



**Changing Landscapes and the Outliers:**

**Macro and Micro Factors Influencing Livelihood Trends  
In Zambia Over the Last Thirty Years**

**Literature Review**

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### **Cover photo: “Resilient livelihoods or expanding market opportunities?”**

- o *Women from Game Management Areas (GMAs) bordering on Kafue National Park (Southern Province), graduate after craftwork enhancement training. (CONASA.)*
- o *Residents from ADMADE areas around Luangwa National Park (Eastern Province) learning improved honey-processing skills. (ADMADE/Nyamaluma)*
- o *Water conservation techniques for dry-season vegetable production for home consumption and sale. (ADMADE/Nyamaluma)*

**Photo montage:** Ian Membe, CONASA

## 1 Executive Summary

### Livelihood trends

Over the last 30 years agricultural production has continued to form the basis of livelihood strategies in rural Zambia. There are wide variations, and combinations depending on ecological zone, land suitability, cropping pattern, year round water availability, and potential for livestock/poultry production. All households engage in a range of non-agricultural natural resource use, for example: fishing, forestry and wildlife utilisation. In addition households are involved in various alternative informal income generating activities, however, these tend to be short term, seasonal and with low rewards, e.g. petty trading, crafts, and casual labour.

Livelihood portfolios are dynamic both on an intra-annual (seasonal) and inter-annual basis. Livelihood strategies respond to changes in climatic conditions, institutional context, rural-urban linkages, market opportunities and household demographics,

While the context and conditions influencing livelihood strategies have shifted there are elements of continuity. The “copper spoon” years, after Independence in 1964, ingrained a belief in a munificent state that would reach and provide to all in perpetuity. Political patronage did bring benefits to the outlying provinces, (or “the outliers”) in the post Independence period. The macro-economic shocks and stresses of the late 1970s and 1980s reinforced earlier structural contradictions in the economy. During the 1990s, the outliers became more marginalized and isolated with reduced ability to benefit from improved market opportunities. Since this period it could be argued that they are regaining a certain degree of internal resilience. However, the “global market” in which they want to participate in continues to work against them.

### Macro and micro factors that have impacted on livelihoods

- The dichotomies between rural and urban populations, and between “the line of rail” and outlying areas are rooted in the colonial period and have never been adequately addressed.
- Maize, as both the urban staple food, and the anticipated pathway to national staple food self-sufficiency has formed the basis of political patronage.
  - During “the years of the copper spoon”, NAMBOARD and the cooperative movement were the vehicles through which the state was able to subsidise both producers and consumers. However this was on the basis of continued high copper revenues.
- The economy began to decline in the mid-1970s following the oil shock (1973) compounded by a sharp decline in world copper prices (1974). No major substitutes from other economic sectors came on stream. The increased decline in the economy in the 1980s was due to the lack of sufficient responses to these external factors, declining terms of trade and shifting demand patterns for the raw materials that Zambia produced.

- The early domestic structural reforms and later Structural Adjustment Programme (SAP) included a range of measures that were aimed at restructuring and stabilising the economy in order to restore growth. These actions included: removing subsidies especially in the agriculture input and output markets, rationalising the civil service and cutting public expenditure, closing or selling public enterprises, devaluing the local currency, and opening up the local economy to foreign competition.
- However, even after the removal of input and marketing subsidies, the government continued to intervene in the maize economy. One example of this was immediately before the 2001 elections, MMD agents were appointed as the fertiliser distributors for the Food Reserve Agency. The most recent manifestation (2003) of this is the distribution of 100 x 50kg bags of maize to every chief in Southern Province – “because they should not need to stand in a queue for relief maize, like everyone else”.
- The key role that maize plays in supporting political patronage has led to policy vacillation in the forms of policy dualism, constrained policy intent, and reactive policy.
- The extension of political patronage has contributed to the failure to see through the civil service reform process. The obligation to meet high wage and salary bills reduces available investment in social and productive sectors.
- In the early 1990s the government adopted a cash budget at the behest of foreign advisers. While this initially contributed to curbing inflation, it reduced the transparency and accountability of the budget and disbursement process. Such that a small ad hoc group makes decisions about priority spending on a monthly basis. These priorities in turn are influenced by political patronage, and act towards maintaining resources in the hands of the elite at the centre.
- Decentralisation may have occurred in some sectors but without the requisite devolution of authority. At the local level the relationship between elected and appointed authorities is unclear. Political patronage is used to co-opt “traditional” leadership structures.
- Mixed signals from the government have contributed to the incomplete liberalisation of the maize economy. This has acted as one of the brakes on the trend towards diversification of cropping patterns.
- In contrast, it would appear that the government has completely abandoned the livestock economy, to the extent of failing to support even the provision of public goods such as disease control measures. This has led to asset depletion, reduced draught power, diminished area under cultivation, and reduced access to milk and manure.

#### **Trends in demography, poverty and assets**

- The 2000 Census of Population and Housing found that the urbanisation rate has decreased, and that there was a net urban-rural migration. The proportion of urban population has decreased from 40% in 1980 to 36% in 2000. In-migration to the Copperbelt, Lusaka and

Southern Provinces has decreased, perhaps reflecting a reduction in the availability of formal employment. In-migration to the rural areas has increased. This may reflect retirees or retrenched workers re-settling in rural areas or perhaps PLWHA or HIV/AIDS related orphans returning to rural based relatives.

- Over the period 1992 -1998 the percentage of overall poverty in Zambia has increased from 70% to 73%. However, disaggregation of the data by rural and urban populations shows that during this period, the percentage of rural poverty has declined slightly while the percentage of urban poverty has increased.
- The apparent decrease in rural poverty appears to mask increasing differentiation within the rural population. For example, the percentage of commercial farmers below the poverty line has decreased, while the percentage of small-scale farmers below the poverty line has remained relatively stable over the period.
- Provincial disaggregation of poverty data also shows that while overall levels of rural poverty among small-scale farmers may have remained stable between 1991 and 1998, in Luapula and Western Provinces total poverty has increased from 73% to 82% and 85% to 89% respectively. Total poverty among the rural population has decreased in: Eastern, Northern, North-Western and Southern Provinces.
- An examination of trends in rural household asset levels indicates that although while still low, the percentage of rural households owning radios, bicycles, and ploughs has increased during the decade of the 1990s.

#### **Trends in agricultural production**

- During the 1990s, the monetary and energy value of agricultural production remained stable.
- While the contribution of maize production to the overall value of agricultural production has declined, there appears to have been a trend to diversify cropping patterns, and non-agricultural sources of income. However, what might appear to be diversification in the provinces close to the line of rail, could be regarded as a reversion to narrower cassava dominated farming systems in the outlying provinces.

#### **Outcomes**

- The implications of this for the right to food security and freedom from malnutrition and its debilitating effects, is in part dependent on whether the private sector has taken up the space vacated by the state subsidised marketing system. Private trading networks are establishing themselves, where it is profitable to do so i.e. where there are sufficient volumes of production, and where transaction costs can be contained.
- However, in the outlying provinces the state has retracted from the provision of marketing, extension services, education, health and water provision. The demand for private or market provision of services in the outlying areas is weak. Health services have become dependent

on donors and focus on mobile campaigns to provide preventative services such as immunisation, and Vitamin A supplementation.

- National Demographic and Health Surveys (DHS) have witnessed a steady increase in the percentage of stunted children from 40% to 47% during the 1990s. These are among the highest in Africa. In the outlying provinces such as Northern, Luapula and Eastern Provinces, chronic malnutrition rates are even higher. In Eastern Province stunting increased from 48% to 59% between 1992 and 2000, and in Luapula stunting increased from 56% to 58% over the same period.
- The stress and sometimes shocks of the SAP have perhaps been felt most keenly in urban areas in terms of declining formal employment opportunities and increasing poverty. On the other hand, it is the outlying provinces that have been most affected by the government's market liberalisation policy, reductions in public sector spending and consistently high rates of chronic malnutrition.
- Economic stresses have also been overlaid and compounded by the risk of natural calamities such as drought and floods in some parts of the country. The risk of drought is higher in Southern, and parts of Western and Eastern Provinces, however the link between drought-induced food insecurity and vulnerability to child malnutrition should be questioned and needs to be examined in more depth.

#### **The 2001/2002 drought**

- The impact of the 2001/2002 drought was felt worst in Southern Province where maize production was 56% lower than the previous season's harvest of 2000/2001. The vulnerability of Southern Province to drought shocks is well recognised. The trend towards more diversified cropping patterns in provinces away from the line of rail, is not so pronounced in Southern Province. This is perhaps because, in a good weather year and when fertiliser is applied in time, good maize yields are possible. However, the government's continued involvement in the acquisition and distribution of fertiliser is a clear example of policy dualism. This has had at least two results: on the one hand it has sent mixed messages to the private sector for them to be able to commit fully to input distribution; and on the other hand it has continued the addiction of Southern Province farmers to maize production. 2001/2002 saw both delayed delivery of fertiliser in order to time with the election campaign, and reduced rainfall.
- While there was a maize production deficit in Southern Province, there was also the sale of considerable amounts of maize to urban-based traders soon after harvest. Prices were good reaching import parity as other parts of southern Africa were expected to be in maize deficit. Maize sales were also influenced by the anticipation that the on-going GRZ/WFP food relief distribution would continue. There was little incentive to store maize for own consumption.
- The continued allocation of scarce government resources to support the maize economy and political patronage, diverts thinking and resources away from alternative perhaps drought

tolerant crops, or from strengthening more diversified livelihoods based around livestock, fishing, forestry, and wildlife.

- In normal times in Southern Province, the pattern is to sell maize after harvest and then purchase maize or maize meal later in the year (November/ December) from the proceeds of animal sales, cash crops, vegetable production, milk and poultry sales.
- The use of GMO maize for relief food in Southern Africa raised awareness and debate around the right to culturally acceptable and safe food. However, this debate again highlighted the hegemony that urban-based stakeholders have over the rural population.
- At least by January/February 2003, the predictions of impending “famine” and “starvation” by relief agencies and reports in the national and international media did not appear to have been borne out. Nutrition surveys undertaken by Care International and other agencies (see table) indicate that malnutrition rates have remained stable since July-August 2002, and are below the recognised cut-off of 10% prevalence of global acute malnutrition.

### **So what happened?**

The literature review shows that while the 2001/2002 drought affected agricultural production in parts of Southern, Western, Eastern and Central Provinces, the response to this perceived transitory crisis has obscured a broader picture. This broader, more complicated picture reveals much higher levels of poverty and chronic malnutrition, differentiated on both a geographical and socio-economic basis. The review has identified multiple causes that have led to the current situation, which in turn are rooted in long-term trends.

- Hypothesis I: while in 2001/2002 there was a maize production deficit in parts of the country, the extent and severity of a food security crisis was overestimated. Factors to be considered in this include:
  - Contribution of cassava, other tubers and small grains were not adequately factored into crop forecast estimates.
  - Cash income from the cotton crop was not fully considered.
  - While Corridor Disease has affected the livestock economy, livestock and milk availability continues to play a role in household food security.
  - In vulnerability assessments, the maize production shortfall was closely equated with the need for relief food.
  - Methodological inadequacies in vulnerability assessments (sampling), led to inappropriate extrapolation of the numbers affected and the severity of the problem.
- Hypothesis II: household coping strategies were underestimated:
  - Internal livestock re-stocking mechanisms, sharing of animals among families.
  - Contribution of wild nuts, fruits and roots, which in the past formed part of the staple diet (e.g. mantembe root).
  - Mothers are “protecting” their children.

- HIV/AIDS does impact at household level. However with 11% prevalence in rural areas, communities have not been “devastated and laid to waste” as portrayed, and the requirement for large amounts of food aid assistance to HIV/AIDS affected households may not only undermine community support mechanisms, but also act as a disincentive to agricultural production, and distort market dynamics.
- While the delivery of food relief was well below estimated requirements, deliveries were targeted to the worst affected geographical areas and most vulnerable households. This contributed to the maintenance of household assets and well-being in the short term.
- Hypothesis III: There appears to be a reversion to cassava production in provinces away from the line of rail and major consumption centres.
  - In some farming systems this may represent increased crop diversity, but in others it may indicate a narrowing of cropping patterns that would be reflected in decreased dietary diversity.
  - It would appear that the contribution of cassava production and consumption to nutritional outcomes, depends on its combination with other livelihood strategies (e.g. fishing)
  - The potential impact of this on nutritional well-being and for HIV/AIDS affected households should be more closely examined.
- Hypothesis IV: New institutional landscapes are evolving:
  - The state and its institutions have retracted from local level. The private sector has not filled this space as was expected. Is there an institutional vacuum, or what is happening?
  - What is happening to social relations within the extended family, and how do these kin networks relate to and access wider societal institutions?
  - What has been the impact of Non Governmental Organisations’ (NGO) efforts towards capacity building of Community Based Organisations (CBO) and group formation at the local level?
- Hypothesis V: political patronage and the maize economy have become entwined in a web of relationships and actions that continue to act as a constraint on efforts to reduce vulnerability to chronic food insecurity. Examples of the impact of this detrimental relationship include:
  - Continued government interference in the maize economy that has jeopardised diversification into other crops and non-agricultural activities.
  - Policy vacillation continues to send mixed signals to the private sector.
  - Failure to adopt fiscal discipline in government budgeting processes, has led to inadequate and disrupted disbursements to key ministries.
  - Failure to devolve authority to decentralised structures has meant that communities do not have control over the resources that are central to their livelihood security.
- Hypothesis VI: there is an on-going failure to understand the complex aetiology and relationship between food insecurity and malnutrition. This is also compounded by the lack of



distinction in the pathways leading to chronic and transitory food insecurity in Zambia. Arguably this has diverted attention and resources away from addressing the unacceptably high levels of stunting among children in the country, and the long-term impact that this will have on the Zambian development process. Factors that have contributed to this include:

- Inadequate awareness among key decision makers of the role of nutrition in national development.
- Absence of a national food and nutrition policy.
- Inadequate multi-sectoral coordination and collaboration on food and nutritional issues.

### **The New Deal and future vulnerability**

- Commercial agriculture and in particular non-traditional exports (horticulture and floriculture) are seen as the beacons for future economic growth. It is anticipated that the small-scale farming sector will benefit from this growth through participation in out-grower schemes along the line of rail, or as agricultural labour on newly opened commercial farming blocks. Once again the outlying areas look likely to be marginalized further.
- In this context, what is the new institutional landscape in the outlying areas? What institutions (formal and informal) are now important to households and communities? What are the obligations and responsibilities and support that bond households in production and social transactions? How do changing institutional landscapes at the local level provide social protection for the chronically sick, elderly and other vulnerable groups and what are the appropriate forms of support to them?
- There is considerable concern about proposals to target food aid to HIV/AIDS affected individuals and/or households. Will this be at the expense of long term efforts to reduce poverty through supporting positive livelihood outcomes and identifying strategies to strengthen existing or evolving social networks and institutions at the local level, that assist vulnerable community members?
- Is there a voice from civil society and from how deep in civil society? What role can increased political sensitisation and awareness, the media, and the justice system play in ensuring that the New Deal benefits all?
- The right to food and freedom from malnutrition is more than the right to be fed, but, incorporates the right to feed oneself and one's family. Could this be one pillar of a rights based platform for civil society, CBOs, the media, and concerned informal and formal private sector stakeholders to advocate for shared responsibility to address the unacceptable levels of malnutrition in Zambia?

### Acronyms

ACF	Agricultural Consultative Forum
ADMADE	Administrative Management Design for Game Management Areas
ACP	Agriculture Commercialisation Programme
AGOA	Africa Growth Opportunities Act
AMC	Area Management Committee
ASIP	Agriculture Sector Investment Programme
CBO	Community Based Organisation
CFS	Crop Forecast Survey
CFU	Commercial Farmers Union
CLUSA	Cooperative League of the United States of America
CMA	Crop Marketing Authority
CSO	Central Statistical Office
COMESA	Common Market for Eastern & Southern Africa
CONASA	Community Based Natural Resource Management and Sustainable Agriculture (project)
DFID	Department for International Development (UK)
DHS	Demographic and Health Surveys
DMMU	Disaster Management and Mitigation Unit
DWAC	District Welfare Assistance Committee
FAO	Food and Agricultural Organisation of the U.N.
FASAZ	Farming Systems Association of Zambia
FRA	Food Reserve Agency
FSRP	Food Security Research Project (MACO, MSU, ACF)
GDP	Gross Domestic Product
GRZ	Government of the Republic of Zambia
IMF	International Monetary Fund
MMD	Movement for Multi Party Democracy
NAMBOARD	National Agricultural Marketing Board
NGO	Non-governmental Organisation
NHC	Neighbourhood Health Committees
NTE	Non Traditional Exports
OVP	Office of the Vice-President
PHS	Post Harvest Survey
PLWHA	Person Living with HIV/AIDS
PRSP	Poverty Reduction Strategy Paper
PSRP	Public Sector Reform Programme
PTA	Parent Teacher Association
PWAS	Public Welfare Assistance Scheme
SADC	Southern Africa Development Community
SAP	Structural Adjustment Policy
SAHCU	Southern Africa Humanitarian and Conflict Unit
SRP	Social Recovery Project
UNIP	United National Independence Party
VAG	Village Area Group
VAT	Value Added Tax
WFP	World Food Programme of the U.N.
VMC	Village Management Committee
WASHE	Water, Sanitation and Health Education.
WB	World Bank
WWAC	Ward Welfare Assistance Committees
ZAMSIF	Zambian Social Investment Fund
ZCCM	Zambia Consolidated Copper Mines
ZCF	Zambia Cooperatives Federation
ZRA	Zambia Revenue Authority

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## **2 Introduction**

### **2.1 Background and objectives of literature review**

The objective of the literature review is to develop an analysis of livelihood trends and their implications for Zambia over the last thirty years. This includes the identification of underlying causes, and the links between micro level trends and the macro level economic, political and structural changes that have impacted on livelihoods. The review will also attempt to understand how communities have responded to these factors and the outcome to their livelihoods and well-being. The focus of the review is on rural Zambia. In order to understand household responses in the face of risk of drought, a short case study from Southern Province has been included.<sup>a</sup> The document is intended to contribute to a better understanding of the causes of the 2001/2002 crisis in Zambia, which in turn can lead to a more informed debate about how to redress the current situation.

### **2.2 Sources and data**

The main sources of data and information for the literature review have been as follows:

- Demographic data: the preliminary results from the 2000 census were used. These results are based on the “de facto” population rather than the “de jure” population.
- Official statistics: e.g. Government Economic Reports.
- Agricultural production data has been taken from the Ministry of Agriculture and Cooperative’s Crop Forecast Surveys (CFS) and Post Harvest Surveys (PHS). CFS estimates are normally higher than PHS estimates. PHS excludes the large-scale commercial sector. The two types of surveys do not always cover the same crops, e.g. sweet potato and cassava are not included in the CFS.
- Priority Surveys were undertaken in 1991 and 1993. The Living Conditions Survey was conducted in 1996 and 1998.
- Demographic and Health Surveys were conducted in 1992, 1996 and 2001/2.
- Government policy documents: National Agriculture Policy, Agriculture Commercialisation Programme, Agriculture Sector Investment Programme Documents, Poverty Reduction Strategy Paper.
- Grey literature: Research and Beneficiary Assessments undertaken under the Study Fund of the Social Recovery Project. Rapid Rural Appraisals and Participatory Learning and Action Appraisals by NGOs. Bilateral Agency reports.

## **3 The Seeds of Vulnerability: pre-Independence until 1964**

Northern Rhodesia was an economic enclave for mining companies located in Salisbury. The rural population provided migrant labour for mining activities in the Copperbelt and in South Africa and for labour intensive commercial agriculture in Southern Rhodesia. Profits accumulated in the capitals of her southern neighbours and were invested in those countries. There was no attempt to bring villagers into the cash economy as direct producers. Instead head and hut taxes were levied in Northern Rhodesia to encourage outward migration and integration of the migrant workers into the economies of its neighbours. Zambia entered the Independence era

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<sup>a</sup> See Annex

“geographically isolated and economically and socially insecure, while also being extremely rich”.<sup>1</sup>

### **Environmental inheritance**

Zambia inherited four categories of land in 1964: State Land (formerly Crown Land), Freehold Land, Reserves and Trust Land. Until independence, chiefs held responsibility for all land in the Reserve and Trust areas. After independence, the chiefs were relieved of their *de jure* responsibilities for land allocation, but their *de facto* position probably changed very little as they were not replaced by effective structures.<sup>2</sup>

The country can be divided into three major agro-ecological zones:

Zone I covering the southern parts of Southern and Western Provinces constitutes 12% of Zambia’s total land area. Rainfall is less than 800mm and the soils are relatively poor. Parts of this zone are not suitable for cattle rearing because of tsetse fly. This zone is suitable for production of drought resistant crops like: cotton, sesame, sorghum and millet. Other parts of the zone (to the west of the Zambezi river) are suitable for extensive cattle and cashew nut production and have limited potential for cultivation of sorghum, millet and cassava.

Zone II incorporates the fertile plateau in Central, Southern and Eastern Provinces. The zone constitutes 42% of the country and is characterised by rainfall of between 800-1000 mm annually. Crops grown include: maize, cotton, tobacco, sunflower, soybeans and irrigated wheat. The area is also suitable for beef, dairy, poultry and vegetable production.

Zone III is the high rainfall zone with an annual average of more than 1200 mm. The zone covers 46% of the country’s total area covering Copperbelt, Luapula, Northern and North Western provinces. With the exception of the Copperbelt the zone is characterised by highly leached, acidic relatively infertile soils. It has good potential for the production of millet, cassava, sorghum, beans and groundnuts. There are opportunities for increased exploitation of the fisheries resources.

The majority of documents and reports highlight the wealth and abundance of Zambia’ natural resources. The three major agro-ecological zones reveal a broad range of agricultural potential in particular for cash crops. This scope is also reflected in the diversity of possible livelihood portfolios available. However, the potential agricultural utilisation of these riches needs to be tempered with an understanding of the following constraints: the year round supply of water for agricultural and livestock use can be problematical; the leached and generally infertile soils require high levels of nitrogenous fertiliser; and for much of the country the possibility of only one short planting season dependent on uncertain rainfall leads to wide temporal and spatial fluctuations in agricultural production.

### **Inheritance of colonial infrastructure**

As a landlocked country the extraction of mineral wealth was dependent on the development of rail and road links. This led to the development of the “line of rail”<sup>a</sup> from Southern Rhodesia

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<sup>a</sup> The “line of rail” is an expression used to identify the areas in proximity to the railway corridor from Livingstone, through Lusaka to the Copperbelt.

through Livingstone, Lusaka, and to the Copperbelt. From the Copperbelt there were also rail links to the Congo and Angola. Away from the line of rail, there were road links to the provincial capitals, but communications from province to district and district to sub-district were low priority.

### **Economic and human capital**

At the end of the colonial period Zambia while being rich was economically vulnerable; there was a high dependence on copper revenues, and there was little dynamism in the agricultural sector. Limited investment in education, skill development and health care also meant that Zambia would enter Independence with the challenge of investing in human capital for the future development of the country.

The foundations for a dual agricultural economy were laid: State Lands and commercial farming were concentrated along the line of rail, contrasted with subsistence based agriculture on Trust lands with limited infrastructure and few market links. The role of the rural areas to feed the urban-based workforce, with both labour and staple food had begun.

## **4 “Born with a copper spoon: the years of plenty”. Independence to the 1970s**

### **4.1 Meso-macro factors influencing vulnerability**

Zambia was economically prosperous at Independence (1964) having inherited a strong mining based economy. The United National Independence Party's (UNIP) economic development efforts were largely directed towards the achievement of a humanistic society through the promotion of social equity i.e. subsidised social services and food. UNIP adopted a centralised planning model with a controlled policy environment. Economic management was mainly through state institutions using various instruments, such as agricultural input and marketing subsidies, foreign exchange control and controls on interest rates. Copper revenue was used to invest heavily in parastatal firms, with high tariffs and import licensing ensuring their protection from external competition. Copper revenue supported the extensive subsidies in the agricultural sector, an approach that could only remain viable with continued copper production and strong copper prices. There was free access to health services. Price controls covered 32 essential commodities and were in place up until 1984.<sup>4</sup>

In the 1970s, a policy of targeting investment to rural areas was embarked upon which saw factories established in provincial centres. Examples were: bicycles (Chipata) batteries (Mansa) pineapple canning (Mwinilunga). These investments contributed to income generation, employment creation, infrastructure and social amenities in the outlying provinces. The 1970s and 1980s also saw an expansion in health facilities, primary schools, colleges, roads, power and communications.

The Land (Conversion of Titles) Act 1975 completed and confirmed the land nationalisation programme by vesting all land in Zambia in the President, to be held by him in perpetuity on behalf of the people of Zambia. Freehold land held by commercial farmers was converted into leaseholds for 100 years and unutilised tracts of land were taken over by the state. Freehold titles in residential areas were similarly treated. All sales of land *per se* (excepting the developments on the land such as buildings, farm infrastructure, etc.) were prohibited. 97% of farmers do not have title to the land that they cultivate.<sup>2</sup> It has been argued that lack of title reduces motivation to

invest substantial amounts of money in land improvements, and prevents the use of land as collateral for credit. However, studies in other African countries have not shown a causal link between titling and increased investment in land improvements. Instead, increased investment is more closely linked to market access and size of land holding. Moreover, the allocation of scarce resources towards the costs of land administration without legal, transparent and efficient mechanisms within which the land market can operate may disadvantage socially or geographically marginalized groups (e.g. widows, youth, single or poor households). These groups require knowledge, financial resources and legal support in order to be able to enter the land market. There is also the need to ensure that there is no further encroachment of Customary land through leaseholds granted under the authority of Chiefs, then being converted to State Land and therefore becoming eligible for title and thus becoming permanently removed from the Chief's control.

During this period Zambia was affected by political turmoil in neighbouring states that affected economic and social development. The long closure of Zambia's borders and transport routes to the south through the former Rhodesia and old South Africa has left an enduring impact on the pattern of economic development and export trade. Prolonged civil wars in Mozambique and Angola and loss of possible transport links to port facilities in these countries also stunted Zambia's economic growth.

#### **4.2 Government, donor and NGO responses to changing vulnerability**

After Independence the tentacles of the State and the UNIP infiltrated deep into rural areas through the cooperative unions, Lima Bank, UNIP women's groups etc. The government built up a large public sector with a network of state employees reaching into all districts. The State and the Party became inseparable. Civic activity outside the design, control and benefit of the ruling party was considered dangerous and viewed with suspicion. This contributed to the establishment of a system of political patronage.

The marketing board NAMBOARD became the principle mechanism by which the state determined the terms on which rural populations interacted with markets. Through its network of regional cooperatives, the state controlled inputs into agricultural production, notably fertiliser and set prices on farmed produce that was shipped to central marketing and storage centres. Input provision and seasonal credit became widely available with an emphasis on maize production. A pan territorial and pan seasonal pricing policy for maize was put in place. The willingness of the NAMBOARD to collect and transport grain from the furthest reaches of the countryside earned UNIP strong support from the peasantry. The monopolistic control exerted over small commodity producer's produce allowed the government to pursue its import substitution industrialisation strategy by providing subsidized staples, including maize meal, cooking oil, salt, milk, matches and soap to urban workers and miners.

After Independence foreign aid flows to Zambia steadily increased. However, external assistance declined after the Government implemented its policy of nationalisation and expropriated foreign assets.<sup>3</sup>

### **4.3 Community and household responses and outcomes**

Poverty declined during the 1960s and early 1970s as Zambians made gains in income, life expectancy, and school enrolment as a result of the redistribution policies of UNIP. Even so in 1975 it was estimated that 60% of all Zambians lived in poverty<sup>1</sup> and this situation was also reflected in high levels of malnutrition. The 1970-1972 National Nutrition Survey (WHO) for children under 5 years found 37% of children stunted, 23% underweight and 5% children wasted.<sup>51</sup>

The expansion of the health services into the rural areas had concentrated on the construction of health facilities and hospitals and did not have a preventative health care focus. The focus on facilities meant that there were considerable expenses in maintaining the health system, which could not be met through government expenditures in later years.

## **5 External shocks, economic stagnation and attempts at reform. 1970s to 1990s**

### **5.1 Meso-macro factors influencing vulnerability**

The economy began to decline in the mid-1970s following the oil shock (1973) compounded by a sharp decline in world copper prices (1974). No major substitutes from other economic sectors came on stream. The increased decline in the economy in the 1980s was due to the lack of sufficient responses to these external factors, declining terms of trade and shifting demand patterns for the raw materials that Zambia produced. Zambia engaged in a strategy of import substitution industrialisation that was import-dependent. This encouraged firms to produce for the domestic market but did little to build the requisite capacity to export. Lack of foreign exchange also acted as a constraint on investment in manufacturing to upgrade equipment and production methods.

The 1980s marked the first phases of implementing domestic structural reforms amidst a stagnating economy. A programme was designed to address the most urgent economic problems, with the hope that the initial reforms would lay the foundation for liberalizing the statist economy more completely.

There were opponents both inside UNIP and outside who blocked the momentum for reform. They feared the loss of economic benefits, disruption of protected markets, social benefits, and redundancies in the mines. An increasingly corrupt patronage system was able to paralyse the domestically designed reform process. The old guard failed to recognise the systemic nature of economic collapse, attributing the crisis to external agencies.<sup>1</sup> The implementation of the SAP was piecemeal and failed to fundamentally change the economic structure. The design and implementation of the SAP also failed to sufficiently address SAP related poverty. The SAP was temporarily abandoned in 1987, and was replaced by Zambia's own programme. It was subsequently re-introduced in 1988.

### **5.2 Government, donor and NGO responses to changing vulnerability**

The policies of food subsidies, free social services to all and controlled prices were designed to contribute towards uplifting the nutrition status of the citizenry, however, overall economic policies



militated against these measures. The long- term nature of the deterioration in the terms of trade was generally underestimated. It only really became apparent after the second oil shock and the world recession of the early 1980s.

The provision of subsidies and wholesale free social services led to pressures on the government budget resulting in the government resorting to inflationary borrowing to finance the deficit. Initially external borrowing and a build up of international debt cushioned the effects. This policy became untenable in the 1980s with high interest rates and an explosion of indebtedness.<sup>4</sup> The erosion of income as a result of inflation rendered subsidies and price control on maize meaningless.

In certain cases liberalisation and withdrawal of subsidies saw state owned enterprises in the provinces fold up. The implementation of economic adjustment measures also implied that there would be reallocation of resources from consumption to investment. Budgets for ministerial recurrent expenditures were an area that could be cut quickly, and social services were the easiest targets.

By the mid 1980s health and education infrastructure required rehabilitation. At this point staff salary related costs took up 65% of total health expenditures, and there was a lack of resources to maintain the post-Independence improvement in the health service in terms of buildings maintenance, drug availability and trained staff. Resource allocations were skewed: curative services were favoured against preventative services; salaries were maintained relative to supplies and operations and maintenance; operating expenditures tended to favour "big ticket" items such as the University Teaching Hospital in Lusaka; provincial services were cut much more than urban services, and there were disinvestments or outright abandonment of services in the most geographically isolated districts.<sup>3</sup> This led to cuts in the services that were most cost effective in terms of health status and resulted in empty clinics, or clinics with staff but with no drugs and equipment. It was also another notch in the ratchet in the increasing differentiation between urban and rural and between the line of rail provinces and the outlying provinces.

Government per capita expenditure on health dropped from K6.8 in 1985 to K2.92 in 1991 (at constant 1977 prices). However, while government per capita health expenditure dropped, to a certain extent this was substituted by donor support in particular through UNICEF. Although analysis<sup>4</sup> has shown that there appeared to be a rising trend in the proportion of children attending health facilities who were underweight, it was not possible to ascertain the cause of underweight, nor find a strong relationship between government expenditure and the increase in children who were underweight.<sup>a</sup>

A Social Recovery Project was established between 1990 –93 in recognition that structural adjustment necessarily imposes hardship on the poor and most vulnerable. The programme included specific actions in health and nutrition, education, water and sanitation, women in development, employment generation through public works projects and development of small-scale enterprises.<sup>4</sup> At that stage the government proposed to strengthen planning,

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<sup>a</sup> Underweight data from health facilities needs to be interpreted with caution taking into account that the data is biased towards those who have access to health facilities and wish to take up the services provided.

implementation and monitoring of nutrition and food security related programmes; expand and improve support to the national Food and Nutrition Commission; strengthen the nutrition rehabilitation programme through HEPS and extend the child to child approach to nutrition education in primary schools.

There were increasing questions raised around the role of commercialisation and food security. There were concerns that the focus on maize production marginalized female-headed household, could be related to the continuing high levels of malnutrition, and was contributing to declining soil fertility in some areas.<sup>a</sup>

The failure to understand and articulate the link between food security and nutrition, led to a situation where agricultural policies were in contradiction to positive nutrition outcomes. The consistent approach to viewing nutrition well-being as only a component of social welfare, and relegated to the donor funding basket led to the domination of quick fix programmes such as the hand-outs of HEPS for malnourished children and later in the 1990s, the distribution of Vitamin A capsules without complementary food based and poverty reduction approaches.

When the Zambian economy began to experience the serious external shocks, donors responded positively by increasing their official aid flows. Bilateral agencies divided Zambia's provinces between them: for example the Netherlands supported programmes in Western Province, and Sweden supported Luapula and Eastern Provinces. However, Zambia's later failure to design and implement an acceptable reform package led to a noticeable reduction in external support particularly from the bilateral agencies. When the country did adopt a SAP over the 1983 to 1987 period, this was rewarded with an appreciable increase of external assistance. During that period, the number of aid agencies that were active in Zambia stood at around 150. When Zambia made the unilateral decision to abandon the IMF/World Bank supported SAP in May 1987, many donors significantly reduced their support to the country.<sup>3</sup>

### **5.3 Community and household responses and outcomes**

Between 1981 and 1986 the infant and child mortality rates were less than one out of ten and less than two out of ten respectively. Between 1987 and 1991 this increased with nearly one out of ten infants dying before reaching their first birthday and about one of five children dying before reaching their fifth birthday.

Population growth was 3.8%, with a marked drift of people from rural to urban areas, leading Zambia to be considered one of the highest urbanized countries in Sub-Saharan Africa.

An IFPRI study conducted in Eastern Province in 1986, found around 56% of children under 10 years stunted, with 5% wasting and 26% undernourished. A study conducted in Kawambwa District (Luapula Province) in 1988<sup>5</sup> found 40% of children underweight, 65% stunted and 4% wasted. The 1990 Nutrition Module<sup>6</sup> undertaken as part of the Crop Forecasting Survey found 54% stunting 4% wasted and 25% underweight in children between 6 and 60 months, in rural

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<sup>a</sup> Further work could look at IRDPs work in Northern (B. Sharpe et al) A RPT Northern Province, Eastern Province. Also: Moore, H.L. & Vaughan, M. Cutting Down Trees. Gender Nutrition and Agriculture . Change in the Northern Province of Zambia 1890-1990. (Moore and Vaughan set out to compare the situation using Audrey Richard's "Land Labour and Diet".

areas. Luapula, (67%) Northern (62%) and Eastern (58%) Provinces had the highest stunting rates.

Farmers continued to respond to the subsidies and incentives for maize production. The take up of credit opportunities was high, although in areas where maize production was risky due to climatic factors, defaulting rates increased after poor harvests. 1986 was a drought year in Southern Province and people received relief food through councillors.

Urban Zambians reacted to the impact of SAP policies on employment opportunities, and the increase in the price of maize meal through the food riots of 1986 and 1990.

## **6 New Hope? Multi party democracy. 1991 to 2001**

### **6.1 Meso-macro factors influencing vulnerability**

The emergence of the Movement for Multiparty Democracy (MMD) was grounded in the increasing frustration at UNIP's corruption, incompetence, and the desire for fundamental political change. The leadership (Frederick Chiluba) and the support base for the MMD arose from the trade union movement, which itself was accountable to urban groups and organisations. Thus the urban bias was reinforced and continued for the following decade.

When the MMD took power in late 1991, it worked closely with the IMF and WB to implement a package of structural reforms. The SAP included a package of measures that were aimed at restructuring and stabilising the economy in order to restore growth. These measures included:

- cutting public expenditure,
- closing or selling public enterprises considered a fiscal drain,
- removing subsidies especially in the agriculture input and output markets, devaluing the local currency, and
- opening up the local economy to foreign competition.

Strict fiscal discipline was adopted to reduce inflation, exchange rates were freed, capital controls were removed, and import controls were abolished.

**Monetary policy:** the liberalisation of interest rates and expansion of the role of the Bank of Zambia in market-driven open market operations contributed both to an increase in the cost of credit and a significant re-allocation of resources to reflect relative benefits of fund placements. The active participation of the Central Bank in the financial market, largely by providing a high yielding, alternative investment instrument (the government security) contributed to mopping up liquidity, crowding out the private sector and increased the cost of domestic capital. This contributed to making credit out of reach in particular to small-scale farmers and small businesses.

**Fiscal policy:** On the advice of foreign advisers, Government introduced a cash budget system in 1993 in order to rapidly compress expenditure and stifle the inflationary pressures that are attendant to budgetary deficits. The economic and social sectors were subject to reduced,

unpredictable and untimely disbursements in order to balance domestic expenditures with revenue.<sup>7</sup> Although inflation initially fell,<sup>a</sup> this strategy failed to keep inflation at low levels and they continued at around 25% from 1997 to 2000. The disinflationary impact of the cash budget may have been favourable for growth however, in contradiction, the curbing of expenditures in the economic and social sectors also weakened the prospects for growth. The cash budget created a false sense of domestic fiscal security and avoided the fundamental issue of fiscal discipline. Responsibility for budgetary control was removed from Parliament and handed to an ad hoc group. This facilitated the redirection of resources away from intended targets to a discretion-based system more susceptible to ad hoc requests from the highest authorities, based on short-term political considerations. Economically and socially important ministries were systematically discriminated against in favour of general public services. Ministries could not plan their activities with confidence, leading to inefficient and ineffective implementation. This had particular impact on agriculture with seasonal deadlines.

Simultaneous with expenditure compression, the government created the Zambia Revenue Authority (ZRA) to improve tax collection and administration. ZRA has proved successful in improving tax collection and the introduction of VAT has broadened the tax base.

In 1993 the government attempted to implement the Public Sector Reform Programme (PSRP) with a view to rationalising the Public Service and improving the conditions of service for retained staff. This programme was neither a success nor a complete failure, but is incomplete and did not meet its expected targets. The deterioration in the provision of public services has continued, personal emoluments have remained inadequate, while salary bills consume a disproportionate amount of the domestic budget.

Zambia reduced tariffs by 60% early in the reform programme, simplified the tariff regime, eliminated non-tariff barriers and attempted to stimulate the increase in non-traditional exports. Zambia's economic liberalisation coinciding with lifting of sanctions in South Africa and South Africa expanding its markets and avenues for capital investment. The accession in 2000 to COMESA Free Trade Area Treaty and the ratification of the SADC trade Protocol confirmed Zambia's role at the front end of trade liberalisation at a time when domestic producers were pointing out their lack of capacity to handle direct competition. Simultaneously, government pursued an ultra liberal exchange rate policy suspending the Exchange Control Act and allowing free movement of currency.

During the 1990s the mining sector presented the greatest structural challenge. A massive drop in output was complemented the negative impact of occasional price declines. Copper output dropped to a mere third of the highest level ever attained. The state mining corporation, Zambia Consolidated Copper Mines (ZCCM) was finally privatised in 1999 after protracted negotiations, resulting in a sales deal that was well below its value several years earlier. The contraction in mining especially in 1998-2000 strongly dragged the rest of the economy down as demand collapsed.

Although government adhered religiously to the liberalisation prescription, the outcome of these policies was unsatisfactory. Economic growth was not realised. GNP per capita had shown a

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<sup>a</sup> Between 1993 and 1994 the inflation rate fell from 187% to 53% (period average).

steady decline since Independence with agriculture accounting for around 20% on average. Over the period 1990 to 1999 the country's economic growth was the least average annual growth rate in SADC at one percent.<sup>26</sup> Per capita incomes contracted to less than 50% of their value in 1975; employment stagnated and high inflation eroded peoples' savings. The key factors contributing to low economic growth were: drought affecting agricultural production in the early to mid 1990s; delays in the privatisation of the copper industry combined with reduced production, stagnant investment, and a deterioration of key infrastructure; increased unemployment in the formal sector. While there was an increase in the contribution of Non Traditional Exports (NTE) to Agriculture GDP at the end of the 1990s this was insufficient to compensate for failures in the rest of the economy.

Zambia had become one of the most liberal economies in the world, and remained fully committed to liberalisation and market reform. But this policy framework had shown that while liberalisation may be necessary it is not sufficient to reduce poverty and hunger.

### **1991/2 Drought**

In 1991-92 Southern Africa was hit by the worst drought of the century. In Zambia, the 1992 cereal production was 39% of the average of the previous 5 years,<sup>a</sup> 1.7m people were affected and GDP growth was estimated at -4.7%.<sup>8</sup> At a provincial level crop production was reduced by 93% in Southern Province, 85% in Lusaka Province, 80% in Western Province, 79% in Eastern Province, and 57% in Central Province, in comparison to the previous season<sup>9</sup>. This created food shortages and a decline in income in the rural areas. The drought also created water shortages.

There was a partial drought in 1995 and the El Nino phenomenon in 1998 with high rainfall led to flooding in some areas.

### **HIV/AIDS**

Over the 1990s there was an increasing recognition of the potential impact that HIV/AIDS would have at both the macro and household level. Zambia reported 15,000 AIDS cases in 1991. By 1993-4 AIDS had become the second major cause of mortality among adults in Hospitals at 14% of the total deaths. In 1998, the estimated national adult (15-49 years old) prevalence rate was 19.7%.<sup>26</sup> Since the beginning of the AIDS epidemic TB case rates had increase five-fold to more than 40,000 in 1996. According to official figures (MoH 1999), life expectancy had dropped below 40 years by 1999 as compared to over 52 years in 1980.<sup>b</sup> The number of orphans was estimated to be well over 700,000 by the end of the year 2000.<sup>24</sup>

Rural population trends of STD and HIV infection varied, for example, studies on the prevalence of STDs (syphilis) among people below the age of 26 was higher in Luapula compared to Southern Province due to socio-economic factors related to the fish industry as compared to Southern Province.<sup>10</sup> The existence of pockets with high HIV/AIDS prevalence made it difficult to obtain a national overview of the situation.

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<sup>a</sup> 603,000mt compared to 1,536,000 mt.

<sup>b</sup> Contradiction with CSO data

## 6.2 Government, donor and NGO responses to changing vulnerability

### Changing support to the agriculture sector

In 1996 the government began implementation of the Agriculture Sector Investment Programme (ASIP). This sector wide programme was intended to provide a programmatic framework for donor support, so that the proliferation of donor supported projects could be halted. Five sector goals were to be the prime focus for ASIP:

- To ensure national and household food security;
- To maintain and improve the existing agricultural resource base (land, water and air);
- To generate income and employment through the realisation of domestic and export market potential;
- To contribute to sustainable industrial development; and,
- To expand agriculture's contribution to the national balance of payments.

Towards the end of ASIP (2000), two important decisions were taken by MAFF – these were: the promotion of conservation farming which seemed to address a number of the constraints faced by farmers at the same time; the second was the adoption of the Participatory Extension Approach that would allow MAFF to be able to continually identify and prioritise the key areas of focus.

During the 1990s the Food Reserve Agency (FRA) was established with the purpose of maintaining national strategic reserves to ensure national food security. The FRA's mandate was then extended in view of the slow response by the private sector to provide marketing services. The FRA became involved in the distribution of inputs, in particular fertiliser. Later, in 2002 the government stated that the FRA would be disbanded and it was proposed to establish a Crop Marketing Authority (CMA) in its place. The CMA was meant to be a buyer of last resort for selected crops in outlying areas however, a Bill that was presented to Parliament was withdrawn to allow for further consultations.<sup>11</sup>

### Changes in health service delivery

The 1990s were also a decade of structural change in the public health services. By the beginning of the 1990s government expenditure on health had been falling for two decades: per capita expenditure in real terms decreased by 46% between 1970 and 1981 and by 44% from 1980 –92.<sup>3</sup> These cuts were most significant in provincial and district health services. The cuts, in combination with the end of basic food subsidies at the end of the 1980s and drought in the early 1990s resulted in a health care system which was widely seen to be declining in quality, but nonetheless needing to respond to increases in vulnerability and its impact on health and nutrition.

The MMD launched a package of health service reforms that combined cost recovery with decentralisation and devolution of planning, budgeting and disbursement through District Health Management Boards. This approach began with pilot districts in 1992 and expanded to all districts in 1993. User fees were introduced in 1994. Thus a system of nominally “free” services was replaced with a system based on cost recovery and communities were asked to play a role in service management. Certain categories were later exempted from charges, on the basis of age, social status, chronic illness and inability to pay. However, exemptions were not implemented uniformly and there were other barriers to accessing health services, such as the distance to

health facility and cost of transportation.<sup>13</sup> At the end of the 1990s partnership and accountability in health service provision were still seen to be distant. Neighbourhood Health Committees were still not able to ask for justification of resource use from other, more powerful institutions or individuals.

### **Changes in education provision**

One third of the population was of school-going age. Parents wishing to send their children to school had always had to pay a significant proportion of the costs. Contributions have been for buildings and maintenance as well as compulsory cash payments. From 1993 onwards reforms to the education sector have significantly increased the level of costs expected from users of the service. In the 1990s the education budget accounted for 2.5% of the GDP compared to 5-6% in the 1980s. The quality of education provision was perceived to be declining and the costs increasing. A limited bursary system was put in place to be allocated to the children of poor families as part of the public welfare assistance scheme administered by the Ministry of Community Development and Social Services. However in the absence of any decentralised system for distribution, district officials forwarded names to the provincial level, but a year could elapse before a response was received.<sup>13</sup>

There was an increasing tendency towards the privatisation of education especially in urban areas. The state encouraged the formation of community, NGO and Church schools, but had no means to adequately monitor the standards in these schools.<sup>12</sup> Academic Production Units were established that operated under the umbrella of government secondary schools. Teachers were paid in addition to their salaries and the Units charged significantly higher fees. Academic results were better for those who could attend. However there was a perception that teaching staff worked less hard during normal school hours and, or, deliberately failed to cover the entire curriculum so that they could retain sufficient energy and demand for the additional sessions. These private lessons meant that poorer households that sent children to school but could not afford the private tuition were effectively subsidising the pupils from richer households who did take advantage of the extra courses.<sup>13</sup>

### **Public Welfare Assistance Scheme (PWAS)**

The PWAS, while dating back to the Second World War, received a large injection of funds in 1992 in a government attempt to help destitute people in the rural and urban wards of the country. In 1992, the scheme was decentralised to the District level where 61 District Welfare Committees (DWACS) were formed. In 1994 Ward Welfare Assistance Committees (WWACs) were created. An evaluation in 1996 found that the WWACs were a well-designed and effective way of reaching destitute people. However, only 35% of the Wards in Zambia had functioning WWACs, the scheme was under funded and monies that did arrive were haphazard and unplanned due to the cash budget. The evaluation found that communities were able to clearly identify destitute people and were willing to help them as far as they could. It was also shown that destitute people keep themselves through their own efforts and the charity of neighbours, relatives, kin, church-goers and welfare NGOs, and that closer coordination between these different entities was needed.<sup>14</sup>

On the basis of the success of the Social Recovery Project I, a second SRP was designed not only to improve social service delivery but also to support capacity building for community driven development. Later in 2001, ZAMSIF followed on from SRP I and SRP II. It was recognised that

long-term support was needed for this process. ZAMSIF was specifically designed to support local authorities to facilitate the processes of community driven development that mainstreamed HIV/AIDS, environment and gender and which allowed communities to plan, manage and maintain their own development.

### **Government responses to HIV/AIDS**

Since 1994, national HIV/AIDS policies in Zambia had emphasised the importance of multi-sectoral approaches in responding to the HIV/AIDS pandemic. However key sector policies such as the 1998 draft National Agricultural Policy outline did not highlight HIV/AIDS as a critical area of concern in addressing household food security. Other government departments and NGOs also faced methodological problems regarding how to approach communities on sensitive topics such as HIV/AIDS which as a result hindered effective communication between the targeted HIV/AIDS affected communities and extension as well as other service providers.

A National HIV/AIDS Policy was put in place. The Ministry of Health was mandated to co-ordinate multi-sectoral approaches to HIV/AIDS mitigation. The ministry is responsible for policy formulation at national level and is instrumental for the nine HIV/AIDS Technical Working Groups foreseen in the National HIV/AIDS Strategic Plan for 2000-2002. The co-ordination of HIV/AIDS policies and activities at district level was the responsibility of the HIV/AIDS/ STD/TB/Leprosy Co-ordinator.

In order to complement government efforts in the fight against HIV/AIDS, a number of development agencies, NGOs and the private sector became actively involved in the mitigation of HIV/AIDS in the country.<sup>24</sup>

### **Donor response to political and economic developments**

Donors were initially positive towards the outcome of the 1991 election. However, they became increasingly worried about the performance of the government, not necessarily because of economic policies, but because of reported problems with corruption and the human rights record of the government.<sup>3</sup>

The response to the 1991/2 drought saw the creation and use of NGOs to deliver food at the local level. The Government of Zambia with the assistance of UNICEF and World Bank established the Programme for the Prevention of Malnutrition (PPM). Committees were established in the drought affected areas and PAM (Programme Against Malnutrition) distributed food. In urban areas the Programme for Urban Self-help (PUSH) was established to operate food for work programmes.<sup>8</sup> Community assessments showed that some households had sufficient income to purchase food for some months, and so NGOs were involved in the sale of food, the proceeds of which were put into a revolving fund. Donors assisted with the importation of almost 1 million metric tons of grain of which 10% was designated for humanitarian purposes and 90% for commercial sales. Proceeds from the sales were used to pay for transportation from ports into Zambia and the costs of distributing the 10% humanitarian allotment.

The Early Warning System (EWS) was already in existence and was able to provide information on levels of food production in the country. However, little information was available on food security conditions and nutritional status at the community or household level, as there was no expertise on household food security and nutrition analysis.



A Drought Impact Monitoring System was established in 1992<sup>15</sup>. This was later transformed into the Food Health and Nutrition Information System (FHANIS), which contributed to monitoring food, health and nutrition security in rural and urban areas. While recognised as playing an important role in sensitising decision makers to food and nutrition problems, FHANIS disintegrated in the late 1990s. A combination of factors led to the demise of FHANIS. These included: delayed institutional reform and restructuring of key government structures, failure of government to prioritise a budget for FHANIS after the adoption of the cash budget approach; an over centralised system, and high dependency on donor funds<sup>16</sup>. Three years later in 2002, the absence of credible food and nutrition information was keenly felt.<sup>17</sup>

Under multi-party democracy the relationship between government and NGOs continued to operate on the basis of mutual suspicion. The growth of the NGO sector was in parallel to the weakening of the state, as the financial and policy conditionalities imposed by SAP began to take their toll. The state sector became increasingly powerless while the civil society sector strengthened partly on the back of international donor funding. The interests and preferences of donors influenced the type of NGO that has emerged. Donor support has been towards NGOs working in the areas of governance and human rights.

### **6.3 Community and household responses and outcomes**

#### **Response to agricultural market liberalisation**

Before liberalisation, inputs were delivered to farmers by parastatals despite poor roads; in the post liberalisation phase the willingness of private traders to perform these same services depended on profitability, which in turn depended on road conditions, transactions costs and proximity to large centres of consumption.

Independent traders used cash or goods for barter such as, used clothing, salt and blankets. Traders moved between areas until they had purchased sufficient quantities to trade. They hired local labour to porter the goods to the roadside and from there hired a truck to move purchases to town, and then on to a more substantial market place. It was often cheaper for mill operators in outlying areas to purchase grain from distant commercial farmers rather than small farmers in the area. In more central locations and parts of Eastern Province there are larger operators working around the main provincial and district centre. Agricultural trade is just one part of their businesses being complemented by wholesale shops in town and transport services. Medium scale firms typically send their own buyers into the field with a small truck to buy directly from farmers. Because there are few established markets in the interior, the time it takes to collect a full load depends on the buyer's knowledge of the area and their ability to get to a location before another buyer comes in. These medium scale traders serve as intermediaries between the large companies based in Lusaka and the Copperbelt and small-scale farmers.<sup>33</sup>

Rising costs of public transport also meant that farmers themselves were not in a position to travel long distances to buy inputs or market their own products. High transportation costs and condition of Zambia's rural road network also restrict the opportunities for investment in outlying areas. This is most obvious in the case of small-scale farmers living far from the main road network where the high cost of bringing inputs to the farm and outputs to market often leave the

growers with little choice except to produce for home consumption and limited sales in local and district level markets.

Households responded to the changed scenario under market liberalisation by changing cropping patterns and shifting activities towards other sources of income. The ASIP sector performance analysis for the period 1996-2000 found that there had been a rising trend in the total area cultivated by the smallholder sub sector between 1996 and 2000 compared to the period 1990/91 to 1995/96.<sup>a</sup> In addition, the fall in the average area cultivated that had been seen between 1990/91 and 1995/96 was not only reversed but also rose to 1.47 hectares by the end of 2000.<sup>18</sup> The report argues that these indicators pointed to the fact that farmers might have begun to find ways of overcoming the labour constraints they face.

There was also some diversification away from maize, particularly for areas of Zones I and III whose agronomic conditions are not suitable for maize cultivation. Much of the gain has been with the production of small grains and tubers (sorghum, millet, cassava and sweet potatoes), which are more tolerant to droughts of Zone I and do well in the acidic soils of Zone III. For Zone I and III, the area cultivated to maize dropped from 49.9% to 37.1% and 33.9% to 24.2% respectively between 1990/91 and 1999/00. It remains very dominant in Zone II where it has only dropped from 71.1% to 66.4% over the same years.

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<sup>a</sup> From a range of: 1,160,869 and 1,327,221 hectares between 1996 and 2000 compared to the range of 777,392 and 1,131,896 for the period 1990/91 to 1995/96.

**Table 1: Crop Production Trends<sup>a</sup>**

Crop	Area Cultivated ('000ha)							Production ('000 bags)						
	1996	1997	1998	1999	2000	2001	2002	1996	1997	1998	1999	2000	2001	2002 <sup>b</sup>
Maize (90 kg)	676	649	510	598	618	584	576	15,660	10,668	7,217	9,509	11,697	8,910	6,684
Sorghum (80 kg)	48	45	36	37	37	43	30	396	341	282	283	298	336	210
Paddy rice (80 kg)	10	12	9	16	11	14	13	166	156	80	184	110	155	146
Millet (90 kg)	77	86	90	96	61	70	66	610	679	692	774	476	521	418
Sunflower (50 kg)	48	21	16	13	13	37	21	524	149	140	135	141	380	187
Groundnuts (80 kg)	90	127	155	141	141	137	130	434	573	712	637	637	650	518
Soybeans (90 kg)	25	17	12	12	12	17	4	445	326	137	297	297	315	26
Mixed beans (90 kg)	43	42	35	40	40	51	37	265	155	155	193	193	237	185
Cotton (ton)	66	-	-	106	37*	57		41		110	140	27	49	4747
Burley Tobacco (ton)	2	-	-	6				2			6			44
Virginia Tobacco (tons)	2			2				19			21			0.3
Irrigated wheat	10	11	11	10				640	787	710	769			
Cassava			117	138		309	348			817	969	1,352	815	850

Source: Ministry of Agriculture and Co-operatives; Ministry of Finance and National Planning

<sup>a</sup> Some discrepancies noted between MACO and MoF published statistics. Also variations depending on whether medium-scale and commercial farmers are included.

<sup>b</sup> Crop forecasting survey 2001-2002 Final Report

**Responses: shifts in cropping patterns?**

FSRP has undertaken analysis of cropping patterns between 1990 and 1999. They concluded that despite the decrease in area planted to maize the mean value of crop production has remained fairly constant, but with substantial fluctuations from one year to the next.<sup>19</sup> Alongside maize, over the period 1990 to 1999 the areas to soybeans and sunflower had also seen a decline. These crops have been partially substituted by increases in area to cotton, groundnuts, cassava, and sweet potato.

One conclusion that this data suggests is that Zambian farmers have made a considerable diversification away from maize in the past decade most likely in response to the decline in heavy subsidies on maize production and marketing in the 1990s. In the 1980s maize accounted for roughly 70% of total cropped area. From 1995-2000 this area has declined to about 55%.<sup>a</sup> The largest decline in maize area has been in Northern Province, which has simultaneously experienced a large increase in cassava production. Cotton area has gone up by 145%, with production increasing at an annual rate of 7.3%.

At the provincial level the following trends are indicated:<sup>19</sup> Provinces on the line of rail and near urban consumption centres (Copperbelt, Lusaka) the area under maize is generally on the rise (except for Lusaka) with production rising as well except 1997/98. For Lusaka province this may indicate increasing productivity. Generally, the increase in maize production is a reaction to liberalisation of the market that gives incentive to low value high bulk crops near consumption centres. In the Copperbelt sweet potatoes are also on the rise, whereas Lusaka Province shows cotton and groundnuts as increasing.

In Central Province, while area under maize appears to have remained stable, production has decreased, suggesting a decline in productivity. Overall it appears that the effect of the decrease in maize production has not been matched by increases in other crops.

In Eastern Province, the rise in the value of total production is attributed to a rise in cotton production through out-growers schemes. The area under cotton increased by 109% from 1992/3 to 1997/8. Maize area stayed the same, but production levels have dropped. Groundnut production is also making a resurgence.

Luapula and Northern provinces show a decline in area and production of maize, with a decline in productivity in evidence as well. In both provinces, area under cassava has increased by more than 100%, and although production has shown a corresponding increase in Northern this is not the same in Luapula. All other crops have shown a general increase in area and production apart from mixed beans. In Luapula, sorghum area and production have gone up. In North-western Province the area under maize has been steadily decreasing, and production has also dropped. There has also been a general decline in the area and production of all other crops apart from sorghum and sweet potatoes.

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<sup>a</sup> However PHS derived trends (small-holder) show that at national level area under maize has increased marginally (5%) over the six year period, but downward trend in production -2.2% annually Needs to be verified which figures are used CFS or PHS, and whether commercial sector is included.

For Southern Province the upward trend in the value of production has been largely due to a rise in cotton production. Maize production has been on the increase apart from 1997 and 1998<sup>a</sup>. Areas under cotton and production have increased by 180% and 400% respectively. Groundnut area and production have gone up. There is no discernable trend in sweet potatoes. Area and production of millet and sorghum have been on decline.<sup>b</sup> A similar trend can be seen in Western Province with increases in area and production of maize apart from a decline in 1997/8. Cotton and millet production have been going up.

**Responses: trends in the livestock economy?**

**Table 2: Livestock Statistics**

	<b>CATTLE</b>	<b>SHEEP</b>	<b>GOATS</b>	<b>PIGS</b>
<b>1996</b>	5,447,692	151,625	1,613,446	628,774
<b>1997</b>	2,700,516	84,284	722,072	317,929
<b>1998</b>	2,747,176	67,341	89,1374	310,845
<b>1999</b>	2,904,880	72,083	953,757	343,196

Source: Agricultural Statistics Bulletin, MAFF

Table 2 provides an overview of livestock numbers for the country between 1996 and 1999. Southern Province accounts for a around a quarter of the total cattle population. A brief review of agricultural statistics for the 1990s indicates that in 1990-92<sup>20</sup> the total cattle population was reported at 1,797,697 for Southern Province. In 1996<sup>21</sup> this was reported at 1,487,299, reaching a low of 742,697 in 1997 and then rising slightly to 797,636 head in 1999.<sup>c</sup> The situation in Southern Province appears to reflect the national trends as shown in the above table. If the data are reliable it shows a reduction in cattle numbers during the 1990s with perhaps a reversal of the trend in 1999. Anecdotal reports indicate that cattle have continued to be affected by Corridor Disease, but this needs to be checked through official statistics and other means.

The reduction in cattle holdings is reported to have affected draught power capacity. Communities started to adopt conservation farming practices in 1995, through demonstration and extension activities from agencies such as the CFU, CLUSA and Care International.<sup>d</sup>

**Responses: the fishing economy**

The fish sub-sector contributes significantly to the agricultural sector in Zambia. It is estimated that more than 300,000 rural households in Zambia earn part of their income from fishery related activities, contributing about 3% of GDP. The main sources of fish are capture fisheries and aquaculture with capture fishery being predominant.

<sup>a</sup> This decrease in production may reflect impact of floods.

<sup>b</sup> Contradicts anecdotal reports, but may reflect impact of SACU regulations with respect to importation of sorghum to Botswana for the brewing industry.

<sup>c</sup> The data needs more investigation and verification: the agricultural census was done in 1990/2 i.e. drought affected years, but the holdings are very high; all provinces and all species appear to have experienced this massive drop between 1996 and 1997 which could be explained by Corridor Disease for cattle but cannot explain the drop for the other species.

<sup>d</sup> FAO study on CF in progress

The abundant water resources in terms of lakes, rivers and swamps provide great potential for the development of fisheries in Zambia including fish farming. However, this potential is yet to be realised. Fish catches have remained static at between 60,000 and 70,000 metric tonnes per annum over the past five years while national demand is estimated at 100,000 metric tonnes. Per capita fish consumption has fallen due to declining yield in capture fisheries, which have been attributed to unsustainable fishing practices and increasing human population. The performance of the fishery sector is also constrained by lack of improved fishing technologies, poor access to credit, poor storage facilities, poor processing, post-harvest losses and unreliable transport.<sup>22</sup>

**Table3: Fish Production: 1996-2000**

Year	Production
1996	66,332
1997	65,923
1998	69,938
1999	67,327
2000	62,076

Source: Ministry of Agriculture and Cooperatives

**Responses: diversification of income sources, and non-farm activities?**

While agricultural activities remained the dominant livelihood strategy, anecdotal reports indicate that households were and are diversifying their income sources and intensifying utilisation of their natural resource base. Examples are fishing, rearing of small-stock, vegetable production<sup>a</sup>, informal sector activities, petty trading. Alternative informal income generating activities tend to be short term, seasonal and with low rewards. The increased exploitation of natural resources (charcoal production, wild animals, timber, craft materials and wild foods) led to increasing concern within communities and among external actors as to what role local groups should have to ensure the sustainable utilisation of these resources. However, the considerable tax revenues and political patronage obtained through the allocation of user rights over natural resources, in particular timber and wildlife concessions complicated this.

**Responses: trade-offs in skills, knowledge and education**

In the context of limited macro economic growth, and the retraction of public services in the rural areas, families had to make decisions about the allocation of household resources. These decisions involved trade-offs between short-term needs and long-term investments, and balancing the possible benefits of the modern economy with the security of cultural identity and values.

The value of education is broadly acknowledged, but the imperative to provide for the basic needs in life often outweighs the longer-term potential of investment in education. The success of certain livelihood activities at household level or the natural resource endowment of a community may influence whether children ever attend school. For example flooding and poor organisational capacity to maintain drainage channels leads to reduced harvests, incomes and the inability to send children to school.

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<sup>a</sup> Anecdotal reports that HIV/AIDS affected households are engaging more in vegetable production, due to smaller areas to manage (but more intensive) and gardens closer to the homestead.

The well being of a child's household impacts significantly on the ability to attend school.<sup>13</sup> Wealth ranking exercises showed that the ability to pay for education is a defining attribute of household categorisation. Children from the poorest households are seen as unlikely to progress beyond Grade 4. For the very poorest, access to education may depend on the flexibility of the local school in accepting staged payments or may not be possible at all. The leniency that school authorities have shown towards tolerating late fee payers seems to have decreased during the 1990s. In the poorest households the ability to receive education is a luxury that is likely to be subsumed by the need to eat.

During the 1990s there was a growing perception that the quality of education was deteriorating. Parents valued the education service if it taught the children to read, write and calculate basic mathematics and where the vocational skills necessary to earn and income were imparted. The standard of education was seen to be affected by: the ratio of untrained to trained teachers, and lack of teaching material. The education sector has been one of the most severely affected by HIV/AIDS, with a high proportion of college graduates dying every year.<sup>a</sup> The decline in the number of workers has led to a rise in the teacher-pupil ratio, and thus has reduced sector efficiency. Given the high population growth rate and the attendant broad population pyramid, deteriorating teacher-pupil ratios have been noted of concern.<sup>23</sup>

Cost was and continues to be the major constraint on access to education. Contributions to the cost of education increased dramatically in the early 1990s and particularly in 1994. The cost of keeping one child in primary school was K10, 000 equal to 17 days piecework. Cash was needed for uniforms, contributions to standing funds, transport, and bribes in order to obtain a place in school. The majority of the charges (fees and uniforms) fall at the same time of year January, when there is lower food security and increased medical costs. Rules regarding uniforms were suspended in rural areas during President Chiluba's Third Republic. However, the shame of not having a uniform was a disincentive to attending school, even where the rule was lapsed.

The most common coping strategy was to withdraw children from school, or move the child to a cheaper school, or from an urban to rural school.<sup>b</sup> Financial support could be obtained from the extended family. Close and distant relatives were more likely to support education costs than medical costs although the support might not be sustained. The necessity for children particularly from poorer households to undertake agricultural and household tasks disrupted schooling and knowledge attainment. Activities included herding cattle, fishing, gathering wild food, scaring away birds and vending at markets. Absenteeism was reported to increase at harvest time. Pupils were also used for productive tasks on teachers' own fields. While the use of child labour interferes with studies, if children did not work, the impact on their well-being could be more significant, and the implications had to be balanced within the household.

The rising costs of education increased the numbers of children who were not able to complete school or who dropped out. Declining economic conditions mean that future potential was more likely to be sacrificed to the necessities for life in the present, particularly for the most vulnerable households. The issue of cost had most impact on poor households that in turn had potentially the most to benefit from access to education in order to increase future well-being. Economising

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<sup>a</sup> The Ministry of Education responded to this situation by reducing the length of the teacher training course.

<sup>b</sup> This had a knock on effect, with fewer places in rural schools available to poor rural households

at household level meant that orphans were more likely to be taken from school than other children.

One of the non-cost constraints to access to education is distance. The distance to school is perceived to impact on younger children and girls. Children may be enrolled at an older age when they are physically capable of making the daily journey. Parents are concerned of the risks of physical molestation of girls on the journey to and from school. Seasonal weather conditions may also cut off access to school for some villages.

The perceived benefits of formal schooling in an economy where the formal employment sector was in decline were traded against the value of maintaining a strong cultural identity. In cattle owning groups, male children may be given cattle in exchange for herding, and in order to build their own herd. This can act as a disincentive to attend school because the role model of a successful adult does not necessitate the type of knowledge that is imparted during formal education. In some areas this has led to the reaffirmation of “traditional” ceremonies and practices that provide social and cultural bonds and economic support that the “modern” economy or state cannot. Male initiation rites that may last up to two months are seen as vital in forming a cultural and personal identity. The adult identity and networks around these ceremonies may be valued above a formal education, especially when employment opportunities were seen to be dropping. Girls were also secluded for puberty rites, where cultural values around the role of wife and mother are emphasised rather than educational goals. Bride-wealth can also influence decisions as to whether or not to invest in a girl’s education. Responsibility for educational costs has different implications in matrilineal and patrilineal systems. Where the children are considered belonging to the mother’s family, the burden of school costs will more likely fall upon the mother.<sup>13</sup>

Parent Teacher Associations (PTAs) are not seen as dynamic as Neighbourhood Health Committees, which have received programmatic support and development.<sup>a</sup> PTAs were seen as effective in organising community support for the school rather than in translating parents’ complaints into pragmatic actions. The difference in social status between teachers and parents was seen as a constraint to parents using PTAs to improve the quality of education.<sup>13</sup>

### **Responses: counting the cost of health**

The health reforms aimed to promote and contribute to an increased sense of ownership and responsibility by the community for health services and care in the neighbourhood to improve their own health status. The principle mechanism for this sense of ownership and responsibility was to be the village health committee, Neighbourhood Health Committees or Neighbourhood Committees, (NCs). Many of the impacts of the reforms to the health sector increased the importance of linkages between users of the service and providers.

The major strength of effective NCs lay in their ability to work through, or at least co-exist with, traditional social structures. Some NCs have undertaken health education that makes use of existing cultural knowledge systems. Issues of particular relevance to women are discussed through “bachimbusas” (female instructress at puberty and marriage ceremonies, and men are targeted through the “insaka” (meeting place). Health issues that can be discussed in this way include most of the major education aspects of a decentralised programme: e.g. family planning,

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<sup>a</sup> However there are differences between urban and rural schools in terms of the effectiveness of PTAs.



sexual behaviour, and reducing malnutrition through supplementary food sources. Beneficiary Assessments (BAs) seemed to indicate optimism about these structures in the mid 1990s, but their presence and activities started to decline in the late 1990s.<sup>13</sup>

User fees have been viewed both positively and negatively. People saw positive changes in health centres: improved cleanliness and improved drug situation. On the other hand for some, the fees were too high and consequently people did not attend health facilities. BA studies point to a wide range of difficulties with the implementation of this cost sharing policy, particularly with regard to methods of payment.<sup>13</sup>

Since the introduction of user charges, drug supplies improved in some areas and deteriorated in others, even though people paid fees at the time of registration. In some institutions a percentage of the user fee was channelled into staff benefits that raised moral. User fees were also thought to have reduced congestion in facilities "as the poor no longer go to hospital". People were also concerned about the quality of service provision, for example: the behaviour and attitude of staff, particularly to patients who are poorly dressed or perceived as being poor.

The cost and distance to health facilities could lead to delays in seeking medical treatment. Another factor that affected health seeking behaviour was the type of disease. For example: home remedies were the first recourse for STDs; TB warranted an immediate visit to the clinic; and malaria and headaches could be treated through the purchase of drugs from local shops. BAs showed that the majority of patients went to other sources of health care (other than Government Clinics) through a combination of cost, lack of drugs and staff attitude.

Family support during illness was perceived as crucial to the continued survival of the household. This support might have been in the form of interest free cash loans, or of the preparation of home remedies. Several BA focus groups suggested that levels of inter-household cooperation had decreased due to economic pressures and this was likely to impact on the poorest households to the greatest degree. Conversely, several respondents perceived that it was better to lend money to neighbours than relatives because neighbours repay more readily, although only small amounts would be distributed in this way (up to K1,000 at 1994 prices). While the Churches did provide assistance for illness, this was likely only to be extended to church-going community members. Many households were left with little alternative but to borrow money from moneylenders, which may be at the rate of 50-100% per month.

#### **Responses: HIV/AIDS at the household level**

Through the 1990s various household level studies were undertaken in order to understand the impact of HIV/AIDS and coping strategies used at the household level. These can be summarised as follows:<sup>24</sup>

- **Farm labour related impacts** shortage and reduction in family labour especially for small-scale households. This leads to low labour productivity as a result of death of some household members. Family members also often divert time to care for the sick. Other labour related impacts are manifest in delayed implementation of crop production activities such as planting and weeding. Households respond by: lengthening the workday by 2 or 4 hours in order to compensate for the lost labour. Children are recruited to make up for labour losses at household level and usually made to work for long hours to assist single parents.

- **Food security and nutrition related impacts:** manifested in hunger and deteriorating nutritional well-being especially among children due to diminishing quantity and quality of available food.
- **Loss of household income or assets related impacts:** due to a reduction or loss of income households resort to the sale of household assets (farm equipment, household goods) in order to raise money to meet HIV/AIDS related expenditure. Household asset stripping is another negative HIV/AIDS impact mostly affecting children and women. When husbands die many women and children find themselves dispossessed of their home and land since the rights to certain assets are often vested in men.
- **Farm management related impacts:** manifested in delayed planting/cultivation due to long illnesses and funerals; reduction in area cultivated and reduction in ability to control pests and diseases and declining/poor yields. There is also increased vulnerability from HIV/AIDS impacts in farming systems with pointed labour peaks in the year and by marked gender division of labour. There may also be a loss of agricultural knowledge and skills following the death of members in a particular household. Households respond by the adoption of low external input farming systems (e.g. use of animal manure and biological extracts for pesticides) and shifts from labour intensive cropping systems to less labour intensive food crops such as cassava and sweet potatoes. Affected households normally shift from crop diversification to mono cropping due to loss of labour force through illness or death. Such households also tended to concentrate on small livestock rearing such as goats and free-range poultry.
- **Gender and youth related impacts:** as a result of death of male spouses, women and the rural youth usually assume the roles previously undertaken by spouses/parents. This gives rise to growing incidences of female/child headed households who are over burdened with additional tasks of supporting children or fellow siblings. In child-headed households, children tend to receive inadequate care upon the death of their parents. As orphans, they are left unattended to with poorly and hastily prepared meals. As a result of HIV/AIDS, there are an increasing number of youths getting involved in agricultural production despite the existing inequalities in the allocation and distribution of resources. One coping strategy is that women are more likely than men to be driven into destitution, as a result women and/or children may be driven to survival sex or resort to commercial sex work for financial gain on a more frequent basis. In rural settings, young girls are forced into early marriages by their foster parents or guardians.

#### **Community and household level outcomes in the 1990s: energy value of crop production**

FSRP<sup>19</sup> has also analysed trends in energy levels from food crops in rural areas<sup>a</sup>. At a national level, rural per capita energy from food crops produced by small holders appears to have remained stable and may even have exhibited a moderately increasing trend over the 1990s. FSRP argues that this would suggest that overall smallholder food production has increasingly had the potential to contribute positively towards achieving household food security among rural

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<sup>a</sup> This is based on PHS data (which excludes commercial/large scale farmers)

households. However, given that a proportion of food produce is marketed and not necessarily retained within rural areas, it is difficult to draw any further conclusions as to the actual utilisation of the available calorific energy by rural versus urban consumers. Cash crop production (seed cotton, burley tobacco) also contributes to rural households' purchasing power.

Provincial variations in the 1990s as highlighted in FSRP analysis are as follows: Central, Eastern and Southern provinces, exhibited relatively high per capita levels of energy production with high peaks, confirming substantial food surpluses and distinct production peaks. Copperbelt and Lusaka provinces showed similar patterns, although Lusaka at a lower level, confirming that less food surplus is produced among smallholders in that province.

Western and North Western provinces showed per capita energy production levels that remained remarkably constant over the last decade. Per capita energy levels were low as compared to other provinces, which would seem to underline the importance of other agricultural and livelihood activities, such as livestock rearing and non-agricultural activities (e.g. fishing).

Northern and Luapula provinces showed increasing levels of energy production, indicating a relatively high dependence on local food crop production and a seemingly high adaptability to maintain and increase household food security following the withdrawal of market support mechanisms.

FSRP argues that in the 1990s there was a process of on-going crop diversification, whereby maize was being substituted by the production of other cash and food crops. At a national level, the importance of maize exhibited a strongly declining trend when taken as a proportion of energy produced from food crops. Cassava and sweet potatoes increasingly supplied the necessary energy along with increasing amounts of groundnuts and grains other than maize. Overall, small holders in rural areas seemed to have returned to more traditional diversified cropping and consumption patterns which were in place before the widespread introduction of maize.<sup>a</sup>

Cassava based systems have a steady and secure supply of food. In recent years, Luapula and Northern provinces appeared to gain in terms of per capita energy production. However, with the decrease in maize production in these cassava -based systems, the trend is for a decrease in diversification, which may have nutritional implications in particular for young children.

### **Community and household level outcomes in the 1990s: trends in poverty levels, food expenditure and asset levels**

Table 3 shows that the percentage of people living in poverty<sup>b</sup> increased from 70% of the population in 1991 to about 74% in 1993, decreased to 69% in 1996 and then rose again to 73% in 1998<sup>25</sup>. This shows that between 1991 and 1998 there was an increase in overall poverty and a very marginal decline in extreme poverty.<sup>26</sup>

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<sup>a</sup> More investigation is needed to understand how much this trend is in response to the impact of the removal of maize subsidies, vis a vis the impact of HIV/AIDS on farm management decisions.

<sup>b</sup> The CSO determines the poverty line as the amount of monthly income required to purchase basic food to meet the minimum caloric requirement for a family of six. The "food basket" used to arrive at the poverty line is very modest and based on a minimum calorie requirement. The Zambian measurement has also not fully factored in needs of shelter, education, health care, lighting, clothing, footwear and transport. Freedoms to exercise choice and participate in society are not incorporated into the definition.

**Table 3: Overall and Extreme Poverty in Zambia, in rural and urban areas 1991 –1998**

Year	Zambia		Rural		Urban	
	Overall poverty	Extreme poverty	Overall poverty	Extreme poverty	Overall poverty	Extreme poverty
1991	69.7	58.2	88.0	80.6	48.6	32.3
1993	73.8	60.6	92.2	83.5	44.9	24.4
1996	69.2	53.2	82.8	68.4	46.0	27.3
1998	72.9	57.9	83.1	70.9	56.0	36.2

Source: CSO Living Conditions in Zambia 1998; the evolution of poverty in Zambia 1990- 1996

Over this period, in the rural areas, there was a decline in both overall and extreme poverty, but in the urban areas there was an increase. Although rural-urban differences persisted with overall and extreme poverty being higher in the rural areas, the disparity narrowed between 1991 and 1998. This was on account of the growth in urban poverty exceeding the reduction in rural poverty. Small-scale farmers continued to be among the poorest groups in Zambia. As a group, their level of poverty remained unchanged between 1996 and 1998 at around 84%. In comparison the incidence in poverty among large-scale farmers reduced from 34.9 to 15.6. This indicates increasing differentiation within the agricultural sector and perhaps explains the apparent reduction in overall rural poverty.

The provinces where there was the greatest density of poverty were: Western, Luapula, Northern, North Eastern and Eastern provinces. In Luapula and Western Provinces total poverty increased from 73% to 82% and 85% to 89% respectively.<sup>a</sup> Total poverty among the rural population decreased in: Eastern, Northern, North-Western and Southern Provinces. However the greatest concentrations of poor people were in Copperbelt, Lusaka, Eastern and Southern provinces. Household size and gender are directly related to poverty.

In Priority Survey II in 1993, the expenditure share on food was 75% for rural areas compared to 66% in urban areas.<sup>b</sup> The 1998 Living Conditions Survey found that the proportion of expenditure towards food from total expenditure is 72% in rural areas and 48% in urban areas. This would appear to indicate a decrease in the proportion of total expenditures spent on food. Households in rural areas depend to a large extent on own produced food. This amounted to 43% of total expenditure compared to only 3% for urban households.<sup>27</sup>

Reviewing trends in asset ownership across the Priority Surveys (1991, 1993) and the Living Conditions Survey (1988) there was an increase in the proportion of households owning key assets such as radios, bicycles and ploughs.<sup>c</sup>

<sup>a</sup> Poverty among the rural population in Luapula increased from 80% to 86% and from 81% to 89% among the rural population in Western Province.

<sup>b</sup> In PS II Data on consumption of own produce was collected

<sup>c</sup> Over the period 1991-1998: ownership of radios has increased in rural areas from 23% to 37% (Urban: 61% to 69%); Ownership of bicycles increased from 22% to 37% (Urban 12% to 23%, in 1993 an 21% in 1998); 17% of rural households owned a plough in 1991 compared to 20% in 1993 but reduced again to 17% in 1998.

### **Community and household level outcomes in the 1990s: demographic trends**

The preliminary results from the 2000 Census of Population and Housing<sup>28</sup> indicate that the rate of urbanisation is decreasing. While in 1980, 40% of the population were classified as urban, in 2000 this had decreased to 36%. In-migration to the Copperbelt, Lusaka and Southern Provinces decreased, perhaps reflecting a reduction in the availability of formal employment. In-migration to the rural areas has increased. This may reflect retirees or retrenched workers re-settling in rural areas or perhaps PLWHA or HIV/AIDS related orphans returning to rural based relatives.

Total fertility reduced from 7.2 in 1980 to 6.0 in 2000. The drop in fertility was much greater in urban areas (7.6 to 4.9) than in rural areas (7.2 to 6.7). Eastern, Luapula, Northern and Western provinces had the highest fertility rates of above 7.0. Over the same period the population growth rate decreased from 3.1% to 2.3%. Between 1990 and 2000 there was a decline in the Infant Mortality Rate, however this was a knock on effect of the reduction in fertility and the 2000 level is still above the 1980 level.<sup>28</sup> Between 1990 and 2000, the under-five mortality rate increased in the rural areas (in particular in Luapula, Northern and Western provinces) but decreased in the urban areas.

### **Outcomes: morbidity and nutrition trends**

Between 1992 and 1996 the Demographic and Health Surveys found that morbidity levels did not change: 13%, 40-44% and 23% of children under 5 years of age were reported with acute respiratory infection, fever, and diarrhoea respectively in the two weeks preceding the survey. Over the period 1991 –1998 while still inadequate, the proportion of both rural and urban households with access to clean and safe water increased from 30% to 37% and 80% to 89% respectively.<sup>27</sup>

Demographic and Health Surveys conducted in 1992 and 1996 found the prevalence of stunting to be 40% and 42% respectively. Stunting in rural areas was around 46-48%, higher than the 33% found in urban areas. Luapula, Northern, Eastern provinces recorded the highest levels of stunting. Stunting was also more prevalent among children whose mothers had received no education. Wasting was found to be around 4-5% and undernutrition between 23-25%. These findings would appear to indicate a reduction in stunting compared to the 1990 nutrition module conducted as part of the Crop Forecasting Survey, and ad hoc provincial level surveys. However, while the prevalence of stunting was remarkably different between these surveys the prevalence of wasting and undernutrition were very similar. The timing of the surveys needs to be considered here, e.g. the 1990 survey was conducted in January/December the peak of the “hungry period” compared to between July and January for the 1996 DHS.<sup>a</sup> The sample sizes were also different with 1,200 households being surveyed in 1990 and 7,286 included in the 1996 DHS.

### **Determinants of malnutrition**

**Socio-economic:** The various priority surveys and living conditions studies have shown that children are less likely to be chronically malnourished if: their parents have migrated to their current place of residence; if their parents have attended school; if their mothers can read a newspaper, listen to the radio, or are not farmers. Indicators that reflect higher social status are associated with better nutrition. There is an inverse relationship between the incidence of stunting, underweight and wasting and both household income and educational level of the

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<sup>a</sup> However, higher wasting rather than stunting would be expected in the rainy/hungry season.

mother, i.e. the higher the household income the lower the malnutrition. No clear differences have been found in malnutrition levels between boys and girls.

**Feeding practices:** Demographic and Health Surveys have investigated breast-feeding and complementary feeding practices in children under five years. The practice of *exclusive* breastfeeding<sup>a</sup> is low, but increasing in Zambia. In 1992 only 16% of children under 2 months were fed only breast milk, by 1996 this had increased to 35%. However, as many as 77% of children 4-5 months old are receiving supplements in addition to breast milk. This implies that they are at risk of contamination and low quality feeds. Time of initiation of breast-feeding is also important with respect to whether or not the mother's colostrum<sup>b</sup> is given to the child. Luapula Province has the lowest proportion of children who were fed within one hour of birth (40.9%) compared to the national figure of around 58%.

**Maternal nutrition and low birth weight:** Low birth weight<sup>c</sup> is an indicator of poor maternal nutrition, and also increases the risk of malnutrition in later life. The 1996 DHS found that the percentage of low birth weight babies in the 5 years preceding the survey was 4.8%. Interestingly the percentage of low birth weight babies was higher in urban areas (8.0%) compared to rural areas (2.7%). This could reflect the higher proportion of births that take place in the home in rural areas, where birth weights are not available.

**Dietary patterns and habits:** The role of the staple cassava in contributing to the higher malnutrition levels is subject to debate. A study commissioned by the FAO Luapula Household Food Security and Nutrition project<sup>29</sup> and implemented by TDRC in 1997-1998 found stunting levels of 59% in the project areas in Luapula. Further analysis of this data<sup>30</sup> found considerable differences in stunting between the valley and plateau areas of Luapula Province. In the study population globally, 66% of households used cassava as staple food but there were important differences across districts: almost 90% of households in Nchelenge (valley) had a food typology based on cassava and very few families had maize as the staple food. On the contrary, only 40% of households living in Kawambwa (plateau) had cassava as the staple food and almost 25% of them used maize as the staple food.

The analysis of the anthropometric results showed that the districts on the plateau (Mwense and Kawambwa) had a stunting prevalence of 64.4% and 63.5% respectively. On the other hand, Nchelenge in the valley and close to Lake Mweru had a prevalence of 46.3%. Both children and adults had a better nutritional status in Nchelenge as compared to the other two districts. The study concluded that vulnerability seemed to be lower in Nchelenge as compared to the other two districts due to: health determinants, stability in food availability and opportunities for consuming high quality protein-containing foods (including fish, milk, eggs and meat) which were better in Nchelenge. The study concluded that a cassava-based food typology must be associated to frequent consumption of animal proteins in order to be nutritionally adequate (based on the

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<sup>a</sup> Children who are exclusively breastfed receive nothing apart from breast milk, not even plain water. The recommended exclusive breast-feeding duration is 6 months. Early supplementation is unnecessary and discouraged since the likelihood of contamination and the resulting risk of diarrhea is high. Early supplementation also reduces breast milk output since the production and release of milk is modulated by the frequency and intensity of suckling.

<sup>b</sup> Colostrum is rich in antibodies and immunoglobulins that are important in preventing infections and building future immunity.

<sup>c</sup> Defined as <2.5kg

prevalence of stunting). This seemed to be the case for households whose head's main activities was fishing, like most families in Nchelenge.

This study in Luapula shows that as in all locations, malnutrition is due to a combination of immediate and often area specific factors. These include food insecurity closely linked to livelihood strategies and socio-economic factors, the impact of infection on health, and existing care practices and knowledge, especially as they concern infants and children, women and the elderly.

### **Maternal nutrition**

In 1992, the mean body mass index for mothers was around 22. 10% of mothers were chronically energy deficient, (<18.5) (11.7% rural; 7% urban) while 20% were over nourished. Mean height of mothers was 158cm.<sup>31</sup> In 1996, 9% of mothers were found with a BMI of less than 18.5 (rural: 10.1, urban: 7.8. The mean BMI was 22, and mean height 158.<sup>32</sup>

### **Micronutrient deficiencies**

Surveys in the 1990s revealed micronutrient deficiencies of Vitamin A, iron and iodine among young children and mothers. In the 1997 National Survey on Vitamin A Deficiency in Zambia, 66% of children age 0-4 years and 22 % of women age 15-49 were found to be Vitamin A deficient. The 1998 Anaemia survey found that 39% of women, 23 % of men and 65% of children were anaemic. This study also showed that very young children have high rates of malaria parasitaemia. 35.7% under 6 months of age; 31.8% children 6-18 months. This level of malaria parasitaemia suggests that malaria could play a major role in the deterioration of nutritional status of young children and that infant growth is affected by intrauterine parasitaemia --leading to anaemia and stunting early in life. In 1993, the National Baseline Study in Iodine Deficiency Disorders identified the national prevalence rate of iodine deficiency at 32%. Iodine deficiency can lead to permanent mental impairment. Zambia passed laws in 1974 and 1994 for mandatory iodisation of salt.

### **Well-being outcomes**

For rural households the concept of a good life <sup>3</sup> is centred around farming – i.e. the perceived source of livelihood that would meet the household's basic needs and requirements. Working hard on one's own land is generally associated with facilitation of the good life. Income from other sources other than farming is also perceived to be an important add-on to the ingredients that facilitate a good life. Ability to access sufficient food and better health, safe water and educational facilities is also a measure of the good life. The community often associated the state of being poor to the physical and social condition of those affected. Laziness, being old, orphans, the chronically ill and the disabled have frequently been associated with the state of being poor. Components of a good life also include: happiness in the family and with relations and involvement in development activities in a community group.

## 7 “The New Deal” - or new deals? 2001.....

### 7.1 Meso-macro factors influencing vulnerability

Zambia reached the HIPC decision point in October 2000. Her record for meeting external debt service obligations had been consistent, with support from multi and bi-lateral donors. However, her record for debt servicing on local obligations (with the exception of the amortization of government securities) had been and continued to be poor. This had severe implications on domestic liquidity, and the financial situation of suppliers of goods and services to government.

Levy Mwanawasa took up the Presidency after the elections in December 2001. His candidacy had been on the back of Chiluba's climb-down from an attempt to run for a third presidential term. Opposition parties refuted the parliamentary and presidential election results, with an on-going petition in the courts. President Mwanawasa, a lawyer, proclaimed that he would offer the country “The New Deal” promising a rule of laws, not men. There is some instability within both the ruling MMD and opposition parties. Alliances shift almost daily in reaction to on-going revelations of past misuse of state funds and with the efforts by the President to co-opt key opposition members into ministerial positions. The current political climate is characterised by increasing openness and debate around corruption, the questioning of national development priorities and concern about past abuse of national resources.

There are also growing voices of concern over how past policies are now impacting on the environment, and affecting livelihoods and health. Examples are: water pollution (e.g. Kafue weed endangering livelihoods of fisher people, and mining dumps and tailing dams polluting water supplies), soil degradation brought about by high levels of fertiliser use, air and lead pollution in Copperbelt towns; depletion of wildlife; and deforestation through the inadequate implementation of policies.

#### **Regional dynamics, trade and the global market place**

Regional dynamics continue to play a role in the macro economic factors influencing vulnerability. Political uncertainty in Zimbabwe created a common image for the whole of the southern Africa Region and the parallel foreign exchange markets provided a strong incentive for dumping agricultural produce on the Zambian market at prices that Zambian producers could not compete with.<sup>33</sup> Manufactured goods of South African origin continue to dominate the wholesale and retail sectors not only in the major urbanised areas of Lusaka and the Copperbelt but also in the capitals of the outlying provinces such as Mansa and Mongu. This means that it is difficult for local production for example of red palm oil from Luapula Province and beef from Western Province to compete with subsidised imports.

There had been a historical orientation towards markets in southern Africa. However, with the new trade protocols there was also the potential of new markets to the north with regional neighbours in COMESA rather than South Africa and other more developed markets in the South African Customs Union (SACU). Developed countries outside Africa also offered greater opportunities for high value products, especially in the horticultural sector, whereas in southern Africa, the market had limited expansion potential.



Zambia's membership of the COMESA Free Trade area, the SADC trade protocol and AGOA, was seen to present considerable additional market opportunity in the major areas in which Zambia had its principal agricultural exports: horticulture, cotton and cotton products; coffee, sugar, tobacco, paprika. Although the total size of the SACU market compared with other regional outlets is still of considerable strategic importance, Zambia's physical location means that it is more likely to compete successfully in other COMESA markets like the DRC, Malawi and Tanzania. The DRC has the advantage of proximity to farming areas. Eastern Province could also strengthen markets to Malawi. These non-SACU markets have lower grades and standards specifications.<sup>33</sup>

There was a strong belief that if the opportunities in these areas could be grasped and if the barriers to trade and investment could be overcome this would be where the greatest impact could be achieved in terms of export growth, job creation and income generation.

Some of the barriers or constraints to attract new investment and achieve major growth in the export agriculture sector have been: high transportation costs due to the landlocked nature of the country, low value to weight ratios, limited production capacities and problems with disease control. Other key blockage points in the commodity value chain that inhibited growth and investment were: access to affordable finance, poor credit recovery on input loans to smallholder farmers, limited market access, failure to take advantage of new tariff incentives, and low domestic quality standards. Poor infrastructure and macro-economic uncertainty also continued to remain factors in inhibiting new investment. High inflation, erratic exchange rate movements, steep interest charges and high import duties on fuel and other essential inputs make investment planning difficult. Niche products (mushrooms, sun-dried tomatoes, crocodile skins, castor beans and flower seeds<sup>a</sup>) offered good opportunities but could not match the potential for broad development in other more established areas of agriculture such as groundnuts and cotton. Increased production (in particular for niche market products) is needed to attract new investment to be able to take advantage of economies of scale. Currently, cotton production is below processing capacity and horticultural production is below the cold storage capacity.

There has also been an increasing understanding of how global dynamics is affecting the ability of Zambian farmers to take advantage of market liberalisation. Farmers in the US and EU receive substantial subsidies particularly during times of depressed international prices. The net result of this is that farmers in these developed country markets are sheltered from free market signals that would result in reduced production and enhanced competitiveness for countries like Zambia. The continuation of this system means that the impact of oversupply is magnified on the farmers in developing countries.

#### **HIV/AIDS**

The 2000/2001 DHS<sup>52</sup> reported that 16% of the individuals tested were found to be HIV-positive. The survey found that women are more likely to be HIV-positive than men (18 percent versus 13 percent). Among all individuals tested, the proportion of HIV-positive rises with age from a level of 5% among 15-19 year olds to 25% in the 30-34 years age group, before falling to a level of 17% among those aged 45-59 years. The report noted that as observed in the analysis of the prevalence of syphilis, there are distinct differences between women and men in the age pattern

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<sup>a</sup> Zambia's regional monopoly of trade to the EU in certified organic honey is a notable exception.

of HIV infection. Among women, the proportion found to be HIV-positive rises extremely rapidly with age, from 7% among the 15-19 years cohort to 29% in the in the 30-34 year age group and then drops off to 14% in the 45-49 year cohort. Among men, HIV prevalence is below 5% among those under age 25 years rises to 15% in the 25-29 year age group, peaks at 22% in the 35-39 year age group and stays around 20% in the 40-49 year age group.

HIV prevalence is more than twice as high in urban areas as in rural areas (23% and 11%, respectively). Provinces with levels at or above the national average include Lusaka, Copperbelt, Southern and Central. The lowest levels are found in Northern and North-Western.

## **7.2 Government, donor and NGO responses to changing vulnerability**

The on-going inconsistencies in policy implementation continued from the 1990s into the next decade. The atmosphere reflected political needs and uncertainty, overlaid by the continuing changes and debate over the role of the state/ government in a liberalised market economy.

This policy environment has been categorised as follows:<sup>34</sup>

- Policy dualism: policy declarations are made (in response to donor conditionality, for example) which government has little intention of adhering to.
- Constrained policy intent: sincere policy declarations are constrained either by the budget processes described above, or by unforeseen political circumstances.
- Reactive policy: not to be planned in the best interests of, for example, pro-poor growth, but are reactions to particular crises or, more rarely, opportunities.

An illustration of this policy landscape can be seen in the preparation and the early implementation of the Poverty Reduction Strategy Paper between 2000 and 2002. The PRSP was developed through a process that seemed to open up an increased space for dialogue between civil society actors and representatives of the GRZ. The coalition of Civil Society for Poverty Reduction served as a focal point for increased cooperation and organisation, and the strengthened consensus was considered to have a high impact on the PRSP process and document.<sup>35</sup>

The overall objective of the PRSP is "Poverty Reduction and Economic Growth" and it sets the target to reduce poverty to 50 percent of the population by the year 2004. The PRSP focuses on improving macro-economic management and promotion of growth through investments in the agriculture, manufacturing, mining and tourism sectors to create employment. The PRSP also enhances support to social sectors in education, primary health and sanitation, and strives to integrate cross cutting issues of HIV/AIDS, gender and environmental management in development. The PRSP forms the core guide for development programmes in Zambia for the period 2002-2004.

Within the PRSP, agricultural interventions include the establishment of support system(s) for vulnerable households. One of these is the food security pack that was launched in 2001/2 agricultural season. This was an attempt by the Government to address the recurring problem of poverty through targeting vulnerable but potentially viable farmers by providing them with a pack comprising seed and fertiliser.<sup>36</sup> The overall objective of the Food Security Pack Programme was to improve crop productivity and household food security thereby contributing to the reduction of

poverty among targeted beneficiaries. The programme implemented by the Programme Against Malnutrition targets 200,000 farmers in all the 73 agricultural districts for a three year period.

While the preparation of the PRSP has been presented as a consultative process, broader segments of Zambian society had limited participation. Only the professional and organised segments of civil society were involved in the coalition and there was not active involvement from political parties and representatives of the Cabinet and Parliament. The preparation and ratification of the PRSP was also delayed through donor conditionality, electoral campaigns, and the "Third term debate". The 2002 Budget did not respond to the priorities of the whole PRSP process. Poverty reduction activities were narrowly described and there was considerable difference between budgets and disbursements.

### **The push for increased commercialisation of agriculture**

In spite of the far-reaching policy and institutional reforms introduced between 1990 and 2000, the level of growth and development in the agricultural sector had not been impressive. Between 1995 and 2002, the agriculture sector's contribution to GDP first stagnated and then fell progressively from 18.4% in 1995 to 15.0% in 2002. Lessons were being drawn from the Agricultural Sector Programme (ASIP) of the mid 1990s. Positive trends from the ASIP period were noted as: increased total and per household area under cultivation, signs of increasing diversification, uptake of conservation farming; and a rise in the contribution of non-traditional exports (NTEs)<sup>a</sup> to agriculture earnings<sup>b</sup>. However, overall, the agricultural sector had not met expectations in terms of its contribution to macro economic performance. Reviews also underlined the failure of ASIP to address poverty, household food security and nutrition issues, in part through the absence of a comprehensive livelihood approach to agricultural development. The typology of the policy environment described above had combined to contribute to the overall negative performance of ASIP. The key constraints for the implementation of ASIP were identified as follows:

- Macro-economic instabilities: high interest rates, high inflation, decreasing purchasing power and volatile exchange rates led to limited liquidity and inadequate credit facilities. Long-term investment was abandoned in preference for short term trading opportunities.
- Unfavourable weather conditions: drought and floods limited capacity to grow food and generate surplus. There was low investment in irrigation infrastructure to mitigate the effects of drought.
- Poor infrastructure, liberalisation policies, and various trade agreements exposed local produce to tough competition from imports.
- Private sector activities were limited to the line-of-rail, where there were an increasing number of out-grower schemes. Farmers in outlying areas were offered low prices for produce while inputs were sold at high prices.
- Increasing outbreaks of livestock disease that reflected the impact of earlier policies that withdrew government support from the livestock sector.
- The contraction in the civil service, staff demoralisation and inadequate funding for the remaining core functions led to a decline in access to agro services.

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<sup>a</sup> Agriculture's share of non-traditional exports rose from 21.9% in 1990 to 46.4% in 1999 before declining to 38.4% in 2000.

<sup>b</sup> See page 26 for overview of performance

- Low budget allocation and the impact of the cash budget resulted in inadequate funding to ASIP.

MAFF had also been constrained in the extent to which it could respond to macro-level policies due to weaknesses in the policy formulation structures such that ASIP had operated without a Cabinet approved agricultural policy. The agricultural sector ministerial portfolio had changed seven times since 1992 and each minister wanted to review the draft policy and make changes to it.<sup>18</sup> Disillusionment set in with bilateral donors in particular, leading to a higher number of “projects” at the end of the ASIP period compared to before.<sup>37</sup>

The beginning of the decade witnessed the continued debate over whether the route to macro economic growth lay through the agriculture sector, and the conditions that would be necessary for Zambia’s agricultural potential to be realised. Key themes were around the most appropriate route to increased commercialisation, the relationships between the small-holder sector and the commercial sector, resource use efficiency, the transformation of the Food Reserve Agency to the Crop Marketing Authority and the extent to which the risk of drought and pro-poor approaches were being factored into agricultural strategies.

Post-ASIP, the Agriculture Commercialisation Programme (ACP) 2002-2005<sup>38</sup> is considered as the vehicle for implementing the National Agricultural Policy 2001-2010 (draft) and the Poverty Reduction Strategy Paper (PRSP). The main interventions of the ACP<sup>a</sup> are centered around: agri-business promotion and training; finance and investment; land development and support services; infrastructure development; technology development and transfer and improved coordination of agricultural policy and institutional capacity. The ACP promotes increased adoption of out-growers schemes, and the re-introduction of farm blocks for large-scale farming. It also supports the concept of growth triangles such as proposed for the eastern and northern parts of Zambia, in order to reorient the production in remote areas towards the satisfaction of export markets, particularly in view of the already significant cross-border trading currently going on.

The success of the out grower schemes (in contributing to agricultural exports) in the mid to late 1990s has increased their popularity as a strategy to address problems related to provision of inputs, bulking commodities, both on a local and regional basis for improved marketing opportunities, and quality control. Under the out grower schemes, farmers are typically provided with seed, chemicals, extension support and marketing services. There is considerable risk to the programme operation due to the potential for side buying by other agents. Proponents argue for the need to develop group rather than individual liability, and that the legal context must be clear and transparent. In cotton out-grower schemes, the trust between smallholder producer and ginner was severely damaged by the inability of the ginner to forecast crop selling prices and the producer’s difficulties in understanding the input costs and inherent debt. Out-growers’ schemes could be complemented by investments in value added processing, (e.g. grinding for paprika, cotton processing, freezing or dehydration of vegetables, oilseed and essential oil processing.)

At the *macro*-level, the ACP policy is likely to increase the contribution of the agricultural sector to foreign exchange earnings. It is also likely to increase agriculture’s share of GDP, increase the diversification of cropping patterns and make a modest contribution to poverty reduction. At the

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<sup>a</sup> These are also reflected in the PRSP

meso-level, the ACP's policies are likely to build new linkages with international markets, develop new farmer-driven institutions, create new partnerships between CBOs, NGOs and multinational companies, and promote new crop specific single chain marketing systems. At the *micro*-level, the ACP policies are likely to improve access to credit and inputs for the small proportion of farmers that are being serviced by the large-scale multi-nationals. In addition, the policy is likely to provide them with "guaranteed" markets, increased levels of income, and promote the development of a competitive agricultural production and marketing system.<sup>39</sup>

There are however, concerns about the implications of out-grower schemes and the re-introduction of farm blocks in terms of reinforcing the tendency towards a dual agricultural economy in Zambia and possible negative impact on attempts at poverty reduction. FSRP research has found that household land cultivated per capita is closely associated with per capita income (crop, livestock and off farm income). There is a large variation within districts<sup>a</sup> of the amount of land cropped by households, which in turn generates the very large disparities in crop incomes observed across the smallholder population. In every province, the top 25% of small and medium scale farmers cultivate six to ten times more land per capita than the bottom 25% of farmers.<sup>b</sup> It is estimated that 40% of all small holders do not bring any crop of commodity to market. The majority of these farmers fall in the lowest land size category, farming less than 0.1 ha per capita. In value terms, 60% of total crop output is produced by 20% of smallholder households.<sup>40</sup>

The FSRP argue that a public goods approach to poverty alleviation, whereby public investments<sup>c</sup> are made to encourage the productive utilisation of currently under-utilised areas with good agro-ecological potential would help to redress the current land constraints faced by many impoverished and isolated rural small holder households. This approach of facilitating a more equitable land distribution to the many is seen as an alternative to the allocation of farm blocks to the already fortunate and connected few. Elsewhere in Africa, an initial "good" distribution of assets led to agricultural and non-agricultural growth that slightly benefited poorer households, and closed some of the gap with the rich.

### **Maize production and marketing characteristics of the early 2000s**

FSRP studies have shown that inorganic fertiliser can be profitable on maize and cotton, but often it is not in Zambia.<sup>d</sup> Variability and risks can be high if weather and soil and crop management practices do not enable crop responses to the fertiliser. So under the scenario where inputs are not available or late, where there is a lack of resources for adequate weeding, weather risk and initial soil fertility constraints, the use of fertiliser may be unprofitable. Improving fertiliser productivity means investments in research and extension as well as on the farm, particularly in

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<sup>a</sup> This seems to imply that geographical factors are not influencing per capita land cultivated; and that internal household factors e.g. asset holding, demographic characteristics, education, years of residence and "connectedness" are more important.

<sup>b</sup> These findings do not include the large-scale commercial farming sector.

<sup>c</sup> Feeder roads, health centres, schools, electrification.

<sup>d</sup> This debate is also taken up in the paper: Deininger, K. & Olinto, P. 2000? Why Liberalization alone has not improved Agricultural Productivity in Zambia. The Role of Asset Ownership and Working Capital Constraints. World Bank. The paper rejects the hypothesis that due to high input prices application of fertilizer is not profitable economically. Ownership of productive assets (draught animals) emerges as a key constraint to higher agricultural productivity and household welfare.

knowledge development. Farmers can and should be able to assess profitability of fertilisers and then make their own choices, given their prices, resources and returns.<sup>41</sup>

However the government has continued to see the supply of fertiliser for the maize economy a political obligation, and the Zambian Treasury is heavily indebted to South African banks for previous importations.<sup>56</sup> Regardless of the nominal price at which the fertiliser is “sold” to small-scale farmers it is effectively heavily subsidised because loan recoveries are consistently poor. This effective subsidisation ensures that Zambian farmers remain “hooked” on maize production – since equivalent subsidies are not available for alternative perhaps more drought resistant crops, or more diversified livelihood strategies. The unsustainable nature of the financing of Government’s annual fertiliser intervention makes the quantity and timing of the commodity very erratic. This creates annual variation in smallholder maize production which matches the variation induced by weather factors. In some years good weather and food fertiliser deliveries combine to generate a surplus crop. This happened in the 1999/2000 season as the national crop ran to over 1 million tonnes. In the 2000/2001 season the weather was reasonable for maize, but the national crop fell to 800,000 tonnes mainly under the impact of later fertiliser deliveries.

In the 2001/2002 *marketing* season<sup>a</sup> vacillating government policy resulted in the continuation of mixed policy signals to the private sector. Direct subsidies were provided when government arranged to supply selected milling companies with imported maize at a landed cost well below market costs that would be sold at subsidised prices. In addition indirect subsidies were provided through exchange rate depreciation. Selected large-scale millers were given access to these subsidized maize supplies effectively pushing all other millers and traders out to the market, and discouraging commercial imports. Small-scale traders, hammer mills, and consumers did not have access to imported maize grain. This effectively cut out the alternative and cheaper<sup>b</sup> option for consumers to buy maize grain and take it to a local hammer mill.<sup>42</sup> This had greater impact on the purchasing power of poorer households in the compounds.<sup>43</sup>

### **The 2001/2002 drought**

For Zambia, the 2001/2002 Southern African regional crisis was characterised by a drought induced maize production deficit in Southern, Western and parts of Central provinces. In 2001/2002 poor to fair fertiliser deliveries combined with dry weather, led to an estimated production of 600,000 tonnes. Southern Province was the most heavily affected province, with maize production 56% lower than the previous season’s harvest of 2000/2001.<sup>44</sup> however despite being drought struck the crop was mostly sold to urban traders for cash at the high prices obtaining at harvest time. Prices were good, reaching import parity as other parts of southern Africa were also expected to be in maize deficit. The GRZ-WFP food relief program had been operating for some months, and there seemed little sign that it was going to shut down. There was little incentive to store maize for own consumption. In Eastern Province it was bonanza time – although maize production was down from 2000, prices were far higher.

The maize shortfall was estimated as the difference between expected production and expected consumption. Household expected maize consumption levels were estimated as the difference

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<sup>a</sup> The 2001/2002 *marketing* season is based on the 2000/2001 *production* season.

<sup>b</sup> Even while the industrial milling operations should be able to achieve lower selling prices through economies of scale, Mugaiwa, or mealie-meal produced by the hammer mill is cheaper.

between production and sales based on 1999/00, the most recent non-crisis year<sup>a</sup>. Expected maize production was estimated based on 2001/02 crop forecast survey data.<sup>45</sup>

The August 2002 SADC VAC<sup>46</sup> assessment confirmed a cereal gap of 711,000mt and estimated that 2.9 people would require food assistance by March 2003 with 224,200 mt. food aid. The December 2002 SADC VAC<sup>47</sup> revised the population requiring assistance based on the revised census population of 9.3 million (from 10.3 million) with a growth rate of 2.3%. The revised figure for the total population in need was 2.5 million, with a total food aid requirement of 91,798 mt. for between January to March. Up until December 2002, 90,447 mt<sup>b</sup> of food aid had been received. As at the end of December less than 40% of the requirement for the period August to December had been met.<sup>48</sup>

From July/August 2002 the use of GMO maize for relief food in southern Africa raised awareness and debate around the right to culturally acceptable and safe food. The Zambian government vacillated on this issue, and finally announced a complete ban in October. With no contingency plans in place, and apparent unwillingness to use available cash for purchasing alternative maize supplies, the WFP pipeline ruptured between October and December. The gap was partially filled by NGOs, churches and later the Office of the Vice-President and the Disaster Management and Mitigation Unit (DMMU).<sup>48</sup> The unstable and unpredictable pipeline that was a result of the protracted decision making concerning GMO maize, affected the efficiency and effectiveness of the relief effort. Moreover, the GMO debate again highlighted the hegemony that urban-based stakeholders have over the rural population.<sup>49</sup>

At least by January/February 2003, the predictions of impending "famine" and "starvation" by relief agencies and reports in the national and international media did not appear to have been born out. Nutrition surveys undertaken by Care International and other agencies (see table) show that the malnutrition rates have remained stable since July-August 2002, and are below the recognised cut-off of 10% prevalence of global acute malnutrition. From July 2002 to May 2003, lack of clarity and a poor understanding of institutional roles, which were implicated in the demise of FHANIS continued to act as brake on the establishment of a food security and nutrition surveillance system.<sup>50</sup>

### **Donor response to political and economic developments**

Towards the end of the 1990s, disillusionment had set in among Zambia's key donors. This was in reaction to: the increasingly corrupt and poor governance practices of the Chiluba regime, the failure of key sector wide programmes such as ASIP to perform to expectations, and then the disputes around the lead up to the 2001 elections and their outcome. However, currently a new engagement appears to be emerging. This is in response to: the framework provided by the PRSP, and an increasing understanding of the need to balance support to social and economic sectors as gains in the social sector are being lost through the erosion of livelihoods and assets as a result of HIV/AIDS. This is also linked with some awareness that the 2001/2002 "crisis" in Zambia was underscored by chronic poverty and the impact of HIV/AIDS on livelihoods and that these issues need to be addressed in such a way that will mitigate the impact of future shocks.

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<sup>a</sup> This could be recalculated taking a 5 year average?

<sup>b</sup> WFP, DMMU/OVP, NGOs and Churches

### 7.3 Community and household responses and outcomes

#### Livelihood trends

The 2001/2002 crisis in Southern Province highlighted the importance of understanding how diversified livelihood portfolios and strategies can mitigate against the risk of drought and maize production failure. In normal times in Southern Province, the pattern is to sell maize after harvest and then purchase maize or maize meal later in the year (November/ December) from the proceeds of animal sales, cash crops, dry season vegetable production, milk and poultry sales, etc.<sup>a</sup>

In Southern Province livestock are seen as crucial to livelihood portfolios. However over the last 15 years various factors have affected cattle holdings in Southern Province. These include: drought, disease, the privatisation of cattle breeding farms, decreased access to credit through the Lima Bank and ZCF, under-disbursement of government budget allocations, and the slow development of alternatives to previously government provided services. However, to date there does not appear to have been a systematic effort to understand how social organisation has been affected by these factors, nor how internal re-stocking mechanisms function in Southern Province.

#### Outcomes: mortality and unacceptable nutritional status

A comparison of the mortality rates found in the 2001/2 DHS with rates from the two earlier surveys suggests that mortality among young children has declined from the fairly stable levels observed in the late 1980s and early to mid-1990s. However, more detailed analysis of the mortality data from all three surveys is needed to confirm the nature and magnitude of the trend in early childhood mortality over the past decade in Zambia.

The 2000/2001 DHS also shows that the IMR in the Luapula /Northern provinces is about twice that in the Copperbelt, Southern and Lusaka Provinces. Under-five mortality follows a similar pattern. Infant and child mortality in rural areas are about 20 and 15 percent greater respectively than in urban areas.

#### Outcomes: provision and uptake of preventative health services

There was a substantial rise in vaccination coverage in the early to mid-1990s. In contrast, between 1996 and 2001/2, there was an 11 percent decline in the proportion of children fully immunized. Immunisation coverage levels are comparatively low (between 60 and 65 percent) for children of birth orders six and higher and children living in Luapula, Northern and Western provinces. Coverage levels are highest (exceeding 75 percent) for urban children, children living in Copperbelt, Lusaka, and Southern provinces, and children whose mothers have a secondary or higher education.

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<sup>a</sup> A 15 minute brainstorm with Care Zambia staff produced the following livelihood activities in Southern Province from May – November: Sale or barter of harvest to generate income; sales from vegetable gardens; poultry and milk sales; restocking livestock; petty trading (re-sale of goods); making crafts; fishing; processing foods; exploiting natural resources (sale of grass, making charcoal, wild foods, hunting etc.); brewing local beverages; piecework; protecting their social assets (marriage, visiting relatives); mining activities (mainly sand for building sites, and precious stones); purchasing productive assets.



The 2001/2 DHS survey found that 67.4 of children under five years of age had received Vitamin A supplements. Overall 58.6 % of children under five are consuming vegetables and fruits rich in Vitamin A. Fruits are available in most rural areas; however, only 58.9 % of children living in rural areas are consuming these. There are significant regional differences where only 42.3% of children in the Southern province are consuming fruits and vegetables compared to 71.2% in the Northern province.

Diseases lead to poorer nutritional status, and poor nutritional status increases susceptibility to and severity of illness. The disease burden for young children continues to be high. The 2001/2002 DHS found similar levels of morbidity compared to 1992 and 1996. Twenty percent of children under five had diarrhoea in the last two weeks of the survey. Over 50% were reported to have had a fever and/or a cough in the last two weeks—15% reported ARI symptoms while 43% had a fever. These findings do not indicate any improvement in child morbidity patterns compared to 1996. Although care-seeking behaviour is improving many children do not get prompt or effective treatment for illness leading to greater weight loss per illness episode.

The DHS indicates that almost all babies are being breastfed; however, only 15.2% are exclusively breastfed up to 6 months. 44.8% are breastfed exclusively to four months. These rates show an increase from the 1992 and 1996 DHS surveys. Exclusive breastfeeding is a critical intervention to provide complete nutrition to children under six months of age as well as reduce exposure to diarrhoea diseases. Exclusive breastfeeding also reduces the risk of maternal to child transmission of HIV/AIDS when compared to mixed feeding. There are still traditional beliefs to address in order to increase the rate of exclusive breastfeeding throughout Zambia

#### **Outcomes: nutritional status**

Figure 1 presents trends in the three nutritional indicators during the period between the 1992 and 2001/2 DHS. The results document a gradual increase in both the proportions of children stunted (from 40% to 47%) and underweight and a stable pattern with respect to the level of wasting. The levels of stunting are among the highest in Africa. In the outlying provinces such as Northern, Luapula and Eastern Provinces, chronic malnutrition rates are even higher. In Eastern Province stunting increased from 48% to 59% between 1992 and 2000, and in Luapula stunting increased from 56% to 58% over the same period.

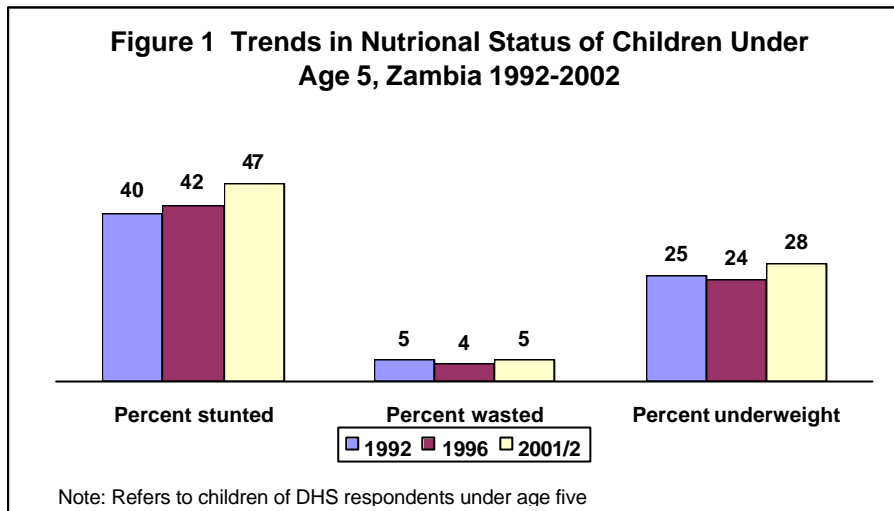
With reservations<sup>a</sup>, these results can be compared to the 1970 to 1972 National Nutrition Survey for children under-five years. This study reported stunting levels of 37%, underweight of 23% and wasting of 5%. It can be posited that at the national level, the prevalence of stunting for under-five children increased slightly to around 40% over the period between 1970-1992.<sup>b</sup> However since, then the rates of stunting have rapidly deteriorated from being unacceptably high, to being outright unacceptable.<sup>c</sup>

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<sup>a</sup> Care should be taken in interpreting the results of various nutrition surveys. Age groups covered varies; confidence intervals are not always provided; it is not reported whether the presence of odema is checked. The time of year when the survey is undertaken can also affect interpretation.

<sup>b</sup> Although over the same period, levels of stunting in some provinces increased considerably more.

<sup>c</sup> There is on-going debate as to how to interpret malnutrition rates in areas of high HIV/AIDS prevalence.



Source: DHS 2000/2001 Preliminary Report.

The rural-urban divide continues, with the proportion of stunted children in rural areas increasing from 46% to 51% over the decade, compared to an increase from 33% to 37% in urban areas. The DHS surveys together with other surveys conducted over the last ten years consistently show that the prevalence of stunting and underweight are higher in Luapula and Northern Provinces, i.e. the outlying provinces. The proportion of severe to moderate malnutrition is also higher in these provinces; this carries a higher risk of morbidity and subsequent death. Mortality rates are highest in the Northern and Luapula provinces.<sup>51</sup> Overall, chronic malnutrition is lowest in the "line of rail" provinces: Central, Southern, Copperbelt and Lusaka Provinces.

As shown throughout this literature review the provinces where malnutrition has been highest are the outlying provinces. These are the least developed provinces with the poorest infrastructure and distant facilities such health services and markets. With the exception of Eastern province, the non line of rail provinces are not the major maize producing areas. Thus they have not benefited from Government support for maize production, and associated spin-off benefits to the same extent as the line of rail provinces.

The 2001/2002 DHS survey<sup>52</sup> also provides anthropometrical measurements for women. 15% of women are chronically malnourished with a Body Mass Index less than 18.<sup>a</sup> The mean height for women was found to be 158 cm. There were also geographical differences with 17.5% of women in rural areas considered thin compared to 11.4% in urban areas. These data appear to indicate that an increasing number of women are considered thin, i.e. the prevalence has increased from around 10% in the early 1990s to 15% in 2000.

#### **Impact of 2001/2002 drought on nutrition well being**

Surveys conducted by Care International in December 2002 and January 2003 in districts of Southern and Central Provinces indicate that prevalence of stunting wasting and underweight are within the range of the DHS 2000/2001. Within the Zambian context Southern Province has always had lower prevalence of malnutrition compared to the national average.

<sup>a</sup> Unable to verify whether 18 was used as the cut-off compared to 18.5 in the previous DHS surveys.

### **Outcomes: positive trends in literacy rates**

Measured by adult literacy rates, Zambia has made progress since the early 1970s, with a progressive improvement over each five-year period, from 51.8% literate in 1972-76 to 78.2% in 1997-2001<sup>a</sup>, and with some closing of gender disparities (which nevertheless continue significant, with 70.2% of women literate in 1997-2001, compared with 84.6% of men).

### **Impact of HIV/AIDS on agricultural production**

An FAO<sup>53</sup> implemented study on the impact of HIV/AIDS on food security is currently being completed.<sup>b</sup> The preliminary results from the 2002 study were discussed at a stakeholder workshop in mid March.<sup>54</sup>

### **Household and community level HIV/AIDS**

There is general agreement on the impact of HIV/AIDS on the individual and at the household level, and how different morbidity, mortality, and demographic profiles have different effects on food security processes and outcomes.<sup>55</sup> However, there is still considerable debate as to whether rural communities have been so completely overwhelmed by the effects of HIV/AIDS that massive increases of social welfare type assistance and food relief are required.<sup>56</sup> There is considerable concern that such approaches would be at the expense of long term efforts to reduce poverty, support positive livelihood outcomes, and strategies that would strengthen existing or evolving social networks and institutions at the local level, that in turn assist vulnerable community members.

## **8 Discussion and conclusions**

### **8.1 Livelihood trends**

Over the last thirty years agricultural production has continued to form the basis of livelihood strategies in rural Zambia. There are wide variations, and combinations depending on ecological zone, land suitability, cropping pattern, year round water availability, and potential for livestock/poultry production. All households engage in a range of non-agricultural natural resource use, for example: fishing, forestry and wildlife utilisation. In addition households are involved in various alternative informal income generating activities, however, these tend to be short term, seasonal and with low rewards, e.g. petty trading, crafts, and casual labour.

Livelihood portfolios are dynamic both on an intra-annual (seasonal) and inter-annual basis. This has implications for the seasonal dimension of poverty, which can present differently at different times of year (e.g. illness, labour stress, income poverty, food poverty, ability to meet different kinds of expenditures: education, inputs, social, funerals.) Livelihood strategies respond to changes in climatic conditions, institutional context, rural-urban linkages, market opportunities and household demographics.

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<sup>a</sup> Literacy of those aged 15 years and above. Source: World Development Indicators 2001.

<sup>b</sup> The objectives of the study are: " In the context of the HIV/AIDS pandemic, develop, test and disseminate methods and tools that address issues of environment, gender and rural youth, and information management, as these relate to agricultural productivity and household food security."

While the context and conditions influencing livelihood strategies have shifted there are elements of continuity. There are clear geographical differences in levels of total and extreme poverty between rural and urban areas and between provinces along the line of rail and the outlying provinces. There are also signs of increasing socio-economic differentiation within provinces.

The “copper spoon” years, after Independence in 1964, ingrained a belief in a munificent state that would reach and provide to all in perpetuity. Political patronage did bring benefits to the outlying provinces, (or “the outliers”) in the post Independence period. However, during the 1990s the outliers became increasingly marginalized and isolated with reduced ability to benefit from improved market opportunities. Since this period it could be argued that they are regaining a certain degree of internal resilience. However, the “global market” in which they want to participate in continues to work against them.

## **8.2 Social and institutional landscapes**

Quantitative data shows large differences in poverty levels that seem similar in other aspects, including ethnicity and agro ecological zone. The social organisation of household labour differs from matrilineal to patrilineal systems, and different inheritance practices will affect investment patterns. A critical mix of human, social and natural capital combine with an appropriate economic activity; often the cultivation of high value cash crops brings the differences between relatively more and less poor communities.

There are changing social and gender relations: the extended family organised on patrilineal or matrilineal lines has acted as the traditional safety net in Zambian society. The orphan, widow, retrenchee were usually assured of a home among relatives. This is no longer necessarily the case especially in urban areas, where there is an increase in the number of child headed households, and street children. For third generation urban dwellers – links with rural areas have been eroded. Rural-urban relationships are weak, and the pattern of exchange of remittances and food between rural and urban areas that is a feature in other southern African countries is less apparent in Zambia.

Women are increasingly becoming the major if not the sole breadwinner of their respective households. The “female voice” is increasingly being heard in the public arena. Many institutions/organisations stipulate that women should comprise 50% of committees. Women regularly act as organisers and managers rather than passive recipients. Credit schemes and skills training have empowered women to effectively assume the role of breadwinner. How do such changes in social and gender relations affect the ability to deal with poverty?

There is increasing concern over crime – crop and cattle theft in the rural areas. In urban areas, petty theft, child abuse (labour, withdrawal from school) prostitution and drug abuse are all perceived to be increasing. How can learning about changing social and gender relations be incorporated into on-going plans and strategies for poverty reduction?

## **8.3 Implications for future vulnerability**

Commercial agriculture and in particular non-traditional exports (horticulture and floriculture) are seen as the beacons for future economic growth. It is anticipated that the small-scale farming sector will benefit from this growth through participation in out-grower schemes along the line of

rail, or as agricultural labour on newly opened commercial farming blocks. Once again the outlying areas look likely to be marginalized further.

An accepted wisdom is that growth should come through productivity, i.e. yields per hectare. This emphasises the timely provision of fertiliser. However, FSRP analysis of PHS data indicates that fertiliser distribution subsidies may be an ineffective way to address rural poverty for many poor households that farm too little land to make a difference if fertiliser is applied on their small plots. For the “outliers”, programmes aimed at increasing access to land and area under cultivation may be an important component of boosting agricultural production and overcoming rural poverty.

In this context, what is the new institutional landscape in the outlying areas? What institutions (formal and informal) are now important to households and communities? What are the obligations, responsibilities and support that bond households in productive and social transactions? How do changing social and institutional landscapes at the local level provide social protection for the chronically sick, elderly and other vulnerable groups and what are the appropriate forms of support to changing social and institutional structures. What are the social forces that increase social capital and how can existing or evolving social networks and institutions at the local level, be supported and strengthened so that in turn those mechanisms can assist vulnerable community members.

The right to food and freedom from malnutrition is more than the right to be fed, but, incorporates the right to feed oneself and one’s family. If not addressed, chronic malnutrition (stunting) will continue to contribute to high rates of child mortality and morbidity, low birth weights, and the intergenerational implications of reduced educational and economic performance for Zambians throughout life.

Does the government have the political will to invest in the “enabling” environment for market and communications infrastructure in the outlying provinces? Will this lead to demand driven producer organisations? Are there advantages in this in terms of political patronage? Is there a voice from civil society and from how deep in civil society? What are the social forces that can play a role to increase political sensitisation and awareness, involve the media, and the justice system to ensure that the New Deal benefits all? Could the right to food and freedom from malnutrition be one pillar of a rights based platform for civil society, CBOs, the media, and concerned informal and formal private sector stakeholders to advocate for shared responsibility to address the unacceptable levels of malnutrition in Zambia?

#### **8.4 Development of hypotheses**

The literature review shows that while the 2001/2002 drought affected agricultural production in parts of Southern, Western, Eastern and Central Provinces, the response to this perceived transitory crisis has obscured a broader picture. This broader, more complicated picture reveals much higher levels of poverty and chronic malnutrition, differentiated on both a geographical and socio-economic basis. The review has identified multiple causes that have led to the current situation, which in turn are rooted in long-term trends.

- **Hypothesis I: while in 2001/2002 there was a maize production deficit in parts of the country, the extent and severity of a food security crisis was overestimated. Factors to be considered in this include:**

- Contribution of cassava, other tubers and small grains were not adequately factored into crop forecast estimates.
  - Cash income from the cotton crop was not fully considered.
  - While Corridor Disease has affected the livestock economy, livestock and milk availability continues to play a role in household food security.
  - In vulnerability assessments, the maize production shortfall was closely equated with the need for relief food.
  - Methodological inadequacies in vulnerability assessments (sampling), led to inappropriate extrapolation of the numbers affected and the severity of the problem.
- **Hypothesis II: how did household coping strategies ameliorate the impact of maize production deficits? Were coping strategies underestimated:**
    - Internal livestock re-stocking mechanisms, sharing of animals among families.
    - Contribution of wild nuts, fruits and roots, which in the past formed part of the staple diet (e.g. mantembe root, mungongo nuts).
    - Mothers are “protecting” their children.
    - HIV/AIDS does impact at household level. However with 11% prevalence in rural areas, communities have not been “devastated and laid to waste” as portrayed, and requirement for large amounts of food assistance to HIV/AIDS affected households may not only undermine community support mechanisms, but also act as a disincentive to agricultural production, and distort market dynamics.
    - While the delivery of food relief was well below estimated requirements, deliveries were targeted to the worst affected geographical areas and most vulnerable households. This contributed to the maintenance of household assets and well-being in the short term.
- **Hypothesis III: There appears to be a reversion to cassava production in provinces away from the line of rail and major consumption centres.**
    - In some farming systems this may represent increased crop diversity, but in others it may indicate a narrowing of cropping patterns that would be reflected in decreased dietary diversity.
    - It would appear that the contribution of cassava production and consumption to nutritional outcomes, depends on its combination with other livelihood strategies (e.g. fishing)
    - The potential impact of this on nutritional well-being and for HIV/AIDS affected households should be more closely examined.
- **Hypothesis IV: New institutional landscapes are evolving:**
    - The state and its institutions have retracted from local level. The private sector has not filled this space as was expected. Is there an institutional vacuum, or what is happening?
    - What is happening to social relations within the extended family, and how do these kin networks relate to and access wider societal institutions?

- What has been the impact of Non Governmental Organisations' (NGO) efforts towards capacity building of Community Based Organisations (CBO) and group formation at the local level?
  
- **Hypothesis V: political patronage and the maize economy have become entwined in a web of relationships and actions that continue to act as a constraint on efforts to reduce vulnerability to chronic food insecurity. Examples of the impact of this detrimental relationship include:**
  - Continued government interference in the maize economy has jeopardised diversification into other crops and non-agricultural activities.
  - Policy vacillation continues to send mixed signals to the private sector.
  - Failure to adopt fiscal discipline in government budgeting processes, has led to inadequate and disrupted disbursements to key ministries.
  - Failure to devolve authority to decentralised structures has meant that communities do not have control over the resources that are central to their livelihood security.
  
- **Hypothesis VI: there is an on-going failure to understand the complex aetiology and relationship between food insecurity and malnutrition.** This is also compounded by the lack of distinction in the pathways leading to chronic and transitory food insecurity in Zambia. Arguably this has diverted attention and resources away from addressing the unacceptably high levels of stunting among children in the country, and the long-term impact this will have on the Zambian development process. Factors that have contributed to this include:
  - Inadequate awareness among key decision makers of the role of nutrition in national development.
  - Absence of a national food and nutrition policy.
  - Inadequate multi-sectoral coordination and collaboration on food and nutritional issues.

## 9 Annex 1: Case Studies from Southern Province

The paper has outlined the major macro-economic changes over the last thirty years in Zambia. Within this context, households utilise a range of natural, social, and economic, resources to engage in productive and exchange activities. The resulting strategies and livelihood portfolios depend on how households and individuals transform their asset base, within local social and institutional processes. The case example below illustrates only some of these processes and outcomes for Southern Province.

### Livelihood strategies in Southern Province

Crop production and livestock husbandry are intricately bound together in Southern Province. Livestock plays an important production, economic and social role in people's livelihoods. PRA work in 1996 identified the following livelihood trends in Bbilili.<sup>57</sup>

#### Income activities

In Bbilili the following income generation activities were noted in 1996:

- Sale of farm produce
- Sale of livestock
- Basket making and marketing
- Making stools
- Gardening (water finishes in August)
- Savings
- Brewing
- Thatch grass
- Making yokes
- Sale of cattle to Copperbelt
- Selling timber and carpentry.

#### Livelihood trends

The creation of the Southern Province Cooperative Marketing Union (SPCMU) in 1968, people were able to obtain loans for maize production inputs. There was a bumper harvest and a ready market for their crop. Community members felt that this led to a decrease in cassava production because it had no ready market. In this area the 1960s are remembered for the opening of the Agricultural Camp (1967) and the Veterinary Camp (1968). In the 1970's a form of chitemene was still practised: "mabili," where new land was opened every two years or if crop rotation was used every three years. The 1970s they also witnessed the establishment of the Tobacco Camp (1975) and aerial spraying (for?). In hindsight community members considered that the rainfall pattern up until the 1970s consisted of starting in October and ending in May/June.

#### Livestock trends

The following information was provided through focus group discussions in the Nyawa in 1996:<sup>58</sup>



“1964 – 70: villagers started re-stocking cattle after raiders took the original stocks. Cattle populations were still low because of the presence of tsetse fly. Chickens reared in large numbers. Dogs were also abundant and used for hunting.

1971-75: Cattle population increased and pigs were introduced in the area both for sale and home consumption. Goat population reduced because of overselling. In 1974-5 guinea fowls were introduced in the area from relatives living elsewhere.

1976-80 Cattle population kept on increasing due to increase in knowledge, increase in human population and improved veterinary practices. Pigs also increased in number but goats continued to reduce due to continued increase in sales and human population – ceremonies increased and more goats were slaughtered. Chickens reduced to sales to Livingstone. Guinea fowls were still few.

1981-85: Cattle population reduced especially in 1985 due to the black leg and corridor disease attacks. Goats increased in number and so did pigs. Chickens reduced due to trading with Livingstone and the Copperbelt. Population of guinea fowls has never shown a remarkable increase due to high incidence of diseases.

1986-90 Number of cattle increased slightly because of good management practices. The pig population remained constant as a result of problems associated with drought and water. The number of goats was still high. The number of chickens dropped due to trading and Newcastle disease. Incoming settlers introduced donkeys into area.

1991-6 cattle population went down to water shortages during drought, increase animal theft, diseases and sales to the Copperbelt. Goat population also reduced due to sales. Dog population increased.”

#### **Patterns of cattle accumulation**

Social ties, the process of accumulation and the impact on production activities were also explored during a PRA in the neighbouring area of Bbilili.

“Inherited cattle go to nephews not children. Others get animals through bride price, or dowry. During the early 1960s borrowing or lending of cattle was common. Animals would be lent to a relative for a period of 3 years. When returning them, one animal would be given to the caretaker in appreciation for herding and taking care of them. The number of animals owned by individual farmers has reduced and so lending is no longer practised.

Some married women also own cattle through inheritance and bride price. Women married to men without animals may get assistance from male relatives who have animals on condition that their husbands/children assist in herding and they should maintain a good relationship. Some married women keep their animals with male relatives. They do this because some husbands may not accept to keep their wives' cattle in their kraals. This relative has the right to have the oxen plough his field first if he does not have enough of his own oxen. He has the right to milk the cattle for his own consumption and can only give the owner (female) when he chooses to. Inherited animals are sometimes kept with one brother in the family. During the rainy season, there is a ploughing schedule for all members of the family. Men and boys do herding. Manure is collected and can be used as manure in the fields by whoever is herding the animals. Other relatives are free to get the manure at no cost. Manure was only used widely during 1995/6 for application in the main maize fields because fertiliser was expensive and unavailable.”

### **Cropping trends<sup>59</sup>**

- Fewer crops than before;
- General deterioration in cropping practices: little use of kraal manure; late and rushed planting; ploughing down slopes, uneven ploughing depths, little incorporation of mulch into soil; moisture conservation practices non-existent.
- Decline in cattle population and ownership, distance to water, lack of supplementary feed.
- Fewer crops than before in the 1970s when rainfall was not limiting. Mandia: crops found in 1975: maize, sorghum, sunflower, cotton, groundnuts and millet, then cowpeas and bambara. In 1995 the main crops were: sorghum, maize and millet. Sorghum is planted on twice the area as either maize or millet. Diversity of crops grown in the past has fallen due to loss of initial seed, and lack of suitable crop varieties for drought areas.

### **Trends in dietary patterns<sup>a</sup>**

Case studies<sup>60</sup> and PRAs<sup>57-58</sup> from Southern Province indicate that in the 1940s and 1950s cassava was widely cultivated and consumed. *Mantembe* a wild yam that required soaking for several days was also considered part of the staple diet, together with wild meat and fruits. Food shortages during the colonial period were related to locust plagues (1934); locusts and flooding (1948). People survived on cassava yams and sweet potatoes.

During PRAs<sup>59</sup> in Kakhi village, Makunka area Kazungula District people recalled the food availability in “good years” (1968 and before).

### **Food availability calendar**

- Maize all year
- Millet: May through to March
- Sorghum: July through to February
- Groundnuts: March through to January
- Bambara nuts: May through to January
- Pumpkin: May to August
- Cowpeas: March to December
- Sweet potatoes: July-September

### **Coping strategies in years of drought**

Community and household coping strategies in the face of food shortages

- Barter vegetables in exchange for maize or mealie-meal
- Reduction in quantity and frequency of meals
- Sale of livestock, or goats and poultry
- Digging Munkoyo roots (used for making sweet beer) for sale in areas that don't have them
- Remittances from relatives
- Collection of wild fruits that can be soaked (to remove toxins) and then pounded to prepare a type of nshima.
- Collection of wild foods to supplement food supplies that have run low

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<sup>a</sup> Another source might be the Rhodes-Livingstone Papers for additional information relating to colonial period. Also Scudder, T. 1962. The Ecology of the Gwembe Tonga.

### **Changes in the institutional landscape<sup>a</sup>**

Traditional chieftaincy was important. In the 1920s and 1930s missionaries were involved in education activities and the Watch Tower Movement established itself, noted for the introduction of new burial methods. Government interventions in these areas were around the measures for the eradication of tsetse fly (which included compulsory purchase of cattle in the 1940s) and controls on cattle movement through erecting stock fences. Poverty levels were reported to rise with the loss of draught power, until restocking started again in the early 1950s.

### **Institutional picture**

Institutional mapping exercises carried out as part of PRAs indicate an increasing number and range of CBOs at local level.<sup>b</sup> Reports from the mid 1990s found that the main local institutions were formed around chiefs and councillors. By 2001 the following institutions, committees and CBOs were listed during institutional analysis: WASHE, AMC, VMC, VAG, PTA, Traditional, Neighbourhood Committee, Women's Club, CRB, Farm Cooperative, CINDI, Duanavant, Youth Clubs. The types of participation found in these entities were: attending meetings, contribution of labour, contribution of materials, and voting. This would seem to indicate that the institutional landscape at local level is changing perhaps in response to the retraction of public services.

### **Impact of drought**

In the drier parts of the country the early years of the decade were marked by the impact of the biggest drought related shock in living memory. The impact of the drought was felt through depleted food stocks, water shortages especially for livestock and increased livestock disease and deaths.

The community in Nwaya received relief food through the Catholic Church. However barely had they begun to recover from the impact of the drought, when, in 1993 they stopped benefiting from input loans and in 1994/5 began to be affected by Corridor Disease (East Coast Fever). In 1994/5 they experienced hunger as a result of another drought, but received food relief from both the Catholic Church and Care International. In 1995 in response to the lack of fertiliser they planted more sorghum fields. The perception was that the rainfall pattern had shifted with rains starting later in November and ending in March.

In the Makunka area of Kazungula District<sup>61</sup> community members explained the foods that they were eating, and how they coped:

### **Food availability in drought years (1990 – 94)**

- Maize: February- July
- Millet: March-June
- Pumpkins: February -June
- Cowpea: March-April.

Wild fruits: metu, muzizil, nju, mungongo, vegetables: cleome, amaranthus, hibiscus and roots.

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<sup>a</sup> Further work could be done taking into account: Crehan, K. 1997. The Fractured Community. Landscapes of Power and Gender in Rural Zambia.

<sup>b</sup> The apparent increase in CBOs may be real, reflect the impact of Care's capacity building activities, or, is a reflection of levels of PRA technique and skills!

Most families managed one meal in a day or two and no supplementary feeding for the children was available. Families that had access to cow milk would keep a cup of milk for young children to drink about midday since the single meal was prepared late afternoon. However milk was scarce due to deaths of cattle and lack of grazing and water for those still alive. Clinic figures in Kalomo South on average 33% of the under 5 children were either static or losing weight compared to 13% in Livingstone.

**Other coping strategies**

- Many people sold most of their disposable assets including productive assets such as oxen, ploughs and other equipment. SAP eroded home-bound remittances.
- Drying up water points. Women walking 5-10km in search of water; waiting 5-10 hours to draw water (slow recharge). Water poor quality.

**Government and NGO response**

Three food relief modes: FFF, FFW, Food for Sale (civil servants in rural areas). Relief food distribution from December 1994 – March/April 1995 peaked at 9,600 HH.

FFW: dams (Zulu), toilets in schools

Classrooms, houses for teachers, clinic workers, storage, clinics roads, dip tank.

On-farm seed multiplication: farmers reserved seed, farmer-to-farmer distribution. Farmers in seed programme able to extend their food base three-five months longer than those not in the programme.

**Signs of recovery?**

In 2001, quantitative baseline surveys<sup>61</sup> indicated that in Nyawa, 76% of households owned cattle with an average of 3.5 head per household; 35% owned poultry (13 birds per household) and 41% owned goats (3 goats per household).

## 10 Annex 2: Nutrition Surveys 2002-2003

Summary of Nutrition Survey Results: May 2002 – February 2003 CARE International, Lusaka. 08/03/03)

Location (District)	Date	% Global Acute <sup>a</sup>	% Severe Acute <sup>b</sup>	CMR 10,000 per day	<5MR	Source
Shangombo	May 2002	<b>3.9</b> (2.2-5.6)	<b>1.2</b> (0.2-2.1)			MSF-Holland
Siavonga	June 2002	<b>3.3</b> (2.2-4.5)	<b>0.9</b> (0.3-1.4)	0.6	0.8	MSF-Holland
Kalomo	June 2002	<b>3.4</b> (1.7-5.1)	<b>0.7</b> (0.0-1.7)			World Vision
Sinazongwe	July 2002	<b>4.3</b> (2.5-6.1)	<b>1.1</b> (0.2-2.0)			World Vision/Unicef
Choma	July 2002	<b>5.5</b> (4.2 -7.2)	<b>1.9</b> (1.3 -2.9)	1.2	2.2	Oxfam (revised)
Monze	July 2002	<b>5.8</b> (4.4 -7.6)	<b>1.5</b> (1.1 -2.5)	1.9	2.1	Oxfam (revised)
Mazabuka	July 2002	<b>4.3</b> (3.1 - 5.8)	<b>1.2</b> (0.8 - 2.1)	1.7	3.7	Oxfam (revised)
Livingstone	August 2002					
Kazungula (n=859)	August 2002	<b>5.2</b> (3.8-6.7)	<b>1.6</b> (0.7-2.5)			Oxfam/CARE**
Chipata	September 2002	<b>2.8</b> (1.3-4.3)	<b>1.1</b> (0.1 –2.1)	1.9	3.2	RCZ, SCF Unicef
Shangombo	November 2002	<b>4.2</b> (3.1- 5.4)	<b>0.8</b> (0.3-1.4)	tbc	tbc	CRS
Kalomo (n=873)	December 2002	<b>2.4</b> (1.6-3.3)	<b>0.7</b> (0.2-1.2)	0.3	0.5	Care International
Kazungula (n=888)	December 2002	<b>2.7</b> (1.7 –3.7)	<b>0.7</b> (0.2 –1.2)	0.7	0.9	Care International
Chibombo (n=905)	January 2003	<b>4.0</b> (2.6-5.4)	<b>1.7</b> (0.8-2.5)	1.1	1.5	Care International
Mumbwa (n=886)	January 2003	<b>4.3</b> (2.7-5.9)	<b>0.8</b> (0.1-1.5)	0.8	1.2	Care International
Namwala (n=888)	January 2003	<b>2.4</b> (1.4-3.3)	<b>0.6</b> (0.0-1.1)	0.7	1.0	Care International
Siavonga	January '03	<b>7.7</b> 5.4-10.7	<b>1.2</b> 0.4% - 2.7%	0.7	1.4	OXFAM/Unicef
Monze	January '03	<b>5.1</b> 3.4-7.6	<b>1.1</b> 0.0 - 1.5	0.7	0.8	OXFAM/Unicef
Senanga	February '03	<b>4.5</b> 2.9-6.9	<b>0.3</b> 0.5 - 2.9	0.4	0.5	OXFAM/Unicef

\*\* with caveats: 31 cases of oedema reported, but not included

<sup>a</sup> Wt/Ht <2 Zscore

<sup>b</sup> Wt/Ht <3 Zscore

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