1. INTRODUCTION

DRAFT

This assessment mission was carried out in collaboration with the government of Zambia and does not necessarily imply formal endorsement of the report by the government

Global Context

1.1 The world has been experiencing a dramatic increase in food prices. The FAO food price index of commodity prices surged 57 percent over the last year (March 2007-March 2008) after a 9 percent increase in 2006. This has negative implications for household food insecurity of vulnerable groups but also creates opportunities for developing agricultural production and rural development. The present situation calls for a rapid reaction from governments and the international community: policies need to be adjusted and programmes put in place to address negative impacts and tap opportunities. Unrest linked to high food prices has already occurred in more than 25 countries.

1.2 The historic secular decline in real food prices seems to have stopped. At the beginning of 2008, real prices reached their highest level in nearly 30 years. Projections suggest that they are likely to remain relatively high in the next few years, although at a lower level than that obtaining in the first quarter of 2008. Much will depend on how global supply will respond and on whether demand will continue to grow as rapidly as in the recent past.

1.3 Many factors can explain this evolution, although it is difficult to attribute precise quantitative weights to each of them. On the demand side:

- An increasing share of agricultural produce is used to manufacture bio fuels.
- Speculation on commodity prices as reserve stocks have dwindled. Some degree of panic on the markets as well as policy decisions taken by several countries have also amplified the upward movement of prices beyond what could be justified by the demand and supply situation.
- Long term income and population growth in China, India and other large developing economies have implied increased consumption and shifts in dietary patterns towards animal products whose production requires increased quantities of animal feed.

1.4 On the supply side:

- Adverse weather conditions in major exporting countries (e.g. in Australia) have reduced food grain production in the last years.
- Dwindling cereal stock reserves, which are at their lowest level since the 1980's.
- Higher oil prices have contributed to rising prices for agricultural inputs such as fuel and fertilizer and higher costs of transport, processing and storage incurred along the food chains.
- The decreasing trend in agricultural prices since the 80's has been a disincentive for production and investment in agriculture. Lower investment has constrained agricultural supply growth.

1.5 This situation creates challenges for the achievement of the Millennium Development Goals, particularly MDG1 of reducing poverty and hunger. However, higher food prices affect countries differently depending on whether they are net exporters or importers of food. Net-exporting

countries will benefit and experience higher terms of trade and more income. Net-importing countries will face lower terms of trade and have to pay a larger food import bill which will impact negatively on their trade balance and the strength of their currency. This is especially worrying for developing countries, the majority (55 percent) of which are net-food importers. Almost all countries in Africa are net importers of cereals.

1.6 The people most likely to be **negatively affected** by the higher food prices observed on international markets are net food buyers, depending on the extent to which international price movements are transmitted to domestic markets. Net food buyers comprise urban residents and small farmers, fisher folk, foresters, pastoralists and agricultural labourers that do not produce enough to cover their needs. Also negatively affected are those producers who are net buyers in value terms because they sell at low prices to finance essential needs and buy back at high prices later in the year.

1.7 The **primary beneficiaries** of higher food prices are those that have been holding food stocks and are now able to sell at high prices. Potential beneficiaries are commercial farmers and other operators within food value chains, provided high world prices are transmitted to them throughout the value chain. While commercial farmers will be hurt by rising fertilizer prices, they stand to benefit on balance because the costs of fertilizer constitute usually a relatively small (albeit growing) percentage of the gross revenue from production.

1.8 In planning country level actions, it will be essential to tailor the response to the specific conditions prevailing in individual countries and to the situation of different stakeholders concerned. Countries situations are very heterogeneous, and it is well known that “one size fits all” strategies are often not effective and can even prove to be counterproductive in many cases. Countries have all taken some steps towards addressing the issue, particularly in order to minimize impact on consumers. Some of these decisions (e.g. export bans) have had dramatic consequences on world prices and have exacerbated the problem for importing countries. This circumstance points to the need to carefully consider the domestic and international implications of decisions taken at national level.

Country Context

1.9 In May 2008, in the face of soaring food, fertilizer and fuel prices, the President of Zambia established an Inter-Ministerial Committee, on which FAO and WFP Zambia have been invited to serve, to address the issues involved. Its Terms of Reference are as follows:

- To deal with managing the situation of rising food prices;
- To examine factors related to the situation;
- To develop an action plan that will ensure sustainable food production in the short, medium and long term; and
- To operationalise irrigation development.

This has been followed by the establishment of a Multi-Sector Task Force by the UNCT in July 2008, to assist the Government in the search for solutions and to ensure a coordinated response by the UN system.

1.10 At the same time, under the aegis of the joint initiative on Soaring Food Prices of the Rome-based agencies – FAO, IFAD and WFP - an inter-agency mission was fielded in the second half of July 2008 to help Zambia develop a Country Action Plan in response to high food prices through a consultative process.

2. GENERAL CONTEXT AND FOOD SITUATION

General Background

2.1 Zambia is a land-locked Low Income Food Deficit (LIFDC) country in south eastern Africa with an area of 752,614 square kilometres and a projected population of some 12.5 million people in 2008[1]. Throughout the 1990's, Zambia's economic development was adversely influenced by declining copper prices, which led to a steady decrease in all development indicators. In 2004-2005, the HIPC completion point was reached. Zambia has since received debt relief, increased aid inflows and higher foreign investment in the mining sector.

2.2 Poor agricultural performance contributes to continued food insecurity throughout Zambia. The 2004 Living Conditions Monitoring Survey (LCMS III) indicates that about 76 percent of food crop farmers are food insecure. They are predominantly women and endure severe shortfalls during the lean season, between September and February, mainly owing to the inadequacy of rainy season agricultural production. Rural households depend for food mostly on their own production (55 percent of total consumption expenditure, compared to only 4 percent for urban households).[2] The Multi-Sector In-depth Vulnerability Needs Assessment, carried out by the Zambia Vulnerability Assessment Committee in June 2008, found that, in the most vulnerable drought-prone areas, this proportion was as high as 80 percent. This finding confirms these households' extreme vulnerability to production-related food insecurity.

2.3 Zambia is subject to two major climatic constraints: recurrent droughts and floods. Droughts are the more frequent of the two, with their impact being most heavily felt in the agriculture sector. Climate change has led to droughts and floods particularly in the southern part of the country - Eastern, Southern, Western and parts of Lusaka Provinces – and this has contributed to erosion of the asset base and livelihoods of the farming households in these areas, rendering them highly vulnerable to food insecurity. In the previous and current agricultural seasons, 2006/7 and 2007/8, crop failure has been caused by floods. Since 90 percent of Zambia's farmers are smallholders dependent on rain fed agriculture, they remain highly vulnerable to recurrent food insecurity caused by erratic climatic conditions. The spread of livestock diseases in the flood-affected areas has also significantly reduced livestock numbers and the availability of draught animals in the small and medium-scale farm sector.

Poverty and Health

2.4 The Living Conditions Monitoring Surveys conducted from 1991 to 2006 have shown that the incidence of poverty has reduced over the years. The results show that the incidence of poverty declined from 70 percent in 1991 to 64 percent in 2006. The gains of this reduction can be noticed in rural areas, where the incidence of poverty dropped from 88 percent in 1991 to 78 percent in 2006. In contrast, the incidence of poverty in urban areas increased from 49 percent in 1991 to 53 percent in 2006. Even so, poverty remains a rural phenomenon (80 percent- compared to urban areas - 34 percent); and exceptionally high among small farmers and people living in "urban low cost areas"[3]. 23 percent of all households are headed by women; and 20 percent of all children under-19 years are orphans[4]. The extremely poor and moderately poor populations constitute 51 percent and 14 percent respectively of the total population- a deterioration since LCMS III when they stood at 46 and 21

1Zambia 2000 Census of Population and Housing (Population Projection Report): medium variant with AIDS

2 LCMS III.

3 Ibid.

4Living Conditions in Zambia (LCMS) IV, 2006, Central Statistical Office, November 2007.

percent respectively. The Gini coefficient is estimated at 0.56 percent.[5] Over the past decade the trend in the majority of the Millennium Development Goals (MDGs) has been negative.

2.5 The impact of the HIV/AIDS pandemic (16 percent of the population aged 15-49 years estimated to be HIV positive[6]) further undermines steps to reduce poverty. Prevalence rates are much higher among young women than men, but this pattern changes as men and women grow older with prevalence rates being higher for men. Since women are the primary caregivers, as well as more physically susceptible to the disease, their productive activities are often reduced accordingly. This slows down agricultural production and adversely affects food security, as more women than men are involved in food production at household level.

Overview of the Agricultural sector

2.6 Agriculture is the main occupation of 72 percent of the workforce and contributes to about 13 percent of GDP[7]. Smallholder subsistence farms dominate the sector and account for about 80 percent of total agricultural production (maize and cassava). Growth in agriculture has lagged due to dependence on rain-fed agriculture, inefficient farming practices, lack of agricultural inputs and poor marketing outlets and road infrastructure. Food production is further constrained by the rapid changeover in the sector to industrial crops (coffee, cotton and tobacco) by all farmers as well as market disincentives for local producers from cheaper imported foods as well as the cereal marketing policy followed by the Food Reserve Agency in the recent past.

National Estimates of Smallholders Growing Crops
(Number of households)

Agric Year	Small-scale	Medium-scale	Total
2000/2001	760,983	22,259	783,242
2001/2002	765,323	25,566	790,889
2002/2003	1,002,298	24,788	1,027,086
2003/2004	946,672	43,169	989,841
2004/2005	1,127,418	44,030	1,171,448
2005/2006	1,148,470	40,386	1,188,856
2006/2007	1,126,386	48,349	1,174,735
2007/2008	1,101,219	44,610	1,145,829

Source: CFS Surveys 2000/01 - 2007/08 MACO & CSO

2.7 Smallholder farmers with less than 5 hectares of land (often less than 1.5 hectares), are the most numerous - fluctuating over the last four crop seasons at around 1,100,000. Their production is based on hand-tools and limited use of external inputs. The other extreme, about 2000 commercial farmers, are located in the most favourable agricultural areas (line-of-rail) and by using modern technology produce a large proportion of cash and export products (especially wheat and sugar). The medium-size group consisting of just under 50,000 farmers utilise animal draught power and cultivate an area between 5 and 20 hectares (Wishern et al. 1999). Small-scale farmers constitute 56 per cent of the total population and poverty among this group is high, 90percent of the smallholders being below the poverty line (LCMS III).

Agricultural Output and Productivity

52007 Zambia Budget Speech

[6] Zambia Demographic and Health Survey (ZDHS), 2001-2002, CSO.
7CSO Monthly Report, June 2008

2.8 Over the recent past, agricultural output growth has lagged behind population growth. Between 2000 and 2005, total growth in the agriculture sub-sector (crops and livestock) was 5.8percent, giving an annual growth rate for the sector of 1.2percent.[8]. In contrast, under the Comprehensive Africa Agriculture Development Programme (CAADP), an annual growth target of 6 percent has been set for Zambia's agricultural sector. This however, is still not sufficient to meet the Millennium Development Goal of halving poverty by 2015. Meeting this target requires both the agriculture and non-agriculture sectors to grow by an average of 10 percent per year. As Tables 1 & 2 below show, output levels are fluctuating around a declining trend and productivity levels are falling; they are unlikely to achieve the CAADP targets unless decisive policy measures are taken.

Table 1 Growth rates (percent p.a.) in Crop Output in Zambia, 1990/91 - 2005/06[9]

Crop	1990-1994	1995-1999	2000-2005	1990-2005	CAADP 2015 Target
Maize	-0.50	0.66	1.62	0.49	4.84
Cassava	3.30	11.86	3.60	4.33	5.54
Groundnuts	-5.70	1.77	-0.53	2.96	5.35
Cotton	-8.17	-3.88	3.65	3.40	9.37
Total crop value	-3.25	1.91	1.31	1.09	6.09

Table 2 Crop Productivity Growth Rates (percent p.a.) in Zambia, 1990/91 - 2005/06[10]

Productivity measure	1990 – 1994	1995 – 1999	2000-2005	1990 – 2005
Output per ha	-2.95	-0.75	1.42	-0.06
Output per HH	-4.76	0.27	0.77	-0.42
Area planted per HH	-1.81	1.02	-0.65	-0.36

Production of Staple Foods

2.9 Maize accounts for 60percent of national calorie consumption and serves as the dietary mainstay in central, southern, and eastern Zambia. It is now the dominant staple food with 70percent of the population depending on it due to strong Government support for its production. Yet dependence on rain fed maize production leads to highly volatile output from one year to the next. Given erratic rainfall and less than 5 percent of cropped land under irrigation, Zambia's maize crop fails to satisfy national consumption requirements, on average, in one year out of three.

2.10 Amid this wide year-to-year variation, maize production has trended downwards since the early 1990s, following marketing reforms and the withdrawal of large-scale maize subsidies. The abandonment of large-scale government procurement and pan-territorial pricing has reduced price incentives for maize cultivation, particularly in more remote areas. Consequently, farmers have reduced the area devoted to maize production and diversified into other food staples and export crops, such as cotton, tobacco, and paprika (Jayne et al. 2007; Zulu et al. 2000).

2.11 Cassava, the nation's second largest source of calories, accounts for roughly 15percent of national calorie consumption. Production has grown rapidly since the early 1990s, when government breeders released the first wave of highly productive new cassava varieties. Cassava serves as the principal staple in northern Zambia and is widely grown in western Zambia, where the Lozi people consume a diversified diet of rice, cassava, sorghum and maize. Production of sweet potatoes, though

[8] Ministry of Agriculture and Cooperatives (MACO) estimates
[9] Food Security Research Project (FSRP)
[10] ibid

not well captured in national food balance sheets, has likewise grown rapidly over the past decade, following the release of several new cultivars by Zambia's Root and Tuber Improvement Programme. Sorghum and millet, widely grown minor crops, supplement diets in southern, western, northern, and central Zambia. While Zambia's predominantly rain fed maize crop proves highly susceptible to drought, diversification into alternate staples, such as cassava, sweet potatoes, sorghum, and millet, has moderated this volatility by expanding the country's portfolio of drought-resistant alternative foods.

2.12 The vagaries of climate change have resulted in a significant shift in the cropping patterns of smallholder farmers. Maize farmers have tended to move into less risky and more profitable, drought tolerant food crops such as roots and tubers (cassava, sweet potato) as well as small grains (sorghum, millet). There has also been a significant increases in the area planted under root and tuber crops and small grains, with some estimates claiming a doubling in area cultivated in the last decade. The importance of cassava as a dual purpose crop serving the food and cash income needs of households has increased in recent years. Agricultural productivity of staple food crops is, however, low. This has been explained by the lack of improved cultivars, inadequate agronomic practices and decreasing soil fertility. Little attention has been paid to introducing innovative solutions for soil, water and nutrient management; the main factors limiting yields.

Public Expenditure on Agriculture

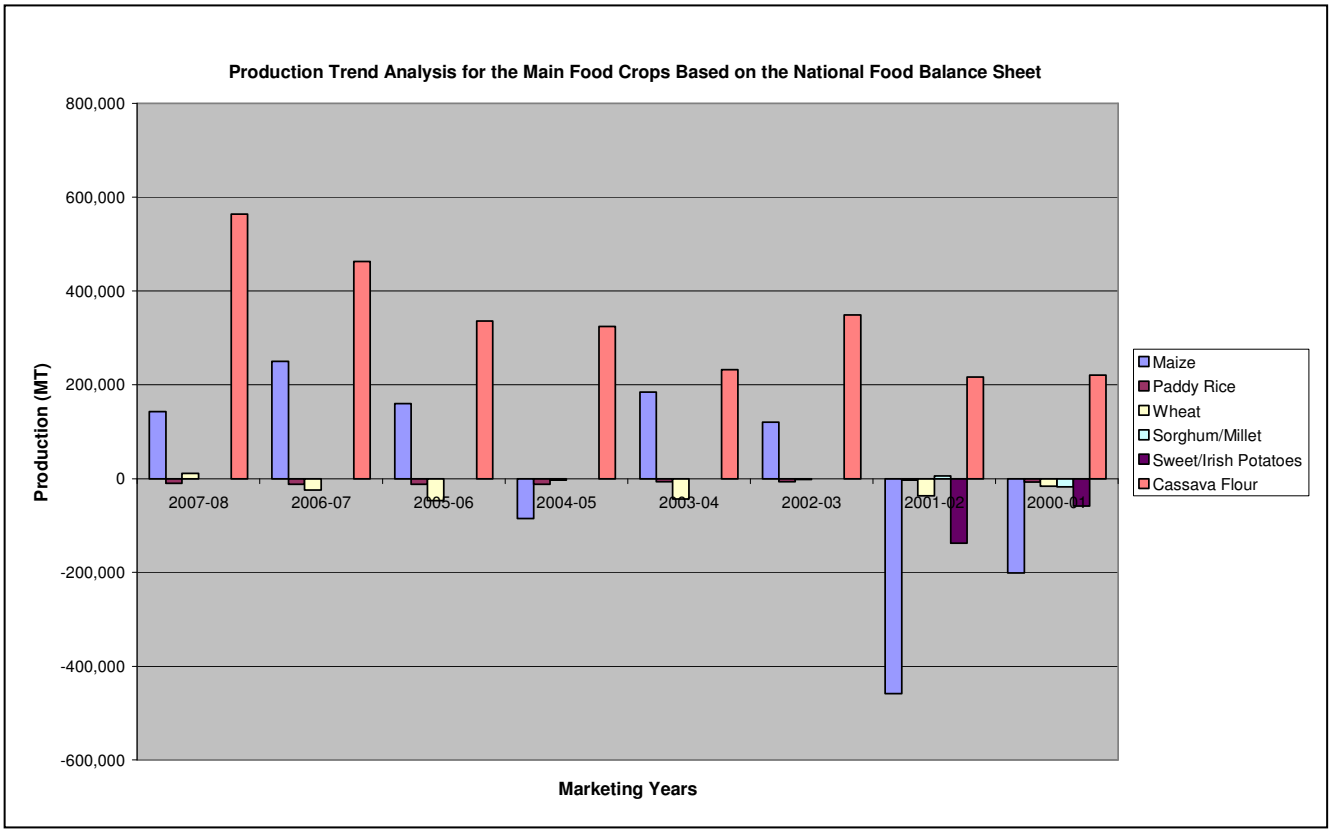
2.13 The CAADP sector analysis indicates that Zambia's agriculture sector could grow at six percent per year if certain crop- and other sub-sector level growth targets can be achieved. These targets include:

- Broader investment in agricultural research and extension;
- Additional spending in livestock and fisheries;
- Specific Agricultural development programmes to be undertaken;
- Investment in Irrigation.

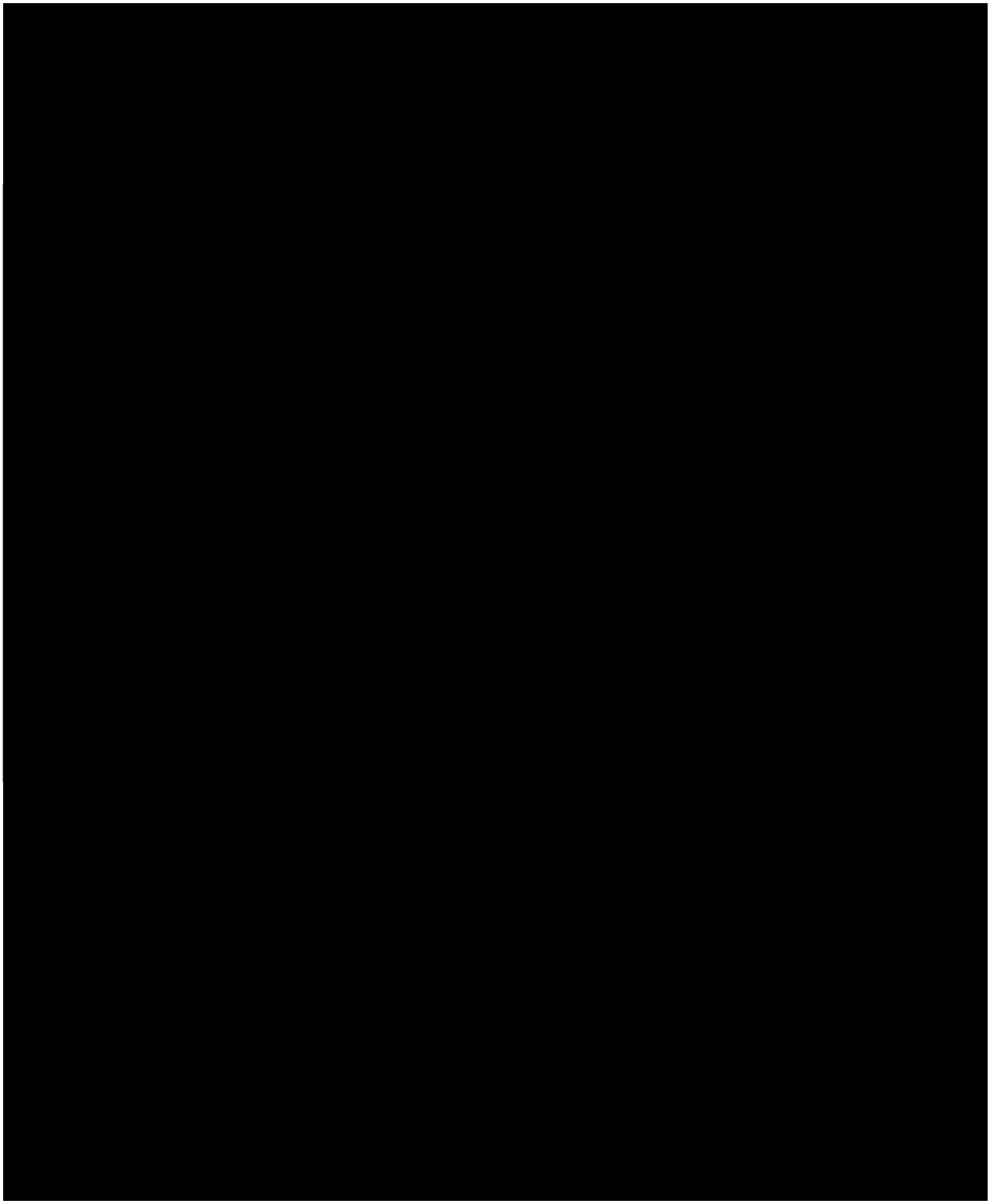
2.14 Government expenditure in the agricultural sector was drastically reduced in the early 1990's. After 2004, with the advent of the Fifth National Development Plan (FNDP), Government initiated consistent annual increases in allocations to the agricultural sector, peaking in 2007 at 8.8 percent share of the national budget. In 2008, the budget showed a reversal of this trend when the allocations fell back to 5.8 percent.

The National Food Balance Sheet

2.15 **Trend Analysis of the food balance sheet** The food balance has been subject to wide fluctuations around a barely discernible rising trend over the past decade. Cereal output has shown a slight overall surplus in six out of the past eight crop seasons (2000/01-2007-08) with rates of coverage of cereal requirements ranging between 54percent in 2000/1 and 107percent in 2007/8. Figure 1 below shows the change in output levels of the main food staples since 2000, with a small surplus every year except in 2000 and 2001, when there were floods and protracted dry spells.



2.16 It is clear that cereal production has not kept pace with population growth. Average annual cereal availability has fluctuated around 130kg per caput over the past eight seasons, ranging from 102kg in 2000 to 152kg in the current crop season (2007/8). In terms of maize meal equivalent, taking account of the substantial and increasing output of cassava and other roots and tubers, the food balance sheet shows a somewhat higher surplus, with annual per caput availability of maize equivalent ranging from 205 kg in 2000/1 to 223kg in 2007/8.



2.17 The Table above presents the National Food Balance Sheet for the current marketing year (2008/9), based on the Crop Production estimates made by the Ministry of Agriculture and Cooperatives (MACO) and the Central Statistical Office (CSO). These estimates foresee a cereal surplus of 143,000 MT, which rises to 564,547 MT maize meal equivalent, when account is taken of roots and tubers output. This gives a per caput cereal availability of 152kg and 223kg in maize equivalent. A comparison of these figures with the MACO norm of 151kg per person per year[11] shows that the overall minimum dietary requirements of the Zambian population are just about covered by domestic production in a good crop season. However, this result has been achieved in only two of the past eight crop years-2006/7 and 2007/8. Moreover, the final outcome of the current agricultural season may show the current forecast to have been somewhat over-optimistic, because of the floods and drought in the southern half of the country as well as farmers' expectations that they will be unable to harvest 41percent of the land under maize.[12]

3. SOARING FOOD PRICES IN ZAMBIA

Soaring food price situation, mechanisms and major causes

3.1 Prices of maize and other staples have risen by over 25 percent and fuel by over 37 percent since January 2007. These increases already pose problems for the food insecure both in urban and remote food deficit rural areas where production costs and market prices are further increased by higher transport costs that are likely to continue rising. The current higher food prices in Zambia are attributed to the following factors:

- Higher fuel prices have pushed up the cost of production of locally manufactured food items;
- Higher fuel prices lead to higher transportation costs and subsequently higher retail prices;
- The current interruption in the supply of energy sources (electricity) to industries has increased the cost of production and consequently the final cost of products;
- Reduction in production of the staple food (maize) due to floods and other factors;
- Higher utility costs.

3.2 According to the CSO, the annual food inflation rate in June 2008 rose to 15.6 percent from 11.7 percent in the previous month. This was in stark contrast to the situation a year earlier, in June 2007, when food inflation was running at 4.8 percent. The increase in food inflation is largely attributed to the cost of maize meal, other cereals and cereal products, meat, milk and milk products salt, sugar and other processed food products. Partially offsetting these increases were declines in the cost of maize grain, fish, dried Kapenta, dried beans, tubers and shelled groundnuts.[13]

3.3 The situation is exacerbated by high levels of poverty which make the livelihood base of the poor vulnerable and fragile. This is further compounded by limited access to improved agricultural inputs and a weak agricultural extension system. These factors, coupled with other macroeconomic variables, make it extremely difficult for small-scale farmers to recover from climatic shocks in less than two rainy seasons. Thus the present situation is particularly dire for these populations in terms of food insecurity and asset depletion given that, in four out of the eight crop years since the 2000/2001 cropping season, Zambia has suffered periodic catastrophic crop failures due to erratic rainfall patterns.

[11] On the assumption that food staples represent 70percent of total energy requirements of 2,030 kCal/person/day
[12] CSO Monthly Report June 2008
[13] Jesuit Centre for Theological Reflection (JCTR)

Figure 2: Food and Non-Food Inflation Rates, January 2007 – May 2008[14]

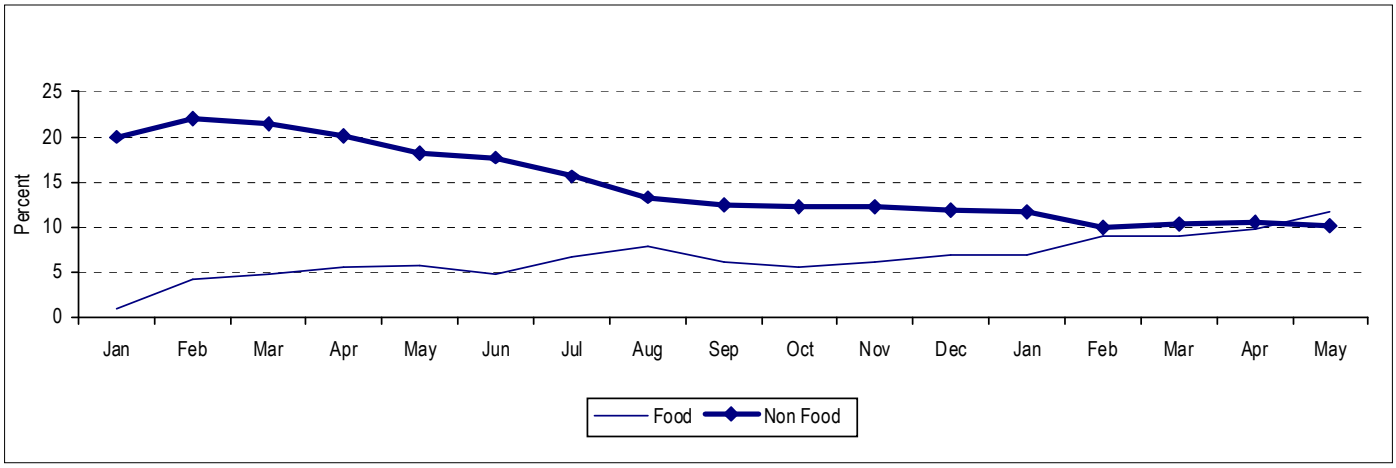


Table 2 shows that food inflation is on and increasing trend while non-food inflation shows a declining trend. Between May 2007 and May 2008, food inflation increased by 10.6 percentage points, while non-food inflation declined by 9.9 percentage points.

Economic and Social Impact

3.4 During the 2006/7 agricultural season, floods in the north and prolonged drought in the south resulted in a steep drop in yields of the staple maize crop in the affected areas. The Zambia Vulnerability Assessment Committee estimated that some 440,866 people needed food assistance in the Western and North Western provinces.

3.5 In the just ended 2007/8 crop season, extensive flooding has again caused a steep drop in maize yields (20 to 60 percent) in most districts, mainly in the Southern, Central, Western and North Western provinces. Indeed, the Central Statistical Office (CSO) Monthly Report of June 2008 indicated that farmers expected that they would be unable to harvest 41 percent of the land under maize due to floods/water logging, drought and lack of fertilizer. This has been confirmed by the Multi-Sector In-Depth Vulnerability Needs Assessment (MIVNA) in June 2008, which also found that 66 percent of the road infrastructure had been destroyed and, as a result, 444,624 people in 21 of the 39 districts assessed were in need of immediate food assistance.

3.6 The repeated shocks that have afflicted these populations over the past eight crop seasons are compounded by the general rise in food prices in domestic and international markets. This, in turn, is further exacerbated by escalating transport costs due to the steep rise in fuel prices compounded by the damage to the road network. In this situation, traditional coping mechanisms (reduced food consumption, loans, labour migration and sale of animals) for most of these populations have already been exhausted and their asset base has been depleted. It is anticipated that food assistance will thus be required for the duration of at least two crop seasons so as to preclude recourse to destructive coping mechanisms and enable the rapid resumption of normal life after this series of failed harvests.

3.7 Households in rural areas depend for food mostly on their own production (55 percent of total consumption expenditure, compared to only 4 percent for urban households).[15] The MIVNA

[14] JCTR
15 CMS III.

found that, in the most vulnerable drought-prone areas, this proportion was as high as 80 percent. This finding confirms these households' extreme vulnerability to production-related food insecurity.

3.8 In Zambia, clinical data indicate that the number of hospital admissions of severely malnourished children peaks during the lean season (October to February). The MIVNA confirmed this trend, with lean season underweight (weight for age) as high as 31 percent in some districts, against the 14 percent national threshold indicated by the Ministry of Health. This nutritional situation is expected to worsen further in the flood-affected districts due to poor sanitary conditions as well as the limited and decreasing food availability caused by the widespread crop losses.

4. NATIONAL ACTION PLAN (SHORT TERM AND MEDIUM/LONG TERM)

General Considerations

4.1 To thrive and prosper, agriculture must operate in a policy framework with a clear strategy and objectives which have widespread acceptance within the country and are integrated in the regional policies and programmes for agricultural development and trade within COMESA. This would provide a sound basis for programme and project identification and serve as a guide for private investors in deciding whether to commit resources to farming/agribusiness and, if so, what commodities, subject to what degree of transformation/processing in which markets would provide the highest returns with the lowest risk.

4.2 This is of the utmost importance, because the low agricultural supply response and stagnation of agricultural output and productivity in Zambia over the recent past can be imputed to the conflicting effects of the various policy instruments employed and shortcomings and deficiencies in the administrative design for implementation. Thus, the positive effect of the Fertilizer Support Programme has been counterbalanced by the operation of two negative forces: the conflict between the objective of reducing food prices to the consumer while maintaining farm gate prices, without a policy for the value-chain-middle men, processors etc. as reflected in the stock management and maize marketing policy currently operated by the Food Reserve Agency; and the high level of, and rate of increase in, input prices.

4.3 A pre-requisite for attracting capital to the sector is, therefore, a sound agricultural and agro-industrial development policy, implemented within a clear, coherent and efficient legal, regulatory and institutional framework. This would be based on an analysis of the national and regional -COMESA- resource base and an assessment of opportunities and constraints in the sector and would reconcile the national and regional interests at all stages of the value chain.

Agricultural Development Issues and Constraints in Zambia

4.4 Zambia is endowed with more than adequate land and water resources to produce marketable surpluses every year, and it is surrounded by hungry markets. The challenges faced by Zambian agriculture are:

- Low Productivity
- High Dependence on rain fed agriculture and related risks
- High Post-Harvest Losses
- Deficiencies in the Early Warning System
- Inadequate infrastructure
- Poor functioning grain markets

- Insecure land tenure systems

However, the continuation of the existing framework for agricultural development will not yield the results required to benefit from rising commodity prices. This raises the questions about the kind of investment in agriculture that is required to meet both the CAADP and MDG targets. How should investment resources be allocated among different types of public goods and services (e.g. agriculture research and extension, irrigation, roads, education and health), across different geographical areas (i.e. high potential versus lagging regions) and among different categories of farmers (more numerous small holders farmers versus fewer more efficient large scale holdings)?

4.5 Small and large farmers should be able to respond to and benefit from the increasing market demand for commodities. In the immediate situation, commercial farmers – large and medium – are better positioned to mount a robust and rapid supply response to the market opportunities. There is significant opportunity to expand irrigated wheat, soya and maize production by leveraging existing and new investments in infrastructure. Measures to increase small farmer productivity will demand longer-term solutions that require public investments and the immediate scaling up of investments in successful demonstrations of cost-effective, private sector input and service provision to smallholder farmers.

4.6 Only 20 percent of small farmers use fertilizer in Zambia. Growth in fertilizer use will be a precondition to achieving appreciable income growth and sustained poverty reduction. However, fertilizer promotion must be considered holistically. It is not simply a technical or logistical problem of delivering large amounts of fertilizer to small farmers and expecting a sustainable solution. Achieving sustained growth in fertilizer consumption involves building farmers' effective demand for fertilizer, by making its use profitable, and by developing output markets and regional trade patterns that can absorb the increased production that higher levels of fertilizer will bring. This involves government commitment to the of public goods in support of agriculture development:

- Well-functioning crop science and extension programmes to improve crop productivity for small farmers, particularly for staple food crops,
- Extension programmes that recognise the different categories and are tailored to their different needs, focussing on taking advantage of the higher marginal rates of return at the lower ends of the production function; and
- Investment in rural infrastructure and rehabilitation of the regional rail and port facilities to drive down the costs of input and output marketing.

Greater investment in road and rail infrastructure is likely to be necessary to reduce the farm-gate price of inputs, such as fertilizer, down to levels at which their use will be profitable to smallholder farmers. Once this is achieved, Zambian agriculture will be on a much more competitive and productive footing in the region and internationally.

4.7 Moreover, as pointed out above, achieving sustainable smallholder-led agricultural growth will also require a supportive policy environment that attracts local and foreign direct investment in building fertilizer, credit, seed, and crop output markets. The phenomenon of subsidized government intervention in the market, or the threat of it, leading to private sector inaction, is one of the greatest problems plaguing the food and input marketing systems in the Zambia and the region. While targeted assistance to vulnerable households will remain an important component of a comprehensive food security and poverty reduction strategy in Zambia, such programmes must be carefully designed so as not to interfere with the long-term development of agricultural markets, which will be critical for sustained poverty reduction.

4.8 Achieving the twin goals of agricultural productivity growth and poverty reduction will require some reallocations of the government budget. Over the past several years, about 60 percent of the budget of MACO has been devoted to fertilizer subsidies and maize marketing and stockholding programmes. Meanwhile, the genetic advances that were a major factor in maize productivity growth in earlier decades, have waned as funding by both donors and government has declined. The GRZ has devoted roughly 6 percent of its annual budget to the agricultural sector over the past several years, and of this, less than 4 percent has been allocated to agricultural research and extension. Of this 4 percent, 75 percent is for salaries and wages. Effectively, public sector agricultural research and extension have come to a standstill in Zambia. Rural poverty alleviation will require renewed commitment to public investments in these key areas.

Policy Issues[16]

4.9 **Trade policy and the Food Reserve Agency (FRA)** The major policy issue which constrains the supply response for food production is ad hoc maize export bans. For example, following Zambia's good maize harvest of 2006, intense policy debates arose among government, farmers and trade groups, with government and millers advocating an export ban on maize grain while farmers and traders advocated exports. A recent analysis of the likely impact of these export bans shows that with closed borders, any increase in maize production causes the lean season maize price to fall significantly, which leads farmers to reduce planted area in the following season[17]. In the absence of exports, the Government must increase domestic stocks, which are purchased and managed through the FRA, in order to support domestic producer prices, thereby imposing significant costs on the treasury that could have been used for productive investments.

4.10 Since domestic purchase prices are often higher than export parity prices, FRA exports would cause losses to the country. Calculations carried out by the World Bank show that in 2006, the financial losses from the FRA operations may have been as high as 1percent of GDP. Given the weather-induced uncertainties in Zambia, the combination of a reduced planted area as a response to export bans, with possible droughts in the following season, could lead to an exacerbated bust in production volumes. Hence, contrary to the conventional belief, export bans would actually contribute to increased domestic price variability and long-term food insecurity, and possibly also losses to the treasury if they are combined with stock purchases in an effort to support producer prices.

4.11 **Fertilizer Support Program (FSP)** International experience shows that fertilizer subsidies could be a useful mechanism to stimulate a supply response by increasing farmer access to and application of farm inputs. However, they are only effective where: (i) the subsidy is targeted to those who cannot afford fertilizer to avoid displacing commercial sales; (ii) the inputs arrive at the right time in the right sequence, in good quality and in the right quantities; (iii) input delivery is accompanied by appropriate extension messages; and (iv) in the absence of irrigation, weather conditions are favourable at crucial periods during the crop season.

4.12 The pending FSP assessment, to be carried out by the World Bank and partners at the request of MFNP, is expected to result in recommendations on the fertilizer programs, which should enable both public and private sector investment in agricultural input provision to be better targeted so as to ensure increased productivity, production and agricultural exports to benefit from

[16] The analysis in the following sections draws heavily on work done by the World Bank, the Agricultural Consultative Forum and the food Security Research Project

[17] Dorosh, P., S. Dradri and S. Haggblade. 2008. Regional Trade and Food Security: Recent Evidence from Zambia. FRSP Working Paper.

higher prices - all contributing to the ultimate goal of wealth creation. Its recommendations will also cover measures designed to improve the performance of the FSP or propose an alternative mechanism for the fertilizer subsidy. However, results are not expected before the beginning of next season.

4.13 **Role of the private sector** Experience in other countries indicates that there is a vital role for the private sector in achieving production and productivity goals. In a pilot program in Zambia, twelve private sector input distributors have adopted marketing and distribution systems that employ commission-earning sales agents selling an array of products and services to smallholder farmers. The products (seed, fertilizer, etc.) and the services (tillage, crop spraying, and livestock disease prevention and management messages) are packaged as profitable solutions to small farmers. Results include reduced transaction costs; shrinking marketing margins; and increasing profits from small farmers who are becoming price setters rather than price takers and thus more attractive clients for commercial input and service providers. Over the past eighteen months, this modest pilot program has reached 12,000 smallholder farmers who have invested over $1,000,000 in profit-enhancing agricultural inputs and services.

4.14 The FSP was designed to increase smallholder productivity through improved access to inputs. Whether this objective has been achieved appears open to doubt. The data from the latest Crop Forecasting Survey show that smallholder maize yields are declining, which contradicts the intended impacts of the FSP program over last four years. Also, in June 2008, 17.6 percent of smallholders gave lack of fertilizer as the reason for their not harvesting 42 percent of the area they had planted. Finally, three good years of rainfall make it difficult to establish a clear causal relationship between FSP and increased crop production.

PROPOSED ACTIONS TO BE TAKEN

Rationale and objective

4.15 In order to safeguard against future price shocks and ensure food security Zambia needs to enhance the productivity and production stability of its agricultural sector. The main constraints on the achievement of these goals are:

- unpredictable export policies
- poor access to markets especially in remote areas
- inefficient service delivery systems
- poor rural infrastructure network
- limited public investments into the sector
- poor agronomic practices especially amongst smallholder framers
- low capacity for basic and adaptive agricultural research and poor research outreach
- limited private investments into the sector.

Resource requirements

4.16 In the 2008 budget, Government allocated 5.8percent of the resources to the agricultural sector. In the Maputo declaration Zambia has committed to spend 10 percent of its annual budget on agricultural development. Analysis under the CAADP process reveals that in

order to achieve the targeted growth of 6 percent in the agricultural sector, Government would have to increase the budget allocation to agriculture from today's level to about 12 percent by 2015 assuming the budget prioritizes public investments such as crop science, effective extension programs, irrigation and infrastructure and limits expenditures to other activities that generate lower returns.

Policy measures to be taken

The following policy actions are suggested in order to lift the short, medium- and long-term constraints on agricultural development:

- Put in place predictable export policies to stimulate production and private sector investment, especially in irrigation agriculture; in particular, working with neighbouring countries towards an agreement to keep borders open within the region.
- Ensure predictable transparent and rational market behaviour of the Food Reserve Agency as stipulated in the Agricultural Marketing Act.
- Promulgation of the Agricultural Marketing Act and enactment of the Amendment to the Agricultural Credit Act.
- Increase spending on agricultural development (minimum of 10 percent share of national budget to agriculture).
- Revamp the official extension service in order to promote productivity enhancing and sustainable land husbandry practices such as Conservation Farming/Agriculture.
- Invest in national crop and animal husbandry research institutions and facilitate their outreach linkages through the extension service.
- Rehabilitate and maintain the rural feeder road network.
- Promote and utilize the Zambia Agricultural Commodity Exchange (ZAMACE).
- Restructure the Fertiliser Support Programme based on the findings of the various on-going assessments in consultation with relevant stakeholders.
- Expand (where needed) and link relief interventions with longer-term structural improvement measures (mentioned above); for example promotion of Conservation Farming through the Food Security Pack and the Farmer Field School approach, in conjunction with Food for Assets and Food for Training activities funded by WFP.
- Create a favourable and reliable investment climate for the private sector by implementing an FNDP-compliant CAAPD compact programme.

Short-term food production and supply responses – medium and large scale farmers

4.17 The key to Zambia's successful response to regional and international market opportunities lies principally with the medium and large-scale farmers. Smallholder responses will require longer-term strategies and dedicated investments.

4.18 Zambia's dynamic commercial farming sector currently has the capacity to adapt to market opportunities. There is a significant opportunity to expand irrigated wheat production, which is being produced in rotation with maize and soya. In the short-run, the immediate expansion of wheat production could come from areas where additional water for irrigation is possible through pumping from year around surface water bodies.

4.19 Assuming that water is easily accessible, the main short-term constraint on the expansion of wheat/maize production is **lack of term-finance** at affordable rates for the purchase of on-farm irrigation equipment (i.e. centre-pivots as well as other farm machinery). The existing options are to use the Irrigation Development Fund (IDF) for term-credit for the commercial irrigated farming sector. Existing IDF implementation issues such as the location of the IDF[18] administrator/manager must be resolved before commercial banks will be willing to tap this credit source. An alternative option would be to redirect the existing donor funded credit lines, such as the Agriculture Development Support Project (ADSP) for commercial food production.

4.20 Medium/long-term production and supply responses – small, medium and large scale farmers

4.21 There are medium and long term opportunities for sustained increases of cereal production from all types of farmers, including smallholders. It will take major efforts over the longer-term to achieve sustainable increases in smallholder agricultural productivity and production levels, all of which require a combination of private and public sector services and investments such as extension and technology transfer, access to affordable inputs and credit, access to markets, etc. Some specific interventions are outlined below.

4.22 **Irrigation Development** In the medium-term, the main supply constraint on the expansion of cereal (wheat in rotation with maize and soya) production is access to irrigation water. In a growing number of cultivated areas (both titled and traditional land) access to water through direct pumping is not possible due to the seasonal nature of water bodies or because existing water storage capacity is exhausted. Addressing irrigation constraints would require private and public (common-use infrastructure) sector investments in bulk water storage and related electricity and access road infrastructures. A supply response from smallholders is possible provided that appropriate technical and market support services are put in place. Cooperation from the commercial farming sector is also important. In general, this development would take place in areas of good access to main trunk roads and relatively close to urban centres. Development of peri-urban irrigation for domestic vegetable production is also a good opportunity for smallholders. The latter would require expansion of loan packages for pumps and farm machinery for smallholders, perhaps through IDF or micro-finance schemes.

4.23 **Opening-up New Areas** Zambia is a land-abundant country. In the long-term, expansion of crop production could come from opening up new areas for agriculture production. The Government already has a strategy for "area development" called "Farm Block Development (FBD)", which involves opening up large undeveloped areas with commercial agricultural potential by converting customary land to statutory land and investing in complementary infrastructure - feeder roads, electricity, water for irrigation, and communication facilities. There is evidence that the FBD initiative is supported by some traditional leaders who are willing to give up customary land for the development of commercial farming, which is expected to benefit neighbouring smallholders. So far progress in finding appropriate private investors has been slow, but the current world food pricing scenario makes such investment a more attractive option. There is an opportunity to speed the development of farm blocks quite significantly if private sector

[18] Initially, the IDF was managed by Finance Bank acting as an apex which signed a Memorandum of Understanding with MACO to disburse the fund through a supply credit facility to participating commercial banks who were expected to on-lend these funds to eligible farmers on agreed terms. Experience in the past with similar special-purpose credit facilities is that commercial banks decline to participate because they do not want to disclose privileged information to another commercial bank that acts as an apex. The IDF has now been transferred to the Citizens Economic Empowerment Commission.

partners were adequately involved in their planning and design, and if there is a transparent process and clear criteria for land allocation.

4.24 **Land Tenure** The slow process of land allocation and registration could become a heavy constraint on the opening up of new areas for commercial agriculture development, both for large and small farmers, and on the development of formal irrigation infrastructure for organized smallholder food crop production. The process of accessing traditional land for commercial activities and securing it with a land title is protracted and particularly difficult for smallholders who do not have resources and leverage. The lack of title for smallholders not only hampers their access to credit, it also limits their ability to benefit from public investments in irrigation and energy infrastructure and does not give them a "stake" in the long-term development of their land. There is therefore a need to streamline and simplify the land delivery and administration systems. Actions to address land tenure issues in the medium term could include: (i) streamlining and simplifying processes from land allocation to registration, particularly for smallholders; (ii) modernizing and strengthening national-level land administration services; and (iii) decentralization of land administration to selected provinces, districts and municipalities with high growth potential.

4.25 The fastest way to obtain land titles for smallholders who live and farm on traditional lands is through organized wholesale transfer of blocks of land in conjunction with specific infrastructure developments, such as irrigation, which would ensure that the land title is transferred to those that can put it to the most productive use. It is also critical to support those progressive traditional leaders who are willing to provide smallholders with land title. To this end, an appropriate measure could be the provision of parallel resources for general community development investments which would benefit all community members.

4.26 **Transport and other competitiveness enhancing infrastructure** Producers away from the main tarred roads are severely constrained by the difficulties and cost of getting produce to markets and obtaining inputs. Investments in key rural access road networks, which connect main production areas (including Farm Blocks) to trunk roads, is critical to open up new areas and increase production volumes from existing high-potential areas. In addition to investments in roads and irrigation, experiences from other African and Asian countries have demonstrated that investments in applied research, electricity, communications and education/extension pay high dividends in terms of increased agricultural growth (CAADP Pillar 2).

4.27 **Appreciation of the Exchange Rate:** Appreciation of the Kwacha will continue to affect the export competitiveness of Zambian agriculture. The exchange rate appreciated suddenly against major currencies at the end of 2005 (i.e. some 30 percent). Export competitiveness of labour-intensive crops such as honey, cotton, sugar and tobacco, is highly sensitive to exchange rate appreciation. As the profit margins for many agricultural products are already very small due to low levels of farm productivity, the continuing appreciation of the Kwacha will inevitably lead to many smallholders and/or exporters'' operations becoming unprofitable. This could have a significant negative impact on smallholder incomes (perhaps as demonstrated by increasing rural poverty rates during 2004-06), since almost one third of smallholder households in Zambia derive some share of their incomes from the production of export products.

4.28 Both cotton and burley tobaccos, the two major smallholder export crops, have shown a dramatic decline in production volumes during 2005-2007. After an initial decline in 2006, production of Virginia tobacco stabilized in 2007. However, 2008 Crop Forecasting Survey

results show that there has been another steep decline in Virginia tobacco production during the 2007-2008 season. While production volumes of burley and cotton have recovered somewhat, they are still well below their pre-2005 levels. Government will need to engage in active monitoring of the exchange rate issue and should explore various policy options to ensure that exports remain competitive.

Project Ideas

4.29 The project ideas in Annex I were presented by MACO to Zambian stakeholders at a review meeting in April this year on the priority areas for support under the CAADP Compact for Zambia. The main concern expressed by the stakeholders was the fact that the proposals appeared not to recognise the role of the private sector and civil society in the formulation and implementation of the proposed programmes and MACO was asked to revisit the project ideas through consultative review workshops with all relevant stakeholders. This process is still underway.

4.30 The proposals in Annex II are under formulation by FAO and WFP, while those in Annex III hve already been formulated and approved for execution by WFP and their implementation strategy is to be discussed and agreed on by WFP and FAO with the Office of the Vice President/Disaster Management and Mitigation Unit and the Ministry of Agriculture and Cooperatives.

ANNEX I

ZAMBIA CAADP COMPACT

TO SUPPORT

THE SUCCESSFUL IMPLEMENTATION OF THE NATIONAL AGRICULTURAL POLICY UNDER THE FIFTH NATIONAL DEVELOPMENT PLAN

A. Background for the Implementation of the Comprehensive Africa Agriculture Development Programme (CAADP) in the Republic of Zambia

CAADP as an African Owned Agenda and a Shared Development Framework

The Comprehensive Africa Agriculture Development Programme (CAADP) is at the heart of efforts by African governments under the AU/NEPAD initiative to accelerate growth and eliminate poverty and hunger among African countries. The main goal of CAADP is to help African countries reach a higher path of economic growth through agriculturally-led development which eliminates hunger, reduces poverty and food and nutrition insecurity, and enables expansion of exports. As a program of the African Union, it emanates from and is fully owned and led by African governments. COMESA has been mandated to coordinate and harmonize implementation in its region as a partner with national authorities as a part of the NEPAD Initiative; it fully reflects its broader principles of mutual review and dialogue, accountability, and partnership.

CAADP as a Value Addition Agenda at the Country Level

Although continental in scope, the CAADP agenda is an integral part of national efforts to promote agricultural sector growth and economic development. It provides a shared framework for strategy planning and implementation, and for partnership and development assistance in the sector. This is based upon the recommendation of Africa's professional communities of practice and broad dialogue with stakeholders across the continent. Further, it offers the prospect of political, technical and financial support for countries with plans and strategies that are aligned with the CAADP framework. In aligning with CAADP, countries adopt common commitment to achieve an annual growth rate of 6 percent in agriculture, the Maputo Pledge of allocating 10 percent of national budget to the sector, and will take account of the support of the assistance commitments of the G8 Summits of Sea Islands and Gleneagles.

In its National Aid Policy (Section 3.2.1 and 3.2.2), the Government of Zambia (GRZ) stresses the essential nature of strong strategic plans in all sectors and calls for the improvement of existing policies and plans. It further stresses that the Government shall strengthen its planning, budgeting and financial management systems in a manner that will maximize the country's resource absorptive capacity and optimally utilize both domestic and externally-derived resources. In accordance with this, the Government has developed the Vision 2030 to guide long term development. The NAP and the FNDP guide the implementation of the Vision. The CAADP process in Zambia is aimed at strengthening and complimenting the intervention outlined in the

Fifth National Development Plan (FNDP) and the National Agricultural Policy (NAP) and is anticipated to add value to ongoing process in programme implementation and financing architecture. Specifically, the ultimate goal of the CAADP process in Zambia is to help the agricultural sector by:

Helping define a coherent long term framework to guide the planning and implementation of current and future national development plans (NDPs), policies and programmes under the Vision 2030 agenda;
Identifying strategic options and sources of poverty reducing growth for the agricultural sector between the medium term and 2030; and
Developing existing and new strategy analysis and knowledge support systems to facilitate peer review, dialogue, and evidence based planning and implementation of agricultural sector policies and strategies.
Furthermore it is intended that the national compact will provide a basis and inputs into the formulation of a supporting regional compact.

B. Rationale for and Use of Zambia CAADP Compact

Agriculture remains the key priority in the growth and poverty reduction strategy of the Government of Zambia. Over 60 percent of the population derives its livelihood from agriculture and reside in rural areas. However, the agriculture sector did not receive resources for investment commensurate to its status. The low investment in the agriculture sector resulted in among others, agriculture support infrastructure being run down, extension service delivery operating only at 40 percent capacity, and high recurring livestock disease incidences. The result has been low productivity and high poverty incidences especially in rural areas. The improved economic performance since 1999 has not significantly reduced poverty mainly because there is a weak growth/poverty relationship. The growth is being driven by urban based and capital intensive sectors such as mining, construction and wholesale and retail trade. It is projected that if the country continues on this path poverty will only decline marginally. This will not significantly advance the development objectives identified in the vision 2030 as well as progress towards meeting the Millennium Development Goals (MDGs).

The FNDP complemented by initiatives such as the CAADP seeks to reverse the foregoing situation by appropriately providing priority investment areas and financing arrangements that will accelerate growth and poverty reduction and the attainment of the vision 2030 and MDGs. Inorder to meet these goals, aggregate government spending on agriculture would be required to grow by at least 17 percent per year in order to achieve and sustain the 6 percent agricultural growth anticipated in the CAADP agenda (Thurlow J. *et al*, 2007).

The Zambia CAADP compact will therefore;
set the parameters for long term partnership in the agricultural sector;
specify key commitments on the part of government and development partners; and
clarify expectations with respect to the agribusiness and farming communities in order to ensure successful implementation of the FNDP/ NAP agenda.
Most important among these are sector policy, budgetary, and investment commitments as well as commitments to align and scale up long term development assistance to the sector.

Further, the Zambian CAADP Compact serves to verify and confirm the consensus around the goals and priorities that Zambia has set for the sector and the partnerships and assistance that are required to achieve these goals. Its ultimate purpose is to: (i) increase the effectiveness of planning and execution of government efforts as well as of the delivery of services in the agricultural sector and thereby (ii) provides a solid framework under which assistance can be scaled up to help meet the short and long term investment needs in the sector.

Building on the Governments vision and commitment for economic and social development, is the Aid Policy for Zambia. The objective of the aid policy and strategy is to ensure that the country has a clear, systematic, and well co-ordinated approach to solicit for, and acquire, utilize, manage, report, monitor, and evaluate assistance from cooperating partners.

C. Long Term Vision and Commitment of the Government of Zambia to economic development and poverty reduction

The Governments' national long term development agenda as set out in the Vision 2030 is "to become a prosperous middle income country by the year 2030". The vision will be realized through medium term five year national development plans, the first being the Fifth National Development Plan (FNDP). As defined under the FNDP, the vision of the agricultural sector is "An efficient, competitive, sustainable and export-led agriculture sector that assures food security and increased income". The overall objective of the sector, as outlined in the National Agricultural Policy (NAP) is "to facilitate and support the development of a sustainable and competitive agricultural sector in order to ensure food security and income generation at household and national levels and maximize the sector's contribution to gross domestic product (GDP)." In this respect, the Government aspires to (a) attain national and household food security through all-year round production and post-harvest management of adequate supplies of basic foodstuffs at competitive costs; (b) contribute to sustainable industrial development by providing locally produced agro-based raw materials; (c) increase agricultural exports thereby enhancing the sector's contribution to the national balance of payments; (d) generate income and employment through increased agricultural production and productivity; and (e) ensure that the existing agricultural resource base is maintained and improved upon. These long term visions and strategic objectives underpin GRZ's long term vision and commitments in economic development and poverty reduction.

D. The Government's agenda for Agricultural Growth, Poverty Reduction, and Food and Nutrition Security

The GRZ sees "An efficient, competitive, sustainable and export-led agriculture as an engine for economic growth, enhancing food and nutrition security and reducing poverty. A well performing agricultural sector would therefore translates into significant improvements in the country's GDP, contributes to employment generation, and the reduction of poverty. In this regard, the GRZ has adopted "to facilitate and support the development of a sustainable and competitive agricultural sector in order to ensure food security and income generation at household and national levels and maximize the sector's contribution to gross domestic product (GDP)." The overall objective of the sector, as outlined in the National Agricultural Policy (NAP), is to facilitate and support the

development of a sustainable and competitive agricultural sector that assures food security at national and household levels and maximizes the sector's contribution to Gross Domestic Product (GDP). The specific objectives have been set as (a) ensuring national and household food security through an all-year round production and post-harvest management of adequate supplies of basic foodstuffs at competitive costs; (b) contributing to sustainable industrial development by providing locally produced agro-based raw materials, (c) increased agricultural exports thereby enhancing the sector's contribution to the National Balance of Payments (d) generating income and employment through increased agriculture production and productivity and (e) ensuring that the existing agricultural resource base is maintained and improved upon. The vision, goal and related objectives will be achieved through (i) increase agricultural productivity and land under cultivation; (ii) increase exports of agricultural and agro-processed products; (iii) preservation of the agricultural resource base; (iv) increased land under cultivation; (v) increased land under irrigation; (vi) increased agricultural machinery, (vii) increased livestock population; (viii) and increased fish production.

Under the FNDP and the CAADP process and in line with the Vision 2030, GRZ has defined the following five major programmes for the period 2006-2015, which together represent Zambia's priorities across all the four CAADP Pillars. These are:
Smallholder Agriculture Development
Agricultural Productivity Enhancement
Agribusiness and Market Development
Food & Nutrition Security
Capacity Development and Institutional Strengthening

Final detailed cost, objectives, and specific sub-programmes have been defined in the FNDP/CAADP agenda and summarized in the round table documents as annex.

E. Forging Partnerships for the Successful Implementation of the Investment Priorities in the Vision 2030/FNDP Programmes

1. Purpose, Principles, and Modalities of the Vision 2030/FNDP/CAADP Partnerships

This compact will support partnerships between the government of Zambia, the agribusiness and farming communities, the Civil Society Organizations and the development partners in the successful implementation of the Vision 2030/FNDP/CAADP programmes. The partnerships will cover implementation of programmes that are specified above, in the medium run, and of subsequent programmes to be defined under the Vision 2030 framework, in line with the principles, modalities, and commitment agreed herein. The partnership modalities and principles follow the consultative, long term, sector wide strategic planning and sector wide programmatic approach to implementation defined in the National Aid Policy, in particular in its Sections 3.1 and 4.1. Further within the COMESA region the partners supporting the CAADP agenda are urged to support Zambia in the implementation of programmes and activities under this compact.

Government Commitments under the EDPRS/PSTA Agenda and Partnerships

The government of Zambia confirms its commitment to promoting long term economic and social development to achieve a strong and dynamic middle-income industrial nation that provides

opportunities for improving the well being of all, and to achieve "poverty reduction and economic growth as identified in its Vision 2030 document and set out in its Fifth National Development Plan (FNDP). It confirms the National Agricultural Policy (NAP) as its framework to achieve the objectives related to the above vision in the agricultural sector through development of an efficient, competitive and sustainable agricultural sector, which assures food security and increased income". It recognizes the need to strengthen and expand the emerging opportunities and to deal with the challenges facing the agricultural sector. In addition, the Government commits itself in bringing on board all players in the agricultural sector, including the private sector and civil society, in the implementation of the Programme; and clearly spells out their roles, responsibilities and linkages arrangements. The Government further commits itself to harmonization of external financing and technical assistance through the Poverty Reduction Budget Support (PRBS) and the Performance Assessment Frame work (PAF) anchored in the National Aid Policy

It will endeavor to ensure efficiency and effectiveness in pursuing the implementation of the Vision 2030/FNDP/CAADP agenda as its strategy to achieve and exceed the 6% CAADP growth target over the next 10 years. It commits to work towards fulfilling the Maputo decision of the heads of state and government of the African Union of allocating 10% of the national budget to the agricultural sector within this period, in order to contribute to meeting the investments required to meet the outcomes in the Vision 2030/FNDP/CAADP programmes. In this regard, it will work to ensure maximum efficiency and effectiveness of utilization of resources in the sector as demonstrated in Performance Assessment framework (PAF), Joint Sector Review and Public Expenditure Reviews, in line with its broader efforts to strengthen public financial management. It commits to the dialogue, coordination, mutual review, and accountability mechanisms and modalities specified in its aid policy.

3. Development Partners' Commitments under the Vision 2030/FNDP Agenda

The Cooperating Partners confirm their commitment in the Aid policy and Joint Assistance Strategy for Zambia (JASZ) that achieving the MDGs and meeting Zambia's Vision 2030 requires increases in the volume and quality of development assistance. Therefore, they commit, collectively, to align assistance to the sector with the programmes and priorities identified in the Vision 2030/FNDP/CAADP agenda and to scale up assistance over the next 5 years to help meet investment costs of the programmes defined under the agenda.

In the spirit of the national Aid policy they will commit, in consultation with the government, to provide indications of future aid to the sector on a multi year basis in order to improve predictability and allow better planning, budgeting, and implementation. They commit to provide such aid and related technical assistance in line with preferred modalities and principles set out in the National Aid Policy, including the principles and mechanisms for dialogue, coordination, mutual review, and accountability.

5. African Union and regional partners' commitments under the Maputo declaration;

The African Union, COMESA and its regional partners committed through the Maputo declaration, to support Zambia in its endeavors to define priority programmes that would allow the country to meet the objectives of CAADP and be on the road to attaining MDG1. In this

regard the African Union, COMESA and other regional partners will support Zambia's national strategies as defined in the Vision 2030 and FNDP through mobilizing of political, financial and technical support.

6. Commitments of the private sector and civil society

Given the need to work in appropriate partnerships to realize the goals set in the Vision 2030, the FNDP and the CAADP agenda including the achievement of the Millennium Development Goals, the private sector and civil society commits itself to effectively partnering with the government and people of Zambia in establishing enterprises and initiatives that will have measurable impact in reducing poverty levels in the country and increasing economic growth.

F. Implementation of the Vision 2030/FNDP/CAADP Partnerships

1. Coordination and oversight

Given the multi-sectoral nature of the Programme, an institutional arrangement which clearly spells out roles, responsibilities and linkages will be developed within the framework of the FNDP. A coordinating unit within the Ministry of Agriculture will be put in placed to ensure effective and effective implementation of the Programme. Oversight and coordination of the implementation of the above partnerships will take place within the Sector Advisory Group, Development Partners Coordination Group (DPCG), Budget Support Harmonization Group or any other body of similar consultative nature to be decided by the DPCG.

2. Funding mobilization

The GRZ and Cooperating partners will mobilize immediate funding from both domestic and external sources using the existing financing architecture to: (i) continue implementation in 2008 of the Vision 2030/FNDP/CAADP components that are ready or ongoing and need scaling up; and (ii) finalize, in 2008 GRZ operational investment plans for the remaining components in order to start their full implementation no later than 2009. For this purpose, the GRZ and development partners will immediately after the Round Table undertake consultations through the Poverty Reduction Budget Support (PRBS) and multi-annual Performance Assessment Framework anchored in the National Aid Policy. The objective is to commit funding aligned to the FNDP/CAADP with a view to formulating a sector wide approach at the earliest opportunity.

3. Implementation capacities

GRZ will endeavor to strengthen capacities in order to meet the personnel, institutional, policy, and logistical requirements for a timely start of implementation. Development partners will endeavor to provide the necessary technical assistance, in line with paragraphs 4.2 of the National Aid Policy, to assist GRZ, where necessary, to meet the above capacity requirements.

G. Endorsement
By endorsing this Compact:

1) the Government of Zambia pledges to fulfill the commitments specified therein, in line with the goals, objectives, principles, and modalities laid out in its Vision 2030 document, Vision 2030/FNDP agenda, and national aid policy;

2) The development partners pledge, collectively to fullfil the commitments specified there in line with the Joint Assessment Strategy statement of April 2007.

African Union, COMESA and other regional partners pledge, collectively, to fullfil commitments specified therein in line with the Maputo Declaration and global principle of CAADP implementation.

The private sector, producer associations and civil society pledge collectively, to fullfil commitments specified therein in line with the Maputo Declaration and global principles of CAADP Implementation.

F. Signatures of Stakeholder Representatives

Lusaka April 30, 2008

1. On behalf of the Government of Zambia:
1.1. Ministry of Agriculture and Cooperatives

Signature
1.2. Ministry of Finance and National Planning

Signature
2. On behalf of the Development Partners

Signature
Signatures of Stakeholder Representatives (continued)

3. On behalf of the African Union/NEPAD

Signature

4. On behalf of COMESA

Signature

5. On behalf of the Producer Association

Signature

6. On behalf of the Private Sector

Signature

7. On behalf of the Civil Society

Signature

Witnesses:

1. Agricultural Consultative Forum

Signature

Agricultural Infrastructure and Land Development

(Commercialisation of smallholder agriculture)
This programme addresses the following CAADP pillars:
Land and water management (1)
Access to markets & improved rural infrastr. (2)
Food and nutrition security (3)
improved technology adoption (4)

This programme has been taken-up from the FNDP and up-dated to meet the requirements of the CAADP.

1.0 Background
The Government of the Republic of Zambia has embarked on a programme to open up farm blocks throughout the country.

A farming block is envisaged to be a large agricultural area where basic infrastructure for agriculture such as feeder roads, electricity, and water for irrigation and communication facilities are provided. To justify the large expense involved in infrastructure development in the farm block, the area involved must be sufficiently large so as to achieve economies of scale.
The Farm block development initiative will involve areas of not less than 100 000 hectares per block. The general concept of the farm block will comprise a core venture, large, medium and small-scale farms operating under an out grower arrangement on similar lines like Nakambala Sugar Estates in Mazabuka.

The crops to be grown in the core venture will predominantly be for export so as to support accelerated economic growth. However, food crops will also receive strong support. There will be a possibility for adding value to the produce, thereby creating a link between agriculture and related industries.

Government has initially identified nine viable farm blocks at the moment, one in each province covering an average of 100,000ha.

1.2 Challenges

One of the biggest challenges is how to sustainably maximize the productivity of agricultural land. The utilization of these lands to their fullest potential will require changing land tenure and farming practices combined with public investment in infrastructure such as feeder energy, roads and bridges.
The main thrust of Government economic policy under the poverty reduction is through the development of the agricultural sector. The concept of Farm Blocks will rationalize the use of limited resources to develop the selected parts of the rural areas. Basic infrastructure to be provided in the Farm Blocks will entice the Zambian individuals and the private sector, both local and foreign, to invest in agriculture and agricultural related ventures in these areas. In turn, the private sector firms will be expected to support the small-scale farmers by way of creation of out-grower schemes especially as this relates to the Core Venture investor.
1.3 Goals and Objectives
Overall Objective

The main objectives of Government in agricultural infrastructure and land development include the following:

To commercialize agricultural land and exploit its full potential in order to attain economic diversification and growth.

To enhance food security through production of adequate food for the nation and for export.

To open up undeveloped rural areas, reduce poverty and minimize rural to urban migration.
Specific Objectives
To increase farmer knowledge and skills in proper land utilization and soil and water conservation.
To promote the conservation of natural resources especially soil, vegetation and water in order to sustain agricultural production.
To monitor agricultural land use and carry out resource surveys and inventories.
Strategies
Promotion of conservation farming and rainwater harvesting technologies.
Encouraging land use planning and land management of farms, agricultural lands and other lands.
Opening up new farm blocks and initiate basic infrastructure development and facilitating accessibility and availability of agricultural land.
Develop a land information system that will be tailored to meet the needs of the agriculture sector.

1.4 Sub programmes

The commercialization of agricultural land is multi-disciplinary and inter-sectoral in nature. This calls for a holistic approach involving all stakeholders operating in an integrated manner in the delivery of services.

The services to be provided to achieve desired results will include:

i) Project organization, management and co-ordination

- The programme will be coordinated through the Multi-Disciplinary Committee

ii) Land Advocacy
fill up

- Sensitization
- Dissemination of information on farming blocks

iii) Agricultural land identification
fill up

- Agricultural land baseline data
- Layout plans
- Environmental impact assessment

iv) Basic Infrastructure Development

fill up

- Roads infrastructure
- Bridges
- and boreholes
- Electrification
- Schools
- Health facilities

v) Registration and Land titling
- Demarcation and survey
- Land allocation
- Registration of land

fill up

vi) Community Support

- Security
- Micro-financing and banking
- Telecommunication
- Socio-amenities

fill up

vii) Commercialization and Industry

- Certificates of incorporation
- Incentives
- Immigration permits

fill up

viii) Catchment Conservation and land use

fill up

- Land use plans
- Conservation works
- Land capability maps

ix) Proposed Interventions to Improve Market Linkages.

The FNDP acknowledges that agriculture in Zambia combines the virtues of growth and equity, and that it is in this context that enhanced agricultural productivity has been given the highest priority. If the sector grows, and measures are put in place to include the poor in this growth, poverty will be reduced. The creation of conditions that enhance long-term innovative improvement of productivity of agricultural resources, particularly smallholder farmers' land and labour is considered crucial.

A similar level of importance is placed on building and consolidation of the requisite credit markets for financing new investments in the sector, as well as the improvement of marketing for a more efficient flow of larger volumes of produce. To facilitate faster and diversified agricultural

activity, the FNDP also places a high priority on infrastructure development, particularly rural roads.

THE BUDGET (ESTIMATED PROJECT COSTS)

An indicative budget for developing a Farming Block is given in the table below.

Activity	Budget Estimate ZMK
Financing and co-ordination	500,000,000
Agricultural land alienation / Identification and consolidation	100,000,000
Advocacy	300,000,000
Agricultural land baseline data	50,000,000
Layout plans	50,000,000
Environmental impact assessment	400,000,000
Demarcation and survey	600,000,000
Roads infrastructure	10,000,000,000
Dams and boreholes	1,500,000,000
Electrification	50,000,000,000
Schools	20,000,000,000
Health Facilities	30,000,000,000
Investor identification	100,000,000
Security	500,000,000
TOTAL	ZMK11 4,100,000,000

Scale up the budget base+ 17% annually

THE LIVESTOCK DEVELOPMENT PROGRAMME

Introduction

Domestic animals enhance the economic viability and sustainability of farming systems. They diversify income, provide all-year-round employment and serve as insurance in times of need. Sales of livestock and their products provide funds for financing farm investments. Livestock often forms the major capital reserve of farming households and contribute substantially to crop production through provision of draught power and manure.

The livestock sector in Zambia contributes about 42 per cent to the Agricultural GDP (FAO, 2005). *Per capita* meat consumption is 2.4 kg which is about half that of the average for Africa. In terms of structural organization, the livestock sub-sector has three categories, namely the smallholder (or traditional component), small-scale commercial and the commercial component. The distinction is largely made on the basis of the level of technological interventions employed in these production systems. The poverty incidence stands at 72.9% with 83.1% and 56% occurring in the rural and urban areas respectively.

The commercial sector

On the other extreme, we have the commercial farmers who are heavily dependent on technological know-how. These are into intensive animal agriculture such as feed-lotting, the manipulation of the reproduction systems such as synchronization and the use of artificial insemination, use of milk substitutes for feeding calves, etc. These use high performing exotic breeds such as the Brahman, Bonsmara, Sussex and Hereford for beef and Friesian, Friesian-Holstein, Jersey and Holstein for milk production.

Trends in livestock numbers for the period 1980 to 2002 are indicated in Table 2. As can be seen from this Table the sub-sector actually shrank by 0.9% for the period 1990-2000. This is largely attributable to the outbreak of East Coast Fever and Contagious Pleuro-pneumonia.

While this was happening to the Livestock sub-sector, the human population grew by 2.4% for the same period 1990 to 2000. Table 2 shows the trend in consumption of various livestock products for the period 1980 to 2002. The picture is hardly Being portayed here is that small ruminants (i,e. sheep and goats) has more potential for growth, followed by poultry. Therefore as a strategy, it makes a lot of sense to target these particular species.

Objective

The main objective of the livestock development programme is to improve the efficiency and productivity of livestock so as to contribute sufficiently to enhancing food and nutrition security and poverty reduction.

Constraints to livestock productivity

The major constraints include fluctuations in the availability and quality of animal feed and fodder resources across the seasons of the year, the use of unimproved breeds and or strains of livestock and rampant livestock diseases.

In addition, the inability to collect livestock and livestock products data makes it difficult to plan the activities in the sub-sector. Under-developed infra-structure for generation and promotion of livestock production technologies also impedes the productivity of the subsector.

Market infra-structure for livestock marketing is also underdeveloped to the exclusion of most smallholder farmers.

Table 1. Livestock populations
Values expressed in 1,000

Species	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Cattle	2,181	2,878	2,621	2,600	2.8	-0.9
Sheep & goats	285	594	1,389	1,420	7.6	8.9
Pigs	218	295	309	340	3.0	0.5
Poultry	20,638	15,700	29,000	30,000	-2.7	6.3

Source: FAO(2005a)

The traditional sector

The smallholder farmer hardly ever uses conventional technological interventions such as vaccinations, de-worming, feed supplementation, etc in their production systems. Instead, they rely on ethno-veterinary medicine in their traditional knowledge systems. The small-scale commercial farmers use technological interventions to enhance their productivity, but are mostly constrained by financial resources to a large extent. This is sometimes referred to as the 'viable but vulnerable' group of farmers.

Though the traditional cattle sector is by far the most inefficient in terms of productivity, it is nonetheless the most important as 60% of the total livestock population is in this component of the sub-sector. Most farmers in this component keep mixed breeds or crosses of their local cattle (Angoni, Barotse and Tonga) with exotics such as Boran, Brahman, Jersey, Friesian, etc. There have been deliberate government programmes to promote cross breeding to benefit from the effects of heterosis or hybrid vigour. Institutions such as the Golden Valley Agricultural Research Trust and the Livestock Development Trust are involved in the crossbreeding programmes.

As expected, the traditional sector is characterized by high mortality rates (up to 15% in some areas), slow growth rates and low reproductive efficiency (Aregheore, 2006).

The local breeds of cattle are of special interest to government as they play a key role in sustaining the livelihoods of a large proportion of our population that operate in a 'low in put low out put' production system. In this situation, draught power output is more important that meat or milk yield per unit time.

Table 2. Trends in annual consumption of meat, milk and eggs
1,000 metric tonnes

Product	Year				Annual growth rate (%)	
	1980	1990	2000	2002	1980-1990	1990-2000
Meat, total	82.7	95.2	125.2	127.2	1.4	2.8
Beef	28.1	36.0	41.1	40.9	2.5	1.3
Sheep & goat	1.0	2.1	5.2	5.3	7.6	9.2
Pork	7.2	9.5	10.4	11.0	2.8	1.0
Poultry	24.0	18.9	35.0	36.5	-2.3	6.3
Milk, total	59.3	60.1	57.7	54.7	0.1	-0.4
Eggs, total	27.9	22.3	41.2	41.2	-2.2	6.3

Source; FAO (2005a)

Because of the strategic importance of locally adapted cattle breeds, deliberate characterization and conservation programmes are being put in place. The most effective way of conserving germ-plasm is to promote it's utilization and as such programmes are underway to promote appreciation, consumption and utilization of indigenous farm animal genetic resources.

The demand for livestock and their products outstrips supply. However, Daka (2002) reported that the livestock sub-sector is increasingly becoming an important component of the economy with it's contribution to the National Gross Domestic Product standing at 6.4% and 6.5% for 1996 and 1997 respectively.

The increase in out put from the traditional component is not due to increased productivity, but more from increased livestock numbers due to more people going into cattle farming.

It is clear that the way forward in today's and tomorrow's animal agriculture is intensification of production. Most of this intensification in Zambia is taking place near the markets for the meat and meat by-products. With intensification come the problems of environmental pollution arising from inadequate waste disposal programmes contributing to the disruption of the carbon and nitrogen cycles.

Table 3. Annual production trends in meat, milk and eggs

In 1,000 metric tonnes

Product	Year					Annual growth rate (%)
	1980	1990	2000	2002	1980-1990	1990-2000
Meat, total	82.7	95.0	124.6	127.1	1.4	2.7
Beef	28.1	36.0	40.8	40.8	2.5	1.3
Mutton and goat meat	1.0	2.1	5.1	5.3	7.6	9.2
Pig	7.2	9.5	10.1	11.0	2.8	0.7
Poultry	24.0	18.9	35.0	36.5	-2.4	6.3
Milk, total	58.8	77.7	64.2	64.2	2.8	-1.9
Eggs, total	31.4	25.1	46.4	46.4	-2.2	6.3

Source: FAO(2005a)

Livestock have a substantial impact on the world's water, land and biodiversity resources and contribute significantly to the climate change (Steinfeld, et. Al, 2006). Livestock have been implicated in the emissions of all the three major greenhouse gases of methane, carbon dioxide and chloro-fluoro carbons.

The annual production trends indicate that poultry is the leading commodity in terms of providing meat. It should be borne in mind that this will largely be intensive backyard enterprises as well as commercial production from large enterprises.

Evolution of the Livestock population

There is a critical problem regarding data capturing in the livestock sub-sector in particular. This is probably related to the move by the Government to withdraw the provision of veterinary services such as dipping at a subsidized rate in the name of promoting the private sector in the liberalized economy starting around 1996. Under the old system farmers used to dip their cattle at the dip tank where a veterinary assistant kept a stock register. This incentive was used to capture data across all species at regular intervals. Since it collapsed data being quoted are usually just intelligent projections. In 2004, these projections indicated that there were 3,223,758 cattle, 1,464,610 goats, 112, 288 sheep and 624,467 pigs. The poultry population was 16,551,724 in 2004, while in 2000 it stood at 32,000,820. Poultry is annually affected by Newcastle disease which causes high mortality and has a window around August and September. This population is largely in the smallholder sector and largely comprises local unimproved breeds that have ecologically adapted in the various production systems.

Table 4. Carcass weights and percentage slaughtered

Species/year	Carcass weight (kg/animal)				Percentage slaughtered/year			
	1980	1990	2000	2002	1980	1990	2000	2002
Cattle	155.0	160.0	160.0	160.0	8.3	7.8	9.7	9.8
Sheep	14.0	14.0	14.0	14.0	25.3	25.0	25.7	26
Goat	12.0	12.0	12.0	12.0	30.0	30.0	31.0	31.0
Pigs	44.0	44.0	44.0	44.0	75.0	72.9	74.5	73.5
Poultry	1.0	1.0	1.0	1.0	116.3	120.5	120.7	121.7

Source: FAO (2005a)

From Table 4 above you can tell from the carcass weights that are reported here are greatly influenced by the proportion of livestock slaughters from unimproved breeds in the smallholder sector. One challenge that can be seen here is the need to put in place breed improvement programmes that will attempt to exploit the within breed variation that exists in unimproved breeds.

The livestock numbers are not showing any steady increase, but in fact exhibit regular fluctuations because of the incidences of fatal cattle diseases such as Contagious bovine Pleuro-pneumonia and Foot and Mouth Disease.

Targets

In order to address the issues of food and nutrition security as well as reducing poverty from the livestock sub-sector perspective, the following targets are being set:

To increase the contribution of Livestock to Agricultural GDP from the current 42.3% to 50% by the year 2015

To increase the productivity of pigs and poultry from contributing 11,000 and 36.5 to 15,000 and 40,000 metric tones annually, respectively

To stop the decline in the population of the national cattle herd and make it grow at an annual rate of 4% by 2015

To raise the national cattle herd from the present 1,500,000 heads to 4,000 by 2015

To have characterized, conserved and promoted the use of the indigenous livestock bio-diversity including the Barotse, Tonga and Angoni cattle breeds by 2015

To have established nine pasture seed and fodder materials multiplication centres by 2015 to cater to the needs of the livestock farmers in the various agro-ecological zones

To promote a strong presence of on-farm feed formulation and fodder bank establishment among our farmers through demonstrations and farmer field days.

To have established at least one fully functional Artificial Insemination and Embryo Transfer Centre to cater to the needs of the emerging and commercial dairy farmers' semen and embryo needs by 2015

To establish at least five milk recording schemes among smallholder farmers throughout the country

To reduce the incidences of disease outbreaks of Contagious Bovine Pleuro-pneumonia, Foot and Mouth Disease and Newcastle diseases by 50% by 2015

To have built at least one slaughter slab per district and one arbarttoir per province complete with cold chain facilities by 2015

To have completed the Codon line in Western Province for the control of Trans-boundary Animal Diseases (TADs)

In order to promote the contribution of livestock to Food and Nutrition Security and Poverty Reduction, the following programmes are being proposed.

1) Dairy Development sub- programme

The dairy sub-sector has great potential to generate wealth, employment and reduce poverty since milking and milk sales take place every day when the cow is in milk. Presently, the sub-sector is not contributing its full potential due to a mix of constraints. While we have placed much emphasis on the use of improved dairy breeds, we have not improved the range and pasture resources component.

To tap the full potential in this sector promotion, of professionalism among the actors in cardinal. The following sub-programmes are being suggested to improve productivity and consumption of milk and milk products:

i) Promotion of the use of artificial Insemination and embryo transfer in cattle

Promotion of milk recording schemes is a good entry point for professionalization of the dairy sector. These tools will be targeted at dairy farmers who are involved in Milk recording schemes. The use of exotic semen will be encouraged in farms with a high level of management to avoid indiscriminate breeding.

ii) Promotion of Feed, Range and Pasture utilisation

Milk production cannot be enhanced without pasture improvement programmes. Under here, we wish to promote value addition to the feed resources such as urea molasses and ammonia treatment of stover and natural pasture grass species. The major constraint in this area usually arises from the land tenure system of communally grazed rangelands. To counter this it may become necessary to promote Zero-grazing and cut and carry practices. For non-grazing animals attention will be targeted at building capacity for on-farm formulation of feeds using locally available ingredients.

2) Intensification of Small Ruminants Production

Goats and sheep have a special place in the livestock sector in that the diseases that are ravaging our cattle population do not affect them. Intensification of production will imply science-based farming or the promotion and or generation of technologies in close proximity to the farmer. To get the most out of this sub-programme we must support the improvement the genetics of our local sheep and goats. Small ruminants have a large market but the supply side of the value addition chain has to be addressed. Trade in small ruminants will be easier among the rural poor because they are usually sold live.

3) Pig and Poultry Productivity improvement

Poultry and pig production is a very common urban and peri-urban on/off-farm income generating activity with potential to reduce poverty among the food insecure households. Poultry and pigs contributes almost half of the monetary and nutritive value of Livestock in Zambia (See table 2). However, about 80% of the cost of raising poultry is directly attributable to feed. The modern broiler is being farmed in the peri-urban where the market is readily available, The local chicken, which is largely raised in the village is a delicacy in most homes but it's productivity is low due to high chick mortality and poor nutrition. In societies where consumption of pork is not inhibited by religious beliefs, pig farming can enormous wealth. This is largely science-based farming since production is intensive and therefore requires professionalization through good extension initiatives.

3) Management of livestock biodiversity

Support to Characterisation of indigeneous farm animal genetic resources

Most smallholder farmers are in what is loosely described as the " Low in-put low output" production system. In this system there's only minimum technological intervention applied. It is desired that characterisation work be done so that it is followed by within breed selection programmes in the long term. Characterisation will lead to breed registration with the Herd book society and will then facilitate conferring of ownership. To do this, we will need to upgrade infra-

structure at research stations so that they serve as livestock breed testing centres for purposes of pedigree selection.

4) Development and use of improved technologies and practices

Development of technologies

Research has the potential to create wealth through the generation of new knowledge, adding value and creating new products. Responsible application of science and technology shall continue to be an integral part of providing nutritious and wholesome food to meet the ever increasing demand from the rapidly increasing population.

The FNDP report's underlying theme is "Broad-based wealth and job creation through citizenry participation and technological advancement". Research which promotes value addition to agro-by-products from industry will be the main targets . The thrust of this sub-programme is the promise that non-traditional feed resources are showing. Feed formulation packages that promote the use of locally available ingredients will be encouraged. Research in vaccine production, diagnostic tools refinements or adaptation are key aspects of promoting livestock development.

The research stations should also be used for conservation of nucleus herds/flocks of indigenous farm animal genetic resources because they are a public good.

Promotion of Use of good practices and technologies (extension)

A tool which has increasingly become popular with technology dissemination is 'on-farm' experimentation. In this case farmers are encouraged to take part in the verification experiment through data collection. As such they get so involved and actively take up the practices.

5) Livestock Health

International animal health standards designed to facilitate safe trade in livestock and livestock products are set by the Office International des Epizooties (OIE) under the Sanitary and Phyto-sanitary Agreement of the World Trade Organization (WTO) and documented in the OIE's Terrestrial Animal Health Code. A core principle of the Code is the need for countries to eradicate important transboundary animal diseases (TADs) to reduce the risk of exporting disease to trading partners.

Table 5.Total numbers of cases/outbreaks of selected diseases reported in all susceptible species

Disease	1997	1998	1999	2000	2001	2002	2003
African Swine Fever	212/11	156/…	…/…	850/1	1,019/5	514/7	
Avian influenza1				-	-	-	-
Blue tongue		(03/1997)	(03/1997	(03/1997	(03/1997	(03/1997)	(03/1997)
BSE2				-			
CBPP3	675/2	7/4			(2000)	148/5	7,433/40
Classical swine fever		000	000	000	000	000	000
Footand mouth disease	70/1	(07/1997)	…/4	691/5	(09/2000)	221/7	(10/2002)
Lumpy skin disease	2,720/56	3,362/…	…/…	452/39	…/15	775/75	190/27
Newcastle	17,823/79	6,499/…	…/…	11,809/36	1,775/17	10.993/63	3,030/43

Disease							
Pestes des petits ruminants		000	000	000	000	000	000
Rift valley fever		(03/1997)	(03/1997)	(03/1997)	(03/1997)	(03/1997)	(03/1997)
Rinderpest		(1896)	(1896)	(1896)	(1896)	(1896)	(1896)
Sheep and goat pox		000			-	-	-
Swine vesicular disease		000	000	000	000	000	000
Vesicular stomatitis		000	000	000	000	000	000

Legend
1 Highly pathogenic avian influenza, No./no. number of cases/outbreaks, … no information
2Bovine spongiform encephalopathy, -no disease reported, 000 disease never reported,
3 Contagious bovine pleura-pneumonia, (month/year) date of the last reported occurrence of the disease in previous years

International food safety standards are set by the Codex Alimentarius Commission, administered jointly by the World Health Organization and the Food and Agriculture Organization of the United Nations. The goal of global eradication of most TADs is unachievable for the foreseeable future, other than in the case of rinderpest, and this prevents many countries, especially developing nations, from engaging in international trade under WTO rules. It is proposed that an alternative, commodity-based approach to the formulation of international animal health and food safety standards, based on the fact that different commodities pose very different risks when it comes to the spread of human and animal pathogens. Therefore, the risk mitigation strategies required are equally commodity-dependent. A more focused commodity-based standards would improve access to international markets for all countries, especially those in the developing world. For this objective to be realised, credible and independent certification is required. There is therefore a great need to first establish disease free zones from which exports could originate. After this a systematic disease eradication campaign should be embarked on with emphasis on cattle traceability.

Veterinary Public Health and Food Safety, Wildlife diseases and interface with domesticated livestock, Trans-boundary animal diseases (TADs), Emerging livestock diseases and Diseases of National Economic Important (DNEIs) are key activities of the ministry. It is very important to strengthen these areas. Unless the above are implemented, it is impossible to attain the current OIE standards for export of meat and meat by-products.

6) Tsetse and Trypanosomiasis control sub-programme

Tsetse flies cause a lot of economic losses in livestock in addition to transmitting human sleeping sickness. Livestock pest control programmes such as the Kwando-Zambezi River Basin under the Pan African Tsetse and Trypanosomiasis Eradication Campaign (PATTEC) must be complimented as it does not go into all affected areas in the country.

7) Livestock Information Management Systems (LIMS)

Strengthening support to the National Epidemio-surveillance Centre (NALEIC) through enhancing technological capacity such as promotion of the use of the Digital pen technology.

8) Promotion of commodity-based livestock trade

While the Venn Diagram from the investment analysis report (IFPRI, 2007) shows that the marketing channels for livestock products are clear, the reality on the ground is a little different. It may be clear for the commercial sector due to the so called 'supermarket revolution', which is by-passing our small-scale farmers due to the high standards being set. Deliberate policies need to be put in place to bring the smallholder farmers on board. To do this we need to review the whole supply and value addition chain so that we provide an insight on the status. Infra-structure such as slaughter slabs/houses, the cold chain, quarantine facilities and transport systems to markets must be put in place.

Table 6. Trade in Live animals

Species	1980			1990			2000			2002		
	Export	Import	Net trade	Export	Import	Net trade	Export	Import	Net trade	Export	Import	Net trade
Quantities (count)												
Cattle	0	279	-279	0	36	-36	0	81	-81	11	12	-1
Sheep & Goats	0	213	-213	150	17	133	0	33	-33	0	16	-16
Pigs	0	40	-40	550	118	432	0	0	0	0	0	0
Poultry *	670	36	634	533	33	500	81	133	-52	137	18	119
Value (1,000 US $)												
Cattle	0	60	-60	0	78	-78	0	76	-76	22	28	-6
Sheep & Goats	0	61	-61	34	10	24	0	3	-3	1	7	-6
Pigs	0	19	-19	14	30	-16	0	0	0	0	0	0
Poultry	463	169	294	320	328	-8	127	331	-204	172	438	-266
Total	463	309	154	368	446	-78	127	410	-283	195	473	-278

*multiply by 1,000 units

ESTIMATED COSTS FOR THE PERIOD 2008-2015

CAADP LIVESTOCK DEVELOPMENT PROGRAMME

PROJECTED FUNDING REQUIREMENTS

(Base year of budget is 2008 with an annual increase of 17% per annum)

In billions of Kwacha

SUB-PROGRAMME	YEAR								
	2008	2009	2010	2011	2012	2013	2014	2015	GRAND TOTAL
1) Dairy Development									
1.1.)Promotion of the use of A.I. & E.T. & Breeds	9.2025	10.77	12.6	14.7375	17.2425	20.175	23.6025	27.6225	126.75
1.2.) Promotion of the use of Improved Feed, Range & Pature	5.5215	6.462	7.56	8.8425	10.3455	12.105	14.1615	16.5735	76.05
1.3.) Support to milk recording schemes	3.681	4.308	5.04	5.895	6.897	8.07	9.441	11.049	50.7
Sub-programme Total	18.405	21.54	25.2	29.475	34.485	40.35	47.205	55.245	253.5
2) Intensification of Small Ruminants Production									
2.1.)Promotion of the use of improved breeds	4.908	5.744	6.72	7.86	9.196	10.76	12.588	14.732	67.6
2.2.) Promotion of improved feeding technologies	3.681	4.308	5.04	5.895	6.897	8.07	9.441	11.049	50.7
2.3.)Promotion of improved housing structures	3.681	4.308	5.04	5.895	6.897	8.07	9.441	11.049	50.7
Sub-programme Total	12.27	14.36	16.8	19.65	22.99	26.9	31.47	36.83	169
3) Pig and Poultry Productivity improvement									
3.1.) Promotion of poultry outgrower schemes	7.362	8.616	10.08	11.79	13.794	16.14	18.882	22.098	101.4
3.2.) Promotion of pig outgrower schemes	2.454	2.872	3.36	3.93	4.598	5.38	6.294	7.366	33.8

3.3.) Professionalisation of pig and poultry production	2.454	2.872	3.36	3.93	4.598	5.38	6.294	7.366	33.8
Sub-programme Total	12.27	14.36	16.8	19.65	22.99	26.9	31.47	36.83	169
3) Management of Livestock bio-diversity									
3.1.)Support to indigenous/local characterisation initiatives	6.135	7.18	8.4	9.825	11.495	13.45	15.735	18.415	84.5
3.2.) Support to breed improvement initiatives	3.681	4.308	5.04	5.895	6.897	8.07	9.441	11.049	50.7
3.3.) Support to ex-situ conservation initiatives	2.454	2.872	3.36	3.93	4.598	5.38	6.294	7.366	33.8
Sub-programme Total	12.27	14.36	16.8	19.65	22.99	26.9	31.47	36.83	169
4)Development and use of improved technologies/ practices									
4.1. Development of improved and appropriate technologies									
in Range and Pasture Management, Animal breeding,									
and animal nutrition	5.5215	6.462	7.56	8.8425	10.3455	12.105	14.1615	16.5735	76.05
4.2.Support to research infra-structure improvement									
and strengthening of systems	11.043	12.924	15.12	17.685	20.691	24.21	28.323	33.147	152.1
4.3.Promotion of good practices	1.8405	2.154	2.52	2.9475	3.4485	4.035	4.7205	5.5245	25.35
Sub-programme Total	18.405	21.54	25.2	29.475	34.485	40.35	47.205	55.245	253.5
5)Livestock Health									
5.1.) Support to veterinary field services	12.27	14.36	16.8	19.65	22.99	26.9	31.47	36.83	169
5.2.) Support to surveillance & diagnostics	9.2025	10.77	12.6	14.7375	17.2425	20.175	23.6025	27.6225	126.75
5.3.) Support to Tsetse eradication campaigns	9.2025	10.77	12.6	14.7375	17.2425	20.175	23.6025	27.6225	126.75
Sub-programme Total	30.675	35.9	42	49.125	57.475	67.25	78.675	92.075	422.5
6)Livestock Information Management System									

(LIMS)									
6.1. Support for the promotion of the use of the Digital Pen									
Technology	3.681	4.308	5.04	5.895	6.897	8.07	9.441	11.049	50.7
6.2.) Support for the establishment of a functional LIMS	2.454	2.872	3.36	3.93	4.598	5.38	6.294	7.366	33.8
Sub-programme Total	6.135	7.18	8.4	9.825	11.495	13.45	15.735	18.415	84.5
7) Livestock marketing and trade									
7.1.) Development and or harmonisation of livestock									
products standards	2.454	2.872	3.36	3.93	4.598	5.38	6.294	7.366	33.8
7.2. Market infra-structure Development	7.362	8.616	10.08	11.79	13.794	16.14	18.882	22.098	101.4
7.3.) Farmer/Trader Mobilisation	2.454	2.872	3.36	3.93	4.598	5.38	6.294	7.366	33.8
Sub-programme Total	12.27	14.36	16.8	19.65	22.99	26.9	31.47	36.83	169
Programme Total	122.7	143.6	168	196.5	229.9	269	314.7	368.3	1690

References

Aregheore, M., 2006. Country Pasture/forage resource profiles

Daka, D.E., 2002. Livestock Sector in Zambia: Opportunities and limitations. In: Development and field evaluation of animal feed supplementation packages .IAEA, Vienna 2002 IAEA-TECDOC. Proceedings of final review meeting of an IAEA Technical co-operation regional AFRA project organized by the joint FAO/IAEA Division of Nuclear Techniques in food and agriculture, Cairo, Egypt, November, 2000. pp 141-143

Irrigation development and support

1. INTRODUCTION

1.1 Background

The Government through the Ministry of Agriculture and Cooperatives (MACO) has recently adopted a National Agriculture Policy (NAP) aimed at providing a conducive environment for the growth of the agricultural sector up to 2015. The main thrust of the NAP is to assure a future for Zambia's development based on a vibrant, competitive and efficient agricultural sector which assures food security and significantly contributes to income and employment generation, increased industrial development, export earnings and overall economic growth and poverty reduction. The agricultural policy framework is therefore being implemented within the overall framework of the poverty reduction initiatives such as the Poverty Reduction Strategy Programme (PRSP) and its successor, the Firth National Development Plan (FNDP).

Within this overall framework and taking into account the vulnerability of Zambia's agricultural sector to weather and climatic vagaries, MACO has recently designed a National Irrigation Policy and Strategy that would provide guidance to all levels and types of investments in irrigated agriculture. In addition, a National Irrigation Plan (NIP) has been developed as part of the that would run from 2006 to 2011. The NIP specifies costed strategic investments and activities required to initiate and operate a competitive and sustainable agricultural sector.

1.2 Challenges

Zambia has a pervasive dependence on rains for its farming. It has therefore, from time to time suffered severe droughts, resulting in reduced crop yields and livestock losses. Both agricultural production and productivity have shown high vulnerability to adverse weather patterns with cyclical trends in national harvest and a trend of alternating surpluses and food deficits. The overall macro-economic growth and welfare indicators are sensitive to the availability or absence of food surpluses and deficits. There is thus an urgent need to break this pattern especially that Zambia possesses tremendous land and water resources. Zambia has over 1,740,380 million cubic metres of underground water resources. Surface water resources on the other hand range from 136,200,000 million cubic metres per day in a drought year (10 year return period) to 237.3 million cubic metres per day in an average year. This is about 40% of the surface water resources in the SADC region.

Zambia possesses over 423,000 ha of irrigable land of which about 100,000ha is actually irrigated among large scale, emergent and smallholder farmers. Compared to countries such as Zimbabwe

(4.7%), South Africa (7.9%), Zambia with more water resources only had 0.9% of its arable land irrigated between 1995 and 1997. Most of the irrigated land lies along the line of rail, above karstic areas for ground water, adjacent to standing water bodies such as rivers and dams, and in dambos and wetlands for smallholders and emergent farmers. The main technologies in application include gravity systems (stream diversions and furrows), buckets, low cost and high cost drip systems, sprinklers, rain guns and centre pivots.

Existing irrigation systems are operated by large scale agri-business estates, individual commercial farms, contract and outgrower groups, associations of farmers and individual farm units. Very little irrigation is undertaken by small scale farmers. The main crops grown include wheat, green maize, sugar cane, tea, coffee, cut flowers, fruits and vegetables.

Government has in recent past recognized the potential contribution and the role for irrigation in achieving food security as well as enhancing income and employment generation opportunities. Irrigation has the potential to contribute to poverty alleviation through diversification and intensification of crop production and increased agricultural based exports.

Through the NIP, MACO is therefore, proposing a package of interventions that once implemented, will break the cycle of vulnerability that Zambia is exposed to. The NIP proposes a strategy for full, efficient and sustainable exploitation of both surface and underground water resources through a holistic approach that promotes irrigation in its various forms and targeted at the different farmer types to ensure all round agricultural production of food, cash, export and industrial crops.

1.3 Irrigation development: Goals and Objectives

The objective of the programme is to promote a well regulated and profitable irrigation sub-sector that is attractive to both the public and private sector.
Specific Objectives
To design, develop and promote appropriate and sustainable irrigation technologies and techniques for small-scale farmers.
To encourage and promote affordable and accessible credit mechanisms, which are consistent with irrigation needs.
To promote an environment for increased profitability of irrigated farming.
Strategies
Development of small-scale irrigation schemes where these are socially and economically viable.
Facilitate irrigation infrastructure development for improved agricultural land productivity.
Provision of reliable information services and regulated access to resources necessary for production and marketing of irrigated produce.
Review and revise the existing water tariff structure as it pertains to irrigation water users.

The Government of Republic of Zambia (GRZ) has developed a new Irrigation Policy and Strategy (2004) and embarked on a comprehensive National Irrigation Plan (NIP) to revamp the country's irrigation sector. The NIP is well integrated into a broader water resources action program through which the GRZ is now placing great emphasis on developing and managing more sustainably the country's water resources. Recognizing that irrigation is a high input and intensive enterprise, the NIP from the outset points out the fact that its interventions should be inclusive in targeting all categories of producers, :thus smallholders, emerging commercial and

large scale commercial farmers, living within areas of high potential for irrigated agriculture. It also calls for a much greater focus on public-private partnerships (PPP's), on small-large scale farmer cooperative arrangements, and market development opportunities where the country has a competitive edge either for import substitution or for exports.

1.4 Sub programmes: key activities

There are three key interventions proposed under this NIP and these are :

Finance and Investment which encompass; infrastructure development i.e., communal water supply systems (public) and irrigation development fund,

Policy and Legal, and;

Institutional and Social support as specified in the matrix at annex 1.

1.4.1 Finance and Investment

In order to facilitate farmers have access to water and in view of limited financial resources at their disposal, it is necessary to have an innovative fund that will accelerate irrigation development and trigger the production of high value irrigated export crops.

The proposed interventions required minimizing the impact of the constraints related to finance and investment gaps are described below:

Establishment of an Irrigation Development Fund (IDF)

The IDF would be a source of capital for investment in irrigation-related projects and acquisition of technology by farmers and industry operators falling in the following categories:

Peri-Urban farmers: requiring a basic package of irrigation tools and equipment (boreholes, irrigation systems, pumps, pipes, drips, sprinklers, etc) for growing cash and export crops in peri-urban areas at individual household level;

Outgrower farmers: requiring basic package of irrigation tools and equipment (Treadle pumps, sprinklers, drips, pipes, etc) to grow cash and food crops, linked to an outgrower promoter in rural and peri-urban areas;

Smallholder farmers: requiring a basic irrigation package (watering canes, treadle pumps, rope and washer pumps, low pressure sprinklers, low cost drips, etc) to utilize water from dambos, rivers, streams, lakes and other water bodies for food and cash crops in rural areas;

Large scale commercial farmers:requiring a basic irrigation package (centre pivots, self-moved systems, rain guns, fixed systems, etc) to produce cash, food and export crops; This component will cater for the proposed acquisition of irrigation equipment for large scale commercial farmers under ZNFU. It will provide for a recoverable loan amount at concessional rate for access by such category of farmers.

Other private farmers: requiring establishing medium to long-term large water transfer systems such as dams weirs, canals and pumps at individual farm level. This would also cater for medium and emergent farmers wishing to construct weirs, canals, and pumps and piping required to harvest water from water bodies at individual farm level.

Manufacturers: of irrigation equipment and tools wishing to expand or test new irrigation technology for import substitution and cost saving, but lack working capital. Such manufacturers could access this loan component of the IDF for investment in expanding capacity and for

working capital to produce targeted amounts of irrigation equipment for sale to different categories of farmers.

Communal water supply systems

Past efforts to promote irrigation have had limited impact resulting in only small pieces of land being irrigated. Some existing farming systems such as, communal grazing present opportunities where water can be taken to afford farmers' participation in irrigation. The communal bulk water supply systems will involve the transfer of water from large water bodies into farming areas to make available water for irrigation to several commercial farmers as well as small-scale farmers. These schemes under PPP's will require business units to manage the abstraction and distribution of water to various farming units within the scheme. In essence, these schemes will be in the order of 5-10,000 ha.

1.4.2 Policy and legal

In order to facilitate and create an enabling environment for the development of irrigation, some policy and legal interventions that provide incentives for investment are proposed:

Reduction of cost of energy: Electricity and diesel are key inputs in the utilisation of irrigation technology. In order to encourage more investment in the short term, a reduction in electricity tariffs and pump price of diesel are proposed at 75% of market rates for the next 2-3 years.

Reduction in cost of Irrigation Equipment: Most equipment required for irrigation is imported and therefore subject to duty and VAT charges. It is recommended that during the first 2-3 years of NIP/NDP, duty and VAT on basic irrigation equipment be reduced to a manageable level. It is also important that customs and excise duty as well as the base lending rate for irrigation equipment loan be reduced.

Improved Incentives for investing in Irrigation: apart from the above incentives, it is proposed that tax rebates on irrigated farmers be implemented to encourage retention of re-investable capital.

1.4.3 Institutional and Social support

A conducive and facilitating institutional and social environment for the investment and operation of irrigated farming is very necessary. The following interventions are proposed to improve the institutional and social environment:

Streamlining Issuance of Water Rights;
Improved Capacity for MACO Extension;
Improved Capacity of Farmer Organisations;
Support to Outgrower Promoters; and
Support to Irrigation Research.

1.5 Target Groups for the Interventions

The main target groups for this intervention is therefore inclusive of smallholders, emerging commercial and large scale commercial farmers, all living in areas with a high potential for irrigation.

The markets being targeted are local consumers, urban consumers through urban markets and retail supermarket chains, industrial processing and export to SADC, COMESA, EU, USA and other international markets.

1.5.1 Targets

Through this programme, the government will aim to develop socially desirable and economically viable irrigation schemes; construct communal bulk water supply systems; facilitate irrigation infrastructure development for improved agricultural productivity; establish an Irrigation Development Fund to enable farmers access funds for irrigation equipment; facilitate establishment of water rights that are supportive of sustainable agricultural development; and promote sustainable utilization of wetlands and ambos.

The programme strategy takes into account the related targets defined in the FNDP to be achieved by the year 2010. The targets include, but are not limited to, the following: (i) 70,000ha brought under irrigation of which 10,000ha among large scale commercial, 30,000ha among emergent farmers and 30,000 ha among small scale farmers;
(ii) 45 potentially viable small-scale irrigation schemes identified; (iii) 45 existing irrigation schemes assessed for rehabilitation (v) 25 potential sites for water harvesting identified and 25 water harvesting structures constructed; (vi) 45 wetlands/dambos identified for agricultural utilization; (vii) 68,000 farmers acquire irrigation equipment and have access to basic irrigation infrastructure

1.6 Financing

The total direct resource commitment is estimated at US$150million for the five-year period as shown in table below.

Strategy	Total cost Kwacha	Total cost US $
Irrigation Development Fund (IDF)	542,500,000,000	113,020,833
Infrastructure Development (public)	90,000,000,000	18,000,000
Institutional and Social		
Capacity building of MACO Extension	65,932,000,000	13,735,833
Capacity Building - Farmer Organisations	13,727,200,000	2,812,873
Capacity Building - Out Grower Promoters	576,000,000	115,200
Strengthen Irrigation research capacity	9,180,000,000	1,836,000
Capacity building -Technology Development and Advisory Unit – UNZA	2,400,000,000	480,000
Grand Total	724,315,200,000	150,000,739
Yearly funding requirements	144,863,040,00	30,000,148

	0	

CROP PRODUCTIVITY ENHANCEMENT PROGRAMME

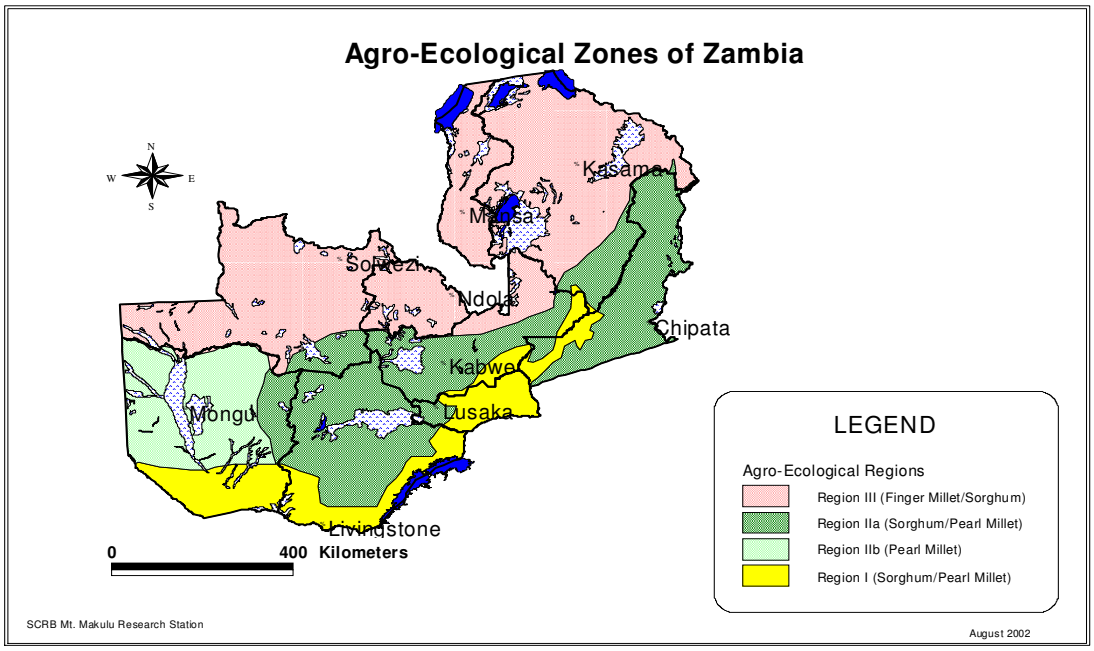
The importance of increased crop production and productivity ensures food security at both household and national level, generate income and provide employment opportunities. Primary agricultural products now make the largest contribution to agricultural exports. On average, exports of products such as sugar, tobacco, cotton lint, coffee, maize and others contribute significantly to non-traditional exports
Other major contributors to agricultural exports are processed foods and textiles. Processed foods are largely maize-meal that is exported to the neighboring Democratic Republic of Congo (DRC). The textile industries have also experienced strong demand from the regional market due to the American Growth and Opportunity Act (AGOA) program. This has been a remarkable achievement for the agricultural sector and it underlines the pivotal role agriculture can play in the growth of the Zambian economy.

The country is divided into three major agro-ecological regions, namely Regions I, II and III. Rainfall as well as the quality of soils differ across these zones.

Region I: This region receives less than 800mm of rainfall annually and constitutes 12% of Zambia's total land area. It consists of loamy to clayey soils on the valley floor and course to fine loamy shallow soils on the escarpment. It covers the Southern province and parts of Eastern and Western provinces. The Region is suitable for production of drought resistant crops like *Cotton, Sesame, Sorghum* and *Millet* and has potential for production of irrigated crops, like *Winter Maize*.

Region II: The Region receives between 800 to 1000mm of annual rainfall and constitutes 42% of the country. It is sub divided into two namely, Region IIa and IIb. Region IIa covers the Central, Lusaka, Southern and Eastern fertile plateaux of the country and generally contain inherent fertile soils. Permanent settled systems of agriculture are practised. A variety of crops are grown in this Region and these include *Maize, Cotton, Tobacco, Sunflower, Soyabeans, irrigated Wheat, Groundnuts* and other arable crops. The area is also highly suitable for *flowers, Paprika* and *vegetable* production. Region IIb covers Western province and consists of sandy soils. It is suitable for production of *Cashew nut, Rice, Cassava* and *Millet*, including *vegetable* and timber production.

Region III: The region receives more than 1000mm up to 1500mm of rainfall annually and constitutes 46% of the country's total land area comprising the Copperbelt, Luapula, Northern and NorthWestern provinces. With the exception of the Copperbelt, the Zone is characterized by highly leached, acidic soils. It has good potential for the production of *Millet, Cassava, Sorghum, Beans* and *Groundnuts*. *Coffee, Sugarcane, Rice* and *Pineapples* are also grown in this area.



This programme largely responds to pillar III though it also addresses various other pillars

Challenges
Low productivity
Environmental degradation due to unsustainable agricultural practices;
Weak research and extension system
Weak farmer-extension and research linkages
Predominantly non market oriented extension production messages
Low adoption rate of improved technologies such planting materials, good management practices and other agricultural inputs
Overall Objective
To enhance agricultural production and productivity

The Goal is to increase production and productivity of priority crop commodities.
Targeted crops are: Cereals (Maize, Sorghum, Finger millet and Rice) Root Crops and tuber Crops (Cassava and Sweet potatoes), legumes (Beans and Groundnuts) and Oil Seed Crop (Sunflower)

Others to be targeted for production, protection and research include indigenous horticultural crops i.e. fruits and vegetables.

With regard to commercialization of the agricultural sector, it is expected that an increased number of small-scale farmers will be fully integrated in commercial production through outgrower arrangements or as individuals. Major cash and high value crops to be targeted include Cotton, Tobacco, Groundnuts, Paprika, Cashewnuts, Soyabeans, Castor, Sesame, Marigold, herbs

and spices in agro-ecological regions I and II; Coffee, Tea, and Sugar in region III. Large scale commercial farm production of cash and export crops like floriculture and horticultural products will also be promoted and it is expected that production of these products will double by 2015.

Specific Objectives
To extend proven technological messages and innovations to resource poor farmers including women and young farmers so as to increase agricultural production.
To provide liaison and links between farmers and farm support organizations responsible for credit, marketing and research.
To support farmers gain management and marketing skills in order to operate on a commercial basis.
Activities
Promote and strengthen farmer groups and farmer field schools as targets for technology transfer.
Create and strengthen the zoning of agricultural camps in order to improve service delivery and infrastructural development.
Use electronic and print media as communication tools to support extension information delivery.
Promote and encourage the involvement of the private sector and NGOs in the provision of extension services.
Facilitate delivery of skills training and technology transfer to small-scale farmers using Farmer Training Institutes at staff level and Farmer Training Centres at farmer level.

Development and Promotion of Appropriate Technology
The development and promotion of appropriate technology is critical to increased agricultural production and utilization. This strategy will therefore among other things, focus on the following:
Development and promotion of appropriate farm machinery, implements, equipment and accessories and.
Development and promotion of appropriate seed varieties and planting materials.
Development of sustainable yield enhancing farming methodologies.

Sub programme: Promotion of Gender in Resource Allocation and Access to Agricultural Services, Focussing on Women and Young Farmers
Women and young farmers have in the past not benefited much from agricultural services such as credit, extension and labour saving technologies despite the vital role they play in agriculture. In order to change this situation, agricultural research, extension, credit, and land tenure services need to be refocused in order to address the needs of women and young farmers.

The strategy among other things focuses on:
Creating gender awareness among policy makers and farmers.
Building capacity of MACO staff at national and field levels in gender analytical skills and techniques.
Facilitating the mainstreaming of gender in Agricultural Training Institutions' curriculum.

Table 1: Public Investment in Agriculture by Type of Expenditure, 2002-2004

Type of Expenditure	Proportion of Total Expenditure (%)
Agriculture Research and Technology Development[1] (other than soils and crops research)	1.8
Conservation Farming	0.5
Fertiliser Support	7.5
Smallholder Irrigation Development	5.0
Land & Infrastructure Development/Rural Investment	4.7
Participatory Extension	0.4
Seed multiplication and Distribution	0.8
Soils and Crops Research	0.96
Marketing, Trade and Agribusiness	2.7
Agro based Industry Development	0.3
Other	75.34

Source: GRZ, Public Investment Programme 2002-2004 Report. MoFNP, 2003
Note: Includes all other research and technology Development not included in soils and crops research.

Technology development and dissemination has been a major constraint to increases in productivity. The government institutions mandated to spearhead technology development and its effective dissemination faced serious challenges in their operations. Challenges have included high staff turnover and inadequate funding for operations.

b) Sub programme: Strengthening Crop Extension Services

Constraints
Limited diversification of agricultural production
High dependence on rain fed agriculture and related risks, and limited utilization of irrigation
Limited diversification of agricultural production
High incidence of crop and livestock pests and diseases

The Goal is basically be to facilitate the provision of timely technical information and guidance, in areas of crop diversification, soil fertility, agronomy, seeds multiplication, to the farming community
Objective

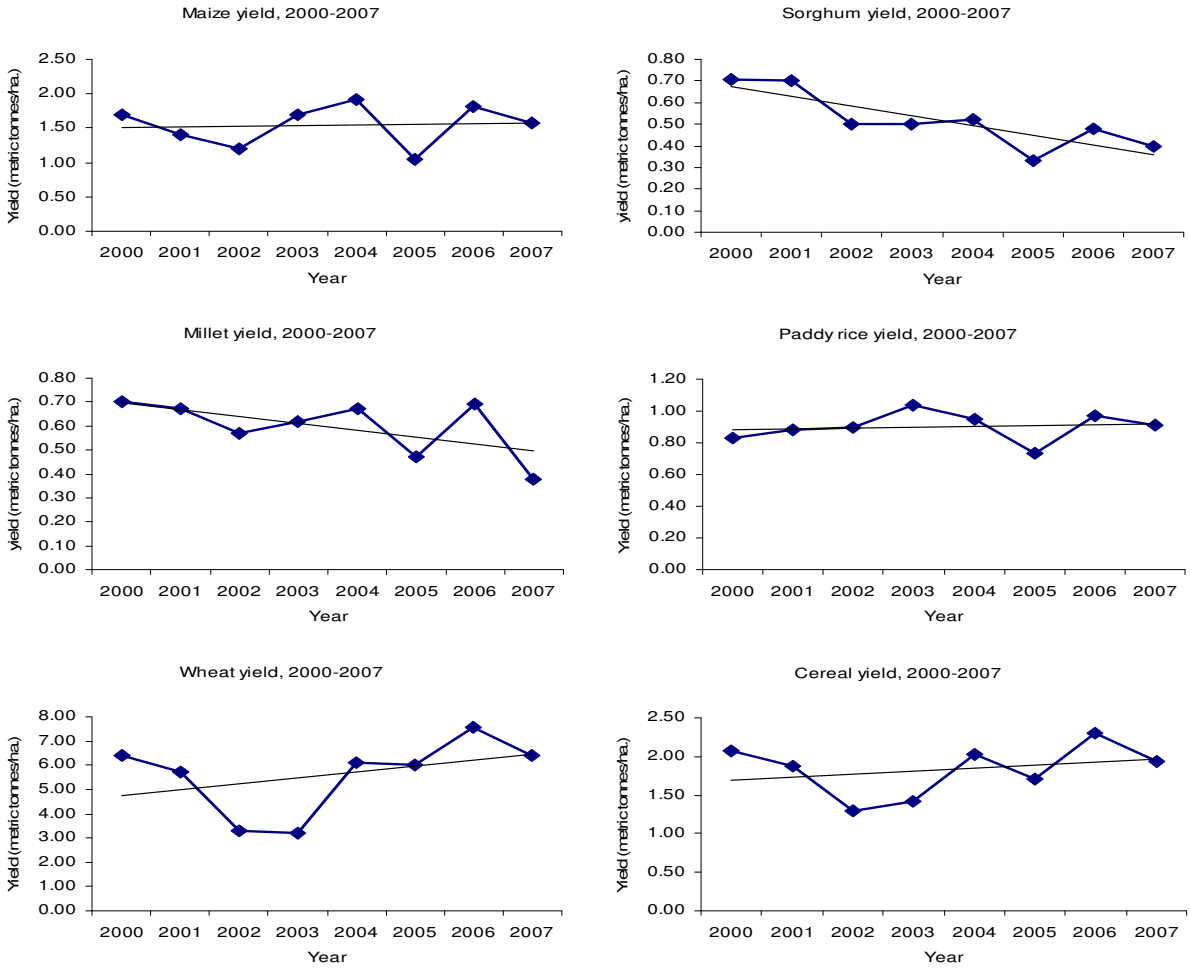
To provide efficient and effective crops extension, especially through participatory approaches, to assist farmers increase agricultural production and productivity and diversify crop production and utilization.
Specific Objectives
To extend proven technological messages and innovations to resource poor farmers including women and young farmers so as to increase agricultural production.
To facilitate the transfer of and improvements in on-farm crop handling in order to minimize post–harvest losses.
Activities
Promote crop diversification and use of improved technologies.
Promote gender responsive agricultural extension services.
Facilitate delivery of skills training and technology transfer to small-scale farmers using Farmer Training Institutes at staff level and Farmer Training Centres at farmer level.
Use electronic and print media as communication tools to support extension information delivery.
Promote and encourage the involvement of the private sector and NGOs in the provision of extension services.

Diversification of Agricultural Production and Utilization
This strategy aims at rationalizing the use of economic resources, thus encouraging the production of crops or products on the basis of agro-ecological zones or comparative advantage. Under this strategy emphasis will also be placed on promotion of high value products and expansion of crops, fisheries (especially aquaculture) and livestock spectrum especially among small and medium scale farmers. Small and medium scale farmers would be encouraged to process various agricultural products so as to add value and enhance nutrition.

Promotion of Sustainable and Environmentally Sound Agricultural Practices
This strategy focuses among other things on:

Improved use of available water resources, by greater utilization and adoption of irrigation where it is economically viable.
Promotion of sustainable and cost effective agricultural practices.
Promotion of environmentally friendly farming systems such as conservation farming, afforestation, and the use of green manure.
Agroforestry.

These measures can make a major contribution to improving the performance of the agricultural sector and ensuring adequate food supplies by enhancing farmer productivity on a sustainable basis.
Figure 12: Trends in Productivity Cereal Crops



Source: MACO and CSO data.

A review of trends in crop production, hectarage and yield reveals that whereas crop production has increased, yield or productivity increases have been small and negative in some cases except in a few cases where yield has increased. It also reveals that production, hectarage and yield have all fluctuated widely annually. This implies that much of the increase in production has been due to increases in hectarage/expansion in area cultivated and not from productivity gains. A closer look at the allocation of expenditure within the sector shows that over the review period very few resources have been allocated to technology development and dissemination which is the driving force behind increases in production.

Sub programme: Strengthening Research

While Government privatizes and commercializes some of the agricultural services, it will continue to provide such services as research, crop extension, and market information in order to raise the productivity in crops.

Technology Development and Promotion

The development and promotion of appropriate technology is critical to increased agricultural productivity, production and utilization.

The main objective of the programme is to generate and adapt crop and soil technologies in order to increase agricultural productivity and diversify production. This includes the development of low cost sustainable farming systems for all major agro-ecological zones.
Specific objectives
The following are the specific objectives: -
To develop stable and high yielding varieties of both food and cash crops.
To develop food crop varieties which have high nutritional value, storability and acceptability.
To develop varieties that are resistant and/or tolerant to pests, diseases and adverse soil conditions such as soil acidity and salinity.
To develop appropriate agronomic packages and technologies for sustained agricultural production.
To develop post harvest technologies that minimize storage, crop losses and enhance utilization.
To strengthen research/extension/farmer linkages in order to have more farmers' input in agronomic research.
Activities
Breeding (varietal development)
Agronomy (developing agronomic packages)
Plant protection (Insect pest/diseases screening)
Developing post harvest technologies
Promoting of new technologies
Progeny maintenance

Targeted crops include;
Cereals (Maize 6, Sorghum 6, Finger millet 6 and Rice 3)
Root and Tubers Crops (Cassava 6 and Sweet potatoes 6)
Food legumes (Groundnuts and beans 6)
Oilseed crops (Sunflower 3)

Resources
Technology Development and Dissemination Budget Estimate (K7,200,000,000.00)

Crop	Activities	Estimated cost (ZKW)
Cereals Maize	Breeding Agronomy Plant protection Progeny maintenance Promotion (technology transfer)	K1,000,000,000
Sorghum	Breeding Agronomy Plant protection Seed maintenance Promotion	K1,000,000,000
Rice	Breeding Agronomy Plant protection Progeny maintenance Promotion	K900,000,000
Finger millet	Breeding Agronomy	K900,000,000

	Plant protection Progeny maintenance Promotion	
Root & Tubers		
Cassava	Breeding Agronomy Plant protection Progeny maintenance Processing and utilisation	K1,000,000
Sweet potatoes	Breeding Agronomy Plant protection Progeny maintenance Processing and utilisation	K800,000,000
Food Legumes		
Beans	Breeding Agronomy Plant protection Progeny maintenance Promotion	K800,000,000
Soyabeans	Breeding Agronomy Plant protection Seed maintenance Promotion	K900,000,000
Groundnuts	Breeding Agronomy Plant protection Seed maintenance Promotion	K900,000,000
Oilseeds		
Sunflower	Breeding Agronomy Plant protection Seed maintenance Promotion	K800,000,000

ANNEX II

Support to Resource Poor Smallholder Farmers: A proposal to identify future support interventions

Background
Zambian smallholder production systems suffer from low productivity and market access due to a number of reasons, including: poor agricultural practice, low investment capacities, poor access to external production inputs, poor infrastructure as well as labour constraints. Consequently, the majority of smallholder realise only low income levels and are prone to engage in increasingly unsustainable production methods.

Past and present support interventions
Current public sector support interventions target specific groups among the smallholder farming community in order to supply physical commodities that are meant to empower their beneficiaries. However, the targeting protocols and more than that the actual targeting in the field has been a problematic area from the start of these programmes. Additionally, the high costs of proper targeting and monitoring are often seen as prohibitive to achieve the intended coverage given limited resources, which renders these programmes prone to inefficient and ineffective implementation. Examples are:

Fertiliser Support Programme for de-capacitated cooperative members
Food Security Pack for vulnerable but viable
Direct cash transfer for destitute people

Proposed action
Recent reviews and analysis of the agricultural sector under the CAADP round table process as well as comprehensive and high quality data sets becoming available from recent surveys (CFS and PHS supplementary survey) allow a rigorous assessment of the smallholder farming community, their resource endowment/limitations, production methods, access to production inputs and extension services. It is therefore proposed to utilise these information sources to categories smallholder farmers according to their production capacities by a panel of technical experts from MACO, civil society, private sector, collaborating partners and research entities. The aim of this panel is to describe discernable groups of farmers facing similar bottlenecks. Based on the characterisation of these farmer groups or categories future support interventions will be crafted in a second step.

First step
The ACF will put together a panel of technical experts and organise an analytical workshop. The output of this work will be a categorisation of the Zambian smallholder farming community along shared key bottlenecks to sustainable productivity enhancement and market participation. Below is a list of proposed expert on the panel.

Technical Group for Smallholder Farmer Categorisation

Michael Isimwa	MACO
John Phiri	MACO

Coillard Hamusimbi	ZNFU
Paul Kapotwe	PAM
Dr. Jones Govereh	FSRP
Prof. Dr. Mike Weber	FSRP
Sina Luchen	FAO
Dr. Judith Lungu	UNZA
Xavier Roulliard	MACO-SADFS
Dr. Hyde Haantuba	ACF
Dr. Klaus Droppelmann	ACF
Masiye Nawiko	ACF

Timeframe
In the third week of August the technical group will hold a three day workshop. The first day the available sources of information will be screened and research questions agreed. On the second day the actual categorisation will be carried out and the last day will be dedicated to concluding discussions and documentation.

Resource requirements
(include budget for a 3 day workshop for 11 persons)

Second step
The output from the Smallholder Farmer Categorisation will be used by an expanded group of experts including implementers of developmental programmes and input service delivery networks. This group will develop proposals for support interventions.

These proposals will be presented to relevant stakeholders from the public and private sector as well as representatives from civil society and collaborating partners in order to collect their input and ensure their buy-in. The ACF will hold a half day consultative meeting to facilitate this process.

Timeframe
Beginning of September proposals for interventions will be developed by a technical design team. A detailed outline for this activity will depend on the outcome of the first step. By mid of September it is expected to present the proposals to a wider stakeholder audience for endorsement.

Resource requirements
(to be decided before mid of September)

CONCEPT NOTE

.Food Security and Sustainable Rural Livelihoods

Background

The mandates of WFP, FAO and IFAD are complementary with a common aim to combat hunger and reduce poverty. FAO endeavours to raise the living standard of the rural poor by replenishing agricultural production assets and promoting increased food production and consumption. IFAD has a mandate to redress rural poverty. WFP seeks to save lives and livelihoods using food aid as a tool.

Within the donor community there is considerable emphasis being placed on partnerships between organisations within the international community at large and particularly amongst the Rome based UN agencies. The contribution of FAO, WFP, IFAD is vital to ensure a broad development vision that includes enhancing food availability, access and utilisation. A collaborative relationship between FAO, WFP and IFAD in the design and implementation of field programmes that increase the impact of development aid on the lives and well-being of the poor and the hungry is regarded as both necessary and timely.

This concept note is intended to highlight an area of collaboration where the three organizations can institutionalise this support. Attention will be placed on developing communal and household assets, increasing food availability and access and thereby contributing towards the attainment of the World Food Summit and Millennium Development Goals - eradication of hunger and food insecurity. A close partnership in addressing the food security challenge will generate synergy, increase efficiency of resource use and ensure broader and more sustainable impact. The achievement of this goal lies at the heart of this concept note.

The vision of this challenge is to design a comprehensive broad based programme to address Food Security in a concerted and harmonised way. The Zambian Government's assessments indicate that despite some progress having been achieved in the rural areas, much remains to be done and work needs to be scaled up dramatically in order to meet the Millennium Development Goals. Underlying this is the recognition that a partnership approach is likely to combine existing agency comparative advantages to the benefit of the rural beneficiaries.

Rationale

In Zambia, in spite of macro-economic gains recorded in recent years, food insecurity and poverty remains entrenched particularly in the rural areas. Maize has become the most dominant staple food in Zambia with 70% of the population depending on it due to Government's support for the commodity. Maize production, however, is very unstable owing to the rising trend in food crop prices and its vulnerability to the vagaries of climate change. Food prices of maize and other staples are beginning to rise and this trend is expected to pose problems for the food insecure whose ability to buy food could be undermined. Repeated occurrences of unfavourable weather patterns (droughts or floods), experienced in recent years, also result in widely varying production levels of maize and other staples also causing unstable food and nutrition security. The fluctuation in climate has led to droughts and floods particularly in the southern part of the country - Eastern,

Southern, Western and parts of Lusaka Provinces – and this has contributed to erosion of the asset base and livelihoods of the farming households in these area, rendering them highly vulnerable to food insecurity. The spread of livestock diseases in these areas has also had an impact, significantly reducing livestock numbers and in particular the numbers of draught animals required to enhance crop production and productivity among smallholder farmers.

The high food prices, globally, provide an opportunity for Zambian farmers and this highlights the need for investment in, and better management of, the country's food supply. Forecasts for the next ten years in the region predict continuing high prices because of structural changes in supply and demand, regionally. The higher food prices will provide an incentive to produce local food and could stimulate agriculture. Zambia with its export potential could take advantage of this opportunity.

The vagaries of climate change have resulted in a significant shift in the cropping patterns of smallholder farmers. The trend has been to move maize farmers into less risky and more profitable, drought tolerant food crops such as roots and tubers (cassava, sweet potato) as well as small grains (sorghum, millet). There has also been a significant increases in the area planted under root and tuber crops and small grains, with some estimates claiming a doubling in area cultivated in the last decade. The importance of cassava as a dual purpose crop serving the food and cash income needs of households has increased in recent years.

Agricultural productivity of staple food crops is, however, low. This has been explained by the lack of improved cultivars, inadequate agronomic practices and decreasing soil fertility. Little attention has been paid to introducing innovative solutions for soil, water and nutrient management; the main factors limiting yields.

Zambia being well endowed in natural resources has potential to expand the production of staple cereals, tubers and field crops. The country has abundant water resources with many rivers and lakes and huge underground water aquifers giving an irrigation potential estimated at 423,000 hectares out of which only 50,000 hectares is currently under use.

Under the policies of the Zambian Government, both food and cash crops are being targeted for increased production and productivity in order to attain and sustain food security and income generation. Overall crop production is envisaged to increase through expansion of the area under cultivation; expansion of irrigable land; increased productivity and increased use of animal draught power. The policy also recognises and acknowledges the importance of post-harvest management and utilisation.

Crop and enterprise diversification is central to increased and sustainable agricultural production and productivity. Zambia needs therefore to move away from dependence on maize for its food security. Traditional staples such as cassava, millets and sorghum are tolerant to adverse weather patterns and marginal agro-ecological conditions and should therefore be promoted to ensure stable food and nutrition security.

The potential expansion of cereals and other staples as income generating enterprises for farmers is, however, curtailed by weak market linkages, an underdeveloped agro-industrial sector, and inadequately developed value chains. The reduced access to markets is a disincentive to increased production among small holders. Although, liberalization of agricultural markets has led to the

emergence of an expanding body of market intermediaries who supply inputs and purchase outputs from smallholders the linkages between them are weak. The value chains for staples tend to be inefficient, uncompetitive with traders capturing a disproportionate share of the wealth created along the value chain. These intermediaries represent a relatively inefficient segment without an adequate understanding of the dynamics of the market and the need to create confidence in their relationships with smallholder farmers. Measures such as enhancing value addition and market linkages to ensure increased access to local and regional markets by small holders are important to motivate farmers to increase and sustain production. Participation of small holders in the market is also limited by their lack of business and entrepreneurial skills.

Increasing food prices being experienced globally will be both a challenge and an opportunity for Zambian agriculture. It's a challenge in that if not handled well may worsen the food security situation in the country. However, this is also an opportunity for Zambian agriculture with its untapped potential to increase production and productivity and benefit form these product price changes. This has the potential of realising exponential benefits to Zambian agriculture which can result in improved food security and livelihoods for small holders.

Objective

The objective of the project or programme would be to alleviate problems of poverty and food security through more profitable agricultural production systems, increased market access and value-added activities. This could be ensured through support to targeted watersheds and communities within them by:

- intensifying production and improving quality of dominant staples;
- ensuring better water management and the sustainable use of the environment;
- expanding their engagement in post-harvest value-added activities;
- strengthening linkages between players along selected value chains.

Interventions and activities

The programme could be covered through the design of five components:

A. Water management and environmental sustainability
B. Rural infrastructure
C. Crop diversification, productivity and value addition
D. Nutrition and safety nets
E. Capacity development

Possible interventions under these components that could be undertaken by the UN partners – FAO, WFP, IFAD are briefly described below:

Small scale irrigation and water harvesting: In line with Government policy support could be provided for the rehabilitation of existing small-scale gravity schemes and the development of

demand-driven new schemes. Water availability could also be enhanced by introducing and promoting low-cost technologies and water management systems. These could include: (i) gravity diversions from permanent streams where topography permits (ii) treadle pumps for pumping water from permanent streams, rivers or diversion canals for irrigation of small plots where the overall lift is low enough to permit manual operation (iii) motorised pumping from permanent rivers into temporary storage to permit gravity surface irrigation (iv) shallow wells and (v) water harvesting measures including ponds, tanks and small earth dams.

Other rural infrastructure: Food for Work could be used to develop public works programmes that include the rehabilitation of feeder roads, bridges, market structures, and storage. Consideration may also need to be given to social infrastructure in support of WFP school feeding programmes (school buildings, clinics, sanitation).

Land rehabilitation and the creation of productive assets: Food for Work and Cash for Work support can also be used for land rehabilitation and natural resource management activities on communal lands. Interventions would be designed as integrated packages within a watershed context. Activities include both physical and biological soil and water conservation measures.

Crop intensification and diversification: **High yielding varieties of staples could be introduced whilst promoting the application of soil and water management technologies adapted in line with farmers' risk preferences.**

Value addition and market linkages: Emphasis should also be placed on developing value chains for staple products – sorghum, millet, wheat and cassava – as part of a crop diversification process. Backward and forward linkages between farmers and other players in the value chain will need to be strengthened. Market access will need to be improved by providing farmers with market information, to enable them to broaden their options when selecting products, inputs and market outlets. Improvements will also be made by linking farmers to markets through contractual arrangements within out-grower schemes or directly to markets. The strategy to be followed is to reach out from farmers whilst building- back from the private sector players. There is considerable potential for example, for diversification within the cassava based cropping system towards higher value commercial products with assured markets (animal feeds, bakery products, starch).

Household food security and community nutrition: Lack of diversity of food products is also a widespread problem. The diet of the poor is very low in fat, necessary to increase energy density and absorb vitamin A and other fat-soluble vitamins. This is further compounded by food safety issues that also need to be given specific attention. Diversification of local food systems is needed supported by nutrition education. Improved nutrition can also be promoted through encouraging school feeding programmes together with the promotion of community gardens, homestead plantations and homestead food production.

Capacity building of communities and support service providers: The key to successful interventions is to create recognition amongst the rural community of the need for self reliance, and introduce mechanisms to enable communities to manage and maintain the assets created in a sustainable way. Support service providers also need to possess the capacity and skills to design, implement and maintain sound schemes and conservation measures. Capacity building programmes at all levels are needed and in a broad range of technical disciplines (rural

infrastructure, watershed planning, soil and water conservation, forestry, livestock, community organisation and development, enterprise development, business management, marketing and advisory services – to name a few. Farmer field schools based on farmer to farmer learning will be introduced to cover integrated pest management, integrated plant nutrition systems, livestock husbandry, life skills and business entrepreneurship. Emphasis in training activities will be to equip farmers with the necessary skills and knowledge to make informed decisions about commercial farming opportunities.

Safety nets (food and cash transfers): A Safety Nets programme could be promoted by WFP to help move the most vulnerable households and individuals (orphan-headed households, elderly-headed households, disabled individuals) out of chronic poverty and prevent their decline into destitution. Direct support could be provided to protect the lives of the community members who cannot work and do not have any other reliable support. Activities could include direct cash transfers of food and funds to community organizations to provide direct financial support.

These are some of the potential interventions needed to address the problems of food security in a comprehensive manner covering its four dimensions: availability, access, utilisation, and stability of food crops. Clearly the details of the components and activities will be spelled out in the course of project or programme formulation.

Approach

It is proposed that watershed sites are selected for focus of intervention and that corridors are developed between the sites and market outlets. Criteria such as the following could be used for site selection.:

- Sites that have opportunities for a water control/ management component for agricultural production.
- Sites that offer the potential to collaborate with WFP (in the food insecure areas).
- Sites that have access to markets for the production envisaged.
- Sites that do not duplicate other donor supported activities of a similar nature.

The intention is to select sites as 'pockets' of development that extend along 'growth' corridors for the sale of staple food crops. Farmers located in the selected sites and along the corridors will be included as participants in the project.

Prospects for collaboration

Amongst UN agencies, FAO, WFP and IFAD are natural partners in this endeavour and together have the capacity to seriously undertake the tasks needed to achieve the MDG goal. The issue of partnerships is at the top of the policy agenda of all three agencies. WFP and FAO are committed towards the realization of the World Food Summit declaration of assisting developing countries to

achieve the goal of halving hunger by 2015 and the Millennium Development Goal to eradicate extreme poverty and hunger.

The UNDAF (United Nations Development Assistance Framework) advocates greater harmonisation and collaboration amongst all UN organisations towards the goals of poverty elimination and the realisation of the Millennium Development Goals. Under the UNDAF umbrella FAO is working together with WFP to address the challenge of food insecurity and eradicating hunger in a concerted manner through the design of joint programmes at field level that address the broad gamut of food security challenges as part of a comprehensive effort – moving from emergency to recovery and on to development. The UNDAF framework provides an opportunity for collaborative efforts between the different stakeholders within the country.

UNITED NATIONS ZAMBIA- RISING FOOD AND INPUT PRICES POSITION AND RESPONSE DISCUSSION PAPER
DRAFT FOR DISCUSSION
NOT FOR DISTRIBUTION

Introduction

The Food Security Outcome group was mandated by the UN country Team to lead the discussion and strategy development for how the UN system in Zambia should position itself to respond to the government request for assistance in mitigating the negative effects of the soaring food and input prices. In line with the inial response by the Zambian government the focus of the position and strategy should be on how the UN system can assist government to provide a conducive environment for assisting the farmers in the country to benefit from the rising costs of food for local and international markets.

This paper therefore is a result of the analytical discussions held by the Food Security Outcome Group under the United Nations Development Framework taking into account the country specific situation analysis of the challenges and opportunities that the rising food prices present to Zambia. It provides a snapshot of the present situation in Zambia and outlines possible options of response taking into account the institutional and technical comparative advantage of the UN system to deliver assistance to meet the challenges and opportunities presented by the rising food and input prices. The paper aims to generate further discussion within the UN system but also with the other development partners and ultimately the government in terms of the short, medium and long term response to assist farmers to benefit from the rising food prices.

1- Situation Analysis

Zambia has not been spared by the global trend of rising food and input prices. The current higher food prices in Zambia are attributed to the following factors:

a) Higher fuel prices have pushed up the cost of production of locally manufactured food items
b) Higher fuel prices lead to higher transportation costs and subsequently higher retail prices.
c) The current interruption in the supply of energy sources (electricity) to industries has increased the cost of production and consequently the final cost of products.
d) Reduction in production of the staple food (maize) due to floods and other factors.
e) Higher utility costs.

(JCTR 2008)

According to CSO (May 2008), the annual food inflation was recorded at 11.7 percent in May 2008, compared to 9.8 percent in April 2008. The increase in food inflation is largely attributed to the cost of maize meal, other cereals and cereal products, meat, milk and milk

products salt, sugar and other processed food products. Partially offsetting these increases were declines in the cost of maize grain, fish, dried Kapenta, dried beans, tubers and shelled groundnuts.

While the rising food prices are expected to reduce access to food by the majority of the population in Zambia it also provides an opportunity for farmers to gain from the farming enterprises as a result of the higher prices on the market. It is from this premise that the UNCT would like position itself in assisting government efforts of reducing the negative impact of the rise in food prices through a well managed supply response that provides the means for the majority of the small scale farmers to increase production and productivity from their farming businesses.

Zambian farmers can be classified into three categories. Smallholder farmers with less than 5 hectares of land (often less than 1.5 hectares), are the most numerous, approximately 800,000. Their production is based on hand-tools and limited use of external inputs. The other extreme, 1000 commercial farmers, are located in the most favourable agricultural areas (line-of-rail) and by using modern technology produce a large proportion of cash and export products. The medium-size group consisting of about 50,000 farmers utilise animal draught power and cultivate an area between 5 and 20 hectares (Wishern et al. 1999). Small-scale farmers constitute 56 per cent of the total population and poverty among this group is high, 90% of the smallholders being below the poverty line (Seshamani 1998).

Very recently over the past few months the price of fertilizer has seen marked increases in its price pegged at about ZK 210,000(Two Hundred and Ten Thousand Kwacha) per bag on the commercial market. At this rate of input cost the small scale farmers face an insurmountable obstacle to engage into meaningful crop production especially for the main national starch staple crop of maize that is dependant on fertilizer use to achieve reasonable yields beyond the subsistence level for home consumption only. It therefore becomes imperative that a production safety net mechanism is used to cushion the negative effects of the rising prices of inputs in assisting the small scale farmers to gain from the rising food prices. In essence a fundamental incentive - high food commodity prices - is in place for stimulating the agricultural sector and Government, supported by their international partners, must now undertake the necessary public investment and provide a favourable environment for private investments, while at the same time ensuring that the most vulnerable are protected from hunger.

As a short to medium-term supply response, local food production should be boosted urgently. Measures should include the distribution to small-scale farmers of seeds, fertilizers, animal feed and other inputs through vouchers or smart subsidies. If implemented effectively, such a programme will increase the supply response in Zambia and, thus, improve food availability, increase the income of small producers and may reduce price increases in local markets.

In the last decade or so the policy framework in Zambia has been that of full economic liberalization in all sectors. The agricultural sector, for example has been characterized by the government's gradual withdrawal from providing agricultural goods and services in order to allow for the effective participation of the private sector. However it has been observed year in and year out that the private sector has not performed well particularly in the provision of agricultural

inputs and market services. According to Deininger and Olinto (2000), the liberalization has had a minor impact on agricultural productivity in Zambia. Their analysis from the mid-1990s indicates that the supply response of rural producers to the policy changes has been limited. Three main conclusions are drawn in their study. First, reduced use of inputs, unreliable input delivery and poor farmer access to inputs are more important factors than the actual price of inputs.However the current situation in the face of rising ionput costs makes the price a critical factor that will impact negatively to the aspirations of increased production and productivity espacially for the small scale farmers. Second, lack of long-term credit facilities hinders the ownership of productive assets, such as work oxen, which would increase efficiency and productivity. Finally, the constraints facing smallholders in Zambia relate to market access and non-obtainable inputs rather than to poor provision of education and extension.

In view of the situation as described above, the Government of the Republic of Zambia designed a three-year transitional programme, called the Fertiliser Support Programme (FSP).The FSP is a production oriented safety net set up by the government to stimulate agricultural production of the small scale farmers who were struggling to boost their production as a result of the high cost of inputs coupled with unreliable input access by small scale farmers. With the current rise and expected high cost of inputs for the near future, it is apparent that the FSP if managed properly remains a vital pathway through which small scale farmers can be assisted by government to increase their production through smart input subsidies to enable them gain from the rising food prices.

3- The Fertilizer Support Programme – ***"The production oriented safety net for UNCT support to the Zambian Government supply response to rising food and input prices".***

During the last ten (10) years the Zambian Government has been implementing agriculture reforms. These reforms are aimed at fully liberalising markets to enhance the private sector participation in agriculture marketing. The policy reforms emphasised the government withdrawal from direct involvement in agriculture marketing and input supply. During the reforms process, the private sector was able to participate in agricultural input supply mainly along the line of rail. However, the private sector has remained constrained in providing input and output marketing services in rural areas. The government has continued to participate in agricultural input supply due to the duality nature of the agricultural sector and the limited capacity of the private sector to service small-scale farmers in outlying areas.

The FSP states as its main objectives: (i) to improve private sector participation in the supply of agricultural inputs to smallholder farmers thereby reducing government involvement, (ii) to ensure timely, effective and adequate supply of agricultural inputs in the country, (iii) to improve access of smallholder farmers to agricultural inputs (fertilizer and hybrid maize seed), (iv) to ensure competitiveness and transparency in the distribution of inputs, thereby breaking monopolies, (v) to serve as a risk-sharing mechanism for smallholder farmers to cover part of the costs for improving agricultural productivity, (vi) to expand markets for private sector input suppliers/dealers and increase their involvement in the distribution of agricultural inputs in rural areas, thereby reducing the role of Government, and (vii) to facilitate the process of farmer organization, dissemination of knowledge and creation.

Farmers targeted by FSP are small farmers with the potential to become commercial in the near future. FSP does not target the most vulnerable households, which are targeted by programs such as Food Security Packs.

International experience shows that fertilizer and other inputs smart subsidies could be one option to stimulate a supply response by increasing farmer access to and application of farm inputs. However, they are only effective if: (i) the subsidy is targeted to those who cannot afford fertilizer to avoid displacing commercial sales; (ii) if the inputs arrive at the right time in the right sequence, in good quality, and in the right quantities; (iii) if input delivery is accompanied with the right extension messages; and (iv) if, in the absence of irrigation, the weather conditions remain favourable.

The FSP has been criticised by a number of stakeholders in the agricultural sector for falling short in a number of operational areas towards delivering to meet its intended objectives. Notable among the areas in which the UN system has the comparative advantage to assist FSP to deliver more efficiently include the following:

a) Targeting- It has been observed that in a number of instances that FSP has targeted and consequently benefitted the rural and peri-urban elite and some scrupulous business men at the expense of the intended beneficiaries.
b) On time delivery and match of fertilizer and seed packages -. Late arrival of inputs at the farmer level, in the wrong sequence, or quantities have been frequently observed leading to reduced effectiveness of the programme.
c) Governance – Mostly related to the transparency of the programme. There is government dominance in the programme to the extent that the farmers have no or very little recourse for the decisions made at both the provincial and district levels of the Ministry of Agriculture. Some of the decisions have resulted in disadvantaging the intended beneficiaries.
d) Inadequate capacity- of the farmers in both technical and more especially in the farming for business practices to enable the FSP beneficiaries to make sound technical and business judgements from their farming enterprises to optimize their production levels.
e) Capacity building of the service providers- inadequate skills to design, implement and maintain sound input delivery schemes that can be sustained over the long-term.

Identified areas of Support- "*Enhancing the effectiveness of FSP*"

The United Nations system in Zambia can assist government through the improvement of service delivery for input supply by bridging the gaps in the FSP delivery outlined above using the technical comparative advantage of its agencies operating in Zambia as exemplified below.

1. WFP – Improved purchasing arrangements and targeting would be in line with WFP's purchase for progress activities meant to stimulate market development for agricultural produce.
2. WFP's experience in targeting and vulnerability assessment would be useful way of ensuring the well targeted activity and follow up.
3. UNDP- governance and monitoring. The strong working link between UNDP with government will be critical in ensuring that there is understanding in the capacity building on governance and monitoring.

4. FAO technical competences in capacity building of the farmers, farmer organizations and extension staff in Farm planning(including value chain analysis and value addition related interventions) and management (including technical interventions for reducing farmer dependence on inorganic fertilizers and promotion of crop diversification centered geographical area specific cropping systems) could be brought to bear in the design and implementation of a sustainable input delivery system that does not preclude partnerships with the private sector.
5. IFAD experience in the promotion of market linkages and innovative financing schemes
6. AfDB competences in the promotion of agribusinesses
7. FAO has already initiated support in the development of policy guidelines for country level action based on thorough analysis of the recent development in the agricultural commodity markets in order to help countries employ the most appropriate policy instruments to deal with the rise in food prices.

PROJECT SUMMARY

Country:	**Zambia**
Agency:	FAO Emergency Coordination and Rehabilitation Unit
Project Title:	Farmer Input Support Response Initiative (FISRI) to Rising Prices of agricultural commodities in Zambia
Sector:	Agriculture and Livelihoods
Objective:	**Overall objective**: To improve access to agricultural inputs and promote conservation agriculture principles among small scale farmers (SSF) in selected districts of Southern and Eastern provinces in order to mitigate the soaring food prices. **Specific objectives**: 1. To increase agricultural productivity and production through access to quality low nitrogen requirement seed varieties of legumes and maize and stimulate community level production and input dealership in targeted districts; 2. To increase household income and employment through increased agriculture production, productivity and competitiveness; 3. Reduce external inputs dependence by SSFs 4. Provide the basic ground tenets for Conservation Agriculture promotion through training of SSFs and MACO extension staff
Beneficiaries:	Primary beneficiaries 8,400 small scale farmers Secondary beneficiaries 50,400
Implementing Partner(s):	Ministry of Agriculture and Cooperatives (MACO) Department of Agriculture (DoA) and the Seed Control and Certification Institute (SCCI)
Start Date:	1st September 2008 to 30th March 2010
Project Duration:	2 seasons (18 months)
Total Project Budget:	**5,350,000.00**

Needs

Zambia has an estimated 850,000 small scale farmers (SSFs) who contribute 80% to the national food balance sheet. Past and current, assistance to small-scale farmers (SSFs) have focused on 1. Viable farmers covered by developmental programs such as Fertiliser Support Program (FSP) targeting 125,000 farmers, Agricultural Support Program (ASP) supported by SIDA and the Conservation Agriculture Program (CAP) supported by NORAD targeting 120,000). 2. Poor

vulnerable households based on social safety nets (Food Security Pack targeting 20,000 farmers, cash transfers, food for assets). However all this accounts to only about 20 % of the total number of SSFs. This leaves the majority of the resource poor farmers (80%) deprived of concerted agricultural assistance, an aspect that contributes to the lack of phenomenal growth in agriculture. Over the years average agricultural productivity and production of the maize staple and other crops has either been unstable or decreasing among the SSFs category. This year MACO has reported that average productivity has further decreased from last year's 1.57 MT/Ha to 1.31 MT/Ha. Several factors are recognised as being responsible for the falling productivity and production among SSFs, including:

- Lack of access and or increased cost of farming inputs such as seed and fertilisers
- Lack of consistent application of best practices in crop husbandry;
- Declining soil fertility and erosion due to unsustainable agricultural practices;
- Increased vulnerability of farming households to natural disasters and the effects of climate change;
- Inadequate or lack of extension support packages to ensure efficient and sustainable use of provided inputs in specific socio economic settings and farming ecologies

Farmer adherence to Conservation Agriculture (CA) principles has been proven to increase agricultural productivity, production and profitability. CA is based on the adoption of a set of sustainable agronomic practices which includes dry season land preparation using minimum tillage methods for efficient water use (hand hoe basin or Animal Drawn Power (ADP) ripping), use of improved varieties, early planting, inclusion of legume (nitrogen-fixing), crop rotations, effective weed control, crop residue retention and precision input application. The Conservation Farming Unit (CFU) of the Zambia National Farmers Union through Norwegian support has five years Conservation Agriculture Programme (CAP) targeting 120,000 SSFs. The Norwegian Government has further indicated interest to scale up the programme through the anticipated MACO implemented Conservation Agriculture for Sustainable Agricultural Development (CASAD) to target a further 80,000 farmers. These interventions still require to be scaled up to cover many of the potentially productive SSFs.

Difficulties in accessing inputs buy SSFs during the 2008/09 and subsequent cropping seasons will be exacerbated by the rising prices witnessed over the last couple of months. Zambia is among the 22 countries identified by the United Nations as being at high risk of being negatively impacted by the soaring agricultural commodity prices. Since last year, the cost of seed has increased; while that of fertiliser has doubled from around U$ 600/MT to U$ 1500/MT. Input price rises are expected for the foreseeable future. Most of the SSFs will thus not be able to afford the inputs to enhance production and productivity in subsequent planting seasons, an aspect that will result in increased HH food insecurity and vulnerability in high risk areas. Ultimately the majority of resource poor HHs in rural areas will have to depend on protracted food relief to meet their dietary needs. Rising food prices however also provide an opportunity for farmers to increase their income earnings from agricultural commodities.

The high cost of food especially the maize staple due to possible reduction in production will also negatively impact on the urban poor in Zambia. Such a situation could trigger socio unrest as witnessed in other African countries where food riots have occurred in the past few months. There is also likely to be an increase in social vices such as crime and commercial

sex work. There is therefore need to minimize the impact of rising input prices on food production and HHs food security through input assistance to resource poor farmers not covered under the current input support programmes.

The FAO proposes to provide input support to 8400 SSFs with secondary benefits to 66,600 HHs using a bimodal approach encompassing Conservation Agriculture and commercialization of inputs;

- Immediate provision of improved seed of maize, fertilisers and soil fertility enhancing species (legumes) to established farmer groups and Associations who in turn will revolve the funds and increase their capacity to provide input support to communities. This will cushion the impact of price rises in order to enable beneficiary HHs increase their production and productivity in the 2008/09 and 2009/10 main planting seasons;

- Capacity building for farmers and MACO extension staff in Conservation Agriculture and increasing access to soil fertility enhancing plants (nitrogen fixing leguminous species such as, Sunnhemp, Velvet beans and *Acacia albida).*

The proposed project will seek to increase food supply, reduce hunger, counter rising food prices, and improve responses to food emergency crisis by extending the area of land under conservation agricultural practices through provision of knowledge on efficient use of inputs through CA training and inputs to support 8 400 farmers in the 2008/09 season and carry them through sustained CA training and support for another season (2009/10 season). There after the targeted farmers will be linked to the FSP and CASAD programmes who will carry them over for CA support for another 3 seasons. The project will use a similar approach to the CASAD. Geographically, the coverage will be focused on those districts where the CASAD will operate, such that the project will work with 420 Camp Extension Officers (CEOs). The specific camps will be determined in consultation with the Conservation Agriculture Programme (CAP) of the Conservation farming Unit (CFU) and MACO in order to ensure complementarities and minimize overlap.

In the 2008/09 cropping season, 420 camp extension officers will be trained in CA and each of them will in turn train 20 Own Farm Facilitators (OFFs) or lead farmers resulting in a total of 8400 farmers being assisted. In view of the shorter proposed implementation period for the FISRI, the approach will be to carry the 8,400 OFFs or lead farmers from the first season and continue supporting and training them into the second season. In the second season, the trained OFFs will be expected to work with 8 new farmers to train them in CA, thereby having an indirect benefit to a total of 67,200 farmers.

While the new 67,200 farmers reached by FSRI OFFs in the second season will benefit from the FSRI project through CA training, they will not directly receive any material support such as inputs from the project. The project will instead link the new CA farmers to the CASAD and MACO to ensure continued sustained access to CA extension messages and agricultural input support.

Activities – *indicate links to ongoing projects*

The Government is this year providing input support to 200,000 small scale farmers through the Fertiliser Support Programme. The Royal Norwegian Embassy is currently supporting a targeted 120,000 CA farmers through CFU for 5 years and has further expressed willingness to support MACO with the up scaling of Conservation Agriculture targeting 80,000 farmers over a 5 year period from 2008 to 2013. The proposed FSRI project will compliment the FSP, CASAD and CAP programmes in targeted districts through input support and promotion of CA among beneficiary farmers. The link to the on-going FSP and CA programmes will reduce initial project overheads and some operational costs associated with national, provincial and district supervision running costs.

A variety of inputs will be provided to OFF farmers in the 2008/09 season i) to provide the means to facilitate the application of the training, and ii) to provide an incentive for the application of the training. The seed inputs would be determined as a mix of a staple crop and a legume. The project will have a farming systems approach that takes into account differences in needs of farmers based on agro-ecological, and socio economic settings of various target areas. Improved seed of maize and legumes will be provided.

The following are the expected activities:

- Consultative meetings with MACO, CASAD, FSP and CAP programmes;
- Sensitization and identification of target districts and beneficiaries;
- Capacity building for farmers and MACO staff in targeted districts;
- Production and distribution of CA training material;
- Inputs and CA procurements;
- Distribution of inputs and CA equipment to target farmers;
- Monitoring and Evaluation;

Outcomes – *mention specifically any expected outcome relevant to food price crisis*

- Improved risk management in relation to rising price rises;
- Increased supply through increased production and improved market linkages resulting in food price stability;
- Increased economic opportunities for the vulnerable due to higher earnings from increased prices; and
- Increased quality of diets through diversification of food among the target groups.

FINANCIAL SUMMARY	
Budget Items	**$**
Input costs	4,000,000.00
Extension and Farmer Capacity Building	800,000.00
Project operational costs	200,000.00
Sub total	5,000,000.00
Support costs (7%)	350,000
Total	**5,350,000.00**

ANNEX III

PRRO WFP Zambia

PROJECT COUNTRY, NUMBER/TITLE: ZAMBIA 10594.0

"Assistance to flood victims in Zambia"

Duration of project	**21 months; August 2008 - April 2010**
Number of beneficiaries	**233,600 (Maximum)**
WFP food tonnage	**35,682 MT**
Cost (United States dollars)	
WFP food cost	**18,999,675**
Total cost to WFP	**36,020,953**

EXECUTIVE SUMMARY

In February 2008, in the aftermath of the floods that affected several districts in the Southern, Central, Western and North Western provinces, the Office of the Vice-President (OVP) of Zambia requested assistance from the United Nations agencies to support its flood response and relief activities in the areas of infrastructure, food security, health and nutrition, water and sanitation, education and child protection. At the same time, the UN agencies in Southern Africa also launched a Consolidated Appeal Process (CAP) for preparedness and response. The strategy proposed in this PRRO follows the directions indicated in this CAP for recovery activities as well as the recommendations of the Multi-sector In-depth Vulnerability and Needs Assessment (MIVNA) carried out by the Zambia Vulnerability Assessment Committee (ZVAC) in June 2008. The food needs are those required to cover the period from late 2008 to early 2010.

Prices of maize and other staples have risen by over 25 percent and fuel by over 37 percent since January 2007. These increases already pose problems for the food insecure both in urban and remote food deficit rural areas where production costs and market prices are further increased by higher transport costs that are likely to continue rising. In consequence, the President of Zambia, in May 2008, established an Inter-ministerial Committee, on which WFP Zambia and FAO have been invited to serve, to address the issues raised by soaring food prices. To assist in the search for solutions, the UN Country Team (UNCT) has also established a Multi-Sector Task Force led by WFP and FAO.

The repeated shocks that have afflicted these populations over the past seven crop seasons are compounded by the general rise in food prices in domestic and international markets. This, in turn is further exacerbated by escalating transport costs due to the steep rise in fuel prices compounded by extensive damage to the road network. In this situation, traditional coping mechanisms (reduced food consumption, loans, labour migration and sale of animals) for most of these populations have already been exhausted and their asset base has been depleted. It is anticipated that food assistance will thus be required for the duration of at least two crop seasons so as to preclude recourse to destructive coping mechanisms and enable the rapid resumption of normal life after this series of failed harvests.

The goal of the PRRO is to contribute towards improving household food security, livelihoods and nutrition of 233,600 people affected by the 2007/2008 floods and previous dry spells in severely affected districts of Zambia. To this end, the PRRO foresees a reinforcement of targeted support to safety net programmes. The main objectives are to:

1. Strengthen the capability and nutrition status of food insecure households to take charge of their own recovery on a sustainable basis and withstand external shocks and natural disasters;
2. Build national capacities for formulating, implementing and managing food security and nutrition monitoring systems and interventions at central and local levels;
3. Provide additional relief assistance to identified beneficiaries as required;
4. Contribute to the mitigation of the effects of soaring food prices on populations that are already structurally vulnerable.

These objectives are consistent with the National Disaster Management Policy (NDMP) as well as WFP Strategic Objectives 1, 2, 3, and 5; and they support Millennium Development Goals 1, 3, 4, 5, 6, and 8.

The key outcomes of the PRRO are:

- Increased ability to meet immediate food needs due to floods, droughts and high food prices within targeted households;
- Reduced level of acute malnutrition among children under five;

- Strengthened capacity of Cooperating Partners (CP), including NGOs, community-based structures and relevant government institutions to establish and manage food assistance programmes in an effective and efficient manner.

The PRRO will help the victims of the 2007/8 floods overcome the worst effects of the disaster and support the reestablishment of their livelihoods. The beneficiaries, therefore, should not require food assistance beyond April 2010, provided that no other disasters occur during the period of the intervention. WFP will also strengthen the Government Disaster Management and Mitigation Unit's (DMMU) link to the existing national early warning system in order to ensure the integration of climatic and agricultural information for disaster preparedness and to provide timely early warning and disaster information.

5. INTRODUCTION

SITUATION ANALYSIS AND SCENARIO

The overall context

5.1 Zambia is a land-locked Low Income Food Deficit (LIFDC) country in south eastern Africa with an area of 752,614 square kilometres and a projected population of some 12.5 million people in 2008[19]. It was ranked 165 out of 177 countries in the 2007 UNDP Human Development Report with a life expectancy estimated at 52.7 years with HIV and 57.5 years without HIV[20]. Life expectancy has lowered the Human Development Index in Zambia by 5.9 percent.

5.2 Of Zambia's current population, about 64 percent are below the official poverty line. Poverty is a rural phenomenon - 80 percent - compared to urban areas - 34 percent; 23 percent of all households are headed by women; and 20 percent of all children under-19 years are orphans[21]. The extremely poor and moderately poor populations constitute 51 percent and 14 percent respectively of the total population- a deterioration since the 2002-3 Living Conditions Monitoring Survey (LCMS III) when they stood at 46 and 21 percent respectively. The Gini coefficient is estimated at 0.56 percent.[22]

5.3 Agriculture is the main occupation of 72 percent of the workforce and contributes to about 13 percent of GDP[23]. Smallholder subsistence farms dominate the sector and account for about 80 percent of total agricultural production (maize and cassava). Growth in agriculture has lagged due to inefficient farming practices, lack of agricultural inputs, dependence on rain-fed agriculture and poor marketing outlets. Food production is further constrained by the rapid changeover in the sector to industrial crops (cotton and tobacco) by all farmers as well as market disincentives for local producers from cheaper imported foods. Poor agricultural performance contributes to continued food insecurity throughout Zambia. The LCMS III indicates that about 76 percent of food crop farmers are food insecure. They are predominantly women and endure severe shortfalls during the lean season, between September and February, mainly owing to the inadequacy of rainy season agricultural production.

The Problem

5.4 Zambia is subject to two major climatic constraints: recurrent droughts and floods. Droughts are the more frequent of the two, with their impact being most heavily felt in the agriculture sector[24]. In the previous and current agricultural seasons, 2006/7 and 2007/8, crop failure has been caused by floods. Since 90 percent of Zambia's farmers are smallholders dependent on rain fed agriculture, they remain highly vulnerable to recurrent food insecurity caused by erratic climatic conditions. The spread of livestock diseases in the flood-affected areas

19Zambia 2000 Census of Population and Housing (Population Projection Report): medium variant with AIDS

20Central Statistical Office, Monthly Report, June 2008

21Living Conditions in Zambia (LCMS) IV, 2006, Central Statistical Office, November 2007.

222007 Zambia Budget Speech

23CSO Monthly Report, June 2008

24Drought Incidence in Zambia Over The Thirty Year Period 1970/71 – 1999/00, Paper Presented to Second International Conference on Tropical Climatology, Meteorology and Hydrology by Maurice Muchinda, 2001

has also significantly reduced livestock numbers and the availability of draught animals in the smallholder farm sector.

5.5 Prices of maize and other staples have risen by over 25 percent and fuel by over 37 percent since January 2007. These increases already pose problems for the food insecure both in urban and remote food deficit rural areas where production costs and market prices are further increased by higher transport costs that are likely to continue rising.

5.6 The situation is exacerbated by high levels of poverty which make the livelihood base of the poor vulnerable and fragile. This is further compounded by limited access to improved agricultural inputs and a weak agricultural extension system. These factors, coupled with other macroeconomic variables, make it extremely difficult for small-scale farmers to recover from climatic shocks in less than two rainy seasons. Thus the present situation is particularly dire for these populations in terms of food insecurity and asset depletion given that, in four out of the seven crop years since the 2001/2002 cropping season, Zambia has suffered periodic catastrophic crop failures due to erratic rainfall patterns.

5.7 During the 2006/7 agricultural season, floods in the north and prolonged drought in the south resulted in a steep drop in yields of the staple maize crop in the affected areas. The ZVAC estimated that some 440,866 people needed 31,742 MT of food assistance. WFP supported 161,000 of this caseload during the lean season from October 2007 to April 2008 in the Western and North Western provinces.

5.8 In the just ended 2007/8 crop season, extensive flooding has again caused a steep drop in maize yields (20 to 60 percent) in most districts, mainly in the Southern, Central, Western and North Western provinces. Indeed, the Central Statistical Office (CSO) Monthly Report of June 2008 indicated that farmers expected that they would be unable to harvest 41 percent of the land under maize due to floods/water logging, drought and lack of fertilizer. This has been confirmed by the MIVNA in June 2008, which also found that 66 percent of the road infrastructure had been destroyed and, as a result, 444,624 people in 21 of the 39 districts assessed were in need of immediate food assistance.

5.9 The repeated shocks that have afflicted these populations over the past seven crop seasons are compounded by the general rise in food prices in domestic and international markets. This, in turn, is further exacerbated by escalating transport costs due to the steep rise in fuel prices compounded by the damage to the road network. In this situation, traditional coping mechanisms (reduced food consumption, loans, labour migration and sale of animals) for most of these populations have already been exhausted and their asset base has been depleted. It is anticipated that food assistance will thus be required for the duration of at least two crop seasons so as to preclude recourse to destructive coping mechanisms and enable the rapid resumption of normal life after this series of failed harvests.

The food security and nutrition situation

5.10 Households in rural areas depend for food mostly on their own production (55 percent of total consumption expenditure, compared to only 4 percent for urban households).[25] The MIVNA found that, in the most vulnerable drought-prone areas, this proportion was as high as 80

25 LCMS III.

percent. This finding confirms these households' extreme vulnerability to production-related food insecurity.

5.11 In Zambia, clinical data show that the number of hospital admissions of severely malnourished children peaks during the lean season (October to February). The MIVNA confirmed this trend, with lean season underweight (weight for age) as high as 31 percent in some districts, against the 14 percent national threshold indicated by the Ministry of Health. This nutritional situation is expected to worsen further in the flood-affected districts due to poor sanitary conditions as well as the limited and decreasing food availability caused by the widespread crop losses.

6. POLICIES, CAPACITIES AND ACTIONS OF THE GOVERNMENT AND OTHERS

Policies, capacities and actions of the government

6.1 WFP Zambia aligns its activities with existing government policy instruments, with interventions based on the United Nations Development Assistance Framework (UNDAF) for Zambia (2007-2010) and the Joint Assistance Strategy for Zambia (JASZ). Of particular relevance for emergency situations is the Government of the Republic of Zambia's (GRZ) 2005 NDMP. GRZ recognizes that recurrent disasters place an additional burden on the capacity of communities and households to secure and restore their normal livelihoods. Thus, the National Contingency Plan, within the framework of the NDMP, encompasses disaster preparedness, mitigation, response, restoration and prevention as key components of national policy. Disaster-related interventions are led by the OVP through the DMMU.

6.2 In the context of the Decentralization Policy, GRZ has devolved responsibility *inter alia* for service provision to district level where implementation capacity is weak and in urgent need of strengthening. At this level, and relevant to emergencies, are the Provincial Development Coordinating Committees (PDCC), the District Development Coordinating Committees (DDCC) and the District Disaster Management Committees (DDMC). This institutional framework, complemented by NGOs and Community-Based Organisations (CBOs), forms a solid basis for intervening effectively and efficiently in response to relief and recovery needs.

6.3 In February 2008, the OVP requested assistance from the United Nations agencies, to support its flood response and relief activities in the areas of infrastructure, food security, health and nutrition, water and sanitation, education and child protection. At the same time, the UN agencies in Southern Africa also launched a CAP for preparedness and response. The strategy proposed in this PRRO follows the directions indicated in this CAP for recovery activities as well as the recommendations of the July 2008 ZVAC MIVNA report.

6.4 In May 2008, in the face of soaring food, fertilizer and fuel prices, the President of Zambia established an Inter-Ministerial Committee, on which WFP Zambia has been invited to serve, to address the issues involved. Its Terms of Reference are as follows:

- To deal with the transition of managing the situation of rising food prices;
- To examine factors related to the situation;
- To develop an action plan that will ensure sustainable food production in the short, medium and long term; and
- To operationalise irrigation development.

This has been followed by the establishment of a Multi-Sector Task Force by the UNCT in July 2008, to assist the Government in the search for solutions and to ensure a coordinated response by the UN system.

6.5 At the same time, under the aegis of the joint initiative on Soaring Food Prices of the Rome-based agencies – FAO, IFAD and WFP - an inter-agency mission was fielded in the second half of July 2008 to help Zambia develop a Country Action Plan in response to high food prices through a consultative process.

Policies, capacities and actions of other major actors

6.6 Various actors[26] within the UN family and civil society, have plans to supplement efforts to address humanitarian relief needs and promote recovery through food for education and the promotion of livelihood-based food security. A strong networking and collaboration culture exists among partners[27] in terms of programme synergies, common assessments, real-time evaluations and geographical targeting.

6.7 FAO has recently launched a project under its Technical Cooperation Programme "to hasten increased agricultural productivity and production among the resource poor small scale farmers through urgent input support". The project "Input supply to vulnerable populations under the Initiative on Soaring Food Prices (ISFP)", will run for one year from July 2008 to June 2009 and aims to provide maize and legume seeds as well as fertilizers to 4200 smallholders in the flood-affected districts, who are also part of the WFP beneficiary caseload. WFP will coordinate its productive safety net support to these farmers - Food for Assets (FFA) for water resource management and land preparation- with FAO's activities under this project.

6.8 In July 2008, WFP established a Task Force on Rising Food Prices and set aside special additional resources to provide immediate assistance to the most seriously affected countries.

Coordination

6.9 The DMMU coordinates contingency planning together with UN humanitarian organizations, NGOs and the Zambia Red Cross. The DMMU will chair stakeholders meetings to define needs. Stakeholder participation in DDMCs will ensure that activities and assistance at district level are coordinated through the governments' institutional arrangements. WFP will ensure participation in such committees at the Lusaka and district levels through its existing country office and sub-offices.

6.10 The Inter-Ministerial Committee on Rising Food Prices will ensure the coordination of Government policies and actions. The UNCT task force will develop a Plan of Action for the UN agencies in relation to the rising food prices issue as well as ensuring integrated implementation of all operations and activities carried out by the UN agencies in this domain.

26The UN Country Team, the Cooperative for Food Security, Agriculture, Aid Resilience and Markets (C-FAARM), a consortium of NGOs comprising Land O'Lakes, Catholic Relief Services, Cooperative Assistance for Relief Everywhere (CARE), World Vision International, Action Aid and the International Federation of the Red Cross

27For example, USAID-supported NGOs have adopted common approaches

7. OBJECTIVES OF WFP ASSISTANCE

7.1 WFP Zambia has responded to these food crises through the approved three-year PRRO 10310 "Assistance to Populations in Southern Africa Vulnerable to Food Insecurity and the Impact of AIDS". Following government policy, WFP has combined relief distributions with labour-based FFA activities and expanded community schools and nutrition feeding activities to meet the relief food requirements. Both the PRRO and the Country Programme (CP) strategically target groups that can augment agricultural productivity and reduce overall vulnerability to recurrent household food insecurity, both specific national goals

7.2 WFP's FFA programme already provides productive safety nets and contributes to economic growth among the most vulnerable. FFA supports the creation/rehabilitation of productive rural assets (e.g. conservation farming) so as to increase the population's resilience to problems such as drought and floods. WFP will seek to do this within an overall watershed management approach. FFA and Food for Training (FFT) are targeted at the most vulnerable and strengthen smallholders' capacity as well as building rural assets that enable sustainable economic growth, thereby decreasing vulnerability to shocks. WFP will support training and study tours for district and sector authorities to increase their capacity to formulate and implement social protection programmes.

7.3 The goal of the PRRO is to contribute towards improving household food security, livelihoods and nutrition of 233,600 people affected by the 2007/2008 floods and previous dry spells in severely affected districts of Zambia. To this end, the PRRO foresees a reinforcement of targeted support to safety net programmes. The main objectives are to:

- Strengthen the capability and nutrition status of food insecure households to take charge of their own recovery on a sustainable basis and withstand external shocks and natural disasters;
- Build national capacities for formulating, implementing and managing food security and nutrition monitoring systems and interventions at central and local levels;
- Provide additional relief assistance to identified beneficiaries as required.
- Provide a framework for addressing the effects of soaring food prices on populations who are already structurally vulnerable

These objectives are consistent with the NDMP as well as WFP Strategic Objectives 1, 2, 3, and 5, and they support Millennium Development Goals 1, 3, 4, 5, 6, and 8.

7.4 The key outcomes of the PRRO are:

- Increased ability to meet immediate food needs and manage shocks within targeted households;
- Reduced level of acute malnutrition among children under five;
- Strengthened capacity of cooperating partners, including NGOs, community-based structures and relevant government institutions to establish and manage food assistance programmes in an effective and efficient manner;
- Preparedness for response to food price rises.

8. WFP RESPONSE STRATEGY

Nature and effectiveness of food-security related assistance to date

8.1 Since 2001, WFP has responded to recurrent crises both through Emergency Operations (EMOPs) and, as of 2005, through the WFP Southern Africa Regional PRRO 10310.0 (2005-2008) which aims to address the triple threat of food insecurity, poverty and HIV/AIDS. During this regional PRRO, WFP assistance consisted primarily of relief and recovery activities aimed at protecting and improving livelihoods and productive assets among poor food insecure households, including those affected by HIV/AIDS.

8.2 During the lean season 2007/2008, WFP provided livelihood recovery assistance to 161,000 flood-affected people in the North Western and Western provinces mainly through FFA activities supported by NGO partners in co-ordination with the DDMCs. This food assistance has helped beneficiaries by preserving their assets, precluding resort to negative coping strategies and maintaining or increasing the consumption of nutritious foods. The results of the 2007 Community Household Surveillance (CHS) system[28] show that beneficiary families are more likely to have a lower mean Coping Strategy Index (CSI) than non-beneficiary households and to be much less likely than the latter to sell assets during the lean season.[29]

Strategy outline

8.3 This PRRO is in line with the regional Southern Africa CAP for 2008 recovery activities and related needs. The focus of the appeal is disaster mitigation and preparedness and the resources requested constitute the minimum humanitarian assistance required to cover the gaps that cannot be met from the resources available to regional governments. In this context, the PRRO thus aims to prevent increased vulnerability leading to long-term food insecurity, the further loss of assets and a deterioration of nutritional status which, in turn, could result in higher mortality and morbidity.

8.4 The PRRO will have three main areas of focus:

- Recovery/Safety Net Programmes: to provide nutritional support to the most vulnerable groups (elderly, child- headed and HIV-affected households), and strengthen livelihoods of the most food insecure rural smallholders by protecting and building productive assets.
- Relief during shocks: to protect the most food insecure as required during periods when normal coping mechanisms are exhausted.
- Productive safety-net support for rehabilitation/reinvestment activities by smallholders in coordination with assistance provided by other UN agencies and multilateral funding/lending agencies in the areas of drainage, water control infrastructure, seed protection, conservation farming etc.

8.5 The PRRO activities address short-term recovery needs in acutely food insecure areas affected by recent shocks. They will be designed to complement development actions carried out under the current CP 10447 as part of a holistic longer-term approach to chronic food insecurity.

28 October 2007 Community Household Surveillance (CHS) reports

29 March 2007 CHS report

8.6 The strategy recognizes that after four out of eight years of erratic weather, viz. the droughts of 2000/1 and 2001/2[30], as well as the floods and drought of 2006/7 and 2007/8, the livelihoods of rural poor smallholders in the affected areas have been severely reduced and resilience eroded to levels such that their recovery would necessitate more than one good or average agricultural season. Crop failure and subsequent food shortages are often experienced by the same households living in areas prone to drought or floods before they have had a chance to recover from previous shocks. Within this group, some households are at particularly high risk: the elderly, women and those affected by HIV/AIDS whose labour force and access to resources are particularly constrained. These households have much less resilience to shocks and resort to negative coping strategies that erode their asset base and lead to hunger and food insecurity.

8.7 Food assistance under the PRRO will be mainly through FFA and FFT activities. In accordance with previous experience in emergencies and recovery in Zambia, most of the food transfers will be work-based. FFA/FFT activities will be mostly related to farmer field schools, soil and water management, crop diversification, seed protection, small-scale irrigation and drainage, post-harvest techniques and the maintenance and establishment of access roads. WFP will actively engage in complementary partnerships with other UN agencies (particularly FAO) and NGOs, to carry out technically sound and feasible activities, while working closely with the DDMCs to build local capacities and ensure strong community participation.

8.8 Small scale farmers, especially in Eastern Province, have been encouraged to diversify into new income generating activities (*inter alia* bee-keeping, mushrooms and aquaculture) and crops such as soya using conservation farming techniques, for processing and sale to WFP, the Wildlife Conservation Society and other stake holders. In this programme, soya beans are processed into Corn Soya Blend (CSB) in a mill jointly owned by the cooperatives in the district. It is also supplied to the WFP-assisted School Feeding Programme locally and in other food deficit areas. With FFA, smallholders are also being encouraged to grow crops more suited to their ecological zone viz. millet, sorghum and cassava in drought prone areas. WFP is also engaged in the process of developing fortified cassava meal to be sold on the local market and integrated in the food basket for beneficiaries in food deficit areas.

8.9 As a consequence of the anticipated reduction in food availability and access in flood-affected areas, malnutrition is likely to increase, particularly among under-five children. To rehabilitate the moderately malnourished and prevent severe malnutrition, WFP will provide targeted supplementary feeding to under-five children among the affected population who are identified as malnourished. This will be done through existing rural clinics, district hospitals and CBOs. These interventions will be complemented by therapeutic feeding programmes undertaken by UNICEF and the Government in the affected areas.

8.10 WFP is conducting a feasibility study on the use of food or cash vouchers and, should their implementation be feasible, will pilot their use in selected areas within the context of the Ministry of Community Development and Social Services' (MCDSS) Strategic Plan[31]. Food or cash voucher programmes are designed to provide people with coupons to purchase a fixed quantity (commodity-based vouchers) or fixed monetary value (value-based vouchers) of food in selected food shops. For food vouchers to work, however, basic pre-requisites are required, such

30 ZVAC April 2003 Livelihood and Vulnerability Assessment Report

31 MCDSS, September 2007. "Strategic Plan for the Ministry of Community Development and Social Services" 2007-2011

as functioning markets, an adequate network of financial intermediaries and food suppliers and low risk to beneficiaries of food supply failures.

8.11 The Purchase for Progress (P4P) Programme will be integrated to the extent possible to enable farmers to build linkages with markets and sell their produce at remunerative prices, which will act as an incentive to boost food and agricultural production.

Handover strategy

8.12 WFP, through the Vulnerability Assessment and Mapping (VAM) Unit, and in cooperation with FAO, will undertake capacity building programmes in the area of emergency food security needs assessments and early warning and programming. Under food security analysis training, WFP will target the National Vulnerability Assessment Committee (NVAC) and the DDMCs. The following activities will be undertaken.

- Application of enhanced assessment and analysis methods appropriate to vulnerability assessments in Zambia (e.g. integration of the livelihood and household economy approaches in food security and nutrition assessments) to determine the most appropriate responses: food assistance, cash, vouchers or a combination thereof.
- Strengthening market analysis in food security assessments carried out by the NVAC. The thematic areas to be covered include:
    - The role of markets as the forum for the exchange of goods and services: levels of food commodity flows from surplus to deficit areas and their influence on prices.
    - The role of markets and their importance in realising the potential for local purchases.
    - The level of market performance in the midst of a shock or crisis and their limitations.
- The design, planning, implementation and analysis of food security and nutrition assessments. This will involve understanding the type of assessment to undertake (i.e. initial or rapid) and the type of data collection approaches to use (i.e. focus group discussions, key informants, etc).
- Enhancing partnerships to facilitate a better understanding among various stakeholders involved in food security assessments, especially when making decisions on assistance programmes at the district and sub-district levels.

8.13 Under the strengthening of the early warning capacity building activities, the following topics will be covered.

- Theory, tools and techniques of satellite remote sensing (elementary);
- Enhancing the national capability to monitor and evaluate the effectiveness of food assistance programmes on nutrition security;
- Developing an understanding of the integration of climate data (rainfall) and satellite remote sensing products Normalised Difference Vegetation Index (NDVI) or vegetation biomass, satellite rainfall estimates) in monitoring the progression of an agricultural season;
- Developing initial food insecurity hot spot maps, highlighting possible deficit districts as a result of either floods or droughts.

8.14 Making the transition to sustainability requires systems to be put in place to monitor the situation on the ground and trigger timely and effective responses to setbacks such as floods, drought or other natural disasters. The NDMP emphasizes early warning and disaster preparedness as cornerstones of effective response to recurrent hazards. To limit the impact of such setbacks on the broader trend toward sustainable solutions, WFP will strengthen the DMMU's links to the existing national early warning system through the National Early Warning Unit (Meteorological Department and the Ministry of Agriculture and Co-operatives). This will ensure the appropriate integration of climatic and agricultural information for disaster preparedness. It will also contribute to the strengthening of a monitoring system within the DMMU to provide timely early warning and disaster information.

8.15 The PRRO will help the victims of the 2007/2008 floods overcome the worst effects of the disaster and support the reestablishment of their livelihoods. The beneficiaries, therefore, should not require food assistance beyond April 2010, provided that no other disasters occur during the period of the intervention.

8.16 FFA interventions will be implemented within the context of district development plans thus creating opportunities for complementation of resources and utilisation of technical expertise within the local government structures as well as ensuring sustainability. They will also support government strategies and actions in response to rising food prices.

9. BENEFICIARIES AND TARGETING

9.1 The selection of districts where the PRRO will operate is based on the severity of the impact of the floods on the livelihoods of the affected populations. According to the 2008 ZVAC Report, the most affected districts are: Choma, Gwembe, Kazungula, Mazabuka Monze Namwala, Itezhi-tezhi, Siavonga and Sinazongwe in the Southern Province; Kalabo, Lukulu, Mongu, Senanga, Sesheke in the Western Province and Mumbwa in the Central Province. At sub-district level, targeting will focus on those areas where households have lost more than 40 percent of their composite livelihood source[32].

9.2 The targeting of beneficiaries will be based on food security and livelihood profiles agreed by the DMMU, implementing agencies (i.e. WFP, C-FAARM), as well as implementing NGOs at community and satellite level. According to the 2008 MIVNA, 440,000 people have been severely affected by floods and/or by prolonged dry spells. GRZ has requested WFP to assist just over half of this caseload (233,600 people), while the rest will be assisted by GRZ and NGO's. Table 1 below summarizes the total number of beneficiaries by year and by activity.

9.3 The MIVNA found the prevalence of Severe Acute Malnutrition (SAM) was 2.3 percent, of which 0.6 percent had bilateral oedema; Global Acute Malnutrition (GAM) was 7.7 percent indicating an increase of 2.3 percent from the June 2007 MIVNA findings. An estimated 20,000 malnourished under-five children will, therefore, be targeted though supplementary feeding programmes (up to a maximum period of 3 months per child) during the first year of intervention.[33] It is expected that admissions in health centres for supplementary feeding will decrease by half during the second year, should there be no major shock in the same communities.

32 This is made up of agreed socio-economic qualifiers such as type of asset owned, expenditure pattern.

33 This is derived from the total affected population of the 233600 of which 20 percent (46,720) are under five children, and of which eight percent will equal the targeted number of children.

Children will be admitted to the programme on the basis of wasting and Mid Upper Arm Circumference (MUAC) indices[34].

Table 1: Total beneficiaries per year and per activity[35]

Component	Annual beneficiary caseload			Total beneficiaries	Breakdown by sex	
	2008	2009	2010	2008-2010	M	F
FFA/FFT	233,600	233,600	116,800	233,600	116,800	116,800
Supplementary feeding	3740	3740	1870	9,350	4,675	4,675
Total	233,600	233,600	116,800	233,600	116,800	116,800

10. NUTRITIONAL CONSIDERATIONS AND RATIONS

Beneficiary Caseload, Food Basket and Commodity Requirements

10.2 The PRRO rations are designed to address humanitarian and special nutritional needs. Widely accepted foods to be provided are maize, pulses and oil as well as fortified blended food. Most commodities, except vegetable oil, are available on local and regional markets.

10.3 Most households in the southern, western, central and eastern parts of the country experience seasonal variations in the way they source their food and income as well as varying expenditure patterns in times of abundance or scarcity. However, most households to be targeted under the PRRO have had their livelihoods affected by extensive floods during the early part of the season and by a prolonged drought during the latter part of the past two years' rainy seasons. This has now been adversely affected by soaring food prices. The ration size will thus be set at a level that takes into consideration these consecutive shocks. Consequently, full rations are provided so that the most affected households are able to preserve or recover their asset base.

10.4 In order to support households through the first harvest of the season, they will receive 90 percent of standard nutritional requirements (2,100 Kcal per person) for a family of six. This will enable them to rebuild their assets over two agricultural and marketing seasons. The cereal ration is tailored to facilitate distribution practices.[36] For the second year, it is assumed that those households that have not graduated out of food insecurity will still need support, although on a lower or half-ration scale. Rations for supplementary feeding will be provided as a take-home ration for a maximum period of three months per child to allow for full recovery. The table below provides food ration quantities for each beneficiary category.

Table 2: Food basket by component and ration per beneficiary

34Admission will be at Weight-For-Height or Length (WFH/WFL) 70-80 percent of the median (<2 Z-scores), or 11cm>MUAC<12.5 cm, and discharge will be at WFH/WFL >80 percent of the median (<2 Z-scores) and MUAC > 12.5 cm.

35 Numbers are rounded off. Children under supplementary feeding are expected to be part of the same households receiving food assistance; they are therefore not added up in order to avoid double counting.

36 A ration of 8.33 kg/person/month translates into a 50 kg bag of cereal for the standard household of 6 people, thus minimizing the need to scoop and, as a result, incur distribution losses.

(i) FFA/FFT ration[37]

Food basket composition	Half ration	
	kg/month	g/day
Cereal	8.33	278
Pulse	0.9	30
Oil	0.45	15
Blended Food	1.5	50
Total	11.2	373

10.5 Rations for FFA and FFT are meant to provide an incentive for highly vulnerable and food insecure beneficiaries to complete their training and asset creation activities. As a result of reduced food availability and access, it is likely that micronutrient deficiencies (particularly iron and vitamin A) will be amplified, especially among young children. Fortified blended food will therefore be crucial to sustain sufficient micronutrient intake.

(ii) Supplementary feeding for malnourished under five children

Food basket composition	kg/month	g/day	Energy (Kcal/day)	Protein g	Fat g
Blended food	6.0	200	800	36	12
Oil	0.6	20	177	0	20
Total	6.6	220	977	36	32

10.6 Table 3 below shows the total food requirements by commodity and year.

Table 3: Commodity requirements

Commodity	2008 (August-December) MT	2009 (January-December) MT	2010 (January-April) MT	Total (21 months) MT
Cereal	9,730	14,594	2,919	27,243
Pulses	1,051	1,577	315	2,943
Vegetable Oil	537	805	161	1,503
Blended Food	1864	1,570	560	3,993
Total	13,181	18,546	3,955	35,682

10.7 The proposed rations will fulfil two main objectives:

- To provide minimum protein-energy and micronutrient requirements; and
- To provide an in-kind income transfer to labour intensive interventions that create assets.

37 The FFA/FFT rations are per person per month and person per day

11. IMPLEMENTATION ARRANGEMENTS

11.1 WFP sub-offices will work closely with government structures at provincial and district level (PDMCs and DDMCs) to ensure that food reaches the intended beneficiaries.

11.2 WFP will engage international and national NGOs to carry out the FFA/FFT activities, while supplementary feeding activities will be implemented through the District Health Management Teams (DHMT's). Government capacity for monitoring the implementation of FFA activities will be built up within the Provincial Community Development Offices.

11.3 The DMMU will coordinate overall capacity building activities at the national level, both for the vulnerability assessment committee (VAC) and DMMU staff. It is envisaged that DMMU staff (regional coordinators, technical units), who will be trained as Trainers of Trainers (TOT), will undertake similar capacity building activities at district level through the DMMCs. The latter will also be trained under the TOT modality so as to enable them to undertake activities at field level with little or no supervision from the centre. WFP, through its VAM unit will continue to provide technical backstopping at all levels.

11.4 In FFA/FFT and livelihood support, project proposals are assessed by WFP, in cooperation with the Ministry of Agriculture and Cooperatives (MACO) and FAO, through field visits and discussions with potential implementation partners, including local or international NGOs, local associations and district authorities. Partner responsibilities include documentation of proposals, beneficiary selection, with at least 50 percent being women, management of implementation, provision of competent technical support, food distribution and reporting. These will be agreed with each partner in the Field Level Agreement (FLA). Local planning includes community meetings with partners and implementation involves two committees (Food Distribution Committee (FDC) and Asset Management Committee (AMC) with strong female representation.

11.5 The FDC manages distribution ensuring that it follows agreed beneficiary selection criteria with high female representation. The AMC oversees construction and maintenance of assets and is responsible for ensuring equitable access to their long-term benefits. WFP support to local communities and partners will include training in planning and technical standards and the provision of appropriate inputs including tools, equipment and technical support.

11.6 Activities need to be supervised by technically competent staff. WFP will ensure that its Cooperating Partners' contracts specify that they be able to provide qualified technician/s, transport them to the FFA project site and supply all requisite agricultural inputs if the district cannot. WFP will also coordinate with GRZ and the UN system, its actions in support of the national response to rising food prices and collaborate with the Ministry of Works and Supply and the local government authorities on the rehabilitation of rural roads.

11.7 The PRRO will benefit from a well established logistics operation that has supported the previous PRRO 10310.0, which includes the use of multiple ports and extensive transport networks within southern Africa. Currently, the port of Beira has become an important corridor for cargo from the east coast, representing 60 percent of international cargo. Following the renovation of the Walvis Bay port in Namibia, WFP Zambia has increased cargo traffic from the west coast, since this port has the cheapest overland rate.

11.8 Contracts will be issued by regional and country office logistics units for services from ports to transhipment points or Extended Delivery Points (EDPs). The PRRO will rely mainly on road transport as rail lines are unreliable. However, on the Dar-es-Salaam route, rail transport is the cheaper option and will be used where appropriate.

11.9 Internal transport in Zambia is costly because road conditions are poor and have been worsened by the floods, which have destroyed 66 percent of the road infrastructure. There is therefore an increased need to use multi-modal systems with added handling operations. The overland transport of regional purchases will be covered by the external transport budget.

11.10 Regarding markets, WFP, with other stakeholders, will regularly survey marketable surpluses of food and encourage local purchases where feasible. The existing diversified local purchase programme will complement other programme efforts to ensure that purchases support markets and avoid any disruptive effects. This will be undertaken through an implementation framework operating through three main components:

- Availability – WFP will work in conjunction with government, donors and NGO partners to ensure the proactive use of locally available surplus food for the benefit of marginalized populations in Zambia;
- Access – Co-ordinated and complementary programme interventions will ensure the provision of direct transfers to the targeted populations in priority areas nationwide; and
- Contingency – Building on the existing capacity of national government partners and ensuring appropriate response and co-ordination mechanisms for adequate food availability, access and utilisation in response to specific shocks.

11.11 Zambia has been chosen as one of the pilot countries for the 'Purchase for Progress' initiative, under which WFP will explore innovative ways to improve the access of smallholder farmers to markets. Strategies being explored include purchasing on the newly formed commodities exchange and encouraging the warehouse receipts system; purchasing at district level from co-operatives and farmers' associations and purchasing from suppliers/organizations that are buying raw commodities from smallholder farmers and producing value-added products such as micronutrient fortified foods (high energy protein supplement) and cassava flour.

12. PERFORMANCE MONITORING

12.1 Monitoring efforts will concentrate on integrating government structures and staff in the real-time monitoring of project implementation. This is in line with the Paris Declaration partnership commitment "managing for results" which requires that donors "work with partner countries to rely, as far as possible, on partner countries results-oriented reporting and monitoring frameworks". This approach will facilitate handover to the Government at the end of the project and ensure that enough capacity is built to monitor food assistance programmes.

12.2 Monitoring systems will be designed on the basis of a multi-sector consultative process, ensuring that key lessons from WFP's previous experience, including integrated, real-time "output" and "outcome" monitoring systems are transferred to the Government and implementing partners.

12.3 The Output Monitoring System is a 'real-time' system designed to provide data on the numbers of beneficiaries reached disaggregated by demographic status and the commodities provided to them. The system enables WFP to track regularly actual versus planned achievements

of food assistance. Government partners have already attended a training of trainers for the roll out of the system in March 2007. This system will be further developed for use at district level.

12.4 The Post-Distribution Monitoring (PDM) System provides intermediate information on food assistance, enabling WFP to collect feedback from its beneficiaries on their access to, use of, and satisfaction with the food assistance provided. PDM indicators are collected twice a year.

12.5 The Community and Household Surveillance (CHS) system is used to track the short and long-term outcomes of food assistance interventions and to monitor general food security trends. The CHS has been a useful tool in guiding programme implementation, through the use of indicators that include the coping strategy index, food consumption score and nutrition indicators. CHS data will be an important source of information to verify VAM targeting at the household level and, with additional nutrition indicators, will enable the Government and its partners to monitor linkages between food assistance and nutritional status. This will be done through the use of government structures, such as the DDMCs and the DHMTs, to monitor activities. In order to achieve this, WFP will share ideas and strengthen national capacity to collect data on agreed indicators. The purpose will be to enable the Government to use the collected data as part of its already existing early warning system. CHS indicators are collected twice a year.

12.6 The logical framework matrix (attached as Annex 2) shows the results chain as well as indicators for measuring results. A Monitoring and Evaluation (M&E) plan based on this framework will be prepared and used for result-oriented reporting by Cooperating Partners and field staff. WFP staff and implementing partners will receive related required training throughout the project cycle.

13. RISK ASSESSMENT AND CONTINGENCY PLANNING

Risk assessment

13.2 The main risks in this PRRO are related to:

- Fluctuation in the exchange rate of the Zambian currency, which can affect food prices and logistics expenses for the movement of food.
- Rising energy prices and the rise in food prices that pose a risk to the success of the food assistance programme.
- Possible pipeline breaks.
- Inaccessibility to some areas where damaged bridges and roads have not been repaired.
- Lack of capacity by implementing partners to expand operations in the roll out of some activities.
- Instability in some neighbouring countries which could lead to a refugee influx.

Contingency Planning

13.3 WFP is working with the DMMU, OCHA and other UN agencies and NGOs on a contingency plan for Zambia that foresees three scenarios: floods, drought and disease outbreaks (cholera). In the event of a major calamity, the relief response will be met through the mobilisation of additional resources through a budget revision, a Special Operation or an EMOP.

13.4 The success of the operation will depend on adequate resources being available throughout the implementation period. This situation is further aggravated by rapidly escalating and/or high world market prices for food commodities.

14. SECURITY CONSIDERATIONS

14.1 Apart from a 20 km strip from the international borders with Angola, the Democratic Republic of Congo and Mozambique that are in UN Security Phase I, the rest of Zambia has no security phase and the security risks to staff and property are minimal. All WFP offices are Minimum Operating Security Standards (MOSS) and Minimum Security Telecommunications Standards (MISTS) compliant.

15. BUDGET PROPOSAL AND INPUT REQUIREMENTS

15.1 A total of 35,682 MT of food will be required (see Annex I). WFP costs are US$ 33,664,442 million; direct operational costs (DOC) are US$ 30,379,417 million; direct support costs (DSC) are US$ 3,285,025 million. WFP will continue to strive for cost containment through the use of national staff, review of LTSH rates and other efficiency measures.

16. RECOMMENDATION

16.1 The Executive Director is requested to approve the proposed Protracted Relief and Recovery Operation for Zambia, PRRO 10594.0 “Assistance to flood victims in Zambia” at a food cost of US$ 18,999,675 and a total cost to WFP of US$ 36,020,953.

Approved by:

…… Date: ……

Josette Sheeran
Executive Director

ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AMC	Asset Management Committee
CAP	Consolidated Appeal Process
CARE	Cooperative Assistance for Relief Everywhere
CBO	Community-based Organization
C-FAARM	Cooperative for Food Security, Agriculture, Aid Resilience and Markets
CHS	Community and Household Surveillance
CP	Cooperating Partners
CP	Country Programme
CSB	Corn Soya Blend
CSI	Coping Strategy Index
CSO	Central Statistics Office
DDCC	District Development Coordinating Committee
DDMC	District Disaster Management Committee
DHS	Demographic Health Survey
DHMTs	District Health Management Teams
DMMU	Disaster Management and Mitigation Unit
DDMC	District Disaster Management Committee
DMTC	Disaster Management Technical Committee
EDP	Extended Delivery Point
EFSA	Emergency Food Security Needs Assessment
EMOP	Emergency Operation
FAO	Food Agriculture Organization of the United Nations
FBO	Faith-Based Organization
FDC	Food Distribution Committee
FFA	Food for Assets
FFT	Food for Training
FLA	Field Level Agreement
FNDP	Fifth National Development Plan
GAM	Global Acute Malnutrition
GRZ	Government of the Republic of Zambia
HIV	Human Immuno-deficiency Virus
ISFP	Initiative on Soaring Food Prices
ITSH	Internal Transport Storage and Handling
JASZ	Joint Assistance Strategy for Zambia
Kcal	Kilocalorie
LCMS	Living Conditions Monitoring Survey
LIFDC	Low Income Food Deficit Country
LTSH	Landside Transport, Storage and Handling
M&E	Monitoring and Evaluation
MACO	Ministry of Agriculture and Cooperatives
MCDSS	Ministry of Community Development and Social Services
MDG	Millennium Development Goal
MISTS	Minimum Security Telecommunications Standards
MIVNA	Multi-sector In-depth Vulnerability Assessment Committee
MOSS	Minimum Operating Security Standards
MUAC	Mid Upper Arm Circumference
NDMC	National Disaster Management Committee

NDMP	National Disaster Management Policy
NDVI	Normalised Difference Vegetation Index
NGO	Non Governmental Organisations
NVAC	National Vulnerability Assessment Committee
OCHA	Office for the Coordination of Humanitarian Affairs
OVP	Office of the Vice President
PDCC	Provincial Development Coordinating Committees
PDM	Post Distribution Monitoring
PDMC	Provincial Disaster Management Committee
PRRO	Protracted Relief and Recovery Operation
P4P	Purchase for Progress
SAM	Severe Acute Malnutrition
TOT	Training of Trainers
UN	United Nations
UNAIDS	United Nations Joint Programme on HIV and AIDS
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VAC	Vulnerability Assessment Committee
VAM	Vulnerability Analysis and Mapping
WFP	World Food Programme
WHO	World Health Organisation
ZVAC	Zambia Vulnerability Assessment Committee

ANNEX IA

WFP PROJECT COST BREAKDOWN

	Quantity (mt)	Average cost (US$) per mt	Value (US $)
COSTS			
A. Direct operational costs			
Cereals	27,243	385	10,488,470
Pulses	2,943	1210	3,561,502
Vegetable Oil	1,503	1540	2,314,158
Blended Food	3,993	660	2,635,545
Total commodities	**35,682**		**18,999,675**
External transport			1,123,394
Landside transport			1,256,367
ITSH			5,344,111
Total LTSH			8,317,847
Other direct operational costs			1,938,500
Total direct operational costs			**30,379,417**
B. Direct support costs (see table below for details)			3,285,025
C. Indirect support costs (7 percent of total direct costs)			2,356,511
TOTAL WFP COSTS			**36,020,953**

ANNEX IB

DIRECT SUPPORT REQUIREMENTS (*dollars)*

Staff	
International professional staff	294,525
National general service staff	1,662,500
Temporary assistance	45,000
Overtime	20,000
International UNVs	0
National Consultants	120,000
International Consultants	10,000
Staff duty travel	400,000
Staff training and development	55,000
Subtotal	**2,607,025**
Office expenses and other recurrent costs	
Rental of facility	36,000
Utilities (general)	35,000
Office supplies	61,000
Communication and IT services	60,000
Insurance	31,000
Equipment repair and maintenance	77,000
Vehicle maintenance and running cost	80,000
Other office expenses	73,000
United Nations Organizations Services	110,000
Subtotal	**563,000**
Equipment and other fixed costs	
Furniture tools and equipment	6,000
Vehicles (leasing)	64,000
TC/IT equipment	45,000
Subtotal	**115,000**
TOTAL DIRECT SUPPORT COSTS	**3,285,025**

Annex II: Logical Framework Summary

Log Frame Summary of Zambia PRRO No. 10594.0

Results-Chain (Logic Model)	Performance Indicators	Risks, Assumptions
Strategic Objective 3: Restore and rebuild lives and livelihoods in post-conflict, post-disaster or transition situations		
Outcome 1 Increased ability to meet immediate food needs due to floods, droughts and high food prices within targeted households	➢ Proportion of beneficiary household expenditures devoted to food ➢ Dietary diversity (Food Consumption Score) ➢ Coping strategy indices for beneficiary and non-beneficiary households ➢ Asset wealth score compared over time ➢ Acreage of land cultivated during the two planting seasons compared to baseline	➢ Complementary activities (e.g. water, health, sanitation) are implemented by other partners/stakeholders ➢ Targeting criteria are well understood and political environment remain positive ➢ Participation of communities in identification of vulnerable households through improved screening targeting tools; ➢ Local level capacity of CPs, Government and communities is sufficient to implement projects ➢ Availability of complementary non-food items and services ➢ Availability of partners to implement IGA/FFT/FFA activities

OUTPUT 1.1 Timely provision of food in sufficient quantity for targeted beneficiaries in flood-affected districts	➢ Actual beneficiaries receiving WFP food assistance through each activity as a percentage of planned beneficiaries, by project category, age group, sex. ➢ Actual tons of food distributed through FFA activities as a percentage of planned distributions, by project category, commodity. ➢ Actual number of FFA participants in each activity as a percentage of planned participants, by project category, sex	➢ Level of resources remains adequate throughout the project life ➢ Areas remain accessible through out the year

RESULTS-CHAIN (LOGIC MODEL)	**Performance Indicators**	**Risks, Assumptions**
OUTPUT 1.2 Assets created through food-for-assets activities	➢ Number of assets created through food for assets activities ➢ Number of people trained in various skills like conservation farming, appropriate income generating activities. ➢ Number of assets performing their function as per agreed criteria ➢ Number of women in activity steering committees	➢ Level of resources remains adequate throughout the project life ➢ Areas remain accessible throughout the year

Results-Chain (Logic Model)	Performance Indicators	Risks, Assumptions
Strategic Objective 3: Restore and rebuild lives and livelihoods in post-conflict, post-disaster or transition situations		
OUTCOME 2 Reduced level of acute malnutrition among children under five.	➢ Prevalence of under 5 malnutrition (wasting and MUAC) among targeted children (assessed using weight for height-<2 Z-score and MUAC < 125 mm) disaggregated by gender)	➢ Adequate level of services and NFIs by NGOs, UN partners and the Government to address other causes of malnutrition
Output 2.1 Timely provision of adequate food in and of sufficient quantity and quality to targeted malnourished young children.	➢ Actual number of malnourished children receiving WFP food assistance as a percentage of planned beneficiaries by age and sex ➢ Actual metric tons of food distributed as a percentage of planned distributions by commodity	

Results-Chain (Logic Model)	Performance Indicators	Risks, Assumptions
Strategic Objective 2: Prevent Acute hunger and invest in disaster preparedness and mitigation measures		
OUTCOME 3 Strengthened capacity of cooperating partners, including NGOs, community-based structures and relevant government institutions to establish and manage food assistance programmes in an effective and efficient manner.	➢ Number of activities DMMU/DDMC is able to coordinate[38]. ➢ Number of PRRO indicators collected through government structures	➢ Capacity of government (financial and manpower). ➢ High staff turnover

[38] This includes activities such as emergency needs assessments, early warning and preparedness systems in place.

Results-Chain (Logic Model)	Performance Indicators	Risks, Assumptions
Output 3.1 Provision of capacity-building assistance to country and regional entities involved in food assistance and hunger reduction efforts	➢ Actual counterpart staff at local, regional and national levels trained under WFP's technical assistance activities as a percentage of the planned number ➢ Number of areas of technical services and cooperation where capacity-building activities were provided ➢ Training government partners in Results based management, managing for results techniques ➢ Number of government staff at central and sub district level (DDMCs) trained in assessment methodologies and GIS application in emergency needs. ➢ Number of assessments done by government counterparts at sub district level (DDMCs) without WFP technical assistance. ➢ Number of staff trained in beneficiary targeting procedures in the DDMCs. ➢ Assessment on the feasibility of using cash vouchers as a means of food assistance done.	➢ High turnover amongst government employees. ➢ Lack of manpower in government structures ➢ Governments lack of funding to support manpower at district level

WFP Zambia: Response to the High Food Prices

WHY?

16.2 Despite the macro-economic gains recorded in recent years, food insecurity and poverty remain entrenched. Maize, the main staple food, has had its production constrained by the vagaries of climate change, inadequate inputs and market uncertainties.

16.3 Prices of maize and other staples[39] have risen by over 25 percent and fuel by over 37 percent since January 2007. These increases already pose problems for the food insecure both in urban and remote food deficit rural areas where production costs and market prices are further increased by higher transport costs. Livestock diseases in these areas have also significantly reduced livestock numbers and the availability of draught animals in the smallholder farm sector.

16.4 The recurrent droughts and floods, experienced in recent years particularly in Eastern, Southern, and Western parts of Zambia, have also resulted in extreme fluctuations in the output of maize and other staples leading to a massive reduction in food and nutrition security. This has caused increases in malnutrition rates as signalled by the in-depth Vulnerability Assessment Report of the Zambia Vulnerability Assessment Committee (ZVAC) in June 2008.[40]

16.5 In consequence, the President of Zambia, in May 2008, established an Inter ministerial task force, on which WFP Zambia has been invited to serve, to address the issues raised by the soaring food prices. Its Terms of Reference are as follows:

- To deal with the transition of managing the situation of rising food prices;
- To develop an action plan that will ensure sustainable food production in the short, medium and long term; and
- To operationalise irrigation development.

WHO, WHERE, WHEN?

There are two groups of people that are most affected by high food prices in Zambia.

16.6 First, people living in urban and peri-urban areas[41] – 34 percent of the urban population who are below the national poverty line[42]: orphans and other vulnerable children (OVC) and their care givers; people affected by HIV/AIDs without a steady source of income; the elderly and physically handicapped.

16.7 The second group are the rural poor[43] of which 80 percent are mainly smallholder subsistence farmers whose crops have been destroyed by the recent floods and drought and are living in remote areas with poor transport infrastructure and poorly developed markets. Food trade becomes expensive and uneconomical for the private sector because of the extremely high transport costs resulting in market failure and the need for public intervention. Since these people have temporarily lost their livelihoods, they urgently need **immediate** food assistance to preclude resorting to destructive coping mechanisms, such as the sale of household items (roofing and doors) and

[39] Cassava, millet, sorghum and Sweet potatoes,
[40] Malnutrition is usually the first indicator of higher food and nutrition insecurity: global acute malnutrition rates (GAM) have risen 7.7 percent on an upward trend towards emergency levels.
[41] Of Zambia's 12.5 million people, nearly 36 percent are estimated to live in urban areas with an annual growth rate of 2.9 percent-Central Statistical Office (CSO) June 2008
[42] CSO, Monthly Report, June 2008
[43] ibid

productive assets (female animals, tools, and equipment), and to enable them to resume normal life more rapidly.

16.8 The caseload of food insecure rural smallholders affected by drought and floods is estimated to be 440,000 persons[44] of whom 255,501 are to be assisted by WFP at the request of the government in the pending PRRO 10594.0. However, based on the urban beneficiary caseload of the present regional PRRO 10310 Assistance to Populations in Southern Africa vulnerable to food insecurity and the impact of AIDS that ended in July 2008, there are some 310,000 food insecure vulnerable persons (PLHIV, Orphans, OVC and their care givers, the elderly and physically handicapped) who are adversely affected by the soaring food prices. This gives a total beneficiary caseload of 565,501 persons with a resulting total food requirement of 91,343 MT (cereals, pulses, vegetable oil and Corn-Soya blend-CSB) over a period of 21 months for the rural beneficiaries and 12 months for the urban caseload.

HOW? WHAT?

16.9 WFP Zambia intends to use two main mechanisms:

- Food vouchers (mainly in the urban areas, where there are fairly well developed markets and food is generally available);
- Targeted food distribution (mainly in the rural areas, where markets are not well developed).

Food vouchers and targeted food distributions will be used as food delivery vehicles in the framework of activities such as Food for Assets and Household support to nutrition programmes and orphans and other vulnerable children. The vouchers will ensure that households receive a food basket that is nutritious and provides required minimum daily energy needs. Malnourished children visiting Maternal and Child Health Centres will receive daily rations of 180g per person of CSB and 10g each of vegetable oil until they are discharged. Both the PRRO and the Country Programme will be used to respond to rising food prices.

KEY PARTNERS

16.10 This programme responds to the Government's request to WFP and other partners to help address the problems and challenges of the current phenomenon of soaring food prices as per the TORs of the Inter-ministerial Committee. WFP, FAO, UNICEF and the World Bank, among others, will collaborate in helping GRZ to formulate a national Action Plan, incorporating actions in respect of:

- Social and productive safety nets response including expansion of existing safety net programmes or designing new ones;
- Supply response in terms of short term emergency interventions in the agricultural sector through supply of seeds, fertilizer, reduction of post-harvest losses, etc;
- Short-medium term policy measures to respond to high food prices; and
- Budget Adjustments to help sustain sector budgets for various sectors of the national economy.

Other partners will include both international and local NGOs. The latter include the Wildlife Conservation Society to implement FFA and conservation farming; the Programme Against Malnutrition (PAM) and the Programme for Urban Self-help (PUSH) on social protection particularly in urban areas.

[44] Disaster Management Unit, Office of the Vice President

OTHER HIGHLIGHTS

The P4P will be integrated to the extent possible with small scale farmers to build linkages with markets and sell their produce at remunerative prices, which will act as an incentive to boost food and agricultural production. Government has agreed to release food from the national food stocks on the premise that what is released would be replenished by WFP and donors. The response to the high food prices is to be backed by an urban vulnerability assessment (to be carried out in September 2008), which will better inform targeting in the urban areas.