

Chapter 5: Agriculture and food security

Introduction and background

Since the 1970s, Zambia has been experiencing economic and social problems resulting in deteriorating living standards and conditions for most of the people. As incomes continue to decline, human survival has become more and more difficult. Most people have been affected in the areas of food security, health, sanitation, education and employment.

The Government of Zambia has recognised that present poverty levels are unacceptable. In 1991, 69.7% of all Zambians were living below the poverty line, with expenditure below the level to provide for basic needs. Rural poverty is more prevalent, deeper and more severe than urban poverty. The incidence of poverty in 1996 was 82.8% for rural and 46.0% for urban areas. Turning to the severity of poverty, the figures were 36.5% for rural and 19.4% for urban areas in the same year. Rural poverty is more prevalent in remote provinces and is especially severe in the more remote districts within a province. The highest incidence of rural poverty is found in Western Province (94%), followed by Northwestern and Luapula Provinces (92%). However, these provinces only account for 20% of the rural poor due to their low population densities (CSO, 1996).

The key factors behind rural poverty are lack of access to resources, geographical isolation - causing lack of access to services and markets, lack of productive assets such as oxen and mechanised farm implements, which constrains productivity, and lack of labour. Poor households find themselves in a vicious cycle where disease and malnutrition lower productivity, thus lowering production, forcing family members to work for other families during the peak labour months, thereby causing smaller yields on their own plots. A combination of a large number of men who have left farming for urban employment and an increasing number of female-headed households without the labour force to ensure household food security is having a devastating effect on rural communities.

The agricultural sector

With a land area of 752,620 square kilometres, Zambia's abundant agricultural resources are under-utilised, with only 16% of the estimated 9 million hectares of arable land being cultivated. The demand for reasonably fertile land, relative to population pressure, is much more favourable than most of Zambia's neighbours. Agriculture provides livelihoods for about 50% of the population and 67% of formal labour force; it remains by far the main opportunity for income and employment for women who comprise 65% of the rural population. The performance of agriculture has to improve in order to fulfil its crucial role in the development of the economy. Sector growth has failed to keep pace with that of the population for many years; its annual growth rate averaged only 2.5% between 1986 and 1995. Agricultural sector

output is highly variable; for example sector product rose by 18% in 1996 but fell by 6% in 1997, due to the drought (MoFED, 1999).

Zambia's agriculture is predominantly rain-fed and irrigation is applied on only 6% of the potential area. Recurrent droughts and more recently, unusually heavy rains, sometimes result in widespread crop failure. However, even in the most severe drought years, rainfall is usually sufficient to produce an economic crop of maize if soil moisture retention capacity is normal, the crop is planted in time, and short maturing varieties are used. Recent crop failures have also been attributed to land degradation, poor husbandry practices, and low availability of appropriate seed varieties. There is considerable scope for drought mitigation through the promotion of appropriate agricultural practices.

The major crops produced are maize, sorghum, cassava, millet, sunflower, groundnuts, soya bean, cotton, tobacco, sugar, and a variety of vegetables. The total planted area has declined by some 10% since 1990/91 and this decline is mostly due to the reduction in maize plantings. Contributing factors have been significant losses of draught power (due to drought and animal disease), and an important shift in the economics of production reflecting unavailability of credit and removal of subsidies. Nonetheless, there have been significant increases in the total plantings and marketed sales of groundnuts, mixed beans, millets, and sorghum in the last few years, as most of the oilseed and small grain crops entail lower production costs and material inputs than maize. In effect, overall crop mix is shifting in response to comparative advantage factors hidden by the previous regime of subsidies.

The breakdown of agricultural output in recent farming seasons clearly shows that the production of crops has deteriorated significantly (see Table 5.1 below). This is especially true for maize and sunflower, which are both important for domestic food security. Notably, production of cotton and groundnuts has increased significantly. In the case of cotton, this is mainly due to the support currently provided to farmers by private out-grower companies. For groundnuts, the improvements are explained by low production costs and the fact that the crop is both a food and cash crop. It can either be sold for cash or consumed by households when marketing problems arise. Expression of crop production in index terms (Table 5.1) shows that Zambian agriculture is extremely dependent on the weather.

Zambia has great potential to become a net exporter of agricultural products. Within the agricultural sector, the horticultural sub-sector is a relatively new business venture that has recently been recognised as a potential source of foreign exchange earnings from exports. In the Second Republic (1972 to 1991), the government policy in agriculture primarily supported the production of maize (as the main staple), and other field crops, to the detriment and neglect of other viable forms of production like horticultural crops. Thus, the development of horticultural production has been slow and was left largely in the hands of the private sector with very minimal government involvement (Jones, 1990). Since 1992, however, through favourable policy formulation and implementation, the government has encouraged wider participation in the horticultural sub-sector for enhanced growth and development (Brag, 1991).

Table 5.1: Zambia: index of agricultural production (1998/90 = 100)

Crop	Year								
	1989/90	1990/1	1991/2	1992/3	1993/4	1994/5	1995/6	1996/7	1997/8
White maize	100	97	43	142	90	65	125	82	58
Burley Tobacco	100	N/A	68	162	70	101	122	61	N/A
Groundnuts	100	112	82	168	138	144	139	183	227
Sun flower	100	53	7	106	49	69	134	40	22
Seed cotton	100	133	71	131	91	45	112	204	301
Mixed beans	100	99	143	164	162	166	167	96	97
Sorghum	100	107	66	181	179	135	182	143	130

Source: CSO, Research Department.

The production and export of horticultural products has increased significantly since 1991. For instance, export earnings from horticultural products increased from about US\$8 million in 1991 to about US\$37 million in 1997 (EBZ, 1997). The main horticultural products that are produced and exported are green beans, baby corn, courgettes, egg plants, carrots, chillies and peas. A number of commercial farms that are involved in the production of horticultural crops also produce floricultural products like marigolds and roses for export. The export earnings for floricultural products have also shown tremendous growth in recent years. For instance, export earnings increased from about US\$5 million in 1996 to about US\$43 million in 1999 (MoFED, 2000). These trends indicate the great potential of both the horticultural and floricultural sub-sector in earning foreign exchange as major non-traditional exports.

The livestock sub-sector is also economically important in Zambia; it accounts for about 35% of the total agricultural production. The main animal species produced are cattle, goats, pigs and poultry. The livestock sub-sector consists of the extensive communal grazing (traditional), and the intensive commercial sectors. It is estimated that the traditional sector has about 2.3 million head of cattle, over 500,000 goats, 76,000 sheep and 287,000 pigs, representing 82%, 97%, and 89%, respectively, of the national population. About 70% of the cattle and 80% of the goat populations are concentrated in Southern, Western, Central and Eastern Provinces (MAFF, 1994a). Cattle are relatively the most important type of livestock in Zambia. In 1997, about 315 million eggs and 17,500 tonnes of chicken meat were produced. The production of poultry within Zambia, however, has not improved significantly to meet existing demand. The low production levels of poultry products are attributed to high costs of feed and outbreaks of diseases like Newcastle (MAFF, 1997). In spite of this, some small-scale producers have shown great interest in poultry and trends indicate that this sub-sector will register increased production and growth in the near future.

The national cattle herd started to substantially decrease in the 1990s. This situation has been particularly severe in the Southern Province for three main reasons namely, outbreaks of diseases of economic importance such as corridor and foot and mouth; low off-take rates estimated to be less than 10% per year; and occurrence of droughts, which depleted the grazing resources and drinking water, leading to the decimation of a large number of animals. Communal grazing has in part been blamed for the frequent outbreaks of cattle diseases in Southern and Western Provinces. The reduction of livestock in rural areas has negatively affected the food security of households through reduced availability of draught power and income generating ability.

In addition to crop and livestock production, Zambia's agricultural sector produces fish. The fisheries sub-sector is based on both capture fisheries and aquaculture, and is a major source of livelihood and food security for both the rural and urban populations. The abundant water resources in lakes, rivers and swamps support large fishing communities. The favourable environmental conditions such as abundant water, soils, rainfall and temperatures in many parts of the country also present great potential for the development of fish farming or aquaculture. In recent years there has been an increase in the number of households in rural communities that have started fish farming. The extension efforts of the Fisheries Department and several other NGOs have greatly contributed to the adoption of fish farming (MAFF, 1997).

Although the country has great potential to support livelihoods through the fishing sub-sector, the production trends have not been as impressive as expected. The fish catches from the artisanal sub-sector have remained static, averaging about 60,000 tonnes per annum. The demand for fish presently outstrips supply. The per capita consumption has declined due to declining yields in capture fisheries. This decline in yields in capture fisheries has been attributed to increasing human population in fishing areas, and unsustainable fishing practices such as fishing in breeding sanctuaries and the harvesting of immature fish. Furthermore, the sub-sector is constrained by poor storage facilities and unreliable transport (MoFED, 2000).

The role of agriculture in economic growth and poverty reduction

The agricultural sector is critical in poverty reduction and in the economic development of the Zambian economy, and will be the engine of growth for the next decade and beyond. Agriculture generates between 18% and 20% of the Gross Domestic Product (GDP) and provides the livelihood for more than 60% of the labour force. It is the main source of income and employment for rural women who constitute 65% of the total rural population. Increases in rural incomes will, therefore, result in overall poverty reduction and increased food security.

Despite the agricultural sector's low contribution to GDP, the actual contribution of agriculture to the economy is far-reaching and has significant multiplier effects. For example, agro-products (food, beverages, tobacco, textiles and leather products), accounted for between 7.4% and 8.3% within the manufacturing sector, whose share in GDP ranged between 9.9% and 10.5% during the period 1996 to 1999. In addition, the agricultural sector has become a major contributor to non-traditional earnings.

The share of agricultural exports as a percentage of non-traditional exports has seen an upward trend, rising from 22.7% in 1996 to 61.1% in 1999. This performance has been against a background of stiff international competition and low commodity prices (MoFED, 2000).

The agricultural production system

Zambia has about 700,000 farm households. These farmers can be grouped into three main categories:

Small-scale farmers: they constitute about 75% of the farm households in Zambia, operating an average farm size of 2 hectares, using family labour and simple hand tools. Their main activity is production of food and fibre crops and livestock, mostly for subsistence. Lack of cash incomes, appropriate technological packages and irregular supply of inputs are the major constraints affecting their activities. As a result, productivity of their crops and animals is very low.

The small-scale farmers, who are the majority in the farming sector, present a huge potential, which if mobilised with appropriate technological packages, can increase food production in the country, which in turn would improve food security and reduce poverty in the country.

Emergent farmers: the 1997 estimates indicate that about 17% of the farm households in Zambia are “emerging” commercial farmers. They produce both for subsistence and for the market, using family labour, oxen or hired tractors and purchased inputs. Thus, given the supporting technical and advisory services and improving the infrastructure, this group can greatly assist in reducing poverty and food insecurity.

Commercial farmers: the balance of 8% of the farm households are medium and large-scale commercial farmers, with farm size exceeding 40 hectares. These farmers are along the line of rail or near major urban centres. Because of their favourable position, in terms of infrastructure and marketing facilities, they are the principal beneficiaries of the support services, public investments and imported agricultural inputs.

Land tenure system

Land ownership among the majority of traditional and emergent farmers is held in common with inherited usufruct rights. In other words, land tenure arrangements under traditional agricultural systems in Zambia are still under customary law, which puts emphasis on men to have inherited rights to have access to land in order to grow food for their families. This type of land tenure system excludes women and female-headed households from inherited rights to the use of land. It is common knowledge that in Zambia, like in most African countries, women carry out the main agricultural activities. Due to gender bias in owning land under the customary system, farmers are still generally perceived as “male” by policy-makers, development planners and agricultural service providers. For this reason, women find it more difficult than men

to gain access to valuable resources such as credit and agricultural inputs, technology, extension, training and other services that would enhance their production capacity. This raises the issue of empowerment of the vulnerable groups like women and the poor.

Adequate institutional arrangements are required to determine rights and access to resources, such as land, water, and trees as a prerequisite to agricultural development and food security. A large proportion of small-scale farmers does not have formal titles to their land. This creates uncertainties regarding continuous access to land, discourages long-term investment, and induces mining of the land. It also prevents these producers from using the land as collateral for loans. The current land registration and land titling procedures are not efficient because transaction costs associated with obtaining a title are often too high, hence the need to simplify and streamline registration procedures.

Food security

The World Bank broadly defines food security as “access by all people at all times to enough food for an active, healthy life”. The term “access” here is inclusive of both the supply side (availability) and the demand side (entitlement). Defining food security at household level brings in further dimensions: “a household is food secure when it has access to the food needed for a healthy life for all its members (adequate in terms of quality, quantity, safety and cultural acceptability), and when it is not at undue risk of losing such access” (Saad, 1999).

Zambia’s food security situation is serious despite the occasional surpluses the country produces during good crop years. Whichever measure of food security one uses, Zambia is no longer able to feed itself. As a result, chronic malnutrition (stunting) has affected about 45% to 47% of the rural households, while malnutrition (wasting) has inflicted about 6% of all rural households (World Bank, 1996). Therefore, the children affected by chronic malnutrition will remain physically and mentally impaired for life, even if they survive. This high rate of malnutrition has serious implications for Zambia’s development prospects.

The main causes of Zambia’s food insecurity at household level are an inability to produce enough food, due to lack of agricultural service support and technical exigencies such as unfavourable climatic conditions, disease and insect attacks, etc., inadequate incomes and inability to purchase food, the negative impact of HIV/AIDS on the productive capacity of households, and inadequate market and transport systems to take food from surplus to deficit areas within the country.

It is clear that even with the present technology, Zambia is capable of growing enough food (except in the worst drought years) to provide its 10 million people with sufficient food. The problem is access to that food by low-income households. A large proportion of Zambia’s poor cannot command food resources because they simply cannot afford to purchase it at the prevailing prices.

In rural areas, the small-scale farm households are not able to command food resources because of their low per capita productivity – to grow and store enough food to provide for their families throughout the year. The two to three months prior to the harvest are a period of serious nutritional deprivation for many rural households in Zambia.

The detrimental impact that HIV/AIDS can have on rural households' productive capacity and food security has already been experienced in some of Zambia's rural communities. The effects of HIV/AIDS are felt on two key farm production parameters. First, household labour quality and quantity are reduced, initially in terms of productivity when the HIV-infected person is ill; later the supply of household labour falls with the death of that person. The second factor of household agricultural production that HIV/AIDS affects is the availability of disposable cash income. During episodes of illness, household financial resources are diverted to pay for medical treatment and eventually to meet funeral costs. Such resources may otherwise be used to purchase agricultural inputs, such as occasional extra labour or other complementary inputs (e. g. new seeds or plants, fertiliser, pesticides, etc.). Some family assets (e. g. livestock) might be sold off.

Given the level of poverty in Zambia where incomes are far below the poverty datum line, the food insecurity affecting most urban and rural households is a serious problem requiring urgent attention. With a great endowment of natural resources, agriculture is one of the leading critical sectors with the greatest possibility for generating economic growth and increasing food security. Small-scale farming represents a large potential resource for increased agricultural production and poverty reduction. However, realisation of this potential will require an enabling policy environment.

Current poverty reduction policies and programmes in the agricultural sector

In an effort to revamp the economy, the government has taken a number of Structural Adjustment Programme (SAP) policy measures, among them the introduction of a flexible exchange rate; liberalisation of trade; removal of subsidies on production and consumption; reduction in government expenditure; cost sharing schemes in the provision of public health and education services; privatisation of state owned business firms; and liberalisation of agricultural marketing and the supply of inputs.

In order to implement these policy intentions, government has implemented a number of strategies which have included: Privatisation and Public Sector Development; Public Sector Reforms; a National Poverty Reduction Framework; Agricultural and Rural Development; Public Provision of Physical Infrastructure; the Road Sector Investment Programme (RoadSIP); and the Agricultural Sector Investment Programme (ASIP).

The Agricultural Sector Investment Programme

In order to improve the performance of agriculture, the Zambian Government initiated the Agricultural Sector Investment Programme (ASIP) with the assistance of donors.

ASIP is expected to contribute towards creating a liberalised, market-oriented agricultural system and improving the delivery of services to farmers.

The main policy objectives of the programme are:

- to ensure national and household food security through dependable annual production of adequate supplies of basic foodstuffs at competitive cost;
- to ensure that the existing agricultural resource base is maintained and improved upon;
- to generate income and employment through increased agricultural production and productivity;
- to contribute to sustainable industrial development by providing locally produced agro-based materials;
- to enhance the sector's contribution to the national balance of payments by increasing agricultural export (MAFF, 1994b).

ASIP was designed to achieve significantly greater project efficiency, ownership, capacity building and sustainability. As a major instrument through which the Zambian Government is implementing policy changes in the agricultural sector, ASIP's main goals are not only to harmonise investments in order to optimise use of resources and increase farm level productivity in the country, but also to improve the performance of the agricultural sector, reduce rural poverty and improve living conditions in the rural areas by improving farmers' access to agricultural services, such as extension education, veterinary services, credit facilities, and improved rural infrastructure such as roads, bridges and agricultural marketing infrastructure. Under ASIP, a number of programmes/projects have been or are being implemented by the government and NGOs, to reduce poverty among rural based farm and non-farm households.

Strengths, weaknesses and constraints of the policies and programmes

ASIP has had successes and limitations in helping to reduce poverty in the agricultural sector. Most of the success has been in the increased market opportunities for private sector participation and improved stakeholder consultation

Strengths

The emergence of private agri-business enterprises

Following the liberalisation of the economy adopted by the government, the marketing of agricultural inputs and produce has also been deregulated. The parastatal companies that used to dominate the sector have since been privatised and government has encouraged the participation of the private sector in the development of the agricultural sector. This has seen the emergence of private sector players involved in input supply and distribution, output marketing, agro-processing, trading, and provision of finance. NGOs have also emerged as important players in the provision of various services to the farming community. The private sector is expected to play a more pivotal role in bringing about economic growth, while the primary role of the government is to provide an enabling environment.

The Rural Investment Fund

The Rural Investment Fund (RIF) programme in the Ministry of Agriculture, Food and Fisheries has been instrumental in the improvement of feeder roads and community roads as a way of tackling the transport problem in rural areas. Rural communities are involved in selecting the roads and other infrastructure for improvement and they contribute labour to these projects. These RIF projects emphasise participatory needs assessment with an element of self-help required, and have been very successful in improving infrastructure. Available information indicates that women in these communities have fully participated in decision-making about which roads or other infrastructure to prioritise and construct or maintain.

Stakeholder consultation

The ASIP Consultative Forum (ACF) has been instituted as a mechanism for improving consultations with various stakeholders in the agricultural sector on policy issues, planning and budgeting. The ACF is chaired by the Permanent Secretary of the Ministry of Agriculture, Food and Fisheries, with representatives from government, donors, NGOs, private agri-business, and farmer's associations. In the same vein, an Agri-business Forum has also been formed to improve consultation among agri-business leaders, donors and government.

Weaknesses and constraints

Agricultural growth has been well below potential in recent years due to a number of constraints. This has resulted partly from an accumulation of poor past policies. The major weaknesses of the current agricultural policy framework have been identified by reviews of ASIP (MAFF, 1996). The following are some of the main weaknesses and constraints:

- i) non-availability of quality seeds and inappropriate production technologies, especially for small holder farming;

- ii) lack of access to credit, by the majority of small holder farmers, particularly women;
- iii) high cost of farm inputs;
- iv) poor and inadequate rural infrastructure, especially feeder roads, power supply and market facilities;
- v) inconsistencies in policy;
- vi) poor institutional and legal framework;
- vii) inadequate research, inefficient extension delivery systems as well as inadequate extension services and support;
- viii) poor sequencing of the liberalisation process;
- ix) lack of effective co-ordination of investment activities among the key stakeholders in agriculture;
- x) unfavourable weather conditions and high dependence on rain fed production;
- xi) high population pressure on the natural resource base. As a result, many indicators of rural livelihood have been worsening, indicating an increase in rural poverty.

The following section further elaborates on some of the main weaknesses and constraints to the development of the agricultural sector in Zambia.

Lack of access to agricultural credit

Following the liberalisation of the economy adopted by the government, marketing of agricultural inputs and produce was also deregulated. However, because of the historical over-centralisation and control of the economy, many poor rural households did not know how to function in a liberalised market economy. This development left many small-scale participants in agricultural marketing in disarray. A sense of hopelessness and powerlessness has evolved among many rural farmers. Given the sudden change in the marketing system, most of the farmers have little knowledge of how they, as individual small-scale producers, could obtain their inputs after the traditional government-sponsored channels were no longer operational.

The collapse of the Credit Union and Savings Association (CUSA), the Zambia Co-operative Federation (ZCF) and Lima Bank, which were the traditional agricultural lending institutions has left a vacuum with regard to accessibility of credit for small-scale farmers. Furthermore, during the time that the public credit institutions were operating, small-scale farmers were not taught or even advised properly to understand

budgeting, cash flows, the role of interest rates and the need to ensure future credit worthiness.

Presently, financial institutions show little interest in providing credit to rural producers, due to the fact that they lack the traditional collateral requirements (i. e. title deeds to land holdings). The lack of access to credit has had some negative effects on most of the poor rural households.

Lack of access to reliable markets and market information

Government withdrawal from participation in the marketing of agricultural produce has left a vacuum. Since the farmers had been accustomed to marketing their crops through the government-sponsored co-operative marketing system, and because that system is no longer functioning, they have tended to rely on itinerant private traders to buy their crops. The majority of small-scale farmers have no experience in selling their cash crops in a competitive market. They also do not have experience in collective bargaining and they lack market information. This has resulted in small-scale farmers getting unfair terms of trade due to the monopolistic tendencies of buyers. They, therefore, are not able to obtain what they consider to be a fair price for their products. Farmers often sell their produce at prices below production cost. In addition, their lack of adequate on-farm storage facilities prevents them from holding their produce to take advantage of price increases after the main harvest season is over.

Moreover, with the withdrawal of government from direct service provision, the level and quality of complementary services, such as market information, have become poor and the prices of farm inputs have increased beyond the reach of poor farmers; at the same time they cannot find markets for their farm produce. The private sector has not developed sufficient capacity to adequately supply farm inputs and buy produce from small-scale farmers.

Lack of effective farmer organisations

In the past, the marketing co-operatives operated with a top-down approach. Farmers at the grass roots level did not develop management and organisational skills to run these co-operatives. Consequently, there is an almost total absence of farmer organisations of a sufficient scale to function effectively in a competitive market. The liberalisation and market reform process lacked a managed transitional phase, while the pace of implementation was too fast for most stakeholders to cope. For instance, the government did not put in place plans to create capacity for the small-scale farmers in local communities to fill the vacuum in the transitional phase, after the abolishment of government supported local, provincial and national co-operatives. The rapid implementation of reforms created gaps in the provision of services and negative impacts on production, marketing, and input supply, especially for the poor small-scale farmers.

Lack of effective extension services

The government has been funding and/or supporting agricultural research and extension programmes through various national and provincial research institutions. However, public investments in research, extension and infrastructure have been inadequate. Extension and research emphasis has also been on maize production. This type of production culture exposed farmers to a lot of risk and uncertainty as was experienced during the 1991/1992 season, when the drought reduced the maize crop by almost half. Maize production is highly dependent on rainfall and when the country did not receive enough rains, much of the rural population was exposed to famine and hunger.

Inadequate resource allocation is one of the major constraints to improving and increasing agricultural production and reducing poverty. The cuts in government expenditure have had a direct consequence on the quality and coverage of government agricultural services like extension. This in turn has a negative effect on productivity in the agricultural sector as a whole. For instance, before the liberalisation of the economy, some extension activities such as those involving veterinary services had functioned effectively. These have been almost entirely discontinued in most rural communities due to lack of funding. As a result, farmers raising cattle have been losing many animals to corridor disease and other livestock diseases. In places like the Southern Province, the heavy losses of oxen have had a major impact on both cash and food crop production and on the ability of the farmers to transport their produce to the available markets.

Poor infrastructure

Improving productivity in small-scale agriculture depends on the adequacy and quality of rural infrastructure like roads and bridges. The main problems facing Zambia's rural roads are poor planning, lack of funding and severe neglect of rehabilitation and maintenance. These problems have serious implications on the agricultural sector. For example, many places have become inaccessible to motor vehicles and productive activities have been hampered. Another effect has been high operational costs for agricultural traders and transport businesses. Most private transporters shun rural areas in preference for urban sites, which have relatively better infrastructure. Many private traders are unable to reach parts of the rural areas to collect agricultural produce due to poor conditions of the rural road network and lack of appropriate means of rural transport. In a number of cases, rural populations are denied access to agricultural inputs, educational materials, and health services among others because of inadequate rural transport infrastructure.

Cross-cutting issues and poverty reduction in agriculture

The Zambian Government recognises the need to pay attention to gender analysis in policy formulation, planning and implementation in its development programmes. In small-scale agriculture, women are mainly responsible for the cultivation of food crops and for the more burdensome and time-consuming activities, like weeding and the transport of the harvest, and yet they are disadvantaged in terms of access to agricultural services. In the past, the agricultural sector pursued non-gender responsive development strategies, which led to the majority of women, especially those in rural areas, having very little access to agricultural services such as credit, extension and technology.

ASIP and other recent government agricultural policy papers now affirm policy commitments with regard to cross-cutting initiatives, such as gender in development, environmental conservation and governance. In this context relatively more emphasis is put on the importance of approaching poverty reduction from a gender perspective, due to the fact that the gender dimensions of poverty have become more established among aid organisations and in development research. The “gender and development” approach has been particularly significant with the establishment of GIDD. The interactions between environmental sustainability/degradation and poverty are also gaining recognition.

With the renewed emphasis by the government to integrate women’s effective participation in all development programmes on equal footing with men, several activities and programmes are on the threshold of being implemented. Not much, though, has been achieved yet in the various sectors. The rural or agricultural sector is not an exception. Efforts are being made to mainstream gender concerns in this sector; GIDD is working with stakeholders to formalise guidelines and structures that will help in mainstreaming gender concerns.

Proposed policies and strategies for poverty reduction

Long-term vision

Growth in the food and agricultural sector is vital for poverty reduction and for ensuring an adequate and stable food supply for most of the population in Zambia. The long-term vision for the agricultural sector is to create jobs and increase incomes through a sustainable utilisation of resources. Producer incentives and new technologies that increase production and employment in the agricultural sector, including the establishment of small- and medium-scale food-processing facilities, can help augment incomes, reduce poverty and improve food security.

The long-term vision statement is formulated as follows:

“Improved livelihoods of people in Zambia through a growing, efficient and sustainable agricultural sector”.

Objectives

The role of agriculture in the economic growth of the country is clear. There is an urgent need to increase the efficiency of present resource utilisation, while simultaneously conserving and, where possible, enhancing the productive capacity of the resource base. In line with the aspirations of the long-term vision, the government should aim to attain the following objectives in the agricultural sector:

1. ensure food security;
2. generate income;
3. create employment opportunities;
4. stimulate agricultural growth on a sustainable basis;
5. improve marketing of agricultural commodities and inputs;
6. improve the delivery of agricultural finance services;
7. ensure sustainable utilisation of the resource base.

Proposed strategies in the agricultural sector

This sector needs to grow at about 4% to 6% per annum if it is to contribute to national growth and to an increase in rural wealth. For this to happen in a way that effectively supports poverty reduction over most of the sector, a number of important strategies and actions need to be undertaken. These include:

- i) building an effective and efficient participatory extension and technology generation service, and promoting dissemination of agricultural information;
- ii) undertaking affirmative action in agriculture by facilitating participation of women;
- iii) establishing an efficient and sustainable rural finance and credit supply system for small-scale farmers and rural primary agro-processors;
- iv) ensuring that policies, and institutional and legal frameworks are investor friendly;
- v) implementing sound land use, water and environmental policies;
- vi) facilitating long-term investments in farm improvement;
- vii) protecting land and other resources, like water catchment areas, by developing forest plantations, and other conservation practices;
- viii) improving the governance of the co-operative sector by empowering farmers in order for them to address specific problems, such as marketing or undertaking investments in small-scale irrigation projects in poverty stricken areas.

The role of government

The role of government in encouraging growth in the rural sector should be redirected towards fulfilling those functions that are truly public goods. In particular, it should strive to provide better research/extension linkages, which are seen as the main way of supporting effective increases of small-scale maize and traditional crop production, which is undertaken mainly by the rural poor. It should also set policies to create an enabling environment which encourages investment and trade, thereby leading to job creation, which would also be of direct benefit to the poor.

Specific priority activities

In the medium-term, the government needs to focus on a few strategic interventions that are most likely to have the greatest catalytic effect on poverty reduction:

1. promotion of food security - the government will promote food security through consumption smoothing and social protection intervention, supported by maintenance of a national food reserve of maize and other cereals, and a drought contingency fund;
2. promotion of agricultural diversification and post-harvest technologies;
3. ensuring that an early warning system is functional in all drought prone districts, and continuing to have famine relief distribution and monitoring carried out by NGOs and communities;
4. inspection and quality control of farm inputs and commodities through improved legislation and empowerment of farmer's associations;
5. control of crop and livestock pests and diseases;
6. improving the technology development and transfer system through participatory group extension, private sector participation and farmer training, with increasing focus on mainstreaming gender concerns, environmental issues and reduction of post-harvest losses;
7. developing specific interventions to monitor and combat the impact of HIV/AIDS on family food security using village level approaches and extension service personnel;
8. promotion of income and employment generation through increased production of crops and other agricultural products. The government will facilitate higher production of crops, livestock and fisheries through:

- i) investing in constructing rural infrastructure like feeder roads and rural electrification;
- ii) promoting of research and extension, particularly for food crops and livestock, which are very important for the rural poor;
- iii) strengthening legislation to provide for sustainable exploitation of the natural fisheries resources, and promoting fish farming by providing research and extension services;
- iv) involving producers, particularly small-scale farmers, in seed multiplication and distribution;
- v) promoting production of high value crops/livestock and establishment of out-grower schemes and other agri-business enterprises;
- vi) facilitating marketing and agro-processing, including developing the modalities for further involvement of the private sector;
- vii) providing a framework for the development of working partnerships with NGOs, the private sector and other stakeholders;
- viii) enforcing anti-dumping measures with respect to certain imported agricultural products.

Proposed agricultural programmes for poverty reduction

In order to reduce the levels of poverty in most rural and urban communities, and subsequently improve the quality of life on a sustainable basis, a number of priority programmes were proposed by the Agriculture Working Group, as part of the government-led Poverty Reduction Strategy Paper process. For its part, the Civil Society Agriculture Working Group identified five core programme areas for public action in agriculture. These are:

- i) Food Security and Diversification
- ii) Agricultural Finance and Investment
- iii) Agri-business and Market Development
- iv) Agricultural Research and Extension
- v) Natural Resources Management.

It was proposed that each programme should consist of a number of entities; these entities are of three types: new technical projects, on-going or continuing programme

activities and technical services. With this approach, the Civil Society Agriculture Working Group did not come up with cost estimates required for the programmes. It was proposed that it would be more appropriate for the Ministry of Finance and Economic Development and/or the Ministry of Agriculture, Food and Fisheries to suggest the cost estimates for the programmes. These ministries are better placed to do this since they have more details and specifics of the budgetary provisions for the PRSP. Through further consultations with the civil society groups, the suggested cost estimates for the programmes can then be finalised.

Table 5.2 presents details of these proposed programmes. Within each programme, besides the specific objectives, a number of the major outputs were identified over its lifetime. Some activities and indicators of achievements are also provided in the logical framework.

Monitoring and evaluation

In order to monitor progress in the implementation of the Poverty Reduction Programme, it is necessary to establish a monitoring and evaluation system that regularly measures its rate of implementation and its impact. The Poverty Reduction Programme activities will be monitored each year in each sector. Other principal monitoring instruments are the Economic Reports, the State Budget and specific annual reports. The more comprehensive impact evaluations will require household surveys that can be conducted, for instance every five years.

Table 5.2: Logical framework analysis: poverty reduction through agricultural development; programme duration - 2002 to 2004

Narrative summary	Objectively Verifiable Indicators	Means of Verification	Critical Assumptions
<p>Programme goal</p> <p>Improved livelihoods of people in Zambia through a growing, efficient and sustainable agricultural sector.</p>	<p>Improved income, food production, nutrition status and employment of the people in Zambia in general.</p> <p>Indicators include:</p> <ul style="list-style-type: none"> ▪ Food balance (cereals availability and requirements). ▪ Prices of basic food crops. ▪ Production of basic food crops. ▪ Productivity per hectare of the main crops. ▪ Animal production and derivatives (eggs and milk). ▪ Artisanal fishing. ▪ Family sector agricultural marketing. ▪ Fish products marketed (artisan). ▪ Situation of agricultural markets. 	<p>Baseline surveys and impact assessment studies to determine if there is change in the quality of life, through indicators such as income, employment, health, food production, nutrition status, etc.</p>	<ol style="list-style-type: none"> 1. Government policy commitment to improving rural welfare continues. 2. There is financial commitment by the government and donor agencies for the Poverty Reduction Programme.

<p>Specific Objectives</p> <p>Component: Food Security and Diversification</p> <ol style="list-style-type: none"> 1. To increase food security and nutrition through increased production of food crops and livestock. 2. To promote diversification of agricultural production. 3. To promote the establishment of rural based income generating activities. 4. To promote fish farming and sustainable management of natural fisheries 	<p>By 2004:</p> <ul style="list-style-type: none"> • Proportion of food insecure households is reduced to 30%. • Safety net measures available for the vulnerable. • Food reserve in place. 	<ul style="list-style-type: none"> • National surveys. • Research and extension reports. • Monitoring and interim evaluation reports. • Economic reports. • Annual reports. 	<ol style="list-style-type: none"> 1. Key institutions provide continuing support. 2. Institutional mandates clearly understood by the various stakeholders. 3. Civil servants and other project staff are well trained and remunerated to remain with the various programmes and projects for sustainability. 4. Mechanisms for the participation of the farmers and the poor in various poverty reduction programmes are functional.
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<p>Component: Agricultural Finance and Investment</p> <ol style="list-style-type: none"> 1. To promote and encourage access to credit and financial services by low income small-scale farmers. 2. To create an enabling environment for increased private sector participation in the provision of financial resources and services. 3. To provide finance for the establishment of agricultural businesses. 4. To mobilise resources for rural infrastructure development. 5. To rehabilitate or construct rural infrastructure in order to facilitate growth in the sector. 	<ul style="list-style-type: none"> • Appropriate agricultural credit fund/scheme in place by Year 2. • Financial institutions through private sector established. • Appropriate legal framework for private sector participation and for micro and medium-term credit in place by Year 1. • Proportion of producers accessing credit increased to 60%. • Loan default rate reduced to 10%. 		
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<p>Component: Agri-business and Market Development</p> <ol style="list-style-type: none"> 1. To promote the development of farmer driven production and marketing associations and co-operatives. 2. To develop and promote private sector participation in the marketing system and investments for agricultural inputs and commodities. 3. To improve access to agricultural market information. 4. To develop capacity in agri-business skills. 	<ul style="list-style-type: none"> • Agricultural technologies generated and adopted satisfy needs of the farmers in the various farming systems. • More effective projects planned and implemented reflecting the technological needs of the farmers. • Better information flow and linkages among agricultural service institutions to assist farmers. • Proportion of farmer groups rises to 80%. • Number of self-initiated farmer groups increases to 80 % of total 		
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<p>Outputs</p> <ul style="list-style-type: none"> • Crop and livestock diversification adopted by farming households. • Quality of diets and capacity of rural households to produce sufficient food throughout the whole year improved. • Seed multiplication in rural areas established. • Nutrition education in extension training programmes developed and maintained. • Local agro-processing established. • Long-term strategic food reserves established and maintained. • The disaster management system, including a safety net for poor households and an early warning system, improved and maintained. • Fisheries and integrated aquaculture-agriculture farming practices for enhanced and sustainable rural livelihoods promoted. • Rural road infrastructure and storage facilities improved. • Rural market development by the private sector promoted. • Rural micro-financing institutions and sustainable credit systems established. • Agri-business skills and capacity of farmers developed. • Financing available for development of agri-business enterprises like out-grower schemes. 	<ul style="list-style-type: none"> • Increased number of households with diversified crop and livestock production. • Increased number of rural households having quality diets throughout the year. • Increase in seed multiplication taking place in rural areas. • Increase in the number of nutrition education in extension training programmes developed. • Increase in local agro-processing. • Increase in the amounts of food in the long-term strategic food reserves. • Improvement in the disaster management system, including a safety net for poor households and an early warning system. • Increase in fisheries and integrated aquaculture-agriculture farming practices among rural households. • Improvement in the quality of rural road infrastructure and storage facilities improved. • Improved efficiency of rural markets. 	<ul style="list-style-type: none"> • Line ministry surveys (MAFF, MLGH, MoH, etc.). • Project annual reports. • Project/programme monitoring and evaluation reports. • Research and extension reports. • Farmer and co-operative/association interviews. • Participatory community interviews/focus group discussions. • Gender analysis baseline surveys. 	<ol style="list-style-type: none"> 1. Inputs are available adequately and timely. 2. Training and technical assistance available for programme staff. 3. Intended beneficiaries (the poor) appreciate and are involved in the programmes. 4. There is co-ordination and co-operation between the agricultural service institutions.
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<ul style="list-style-type: none"> • Private sector involvement in marketing and investments in other forms of agri-business promoted and developed. • Efficient farmer's organisations like co-operatives providing credit developed. • Financing for rural infrastructure development and rehabilitation made available. • Community labour-based infrastructure projects promoted. • Farmer's organisations developed and strengthened. • Private sector servicing and financing of input supply and marketing developed. • National information system on agricultural markets strengthened and maintained. • Local and export markets developed. • Appropriate demand driven technologies and extension messages developed. • Crop, livestock and fisheries research strengthened. • Linkages among farmers, extension, research and NGOs strengthened. • Gender and HIV/AIDS issues incorporated in extension messages. • Existing land titling and administrative procedures improved. • Households owning land with secure titles in a gender balanced manner promoted. • Capacity of communities to sustainably manage and utilise natural resources built up. 	<ul style="list-style-type: none"> • Increase in the number of sustainable rural micro-financing institutions. • Improvement in the agri-business skills and capacity of farmers. • Increase in the number of agri-business enterprises, such as out-grower schemes. • Increase in the number of private sector businesses involved in marketing and investment in other forms of agri-business. • Increase in number of efficient farmer's organisations. • Increase in the funding for rural infrastructure and rehabilitation. • Increase in the number of community labour-based infrastructure projects. • Increase in the number of farmer's organisations established and strengthened. • Increase in the number of private sector business enterprises servicing and financing rural communities with inputs and commodity markets. • Increase in the amounts of agricultural products marketed locally and in international markets. 		
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<ul style="list-style-type: none"> Existing legislation to protect and enhance water, soil and bio-diversity conservation enforced. 	<ul style="list-style-type: none"> Increase in the number and quality of appropriate demand driven technologies produced and adopted. Increased funding for crop, livestock and fisheries research. Improved linkages among farmers, extension, research and NGOs. Increased awareness of gender and HIV/AIDS issues among the farming population. Improvement in the efficiency of existing land titling and administrative procedures. Increase in the number of households owning land with secure titles in a gender balanced manner. Increased awareness and ability of communities to sustainably manage and utilise natural resources. Enforcement of existing legislation to protect and enhance water, soil and bio-diversity conservation. 		
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<p>Activities</p> <p>Food Security and Diversification</p> <ul style="list-style-type: none"> ▪ Promote agricultural diversification. ▪ Promote seed multiplication. <p>Agricultural Finance and Investment</p> <ul style="list-style-type: none"> ▪ Establish and invest in suitable financial mechanisms for small-scale farmers. ▪ Establish a loan scheme. ▪ Create a fund for rural infrastructure development. <p>Natural Resources Management</p> <ul style="list-style-type: none"> ▪ Disseminate information on sustainable agricultural innovations and practices. ▪ Facilitate land ownership. ▪ Build up community capacities to properly manage and use natural resources. 	<ol style="list-style-type: none"> 1. Funds available for the PRSP. 2. Office space, supplies, vehicles and other resources for programme activities made available. 3. Capacity building or training of project/programme staff conducted in accordance with needs. 	<ol style="list-style-type: none"> 1. Project/programme quarterly and annual reports. 2. Project/programme administrative records. 3. Project training and personnel records. 4. Accounting or auditing reports. 5. Project monitoring and evaluation reports. 	<ol style="list-style-type: none"> 1. Funds and other inputs available adequately and timely. 2. Appropriately qualified and skilled persons will be available as staff on the various PRSP projects and programmes. 3. Programme staff are committed to achieving programme objectives.
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<p>Agri-business and Market Development</p> <ul style="list-style-type: none"> ▪ Train farmers in agri-business skills. ▪ Promote private sector participation. <p>Research and Technology</p> <ul style="list-style-type: none"> ▪ Carry out applied and participatory research. ▪ Disseminate research and extension information. ▪ Incorporate HIV/AIDS and gender concerns in extension messages. 			
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