity to drop out early. What is more, relatives may be less willing to undertake responsibility for the child if they fear he/she is HIV-positive; since many fear even casual contact with AIDS victims. A small minority of those who have been accepted by extended family relatives have found that they are neglected, discriminated against or abused in their new homes. This is particularly likely if the caregiving household is economically insecure or low income, since providing for the additional child may be resented as an insupportable burden.

7.59 Most caregiving households do make an effort to provide adequate physical and psychosocial care for the orphan. Nevertheless, many of these orphans have been removed from a familiar setting – there is evidence that many urban orphans are sent to rural relatives for care<sup>65</sup> -- and separated from their siblings. They are vulnerable to displacement, discrimination and social isolation at a time when their need for economic and psycho-social support is at an all-time high. What is more, children who have lost their mothers have lost an important champion and guardian of their rights. A study of educational services and expenditures in Zambia found that significantly less was spent on the schooling of children who had lost their mothers, while no differences were found between spending on children who had lost their fathers and spending on non-orphans – despite the fact that paternal orphans live in households that are poorer than others, while maternal orphans' households are no poorer than the average. (Das, 2004) In safeguarding educational expenditures for children affected by HIV/AIDS, then, the presence of the mother appears to compensate to some extent for the loss of income incumbent upon loss of the father.

### **E. The Institutional Response to HIV/AIDS**

7.60 By the time that the HIV virus was identified as the cause of AIDS, it had already taken a firm foot-hold in Zambia. Once the magnitude of the problem was recognized, the national response to HIV/AIDS was quickly established in the 1980s. The GRZ has attempted to work in coordination with civil society in its approach to HIV/AIDS control and mitigation. The 1990s saw a significant increase in NGO, CBO and civil society participation in issues concerning HIV/AIDS, to complement the National AIDS Control Program introduced by government. Several NGOs and missions were instrumental in identifying strategies for working with HIV/AIDS, developing home based care programs and community education, and promoting basic knowledge and behavior change. Organizations representing people living with HIV/AIDS

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<sup>65</sup> Second Situation Analysis of Orphans and Vulnerable Children in Zambia.

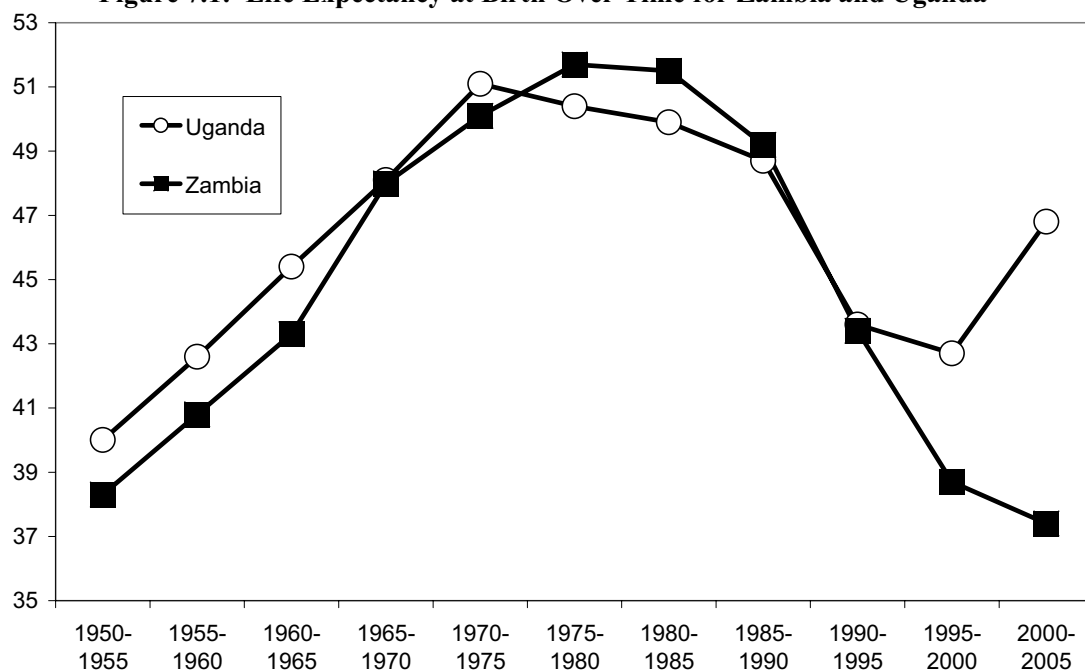
emerged, and issues of HIV/AIDS became mainstreamed into many areas of Government, the media, the private sector, the churches and the traditional authorities.

7.61 Since 2000, two significant global initiatives, the 3-Ones and the 3-by-5 agreements, have amplified the national response. The 3-Ones, that promotes “one plan, one channel, one monitoring system”, encouraged the establishment of the Zambian National AIDS Council in 2001. The NAC was intended to provide a coordinating body for a stronger and more effective response to HIV/AIDS. However, its establishment was heavily donor-driven, and its performance has been hampered by under-staffing, under-funding and a lack of political commitment to its goals. The 3-by-5 initiative, which aims to provide ARVs to 3 million people world wide by the end of 2005, includes a target of 100,000 people in Zambia. Significant additional external funding has become available to support this, and ARVs are increasingly becoming available on an affordable basis, at least in urban areas.

7.62 The National HIV/AIDS/STI/TB Intervention Strategic Plan (NAISP) 2002-2005 was developed by the NAC to address issues of prevention, mitigation and care, as well as the social and economic impacts of the epidemic. A new NAISP will be developed for the period 2006-2010, supplemented by specific sub-sectoral strategies focusing on specific areas of response. Since its creation, however, the NAISP has not provided significant guidance for the national response. This apparent failure is rooted in the extremely comprehensive nature of the plan, which provides broad goals without specifying which actors should assume responsibility for its various components. It is thus a very passive plan; it does not make any clear commitments to prioritized and achievable objectives, nor does it include an explicit workplan with identified resources. The plan has failed to provide a firm framework to guide stakeholders, and has left NAC in a weak position to lead the response to HIV/AIDS.

7.63 The institutional response to HIV/AIDS in Uganda provides a marked contrast to what has occurred in Zambia. In Uganda, the government responded quickly and forcefully to the epidemic at a relatively early stage. The government’s approach has been characterized by openness, and honest discussion of the causes of HIV. In 1986, the year the Ugandan government acknowledged the presence of HIV in the country, the nation’s president toured the country and told people that it was their patriotic duty to avoid contact with HIV. Working with government ministries, NGOs, and faith-based organizations, he promoted simple prevention messages through churches, schools, and personal networks. These efforts succeeded in breaking down the taboos on talking about sexual matters. As a result, Uganda saw large declines in HIV infection rates in the late 1990s. Uganda’s example demonstrates that even a country with few resources can beat back the scourge of HIV. Most analyses credit Uganda’s success in large part to a strong commitment on the part of the country’s leaders to a frank public health campaign.

7.64 Uganda’s campaign employed the mixed “ABC” approach which encouraged abstinence until marriage, faithfulness to one’s partner, and condom use among the sexually active. Simple messages, such as “zero grazing” to promote faithfulness, were key to the campaign. With reporting of AIDS deaths, communities openly acknowledged the disease’s impact, which may have catalyzed community action better than anonymous testing.

**Figure 7.1: Life Expectancy at Birth Over Time for Zambia and Uganda**

Source: United Nations, World Population Prospects: 2004 Revision

7.65 Historical trends in life expectancy at birth in Uganda and Zambia have been very similar. Both saw rapid gains in life expectancy from the 1950s and 1960s as the result of improved public health programs and then a fall in the late 1980s and early 1990s as the impact of HIV/AIDS was first felt. In the first half of the 1990s, both nations had a life expectancy at birth of approximately 43 years. From there, the trends diverged sharply. In Zambia, as the AIDS pandemic deepened, life expectancy fell to 37.4 years, while in Uganda it rose to 46.8 years, as the nation's forthright prevention campaign began to succeed.

### HIV/AIDS Prevention Programs

7.66 HIV/AIDS prevention programs in Zambia often take the form of IEC campaigns, targeting the general public or specific groups with information through leaflets, posters, TV and radio programs etc. Many IEC materials are produced through NGOs and the international community, and there is no on-going GRZ funded IEC campaign. While some organizations seek approval from the NAC for their campaigns, others do not. From time to time, materials are banned - invariably those that refer to the sexual activity of young people, or condom promotion.

7.67 The effectiveness of prevention messages is limited by the fact that they are often embedded in a context of contradictory or misleading information. This contradictory information may come from a trusted source - a church, an elder, a teacher - and may be difficult to disregard. Community outreach workers for NGOs report that correcting inaccurate beliefs is a constant challenge at the local level. At national level, two newly formed umbrella groups, the Expanded Church Response to HIV/AIDS and the Zambia Interfaith Network, are seeking to help all FBOs to provide factual information, and avoid misinformation.

7.68 Many young people and parents agree that schools are potentially an excellent place to teach children of all ages about HIV. The school curriculum has included sex education and HIV/AIDS awareness for many years, through science and social studies, and the community school official curriculum also addresses HIV/AIDS. However, the curricula reflect conventional conservative social views, aiming to inform children about HIV rather than to engage them as individuals at risk of HIV. The timing of information is also delayed, since children may become sexually active at an early age. Teachers often lack the confidence to talk to children about sex, and need more appropriate skills and strategies as well as more time, space and materials if they are to be effective. NGOs that have supported school-based Anti-AIDS clubs have helped to overcome some of these deficits, particularly since teachers leading anti-AIDS activities are self-selecting, and hence are usually committed and willing to talk. However, the challenge of making AIDS education exciting and interesting means that recruitment of teachers for this initiative is often slow.

7.69 Interventions addressing traditional leaders have been carried out in many rural areas. These efforts are generally aimed at increasing awareness of the dangers of certain traditional practices, and asking Chiefs to discourage early marriages. In some cases, Chiefs are now promoting VCT before marriage. These interventions have notably been led by long-established missions, most of which run health centers and hospitals, and success has been based on building a long term relationship and dialogue between outreach workers and local leaders.

### **Care and Impact Mitigation Programs**

7.70 Zambia has been at the forefront of the development of home based care (HBC) services, usually under the auspices of churches and, at times, NGOs. Over the past decade, HBC has moved towards the development of community cadres of care givers. The objective of community HBC is to make care more local, more accessible and less stigmatizing. Most HBC programs receive support through the Food Program Management Unit (a joint GRZ / World Food Program unit). Since HBC relies on the services of volunteers who must work under highly stressful conditions, some HBC programs have found that volunteers become over-burdened by their commitment, and may give up. However, recent experience demonstrates that linking HBC groups and micro-credit programs has increased the volunteers' sense of reward and strengthened their commitment to care activities.

7.71 The recent increase in the availability of ARVs has rapidly improved opportunities for treatment, especially in urban areas. Patients can access free or heavily subsidized ARVs through programs run by Government and by several international NGOs. Generic ARVs have made private sector treatment more affordable. There are no official estimates of coverage, and numbers are changing rapidly. However, doctors involved agree that approximately 35,000 patients may currently be accessing treatment through various channels. Access to ARVs is much easier in urban areas than in rural areas, however, the lack of health staff in rural districts limits the GRZ's prospects of achieving more equitable access. Indeed, with the number of doctors falling on an annual basis, the extension of the ARV program to the targeted 100,000 patients will be challenging. Further, continuing reluctance to take up VCT, and widespread poverty (which prevents patients from paying for the necessary transport and a good diet) also presents difficulties for scale-up and expansion planning.



### **Addressing the Impact of HIV/AIDS on Orphans and Vulnerable Children (OVCs)**

7.72 The number of NGOs, CBOs and FBOs addressing the problems of orphans and affected families has risen over the past five years, to nearly 500<sup>66</sup>. There are many more organizations working in urban areas than in rural areas, however, and the most remote provinces have the lowest coverage<sup>67</sup>. The most common activities amongst these organizations address the economic status of affected households. They also promote improved access to services, especially health and education. Recently, psychosocial support activities intended to address the emotional, psychological and social well-being of orphaned children and the households they live in have also been developed. There are around 150 organizations involved in institutional care, mostly orphanages.

7.73 Government has achieved significant improvements in services for orphans and households affected by HIV/AIDS in the past five years:

- The Free Basic Education policy of 2002 has removed a significant barrier to the access to primary education (although other barriers remain).
- GRZ also provides bursary support for a limited number of children to access primary and secondary school, and grant support to and teachers for selected community schools.
- The Public Welfare Assistance Scheme (PWAS) assists households affected by HIV/AIDS with health and education support, basic household needs, and cash transfers.
- The Victim Support Unit has expanded to over 300 police stations that provide support to victims of property grabbing and intervene in cases of violence, child abuse and sexual abuse.
- The Food Security Pack has provided free farm inputs to up to 150,000 ‘vulnerable but viable’ rural families per year, including widows and households affected by HIV/AIDS. This program is aimed at enabling them to plant enough food to provide a daily meal.

Nonetheless, orphans from poor households do not have secure access to basic education or essential health services.

7.74 The National OVC Steering Committee was established in 1999, with the intention of improving the design, implementation and coordination of programs that provide services to OVCs. Its slow performance has delayed the redesign of the National Child Policy, and reduced the level of attention paid to children and families affected by HIV/AIDS at a senior level.

7.75 Zambia’s private sector and international privately run charities and NGOs are also providing a variety of HIV/AIDS-related programs and services. The activities of these organizations are difficult to monitor, and so efforts to ensure that their activities are consistent with government programs and policies should be strengthened. However, it appears that there are substantial resources channeled to OVC by such organizations. These resources support education costs, institutional care and household economic security programs.

7.76 More work is needed to address the specific problems of children living without parents or adult care-givers. These children are found in child-headed households, or on the street. Child headed households are estimated at 1 – 2 percent of all households, while estimates of street children vary so widely that little can be said about prevalence. Little qualitative or quantitative

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<sup>66</sup> This estimate refers to registered NGOs, FBOs and CBOs with budgets that exceed US\$5000 per year.

information on either group is available to help design or monitor activities, and the good examples of work with street children are not well documented or easily accessed.

## F. Priorities for Action

7.77 There are no simple solutions to the HIV/AIDS and poverty predicament in Zambia. If HIV and poverty are in fact mutually reinforcing phenomena, however, then there is reason to hope that the reverse is also true – that any progress in reducing poverty levels will also help to limit the spread of AIDS, while successes in reducing HIV/AIDS prevalence will remove an obstacle to greater productivity and growth. In fact Zambia can claim some successes, such as the decline in prevalence among young women (particularly educated women) aged 15-19. The country can build on this and other successes. The following are suggestions that might facilitate this attempt:

- 1. Provide Strong Political Leadership for Prevention Campaigns:** What has been lacking in Zambia is a clear commitment on the part of the national government to a public health campaign to change sexual behavior. The public awareness of HIV/AIDS is still characterized largely by misinformation and reluctance to discuss sexual matters. The Uganda example demonstrates that with will from the national leadership, a society can overcome societal taboos, change sexual behavior, and defeat HIV/AIDS.
- 2. Focus Prevention Efforts on Youth:** HIV/AIDS prevention and behavior-change initiatives focused on adults have proved to be notoriously ineffective in most countries of sub-Saharan Africa. Where progress in reducing incidence and prevalence has been made, such as in Zambia, it is the youngest cohorts of the population who seem most ready to adopt healthier behavior. This openness to change among youth should be fostered and supported. Teachers can be encouraged to become leaders in prevention programs aimed at children and young people by providing them with improved knowledge, communication skills, confidence, formal and informal curricula, time and space for these activities. Although promotion of consistent condom use is key, peer-based initiatives aimed at delaying the age of sexual debut and at discouraging inter-generational sex should also be central components of the HIV prevention package. The fact that prevalence rates have declined faster among the educated suggests that promoting educational achievements, particularly among girls, can be viewed as a plausible component of HIV/AIDS prevention.
- 3. Correct Misleading Information:** Communities are harboring errors and misunderstandings concerning HIV/AIDS as a result of informal rumors, traditional beliefs, condemnation of PLWHA by some churches, as well as partial or incomplete understanding of publicly disseminated messages. These errors limit the effectiveness of prevention campaigns and foster the stigmatization of PLWHA. The GRZ and civil society should support the development of IEC guidelines that promote the production of factual educational materials, and that protect the production of appropriate and accurate HIV/AIDS educational materials.
- 4. Target Programs According to the Labor Status of Households:** Households with abundant labor are in an excellent position to benefit from agricultural improvement schemes, such as crop diversification, improving access to inputs, irrigation, etc. Households lacking adequate adult labor are unable to benefit from these or other rural development programs (such as Food for Work) that require labor. In addition, they cannot undertake the casual daily labor (*ganyu*) that serves as a safety net for the able poor. Although community labor-

sharing arrangements and community gardening projects have assisted labor-deficient families in a few communities, it is probable that long-term nutritional assistance and other direct support programs will have to be provided to members of these households.

- 5. Significantly Increase Commitment to Staffing Essential Public Services:** Because the poor have no recourse but to rely on publicly provided health and educational services, they are most likely to be hurt by the loss of public sector personnel to HIV/AIDS. Government must ensure that it has an adequate plan to buffer the impact of the AIDS crisis on low-income services users. It should intensify HIV/AIDS prevention efforts in the workplace, create flexible guidelines for redeployment of staff, and make realistic plans for the recruitment and training of workers who can replace employees who will die of HIV/AIDS.
- 6. Protect Access to Education:** Particularly for young girls, higher education appears to have been a positive factor in the reduction of HIV/AIDS prevalence rates among the young. Programs that support access to education and promote educational achievements can therefore have a double pay-off for Zambia: improving human capital while combating the spread HIV/AIDS. Ensuring that low-income children (particularly girls) can remain in school during and after shocks to the household should be a priority objective for the GRZ and international organizations.
- 7. Improve Health Worker HIV/AIDS Training:** To combat the persistent stigma and discrimination that is undermining quality care of PLWHA within health care facilities, health workers at all levels should be better prepared to manage the patient with HIV/AIDS. Basic counseling skills should be included in the pre-service (as well as in-service) training of nurses and medical officers, so they will not feel helpless and resentful when the psychosocial needs of HIV/AIDS patients arise during treatment.
- 8. Scale Up and Coordinate Care and Mitigation Programs:** An intensified effort to the address the problems of children (including orphans) and families affected by HIV/AIDS is urgently needed. Zambia has a variety of fine programs that provide social protection, increase access to basic services, provide psychosocial support, and improve livelihoods amongst marginal households. However, demand is greater than supply, and most affected households are thus unable to access such programs. What is more, there is little coordinated planning among the organizations and entities implementing these programs; and so gaps and redundancies in coverage are the norm. Scaling up the response requires greater political commitment and prioritization by Government. If the GRZ is able to effectively demonstrate that its commitment is significant and genuine, then it is likely that commensurate support can be secured from the international community.
- 9. Support and Encourage Local Initiatives:** To ease the strain on the health system, local groups and organizations can be tasked with developing and implementing plans for improving home-based care of PLWHA, fighting stigma and promoting safer behavior. Community Based Organizations have been found to be responding to the HIV/AIDS crisis in some informal urban settlements, usually under the leadership of church groups and NGOs. Interventions that involve traditional leaders in prevention or mitigation programs have created successful long term relationships between communities, NGOs and the health system. To foster replication of these and other successful local initiatives in rural areas, Government should offer support to experienced NGOs and faith-based organizations, and encourage them to expand, replicate or scale up their initiatives. In addition, appropriate components of these approaches should be adapted for introduction to urban communities as well.

## **8. MALNUTRITION AND POVERTY**

### **A. Introduction**

8.1 Malnutrition is a longstanding and serious problem in Zambia. Micronutrient (vitamins and minerals) status is generally poor throughout the year because the daily diet is monotonous and consists of one or two staple crops and little else. The nutritional status of the entire population (most particularly rural inhabitants) deteriorates during the pre-harvest season, when the supply of food is most limited and transmission of disease is highest due to heavy rains. Children under five, school-age children and women of reproductive age are most vulnerable to malnutrition because their requirements for energy, micronutrients and protein are high during these periods of rapid growth.

8.2 The prevalence of stunting or chronic malnutrition (measured as low height for age) in children under five years of age has increased in Zambia from 40 percent in 1992 to 48 percent in 2002/3. The prevalence of wasting or acute malnutrition (measured as low weight for height) has remained the same over the same period at 5 percent in children under five.

8.3 The problem of malnutrition is largely ignored in Zambia. Other than nutritional support in the extreme cases that result in hospitalisation, malnutrition is usually considered to be a by-product of poverty, hence essentially only solvable as the economy develops. However, two arguments suggest that this approach is not appropriate.

8.4 Firstly, the impact of malnutrition on the national human capital base is sufficiently large to pose a serious threat to prospects for economic development. Malnutrition affects access to school, capacity to learn, physical development, and energy to work, as well as ensuring that productive years are lost in additional morbidity and mortality. The interrelationship between malnutrition and both HIV/AIDS and malaria entrenches both epidemics, which are acknowledged to have had (and to be having) a negative effect on economic development. This argument supports the view that nutrition programs need to be given a higher priority in future.

8.5 Secondly, malnutrition is not solely related to poverty. The statistics presented in this chapter show that although somewhat better than the poorest, a sizeable proportion of children even from the richest quintiles suffer from malnutrition. Ensuring adequate nutrition requires not only access to food, but also adequate knowledge on how to prepare it, the nutritional needs of children, and how often feeding is required. Further, there needs to be someone present, with enough time to feed children. This argument supports the view that nutrition-specific interventions are required to complement income-focused programming, in order to overcome the non-income dimensions of poverty.

8.6 This section reviews key aspects of malnutrition in Zambia, and proposes ways in which programming could be scaled up to better address both immediate and longer term problems.

## B. Child Malnutrition

### Incidence of Child Malnutrition

8.7 There are three measures of **malnutrition: wasting, stunting and underweight** which is a composite indicator of wasting and stunting. Each indicator uses cutoffs<sup>68</sup> developed by the U.S. National Center for Health Statistics based on the heights and weights of healthy children in the U.S. WHO adopted U.S. standards and recommends their use in developing countries because children under 5 years of age from diverse ethnic backgrounds who are well-fed and healthy have similar growth patterns worldwide (Habicht, et al., 1974).

8.8 **Underweight** (low weight for age), often used because the required data is easiest to collect, is the indicator of choice for the first Millennium Development Goal, eradicating hunger. However, because underweight is a composite of wasting and stunting, the discussion in this chapter will be restricted to wasting and stunting. **Wasting** (low weight for height or weight for length in younger children), or *acute* malnutrition reflects recent illness and/or decreased food intake, often due to the anorexia that accompanies an episode of infection or a decline in the availability of food. Wasting increases during seasonal fluctuations (e.g., when infection rates are high or before harvest when the food supply is limited) and in emergencies (i.e., floods, droughts). **Stunting** (low height for age or low length for age in younger children) or *chronic* malnutrition is a cumulative measure of past nutritional insult and is the best measure of malnutrition.

8.9 Stunting is linked to wasting in that repeated loss of weight in the short term will cause stunting in the long term, if children are not fed more after they recover from illness or a period when food supply is short. Most stunting occurs below 2-3 years of age and is not reversible later in life.

8.10 Over the period 1992 to 2002, the incidence of stunting increased in Zambia. Wasting remained fairly stable.

**Table 8.1: Trends in Rates of Malnutrition in Zambia ( percent of children 0-5 years of age with stunting, wasting and underweight) from 1992 to 2000/1**

	1992			1996			2001/2			2002/3		
	Nat	Urb	Rur	Nat	Urb	Rur	Nat	Urb	Rur	Nat	Urb	Rur
Stunting	40	32.5	46	42	32.7	48.7	47	36.8	51.3	47.7	38.7	51.4
Wasting	5	5.4	5	4	3.1	4.8	5	5.1	5.0	4.5	4.9	4.4
Underweight	25	20.8	29	24	16.5	28	28	23.4	30.3	22.6	17.4	24.7

Sources: ZDHS 1992, 1996 & 2001/2; LCMS, 2002/3

8.11 Based on the most recent ZDHS, 47 percent of children under five are currently stunted; 5 percent are wasted; and 28 percent are underweight. Although not shown in Table 8.2, rates of severe stunting are high with almost one-quarter of children (22 percent) severely stunted for their age. The 2002/3 Living Conditions Monitoring Survey (LCMS) had similar findings for stunting

<sup>68</sup> A child more than two standard deviations below the norm is termed moderately malnourished and a child more than three standard deviations below the norm is termed severely malnourished.

and wasting with 48 percent of children <5 years stunted (24 percent were severely stunted) and 4.5 percent wasted, although only 23 percent were underweight. Stunting amongst children <5 years of age has increased by 18 percent increase from 1992 to 2001/2-2002/3.

8.12 Using 2001/2 ZDHS, stunting is 28 percent higher (14.5 percentage points) in rural areas compared to urban areas. This pattern has been consistent for stunting in all the data presented since 1992.

8.13 While wasting in children <5 years appears to be the same from 1992-2001/2-2002/3, disaggregating by age group using the ZDHS shows a decrease in wasting in children 0-3 years of age, when most of wasting occurs, between the 1992 (8 percent wasting) and 2000/1 (6 percent wasting) surveys (a 25 percent reduction). Both the 1992 and 2001/2 ZDHS surveys were conducted during the lean or hungry season (November through March) when wasting is highest so they are comparable based on time of year. The 1996/7 ZDHS survey was conducted in only part of the hungry season, making it difficult to compare with the two other surveys. Like stunting, underweight also has increased. Because underweight is a composite indicator of stunting and wasting, the increase in underweight is being driven by the increase in stunting rather than wasting.

8.14 To look at the relationship between poverty and nutrition outcomes, both 2001/2 ZDHS and 2002/3 LCMS data have been disaggregated by income quintile. Table 8.2 shows prevalence of stunting by income group using ZDHS estimates of household income and both stunting and wasting by income group using LCMS estimates of household income. Wasting information by quintile is not available from ZDHS.

**Table 8.2: Changes in Prevalence (%) of Stunting in Children 6-59 Months, By National Welfare Quintile**

ZDHS	Quintiles					Average	% Point Decrease Lowest to Highest
	Poorest 20%	Quintile 2	Quintile 3	Quintile 4	Wealthiest 20%		
Moderate Stunting	26.9	26.3	25.3	24.0	19.5	24.7	7.4
Severe Stunting	27.2	26.1	24.2	16.7	12.1	22.1	15.1
Total Stunting	54.1	52.4	49.2	40.7	31.6	46.8	22.5
<b>LCMS</b>							
Moderate Stunting	24.2	24.2	24.8	22.3	21.1	23.3	3.1
Severe Stunting	28.5	23.8	26.6	22.9	19.9	24.4	8.6
Total Stunting	52.7	48.0	51.4	45.5	41.0	47.7	11.7
Moderate Wasting	3.7	3.5	3.1	3.9	3.7	3.6	0
Severe Wasting	1.1	0.8	1.1	0.9	0.9	1.0	0.2
Total Wasting	4.8	4.3	4.2	4.8	4.6	4.6	0.2

Source: World Bank, 2004 using 2001/2 ZDHS and 2002/3 LCMS.

8.15 According to both the ZDHS and the LCMS, stunting decreases as income increases -- by 22.5 percentage points (from 54.1 percent to 31.6 percent) in the ZDHS and by 11.7 percentage points (from 52.7 percent to 41 percent) in the LCMS. The surveys were conducted under different circumstances, and cannot be directly compared.

8.16 While stunting prevalence is lower in the richest households in both surveys, significant declines only start after the middle quintile, with 78 percent of the decrease in percentage points occurring after the middle income group in the ZDHS and 89 percent of the decrease in percentage points occurring after the middle income group in the LCMS. Only children in the two richest quintiles have significantly less malnutrition. However, stunting does not disappear even in the highest income group and 32 percent of children in the richest families in the ZDHS and 41 percent of children in the richest families in the LCMS are stunted.

8.17 According to LCMS data, changes in wasting prevalence are much smaller across income groups than stunting, with no difference in moderate wasting and only a 0.2 percentage point decrease in severe wasting when the poorest and richest households are compared. The trend is therefore that *wasting* is similar whilst *stunting* decreases steadily as incomes increases. This may reflect the fact that while all children suffer from the causes of wasting, particularly illness, children in richer households are able to recover faster and fewer become stunted in the long term.

8.18 In urban areas, there is a stronger link between income quintile and nutritional status. Table 8.3 shows the prevalence of stunting, wasting and underweight by income group in urban areas, using 2002/3 LCMS data.

**Table 8.3: Nutritional Status of Children in Urban Areas by National Welfare Quintile**

Background Characteristics	Stunting (Long-Term) Height for Age		Wasting (Acute) Weight for Height		Underweight Weight for Age	
	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
	<b>Quintiles of Consumption</b>					
Poorest 20%	50.7	21.7	6.5	0.7	25.6	6.0
2	41.7	20.0	3.8	0.3	17.7	2.1
3	43.7	22.6	4.6	1.6	18.9	2.7
4	35.0	16.6	5.4	1.3	14.6	2.9
Richest 20%	29.2	13.8	4.5	1.1	13.7	2.9
<b>All</b>	<b>38.7</b>	<b>18.3</b>	<b>4.9</b>	<b>1.0</b>	<b>17.4</b>	<b>3.2</b>

Source: 2002/3 LCMS

8.19 In rural areas, however, the difference between the poorest and better off is less evident. Table 8.4 shows the prevalence of stunting, wasting and underweight by income group in rural areas, using 2002/3 LCMS data. Provincial data also are included to show geographical differences.



**Table 8.4: Nutritional Status of Children by Province and in Rural Areas by National Welfare Quintile**

Background Characteristics	Stunting (Long-Term) Height for Age		Wasting (Acute) Weight for Height		Underweight Weight for Age	
	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD	Percentage below -2 SD	Percentage below -3 SD
<b>Quintiles of Consumption</b>						
<b>Rural</b>						
Poorest 20%	53.3	30.6	4.2	1.2	27.4	7.5
2	50.0	25.0	4.5	0.9	24.7	6.9
3	54.0	27.9	4.1	0.9	25.6	5.8
4	49.4	25.5	4.5	0.8	23.4	5.3
Richest 20%	50.1	24.6	4.7	0.8	21.8	4.6
<b>All rural</b>	<b>51.4</b>	<b>26.8</b>	<b>4.4</b>	<b>0.9</b>	<b>24.7</b>	<b>6.1</b>
<b>Province</b>						
Central	44.0	23.0	7.0	2.3	20.0	4.2
Copperbelt	42.5	19.7	5.6	1.0	19.6	4.6
Eastern	55.5	29.6	2.4	0.4	24.3	5.9
Luapula	50.9	29.7	7.0	2.6	28.4	8.6
Lusaka	40.5	22.9	4.3	1.1	16.4	2.7
Northern	55.4	27.5	3.1	0.6	25.9	7.0
Northwestern	51.9	28.8	4.3	0.5	28.4	5.8
Southern	40.5	17.3	5.4	0.4	22.2	4.2
Western	46.5	22.1	3.1	0.4	19.4	4.6
<b>Total</b>	<b>47.7</b>	<b>24.4</b>	<b>4.5</b>	<b>1.0</b>	<b>22.6</b>	<b>5.3</b>

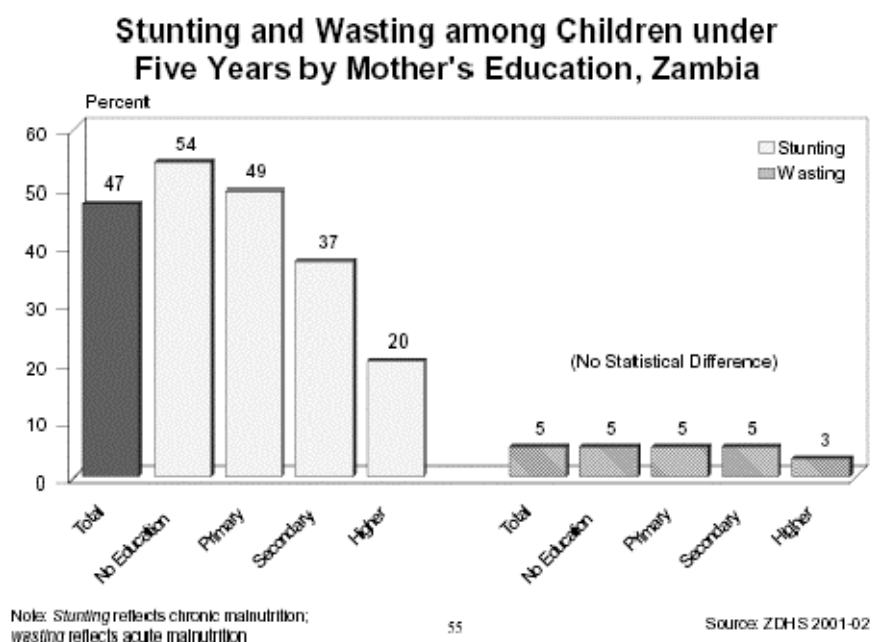
Source: 2002/3 LCMS

**Risk factors for Child Malnutrition**

8.20 The ZDHS 2001/2 presents data on risk factors for child malnutrition. These include having a mother with no education; being a first-born child; being born less than two years after a sibling; being small at birth. Having a mother age 20 to 24 is in fact a worse risk factor than a teenage mother – most likely because the teenagers are more likely to live with and be supported by their own mother or older woman. UNICEF estimates that about 50 percent of malnutrition in children worldwide is due to poor feeding practices, and not lack of food. Poor infant and child feeding practices are often due to lack of education in mothers and caregivers who are not informed about what and how often to feed their children.

8.21 Analysis from the 2001/2 ZDHS found that nationally educational level has a significant impact on stunting with 54 percent of children stunted when their mothers with no education compared to only 20 percent of children were stunted when their mothers had a higher education.

**Figure 8.1: Stunting and Wasting among Children under Five Years by Mother's Education, Zambia**



8.22 In urban areas, malnutrition decreases noticeably by income group. All stunting (<-2 S.D.) decreases by 21.6 percentage points (43 percent) for children from the poorest to the richest households. Severe stunting (<-2 S.D.) decreases 7.9 percentage points (36 percent). The decline in malnutrition in urban areas reflects that the richest of the urban population have more assets, education/knowledge and better access to health services. Nonetheless, 29 percent of their children are stunted - an unacceptably high proportion.

8.23 Further analysis on the causes of malnutrition (based on Annex) shows a highly significant effect of income using per person consumption and residence in low-cost urban areas as proxies for income. Increased stunting is associated with being male, the first child, an increase in mother's education, use of an unprotected source of water while a decrease in stunting is associated with household size and immunization, but the analysis does not confirm statistic significance for these associations.

**Table 8.5 Factors that Affect Nutritional Status in Urban and Rural Areas**

	<b>Stunting (Low height for age)</b>		<b>Wasting (Low weight for age)</b>
	<b>Rural</b>	<b>Urban</b>	<b>Rural Only</b>
Male child	n.s.	n.s.	Significant ↑ wasting
First child	Significant ↑ stunting	n.s.	Significant ↓ wasting
Mothers' Education	Significant ↓stunting	n.s.	NA
PAE (per person consumption in household)	n.s.	Significant ↓stunting	n.s.
Unprotected water source	Significant ↑ stunting	n.s.	NA
Grass roof	Significant ↑ stunting	NA	NA
Household size	Significant ↓stunting	n.s.	Significant ↓ wasting
BCG immunization	Significant ↓stunting	n.s.	NA
Access to health facility	NA	NA	NA
Sick or injured in last 2 weeks	NA	NA	Significant ↓ wasting
Low cost urban area		Significant ↑ stunting	NA

n.s. not significant; NA not available.

8.24 In rural areas in 2002/3, there is only a 3.2 percent change (6 percent decrease) in stunting (<-2 S.D.) from the poorest to the richest quintile (see Table 8.4). The decrease in severe stunting (<-3 S.D.) is higher with a 6 percent change (20 percent decrease) from poorest to the richest quintile.

8.25 The decrease in wasting, by income level, is not consistent across income level, making it more difficult to interpret, and the richest households have more wasting in their children than the poorest. It may be that all stunting and wasting are not affected by income in rural areas because children have very similar access to health services and food. The dearth of information about caring practices hampers analysis.

8.26 Differences in provincial rates of stunting are similar to other surveys, with rates highest in Luapula, Northern, Northwestern and Eastern provinces. Lusaka, the Copperbelt, Southern and Central provinces (where agriculture production is higher, income opportunities are more diverse, markets more lively, and main urban areas also located) have the lowest rates of stunting. Wasting across provinces is more difficult to interpret by province and does not follow the patterns of stunting.

### C. Consequences of Child Malnutrition

8.27 Malnutrition or underweight is the outcome of insufficient intakes of food (in both quality and quantity), and also of disease. There is a cyclic relationship between malnutrition and disease: malnutrition increases the severity of illness through a reduction in immune function, whilst disease increases nutritional requirements and anorexia, exacerbating prevalence of malnutrition. It is estimated that malnutrition is an underlying cause of death in 49 percent of under-five child deaths in all developing countries (said another way, half of children dying from a childhood illness would not die if they were well-nourished).

8.28 The disease burden amongst young children in Zambia is high, which causes and is caused by malnutrition. Diarrhea prevalence stands at 22 percent (ZDHS 2001/2), whilst the malaria infection rate is 1133 cases per 1000 (CBOH 2002). Full immunization covers 70 percent of children (ZDHS), leaving nearly one-third vulnerable to potentially fatal childhood diseases.

8.29 Severe malnutrition increases the risk of dying in young children (by 8.4 times) and moderate malnutrition also contributes significantly to the risk of mortality (4.6 times). For malaria, children with severe and moderate undernutrition are 9.4 and 4.6 times, respectively, more likely to die than well-nourished children (Caulfield, et. al., forthcoming).

8.30 The under-5 mortality rate in Zambia has risen over the past twenty years, as shown below in table 6.3. Whilst the increases seen are a result of multiple factors, there is no doubt that malnutrition plays a major part in the fatality in many cases.

**Table 8.6: Under 5 mortality rate 1980 to 2001/2**

Under-5 mortality rate	1980	1990	2000	2001/2
Rural	132	164	180	182
Urban	108	128	126	140
Total	121	151	162	168

Source: Census 1980, 1990, 2000; ZDHS 2001/2

8.31 Malnourished children are developmentally disadvantaged and are slower to attain skills than their well-nourished counterparts (Behrman, et al., 2004). Children who are stunted in their first three years of life rarely meet their potential for growth and are permanently stunted as adults (Ruel, et al., 1995) with a number of consequences including reduced levels of productivity and earned income in short adults (Haddad & Bouis, 1990). Stunted children are often not sent to school on time, attend school less frequently because they are ill more often and repeat more grades than their taller counterparts (Glewwe, Jacoby & King, 2001).

8.32 Girls who were stunted in childhood grow into stunted adults. Short stature is associated with increased risk of pelvic disproportion and the need for assisted delivery (i.e., C-sections) and increased risk of maternal mortality (Krasovec & Anderson, 1991). Women who are undernourished during pregnancy (i.e., do not gain enough weight) are at greater risk of delivering prematurely. These women are also at risk of delivering a low birthweight infant

which is 40 times more likely to die than a normal weight infant. If the low birth weight infant survives, he or she is at-risk of development problems as an older child and at-risk of pre-mature death from hypertension, diabetes and cardiovascular diseases as an adult (Barker, 1998).

#### **D. Micronutrient Malnutrition**

8.33 Micronutrient deficiencies contribute to increased morbidities and risk of dying. The focus of international attention has been on vitamin A, iron and iodine deficiencies, more recently extended to zinc and folic acid deficiencies. Other micronutrient deficiencies are known to exist in tandem with deficiencies in these five micronutrients and, in fact, with energy deficiency leading to undernutrition. However, the focus in Zambia is on vitamin A, iron and iodine deficiencies.

##### **Vitamin A Deficiency**

8.34 The impact of vitamin A deficiency is severe. Vitamin A is an essential micronutrient for the normal functioning of the visual system, growth and development, resistance to disease, and for reproduction. Vitamin A is believed to improve immunity, and hence reduce mortality rates in children and women.

8.35 When a child with vitamin A deficiency contracts measles, his or her risk of dying increases by 40 percent (Sommer & West, 1996). A recent analysis found that 20 percent of the malaria morbidity could be attributed to vitamin A worldwide. Vitamin A deficiency can also result in blindness and increased mortality in young children. Studies examining vitamin A deficiency and mortality conclude that there is on average a 23 percent reduction in child mortality when vitamin A supplements are given to children suffering from a deficiency (Beaton, et al., 1993).

8.36 Studies on the consequences of vitamin A deficiency in adults are limited, but one study in Nepal found that when women were supplemented with vitamin A before and during pregnancy there was a decrease in mortality from obstetric complications (West, et al., 1999). Two-thirds of children under 5 years and almost a quarter of women have low serum retinol which is indicative of vitamin A deficiency (Rassas, et al., 2003).

8.37 Zambia's response to Vitamin A deficiency has been to fortify sugar with vitamin A, and to provide vitamin A supplementation for children under five years of age. Zambia is largely self-sufficient in sugar, the majority of which is produced through a single factory. The program to fortify sugar has therefore been relatively easy to set up and monitor.

8.38 The ZDHS 2001/2 showed that for urban households, 45 percent had sugar available, and most of that was appropriately fortified. Adjustments to the fortification program, to encourage the use of opaque rather than transparent bags, would increase fully satisfactory results to over 80 percent of sugar, whilst information about a further 10 percent of sugar (unlabelled) would probably reveal that it emanated from Zambia Sugar, and was therefore fortified.

8.39 The fact that over 50 percent of households had no sugar at the time of interview does not mean that they never have sugar, and do not benefit from fortification. Habits in Zambia place a high priority on sugar, and it is likely that many households have sugar sometimes rather than never.

8.40 However, in rural areas only 13 percent of households reported having sugar. The lack of markets, problems in transporting and storing sugar to remote and small markets, and the availability of alternatives such as honey suggest that many households never access fortified sugar. This situation is unlikely to change in the near future. In rural areas, therefore, the successful implementation of the vitamin A supplementation scheme is a particular imperative.

### **Iodine**

8.41 Iodine deficiency is caused by low levels of iodine in the soil. Because it controls thyroid function, a deficiency in iodine is associated with poor birth outcomes (prematurity, stillbirth, low birthweight) and severe mental retardation (cretinism) (Levin, et al., 1993). More recently it has been estimated that a population can lose on average 13.5 IQ points per person even when iodine deficiency is moderate (Herrnstein & Murray, 1994).

8.42 The lack of iodine in the diet poses a severe threat to the human capital base of Zambia. In 1993, 32 percent of school children were iodine deficient. This finding led to a change in legislation, insisting that all salt produced or imported into Zambia was iodized. However, because the sources of salt are more diverse and the legislation not the same in other countries, this has been much harder to monitor or control. Cheaper non-iodized salt, or salt derived from non-iodized stock-feed salt, are both readily available.

8.43 The ZDHS 2001/2 tested salt in respondents' households. Only 77 percent of salt tested was adequately iodized, conforming that the implementation of the iodization regulation still needs to be tightened. Salt was not available in 10 percent of urban households, but like sugar it is possible that this lack is temporary. In rural areas, 20 percent of households had no salt, which raises the question of the extent of regular dependence on traditional salt, made from burning specific grasses, which has no iodine content. Investigation of this issue could suggest that iodine interventions should be targeted at areas where the traditional practices are common.

### **Iron Deficiency**

8.44 Iron deficiency anemia is the most prevalent nutritional deficiency in the world, with 50-70 percent of pregnant women and young children under two years of age suffering from anemia. While there are several major causes of anemia, including malaria, it is estimated that 50 percent of the anemia is caused by iron deficiency. Iron deficiency anemia is associated with a number of poor birth (low birthweight, prematurity, etc.) and maternal outcomes (e.g., mortality) (Galloway, 2003). Anemia caused by iron deficiency and malaria increase risk of dying in young children. Iron deficiency has a profound effect on the attention span and capacity to learn in young and older children. For all age groups, iron deficiency affects capacity to work and play, decreasing capacity to work by 10-20 percent for every 10 percent decline in hemoglobin (Levin, 1986). From studies in 10 countries, including Mali and Tanzania, it is estimated that there is a 4.05 percent loss in gross domestic product due to iron deficiency (Horton & Ross, 2003). For Zambia this means an annual loss of US\$118 million from iron deficiency anemia alone.

8.45 The Zambian population is at high risk for iron deficiency malnutrition. Half of pregnant women and 40 percent of all women are anemic while a staggering 82 percent of children ages 6-18 months are anemic (Luo, et al., 1999).

8.46 According to GRZ policy, all pregnant mothers attending antenatal clinics are supposed to be supplemented with iron tablets during their pregnancy. International recommendations are that iron tablets be taken daily for at least three months during pregnancy. However, the ZDHS

2001/2 showed that although 60 percent of women reported having taken iron tablets during their pregnancy, more than half of these took them for less than two months.

8.47 Repeated or chronic malaria infections result in anemia, which in turn increases vulnerability to infections including malaria. Reducing malaria interventions in Zambia would have a significant impact on reducing anemia among adults and children. Bed-net interventions, other prevention strategies and adequate treatment of malaria will all result in improvements in iron deficiency.

### **E. Breastfeeding and weaning**

8.48 Appropriate feeding practices are of fundamental importance for the survival, growth, development, health and nutrition of infants and children and for the well-being of mothers. Early feeding strategies are an underlying determinant of children's long term nutritional status, which in turn influences the risk of illness and ultimately death (ZDHS 2001/2).

8.49 Breastfeeding benefits depend on the length of time a child is breastfed, and the frequency and intensity of breastfeeding. Ideally, babies should be exclusively breast fed for the first six months of life, and continue to have breast milk as part of the diet until the age of two.

8.50 In Zambia, over 98 percent of children are breast feed, with a mean duration of 21 months. By 18 months old, only 15 percent of babies are not being breast fed. Although most do not reach the target of breast feeding for two years, the vast majority very nearly do so.

8.51 The key concern in the feeding of young babies is related to the *exclusiveness* of breast feeding. According to the ZDHS only 40 percent of children < 6 months of age are exclusively breastfed in 2001/2, although this is an improvement since 1992 when only 8.7 percent of children < 6 months were exclusively breastfed. The LCMS, representing a later date for data collection, reports lower rates of exclusive breastfeeding with only 25 percent of infants <6 months being exclusively breastfed.

8.52 Even in the first weeks of life, many children are given plain water as a supplement to breast milk (31 percent of children under 2 months, ZDHS 2001/2). It is widely believed in Zambia that breast milk is not adequate to stop a baby being thirsty, and that water is essential. In an environment where only 49 percent of households have access to safe water supplies (very much lower in rural areas), this practice is particularly dangerous as babies are exposed to unclean water, resulting in diarrhea infections and other water borne diseases.

8.53 There is little information on the adequacy of complementary feeding. While 87 percent of infants 6-9 months are receiving breast milk and complementary foods, there is no information about the amount of food that is given to these children, although due to high rates of stunting, the amount of food is likely to be inadequate. Looking at the differences in this indicator across income group, there is little difference with only an 11 percent increase in the proportion of children 6-9 months receiving complementary food in the richest income group (95 percent) over the poorest income group (85 percent) (World Bank, 2004).

8.54 The LCMS gives another proxy for the adequacy of feeding young children. In children 6-9 months only 59 percent of children are fed the recommended 3 times daily. By 10-12 months only 3 percent of children are receiving the recommended 5 meals per day.

8.55 Mothers who know or fear that they are HIV positive often fear transmitting HIV to their children through breast milk. However, where access to formula milk, or to clean water for preparing formula or cleaning bottles is limited, breast milk may still be the safer option. Adhering to the regime necessary for safe bottle feeding is difficult, and women may be unable to maintain the necessary standards consistently.

8.56 The ZDHS concludes that the nutrition of young children up to the age of three is often inadequate in terms of both the content of the diet and the frequency of feeding. The content of the diet is dominated by foods made from grains, with fewer and less varied fruits, vegetables, beans and animal proteins than is desirable. Children, like adults, often only eat twice a day, which is way below the recommended 3 to 5 times a day (WHO 1998).

8.57 In Zambia, the infrequency of feeding may be a major cause of malnutrition amongst children in the richer income groups. Even where adequate food is available in the household, children may be malnourished as a result of feeding practices that do not reflect their needs.

8.58 There is a balance between demand for resources, and sufficient labor for food preparation. In rural areas, household size is associated with *less* stunting. In both urban and rural areas, there is less wasting in larger households. Having more adults in a household may increase coping mechanisms by providing more income to the household, and having more adults or older children ensures that there are more hands to feed young children. Having a sick or injured person in the household affects wasting in rural/urban areas (again these data were combined), suggesting that having fewer able-bodied adults to provide for children affects nutritional status in the short-term.

8.59 Clearly, the feeding of young babies and weaning needs to be improved – and many changes could be made at no cost at household level; some even creating savings. Continued errors in how babies are fed create unnecessary morbidity and mortality, draining the time and resources of parents.

## F. Responses to Malnutrition

8.60 While prevalence of malnutrition is highest in the poorest countries of the world, the link between family income or proxies of income are not as straight-forward as might be expected in Zambia. In urban areas there is a strong link between income and stunting but in rural areas where stunting prevalence is highest, this link is not as strong and other factors take the lead in determining malnutrition. From this review, determinants of stunting can be used to develop immediate and long term strategies to address malnutrition in Zambia. If malnutrition is not addressed, the effects of malnutrition will follow the malnourished child, if he or she survives, throughout life by affecting health, learning, earning potential and productivity. There are serious ramifications for the economy of any country where prevalence of malnutrition is high.

8.61 Several reviews in the last few years (Galloway, 2003; DeCromier-Plosky, 2005) have concluded that high rates of malnutrition (stunting) in Zambia have increased in the last decade because there has been little government and donor support to reduce it. There have been some successes and even best practices to reduce vitamin A deficiency through fortification of sugar with vitamin A and vitamin A supplementation for children under five years of age. Use of iodized salt, most of which is imported, has increased. Breastfeeding practices have improved from 1992 to 2001/2 through the Baby Friendly Hospital Initiative although some of these gains may now be threatened by mothers' worries about transmitting the HIV virus to their infants



through breast milk. These activities have received major financial and technical support from USAID and UNICEF. Little has been done beyond pilot projects to decrease stunting (i.e., by improving infant and young child feeding starting at six months) and improve the nutritional status of school-age children.

8.62 In the last few years, institutional and policy issues related to nutrition and donor commitment to reducing malnutrition have also been examined in Zambia (Galloway, 2003; DeCromier-Plosky, 2005). Zambia institutions train a cadre of people who have some nutrition training. Many of these graduates work for the National Food and Nutrition Commission (NFNC) which was established in 1968 to help promote nutrition issues in the country. Most of the others work as agriculture extension agents and are helping to provide rural women with information about agriculture, cooking and family caring practices. To date, these professionals have been largely unsuccessful in their efforts to reduce malnutrition for a variety of reasons documented in these recent reviews, including the awkward institutional set up for nutrition, lack of donor support, lack of focus on operationalizing policy into nutrition programs on the ground, and neglect of programs that could reduce high rates of stunting.

8.63 While the solutions for reducing malnutrition lie in a number of Ministries, NFNC, which is a parastatal of the Ministry of Health, has been limited because it does not function as a multi-sectoral coordinating body, and instead has been limited to work through the MOH, usually dealing with Central policy issues rather than supporting implementation of nutrition interventions at district level and below. There are some nutritionists at the district level but they are limited by lack of budget, technical support, and plans of action that would help them have meaningful impact.

8.64 A variety of other activities by Government, NGOs and CBOs, discussed in chapter 3, seek to reduce malnutrition through increasing and stabilizing household food production and livelihood security. Whilst non-availability of food is an obvious cause of malnutrition, however, this chapter has demonstrated that food availability alone is not a reliable indicator of nutritional status. Whilst food security programs are clearly essential, complementary nutrition promotion interventions are also necessary to ensure that food security is translated into improved nutritional status.

## G. Recommendations – a Multisectoral Approach

8.65 The following recommendations on the immediate and long-term actions, which involve many sectors, to reduce malnutrition take into consideration the current analysis on targeting activities and some of the recommendations made by the Galloway and DeCormier Plosky reports.

### Immediate Interventions

#### Rural Areas

8.66 **Fill the information gap.** The first priority in reducing malnutrition in Zambia is to provide information about infant and young child caring practices, particularly adequate feeding practices. Caregivers need to know the types and amounts of foods children need at different ages and creative ways to encourage children to eat. These interventions should be targeted particularly to all rural mothers where stunting rates are highest. In rural areas because increased stunting was associated with being a first child, the mother's lack of education, and a smaller

household size, special efforts will need to be made to ensure that women who are young, just married, not attending school and living in smaller households have access to this information. Targeting other family members with this information will provide mothers, who have a number of responsibilities in households, with help in caring for small children.

**8.67 Increase the quality and coverage of health services in rural areas.** While distance to a health facility did not make a significant difference in the prevalence of stunting, this is probably because the quality of health services is so poor everywhere in rural areas. Wasting in both urban and rural areas, not disaggregated because the sample size of wasted children was too small, and in fact significantly *increased* when children were closer to a health facility or the child had been sick or injured in the last two weeks.

8.68 Nonetheless, improving the quality of health services and ensuring that the majority of families have access to these services is an important intervention for reducing malnutrition. While improving the health system requires correcting systemic problems such as infrastructure and training which may require a long-term commitment, any immediate interventions delivered by the health system to reduce malnutrition should focus on known preventive and cost-effective activities, including nutrition education to improve infant and young child feeding, promoting consumption of fortified food such as iodized salt and vitamin A-fortified sugar, iron supplementation for pregnant women, and vitamin A supplementation for children under five. Adequate recuperative feeding after illness is an important message to give to mothers to reduce wasting in children.

**8.69 Improve the availability of clean water and improving housing in rural areas.** Use of an unprotected water source had a profound and significant effect on stunting in rural areas. Improving family access to clean water is both an immediate and long-term activity to decrease stunting in rural areas. Children living in houses with grass roofs were at higher risk of being stunted. Improving rural infrastructure is both an immediate and long-term need in the country.

**8.70 Delay the age of first pregnancy.** In rural areas, the first child was at increased risk of being stunted. This suggests first time mothers don't have the experience or knowledge base to care for their first child. It also suggests that young mothers, who may still be growing themselves, may have compromised nutritional status which puts their infants at increased risk of malnutrition. Increasing modern methods of family planning or delaying first sexual contact is an important strategy to decrease malnutrition. Improving the nutritional status of young mothers also is an important intervention to reduce stunting in first born children.

**8.71 Target food aid.** An immediate intervention for people suffering or at immediate risk of malnutrition, is the provision of targeted supplementary food aid, particularly for the poor, to households affected by HIV/AIDS and malnutrition, and to people exposed to extreme risks.

#### Urban Areas

**8.72 Provide safety nets in urban areas.** Unlike rural areas, there was no significant effect on stunting from mother's education, birth order, water source, grass roof, or household size in urban households. The present analysis found that families living in low cost urban areas or where per person consumption in the household was low had significantly more stunted children than families living elsewhere or with higher consumption levels, suggesting that cash transfers targeted to the poorest families will be the most efficient way to improve the nutritional status of the most malnourished children in urban areas. Providing nutrition education messages can improve the efficiency of cash transfers in improving nutritional status.

## Urban and Rural Areas

8.73 **Improve micronutrient status.** While micronutrient status was not included in the analysis for this chapter, improving micronutrient status is essential to ensure the adequate utilization of any energy by young children. Because micronutrients are involved in co-enzyme processes in the production of energy in the body, improving the diversity of the diet and its micronutrient content is an important longer term strategy for decreasing stunting in Zambia. In the immediate term, interventions such as provision of vitamin A, iron and possibly zinc for young children will ensure that these micronutrients do not limit energy utilization when adequate complementary feeding is given. The nutritional status of women needs to be attended to in order to ensure their health and the health of their infants. Iron deficiency, for example, in pregnant women is associated with low birthweight and prematurity both which, if the infant survives, affects growth in early life. Supplying a cost-effective package of micronutrients to school children can act as incentive for children to attend school and reduce illness and increase attendance. Iron deficiency has been associated with poor attention span and by supplying iron and deworming school children can improve their iron status.

### H. Longer-Term Strategies

8.74 **Increase the diversity of the diet.** While improving agriculture production is not associated with improving nutritional status in the short term, increased diversification of what people are growing and consuming could improve the quality of the diet in Zambia. In Zambia, provincial stunting rates are lowest in Central province where most of the agricultural production takes place. In areas more dependent on crops like cassava and sorghum, stunting is higher. This is not to say these crops should be replaced because they are more drought resistant than maize and more suited to areas where rainfall is limited. However, increasing the number of crops people produce and consume will increase the quality of diet and provide nutrients that all Zambians need for good health. However, improving the nutritional status of infants and young children needs to be facilitated by accompanying messages to utilize new foods and include them in adequate amounts when feeding children.

8.75 **Increase incomes.** While there was little relationship between incomes and stunting rates in rural areas, measures to eradicate poverty in the long-term will improve resources and information available to households and ultimately improve nutritional status. Rural development efforts should be a top priority to increase the livelihoods and improve the lifestyles of the rural poor.

8.76 **Increase the educational levels of girls.** Mother's education was an important determinant of stunting in rural areas. Mothers with higher levels of education have greater access to knowledge and resources that can improve the welfare of their families. This suggests that a long-term strategy must be to increase the number of girls finishing at least secondary schools by giving them (and their families) incentives to stay in school and making education more relevant to them from primary to secondary school.

### The Nutrition Policy Framework and Institutional Setting

8.77 Based on this analysis and the Galloway, 2003 and DeCromier Plosky 2005 reviews, several recommendations can be made about how to reduce malnutrition. The most important short term activity is to fill the information gap, particularly in rural areas, and ensure that every caregiver has the information needed to adequately feed children.

8.78 Zambia has an institutional setting that could be recast to improve the efficiency at which the country is addressing malnutrition. Because nutrition is not a sector but sub-sector in several major sectors (agriculture, health and education), national efforts to reduce malnutrition need to be coordinated across these sectors. To date a major disadvantage is that National Food and Nutrition Commission (NFNC) is a parastatal of health and does not work well with other sectors. There are nutritionists in education and agriculture but a coordinated effort will be needed across these three main ministries if malnutrition is to be reduced. An advantage that

8.79 Zambia has is that it has a cadre of trained nutritionists in the country working at the National Food and Nutrition Commission (NFNC), in Agriculture as extension agents for subsistence farmers, and in Education on school health and nutrition, but these nutritionists need to have specific tasks to support implementation of district level nutrition interventions.

8.80 While the decentralizing of health services has been less effective than its heady start in the early 1990s, several vertical programs, such as vitamin A supplementation, have been devolved to the district level with great success, which has given districts more experience in implementing nutrition interventions, and has greatly reduced the cost of delivery. This experience can be used to expand nutrition activities to ensure that a package of cost-effective nutrition interventions is implemented in districts with an emphasis on community-based activities that will prevent malnutrition. The USAID-funded community-based growth monitoring and promotion project should be examined as a possible model for expansion. A program of this type builds capacity in caregivers and communities to adequately care for their children and prevent malnutrition from occurring and at lower cost than what could be provided at a health facility. Nutrition staff at NFNC and elsewhere need to be available to give technical assistance when implementing these interventions. They should not be implementers but build capacity to implement at the district level and below and providing monitoring and evaluation skills to ensure process and impact are being tracked.

8.81 Zambia has a history of putting most of its nutrition program resources into rehabilitating severely malnourished children. It is much more cost-effective to prevent malnutrition at the community level and this should be a major focus of work in districts. The Program Against Malnutrition (PAM), a local NGO set up to distribute food during the drought in the early 1990s, now works with a quarter of farm families to increase family food security. PAM and other NGOs provide an extensive network that can be used to get the information out to households about how they can reduce malnutrition and improve the dietary diversity of the entire household. Some excellent pilot projects exist that can be scaled up to larger areas, if not at the national level.

8.82 To increase the work at district level, however, more nutrition expertise and oversight is needed at the district level. Coordination of NGOs, including PAM, in each district could help give technical assistance in training and monitoring and evaluation. NFNC staff should be divided into several sections: one that assists with monitoring and evaluation, one that helps with development of IEC materials, and one that is directly involved with implementation by giving technical assistance to districts that do not have technical expertise in nutrition. In the long-term nutrition expertise in implementing nutrition activities needs to be built at the district level where at least one nutritionist should reside to assist with implementation. At the district level, the sectors involved/related to reducing malnutrition (health, education and agriculture) should be coordinated to develop a plan of action to address malnutrition which would include whatever expertise that would be needed to address the problem.

**Annex Table 6-1: Chronic Malnutrition: Stunting (Low Height-for-Age)**

Dep. Var.: Stunted Height-for-age z-score < - 2 SD	Rural (1)	Urban (2)
Male child	0.117 (1.28)	0.114 (1.14)
First child	0.437 (3.99)***	0.176 (1.30)
Mother's education	-0.032 (2.02)**	0.008 (0.42)
Log Consumption PAE, pr. adj.	-0.024 (0.31)	-0.419 (4.41)***
Unprotected Source	0.269 (2.68)***	0.231 (1.50)
Grass roof	0.298 (2.30)**	
Household size	-0.031 (1.89)*	-0.010 (0.39)
Dependency ratio	0.047 (0.87)	0.051 (0.85)
Cluster prop. with BCG immunization	-0.259 (1.02)	-0.316 (0.57)
Health Facility	0.006 (1.43)	0.000 (0.01)
Low-cost urban area		0.456 (3.13)***
Constant	-0.285 (0.28)	3.536 (3.08)***
Observations	3281	2542
Notes: Absolute value of t statistics in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.		

**Annex Table 6-2: Acute Malnutrition: Wasting (Low Weight-for-Height)**

Dep. Var.: Wasted	Urban and Rural
Weight-for-height z-score < - 2 SD	(1)
Male child = 1	0.343 (2.21)**
First child, ind.	-0.289 (1.66)*
Log Consumption PAE, pr. adj.	-0.117 (0.97)
Household size	-0.091 (2.54)**
Health Facility	0.013 (2.42)**
Rural dummy	-0.121 (0.55)
death1549	0.383 (0.83)
Sick or injured in the last two weeks	0.303 (1.66)*
Constant	-1.219 (0.82)
Observations	6108
Notes: Absolute value of t statistics in parentheses. Province dummies included. * significant at 10%; ** significant at 5%; *** significant at 1%	

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