

Improving Small Scale Producers' Livelihoods using Zambia's Agriculture Sector Growth Framework

The Zambia agriculture sector comprises mainly of the small-scale farmers in the rural areas facing different obstacles to participate fully in the agriculture growth framework. Despite the government and NGOs establishing and implementing different programmes to create a conducive environment to graduate farmers from small scale to medium scale producers in terms of their production and productivity, this has not yet succeeded.

This Policy Brief highlights outcomes from a research study undertaken in Zambia which assessed Zambia's Agricultural Growth Framework and its contribution to the improvement of Small Scale Farmer's Livelihoods. In doing so, the structure of the agriculture sector in Zambia country was examined, including the challenges that prevent small scale farmers from developing into large scale farmers.

Introduction

As agriculture provides the main support for Zambia's rural economy, growth in the agricultural sector is one avenue through which poverty reduction can be achieved in Zambia. However, despite widespread recognition of the strong connection between agricultural development and poverty reduction, there is continuing under-provision of public investments for over a decade and small scale farmers have continued to wallow in poverty for a very long period. Zambia's primary policy objective of achieving accelerated growth and competitiveness in the agricultural sector cannot be achieved unless adequate public resources are committed towards catalysing the desired growth.

Long-term public investment in research and development, extension services, rural infrastructure, and food safety and quality systems have high pay-offs and are among the most important drivers of agricultural growth and competitiveness. The small-scale farmers are highly affected by challenges inhibiting the commercialisation of their production. In this regard, there is a need to understand the extent to which Zambia's agriculture development framework is involving and helping small farmers and producers to improve their production and eventually their livelihood.

Agriculture has been contributing positively to the national income and presently contributes about 21

percent to the gross domestic product (GDP). It is really a concern that despite the country experiencing good rainfall in the recent past, the performance has been static compared to its potential. Having sustained growth in the agriculture sector enable farmers to enjoy better incomes, and hence improve their livelihoods. The majority of the population are involved in agriculture, but despite the agriculture sector being a positive contributor to the GDP, poverty levels still remain high. This can be attested by the United Nations Development Programme (UNDP) Human Development Report of 2011 for Zambia, which indicates that:

- 58.3 percent of the Zambian population lived in poor households in 2006, compared to 56.3 percent in 2004;
- the average poor person was deprived in 44 percent of the weighted indicators in 2006, compared to 42.8 percent in 2004;
- the share of the population that is multi dimensionally poor¹ (adjusted by the intensity of the deprivations suffered) was 0.257 in 2006, compared to 0.241 in 2004.

This shows that the agriculture sector has not performed very well due to its failure to significantly create employment opportunities and assure food security. This failure is mirrored by high poverty levels, especially in rural areas, where most people derive their incomes from

1 Multi dimensionally poor index (MPI) is a measure that identifies multiple deprivations at the individual level in health, education and standard of living.

Table 1: Breakdown of Allocations under the Poverty Reduction Programmes by percent, 2006-2011

Category	2006	2007	2008	2009	2010
Irrigation support	0.7	2.4	2	1	0.1
Commercialisation of farm blocks	2.2	2.6	2.2	0	0
Animal disease control	1.5	1.6	3.3	4.2	2.5
Livestock development	0	0.9	0.6	0.6	0.4
Fertiliser Support Programme	74	38.2	62.2	75.6	78
Strategic Food Reserves	18.6	52.1	26.9	17.4	18.1
Cooperative education and training	0.3	0.7	0.2	0	0
Others	2.2	0.7	2.7	0	0.9
Total	100	99.2	100.1	98.8	100
Total ZK billion	198.8	196	198.2	196.6	199.9

Source: Agricultural Consultative Forum/Food Security Research Project 2006-2010.

farming. This is an indication that there is a lot that is needed to be done to improve the rate of equitable growth for the Zambian economy.

Table 1 illustrates that on average the allocation to poverty reduction programmes (Irrigation Support, Land Development, FISP among other items detailed in the table above) have maintained an upward trend between 2006 and 2010. Much of the allocation went to FISP and Strategic Food Reserves which when combined in the year 2010, accounts for 92.1 percent while the five others remaining with 7.4 percent.

Although the country has experienced growth in the production of maize, this may have come at the cost of increased inequality, since pricing policies may represent a *de facto* transfer of rent from the maize-consuming population to the big commercial farmers. Areas critical for enhancing productivity, such as crop science, extension programmes, infrastructure development, and a stable and supportive policy environment have not received the needed support.

Further and in terms of the contribution of the sector to food security and nutritional status, the recent gains in crop production Zambia has experienced have been matched with improved food security, at least at the macro-level. On the other hand, the micro-level food security was however dependent on other factors, such as rural household involvement in food and non-food crop production, the inclination to export and the gender distribution of power at the household level. These factors have combined to make micro-level food insecurity a major concern.

Zambia Agriculture Growth Framework

Main Policies

National Agriculture Policy (2004-2015) – The overall objective of the National Agriculture Policy (NAP) is to facilitate and support the development of a sustainable and competitive agricultural sector that assures food security in Zambia.

At the input stage, one of the provisions aims at preventing and controlling pests, crop and livestock diseases. To achieve this, the policy provides that monitoring, regulation and facilitation of disease and vector control implementation programmes for diseases of economic importance would be intensified in priority areas. Ensuring that crops and livestock are protected against diseases is critical as this affects the extent to which agriculture activities could turn out to be productive.

The promotion of irrigation is also a key strategy identified under the policy which would help transform agriculture at the input stage. Given that reduced crop yields and livestock losses in Zambia can also be attributed to severe droughts suffered from time to time, the policy provides for the government to embark on full and efficient exploitation of the country's abundant water resources, both underground and surface, and promoting irrigation to ensure all year round agricultural production. This is particularly with reference to small-scale farmers, who would be prioritised to improve household food security and incomes.

Irrigation Policy (2004) – The overall objective of the irrigation policy is to have a well regulated and profitable irrigation sector that is attractive to both private investors and Zambia's development partners. This objective would be achieved through addressing of a myriad of challenges, many of which have a bearing on small-scale producers.

For example, the policy notes that Zambia has a poorly enforced legal framework that neither regulates nor allocates water in an equitable or economically advantageous fashion hence making it difficult for small-scale producers to actively participate in the system as they could benefit a lot from participating in irrigation farming if there is a good enforced legal framework for the policy in question.

To achieve the overall objective of having a well regulated and profitable irrigation sector, the irrigation policy also has some intermediate objectives that would help attain this main target. These include having

accessible, demand-driven institutions characterised by efficient, transparent procedures and a service-oriented ethos. One of the major challenges for small-scale producers is the challenge in having access to institutions that readily respond to their needs.

Thus, if demand-driven institutions are established, they would be largely those that would be able to respond to the demands from small-scale producers as they constitute the majority of farmers in Zambia.

National Seed Industry Policy (1999) – The availability of seed is critical, not only for the attainment of the policy targets but also for the attainment of food security in Zambia. In that regard, the National Seed Policy of Zambia was developed, whose overall policy objective is to ensure that quality seed of various crops is made available to farmers in an efficient and convenient manner to increase crop productivity and agricultural production.

This would be achieved through the attainment of other intermediate objectives which benefit the small-scale producers. These include ensuring the development of an effective, efficient and sustainable system of producing and supplying high quality seeds of crops to satisfy the national seed requirements. Given that shortage of seed, which results in high prices of seeds and high levels of use of traditional sources, is a major concern to farmers, implementation of this strategy would help in ensuring increased produce in Zambia.

The policy is also aimed at promoting an integrated seed industry involving both the formal and informal system. The recognition of the informal system in the seed industry is a good strategy in trying to ensure seed availability, as the use of seeds saved from previous harvest and borrowing among other farmers are common informal systems used by farmers.

National Cooperative Development Policy (2011) – The formation of cooperatives can be a critical strategy, as through this, small scale producers in the agriculture sector could be transformed. The establishment of the following types of service cooperatives for example, which are identified under the policy, might go a long way in helping small scale farmers across the marketing chain:

- Marketing and Supply Co-operatives sell crops produced by the members. These are critical as they would increase the bargaining power of the farmers, compared to a situation where each farmer would sell individually and be at the mercy of middlemen that can easily exploit them.
- Transport Co-operatives, run transport facilities for transporting members' produce. Given the poor infrastructure networks, farmers often face challenges in transporting their produce, and are forced to part with significant amount of money as transport costs. Utilising transport from cooperatives would significantly eliminate costs due to the mutual understanding among farmers as well as the eliminated middlemen charges which often inflate the costs.

- Savings and Credit Cooperatives, where members pool their savings and make loans to each other. Given the need for some level of investment into agriculture, farmers should have access to credit to finance agricultural activities. Many farmers often fail to produce on a large scale due to inability to meet some costs related to agriculture inputs. Thus, these cooperatives would go a long way in ensuring easy access to cheaper lines of credit for farmers.

This makes it important that strategies be developed to encourage the formation of cooperatives as well as regulating their operations. The Ministry of Agriculture and Livestock (MAL) thus established the National Cooperative Development Policy in November 2011 with the overall objective of creating an enabling institutional and legal environment for the development of autonomous, transparent, viable and demand-driven co-operatives that contribute to socio-economic development and poverty reduction.

The strategies laid out under all these policies above can go a long way in uplifting the living standards of the small-scale producers if successfully implemented. Thus there is a lot of scope for all these policies to benefit small-scale and traditional farmers if they are well implemented and amended to the current needs of small-scale farmers. There also remain some serious challenges that need to be addressed to make the policy more effective in achieving its enshrined objectives.

Institutional Framework

The MAL is the implementing agency for the policies identified above; many other institutions are needed to complement government efforts. Among them include;

- Seed Control and Certification Institute (SCCI) complement MAL in the provision of quality seeds to farmers as well as quality control, monitor seed trade and provide coordination of the sector.
- The National Plant Genetic Resource Centre also has to come in for collection and preservation of genetic resources, while other research institutions are also responsible for variety development and improvement. Private seed companies, non-governmental organisations (NGOs) and community-based organisations (CBOs) are also heavily involved as they are responsible for production, marketing and distribution of seed.
- The National Plant Genetic Resource Centre collect and preserve genetic resources.
- Soil and Crops Research Branch of the MAL conduct soil and crops research on the basis of crop comparative advantage in line with agro-ecological regions.
- The existing policy framework gives space to the private sector and NGOs to chip in the provision of services, such as extension services and production, marketing and distribution of seed.

- Other key players are Research Trusts, the University of Zambia, the Ministry of Science, Technology and Vocational Training through the National Science and Technology Council (NSTC) and the National Institute of Scientific and Industrial Research (NISIR) and seed companies involved in crops research.

These institutions generally form the key players in ensuring that agriculture development objectives identified under various agriculture-oriented policies are met. Thus, their capacity to deliver in a coordinated manner is also important in booting the agriculture sector.

Policy Constraints Impacting Negatively on Small-scale Farmers

There seem to be a number of policies with ambitious strategies aimed at improving the performance of the agriculture sector broadly. However, the co-relationship between the content and strategies in these policies and the impact on the performance of the agriculture sector, especially for small-scale farmers, seem to be distant.

For example, irrigation seems to be one of the major challenges most farmers are facing in Copperbelt, Chipata and Southern provinces. Tapping subsurface water is still a pipe dream among most small-scale farmers in these provinces and most of farmers who produce cotton, groundnuts and maize in these provinces depend on rains for good yields as well as the use of watering can system.

The majority of farmers in three provinces have no access to any form of irrigation. Only few small-scale farmers use Treddle pumps in southern province to irrigate their farms. This form of irrigation is specifically for their horticultural crops, thus these farmers do not use any form of irrigation for cotton, groundnuts and maize crops.

What is apparently interesting is that the present irrigation policy does acknowledge these and other challenges and provides remedies thereof in the quest to achieve the overall objective of having a well regulated and profitable irrigation sector. Implementation of the irrigation policy would go a long way in solving the plight of small-scale farmers. However, what is of worry is that the policy has been in existent since 2004 and limited efforts have been made in ensuring that the policy measures are thoroughly implemented as it is evident that the challenge of irrigation is still persistent. This could be attributed to lack of capacity in the MAL or lack of government commitment in ensuring that such measures are implemented. Having skills re-orientation trainings for MAL staff, increased budgetary resource allocation to the agriculture sector and political will would go a long way in addressing the implementation challenge.

Another key policy issue that constrains small-scale farmers' performance is access to credit. The NAP provides for strategies in helping farmers to get access to funding and these include creating a fund for access by farmers through appropriate financial institutions and NGOs. In addition, the policy provides for the encouragement of

group lending to ensure good recovery rates as well as the promotion of private/public sector partnership in credit provision and savings mobilisation. These proposals and strategies are articulated in the policy, but the implementation is yet to start in earnest, hence access to credit is still a challenge.

Although there could be some level of group lending among farmers which seem to be unsustainable and on a minority scale, the study establishes that all farmers have difficulties in having access to credit schemes offered by financial institution due to collateral requirements. Besides the stringent requirements by some financial institutions, the cost of borrowing in Zambia is high and not favourable to small-scale farmers.

Another area of concern was access to extension services and inputs. The provision of extension services to the farming population through the extension workers is an important responsibility of the government and reflected in the NAP. Although the NAP does recognise the limitations of the government in the provision of extension services, nothing much seems to have been done about it.

For example, in the Copperbelt, Eastern and Southern provinces, on average 1 extension officer covers 1000 farmers. The study establishes that on average, extension officers only visited farmers three times in a year. The findings indicate that distance has an effect in delivery and access of extension services. The District Agriculture Coordinators (DACOs) indicated that they are very understaffed and could not meet the growing demand to provide extension services on a frequent basis.

Engagement and Contribution of Small-scale Producers

Small-scale farmers in Zambia account for a higher percentage in terms of production field and a few cash crops. According to the Crop Forecast Survey of 2011-2012 most of the small-scale farmers are engaged in the production of maize, seed cotton, sorghum, rice, millet, sunflower, groundnuts, cowpeas, sweet potatoes, Bambara nuts, paprika and mixed beans as compared to the production of tobacco, Irish potatoes, wheat and soya beans which are heavily dominated by large-scale producers. This shows that opportunities are there for smallholder farmers as they are the one feeding the nation.

Small-scale farmers account for about 70 percent of farmers involved in agriculture. According to the Crop Forecast Survey of 2011-2012, smallholder farmers have dominated the farming of maize (95 percent), millet (99.9 percent), sorghum (93 percent), groundnuts (99.5 percent) and seed cotton (99.4 percent) in terms of crop production, which proves that small-scale farmers are contributing substantially to the entire agricultural production.

In addition, the Crop Forecast Survey, 2011-2012 shows that small-scale farmers account for 100 percent production of rice, 98 and 99 percent production of sunflower and mixed beans respectively. The large-scale farmers have dominated the production of tobacco, wheat

and soybeans accounting for 74, 100 and 93 percent respectively.

Despite this vast potential to produce and increase sales by farmers, the agriculture sector still remains underdeveloped. Different government- and donor-funded programmes have failed to graduate small-scale farmers into medium-scale farmers in terms of their production and productivity, due to the fact that essential factors to exacerbate growth among small-scale farmers still remain underdeveloped. Only until Zambia manages to ease the access to inputs, training and extension services, post-harvest management and markets to small-scale farmers will see noticeable growth. In addition to this, the government should provide the needed infrastructure (feeder roads, among others) to facilitate the reduction of cost in farming among the rural community.

Challenges Faced by Small-scale Farmers

Livestock Sector

The study establishes that both goat and beef producers rely on nature to feed their animals due to high cost of inputs (feed). Goat farmers use free scavenging methods to feed their goats. With regards to cattle, the study reveals that cattle are normally taken to feed on maize stover during the dry season and available pastures in that particular season. Most of the farmers do have knowledge on preservation methods of pasture but the study observe that there is a challenge on the quality of the pasture they preserve due to poor storing techniques. Therefore, as good management of improved pasture is the basis of better dairy feeding, it is important that these farmers are trained on pasture quality and preservation.

Cotton Farming

The study observes that farmers receive inputs through outgrower schemes offered by the ginnery companies. The NAP acknowledges some limitations on the ability of the government to provide extension services on its own. Thus, the policy encourages the involvement of the private sector and NGOs in the provision of extension services, although it does not include the harmonisation and regulation of the provision of extension services by the private sector and NGOs. These ginnery companies offer inputs at a credit and provide extension and marketing services.

This is a positive development and there is every need to support such interventions which are working. As this is being encouraged, it is also important that this relationship between ginnery companies and farmers be closely monitored as in most cases, going by the recent strife between farmers and ginners, farmers tend to lose out. A good example is on the standoff that was experienced in 2012 over cotton prices between farmers and ginners as presented in Box 1.

What is clear from this is that there is a proven lack of an effective regulatory oversight by the MAL and other

statutory bodies such as the Competition and Consumer Protection Commission (CCPC). Price discussions and agreements are supposed to be tightly monitored by such institutions to avoid such situations recurring and to avoid market distortions and failure necessitated by such perceived collusive actions from a competition policy perspective.

Groundnuts and Maize

The major challenge facing farmers was lack of knowledge and capacity in understanding the broad varieties of groundnuts. The study establishes that farmers use recycled seed and are reluctant in adopting new and improved varieties.

For maize, most farmers receive inputs through the Farmers Input Support Programme (FISP), although the amount of inputs received by most farmers under FISP is not enough. Hence, they buy fertiliser and weed killers from the agro dealers in order to supplement subsidised inputs they receive.

Output Side

Overall, the productivity level of various crops in Zambia still leaves a lot to be desired. There is need to integrate appropriate technologies that will enhance crop productivity. With regards to productivity (yield/ha), Copperbelt is performing better than the Eastern and Southern province hence, the need to assess the scope of replicating practices being implored Copperbelt to improve the productivity of other provinces. Eastern province performed better in cotton and groundnuts production compared to Copperbelt and Eastern province (Table 2).

Box 1: Standoff over Cotton Prices between Farmers and Ginners

There was a heated standoff over price between farmers and the Zambia Cotton Ginners Association (ZCGA), which represents the main cotton buyers. Farmers are reported to have been demanding a price of close to K4000 a kg, but ginners were said to be offering only half that. For its part, the ZCGA insisted that the world price of cotton had plummeted and its members were therefore unable to offer more.

The price of cotton on the international market measured on the Liverpool index had shot to record highs the previous year and was well in excess of £150 (K1.2 million), which farmers believe should have translated into a better price than they received.

Although international price of cotton were no longer at those levels, farmers felt it was still trading at reasonable levels which should have been reflected in the local price.

Source: Post Newspaper, June 20, 2012

Table 2: 2011-2012 Crop Forecasting Survey

Crop	Province	Area Planted (Ha)	Area Harvested (Ha)	Expected Production (MT)	Yield (MT/Ha)	Expected Sales (MT)
Maize	Copperbelt	89,501	79,329	205,542	2.30	122,306
	Eastern	276,288	245,319	572,760	2.07	214,265
	Southern	303,429	227,076	554,275	1.83	257,126
Groundnuts	Copperbelt	8,709	8,447	5,399	0.62	2,892
	Eastern	56,903	54,793	30,895	0.54	10,223
	Southern	22,874	20,420	9,514	0.42	2,040
Cotton	Copperbelt	605	605	785	1.30	-
	Eastern	190,607	184,472	160,956	0.84	-
	Southern	40,380	36,460	33,417	0.83	-

Source: *Crop Forecast Survey, 2011-2012*

According to the Zambia Central Statistics Office, by 2010 cattle population was 3,038,000 and goat population was 758,501 in the country. It is undeniable that goats are second from pigs in terms of their prolific value. There was need to look at goat production from commercialisation side, as this is a product that has a huge and specialised export market through Kasumbalesa and Nakonde border posts. An increasing demand for livestock products, such as goat meat can offer small-scale farmers the opportunities for increased market participation. However, existing goat markets are largely informal, with poorly developed inputs and services.

Storage facilities being used by farmers are not well developed and this has led to increases in the post-harvest losses being incurred by farmers. The farmers who have traditional storage facilities have challenges on pest control-related issues, stacking, record-keeping and fire safety arrangements and above all limited storage space.

Marketing Issues

In maize the biggest market player is the government through Food Reserve Agency (FRA). Though FRA provides a ready market, farmers are generally not satisfied with the operations of FRA because of delays in payment. This hinders their effective planning for the subsequent seasons. The Government of Zambia through the MAL determines the floor price of maize which some farmers do not find attractive.

However, the strong message coming from farmers was for the government to also allow the private sector players to participate in the purchasing chain as this will offer an alternative market. Lifting the export ban on maize could also allow farmers to tap in the regional markets, such as Democratic Republic of Congo and Malawi.

The cotton sector is heavily under the control of the private sector who offers out-grower schemes to small-scale farmers. Ginners pre-finance the production of cotton by providing farmers with inputs and farmers are tied to sell their produce to them. The study learns that Dunavant,

Cargill and Alliance remain the main players in this sector. Under the out-grower scheme farmers are given inputs at a credit, normally considered during the setting of the market price. The major challenge remains on the pricing as farmers are tied to a pre-arranged price which many farmers end up complaining about.

Groundnut marketing channels are not well developed as this market is mainly informal. Farmers produce and sell to fellow farmers producing other crops which fetch a higher price on the market. The problem in this sector is that farmers are unable to sort groundnuts according to varieties and grades and if they had this capacity they would have been able to maximise their returns. There is also a problem with post-harvest handling of groundnuts by these farmers which increases the level of *aflatoxin* in groundnuts hence preventing the crop from meeting international standards.

Another challenge, hinges on lack of knowledge on the lucrative nature of livestock business among most farmers. Most of farmers do not consider livestock rearing as a lucrative business. The NAP policy also recognises the importance of livestock farming and its demand both nationally and internationally and provides strategies to ensure that animal production and marketing is enhanced. But it is clear from the findings on the ground that there is a disconnection between intentions of the policy and the ground realities. It is only hoped that the NAP, after been reviewed, will offer better strategies on how to ensure that whatever is contained is easy to implement.

As a result of the challenges faced by these farmers, such as poor information and extension support; inadequate infrastructure; financing and organisational difficulties and highly exploitative, inequitable marketing lock-ins by rent seeking traders are still eminent. What is a matter of concern is that there has been little effort to ensure that these challenges are addressed through the effective implementation of policies.

What is, therefore, of exigency is for the government or through public-private partnerships to invest in technology

improvement and other irrigation services which will assist small-scale farmers expand their production base and productivity. Having improved access to irrigation inputs and training and appropriate credit mechanisms for emerging farmers is a prerequisite to the growth of small-scale farmers. Unless these are addressed, small-scale farmers will continue to use cans and remain dependent on rain-fed irrigation.

Agriculture Investment

According to Zambia Investor Guide of 2012, the Zambian government has put in place several incentives to encourage investment in the agriculture sector:

- Guaranteed input tax claim for four years prior to commencement of production for agricultural businesses
- Zero rating agricultural products and supplies when exported
- Value added tax (VAT) deferment on importation of some agricultural equipment and machinery
- Income tax rate of 10 percent
- Farm improvement allowance at 100 percent on fencing, brick or stone wall and an allowance of K10 million for farm occupied by farm workers
- Farm works allowance at 100 percent for the full cost of stumping and clearing, works for prevention of soil erosion, boreholes, wells, aerial and geophysical surveys and water conservation
- Dividends paid out of farming profit are exempt from tax for the first five years the distributing company commences farming

It is clear from the above non-exhaustive listed incentives and exemptions, which are mainly given to large scale investors, that these incentives give larger scale farmers opportunities for greater economies of scale. Ensuring that small-scale farmers also benefit from such incentives, of which most of them date back to the investment Act of 1993 (amended in 1996), would be a great boost to small scale farmers.

An attempt to do so is reflected in the 2012 budget speech which notes that while committed to FDI development and an incentive programme, the Zambian government needs to re-assess the incentive policy, to make it more cost effective and allow it to benefit a broader spectrum of the Zambia population. This could also benefit small-scale farmers.

There are different ways through which investors can acquire land in Zambia, depending on whether the land is state land or customary land. For state land, they can contact ZDA, which would guide the investors by pointing out available land that is ready for investment. In addition, potential investors can also approach existing owners of state land and negotiate on commercial basis for the transfer of the land. Investors can also end up owning customary land by approaching village headmen and chiefs directly in searching for land. However, customary land has to be converted into state land first before it is acquired.

Box 2: Chiansi Irrigation Project

A lot of concerns are raised on investment in the agriculture sector as it might not be more effective in livelihoods improvement. The Principles of Responsible Agricultural Investments (PRAI), developed by Food and Agriculture Organisation (FAO), International Fund for Agricultural Development (IFAD), United Nations Conference on Trade & Development (UNCTAD) and the World Bank can be useful in such an assessment. For example, a case study of the Chiansi irrigation project, located in the Kafue district of Zambia, adjacent to the Kafue River was used by the study to assess the nature of some of the agricultural investment in Zambia.

In 2012, CUTS carried out a study of the scheme, which involved some in-depth interviews with the beneficiary farmers. The findings would be used to assess whether the project carefully observed the PRAI principles. This project, led by InfraCo Limited, is expected to see a sum of US\$29mn being injected, with the Dutch government granting US\$10.5mn.

It is also important to highlight that the project has resulted in some benefits to a few small farmers in terms of access to irrigation water and trainings on modern and efficient way of doing farming, which could even outweigh the negative issues on investment. The cooperative now holds a 25 percent stake in FarmCo and dividends have been settled at a consistent amount of K250, 000 to the locals in order to provide predictability. Though these positive developments, understanding the impact of investment needs a holistic and broad methodological approach for the gains and losses to be thoroughly unpacked.

Realising that there are already in place some developed investigative principles in understanding agriculture investment, the PRAI was used for the Chiansi case. The PRAI framework has seven principles. While principles 5 and 6 were found to be observed in Chiansi investment, there were some grey areas with regards to the following principles, which might call for refinements to the manner in which investment was handled;

- **Principle 1:** *Existing rights to land and associated natural resources are recognized and respected.*

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Among other issues, investment that recognises this principle has to identify all rights holders and negotiate with land holders/users, based on informed and free choice, in order to identify the types of rights to be transferred and modalities for doing so.

The process through which customary land is acquired by investors is often subject to abuse. The chief or the headman is expected to verify first that the land is available and no one claims it, before the writing a letter to the district council, which is also expected to check whether there are any conflicting claims before land is surveyed and used. Although most of the land is often reported to be available when investors come, it is often the case that some dissenting voice would be suppressed first by the chief, especially since it is only the chief and the investor who have to negotiate on a price.

Prior to the installation of the Chiansi irrigation system, there were twenty one families that occupied most part of the fertile land which was used for various livelihood activities that include, among others, crop production, livestock rearing, and brick making for construction of utility shelters. Although 20 of these families were relocated within Chiansi area and became members of the Chanyanya cooperative, one farmer refused to join. The reason for lack of buy-in the project included lack of clarity of the project outputs and how the dividends from the commercial farms will be shared among the farmers.

At the time of this research, less than 10 small holder farmers had occupied and fully utilising the 20 percent land from the 125 members of the cooperative. This appears to suggest that full information was not disclosed to the farmers when land was being acquired; hence the existing rights to land were not fully respected.

It also turned out that about 126 people were permanently removed from their homes and land as it was donated towards the running of the project. The erection of the project meant that indigenous people's shelter, land for keeping livestock and farming land was to be disrupted. Some of the households lost their land against their will. Their relocation on pieces of land smaller than the previous land size has bred some disputes within the neighbourhood especially those with livestock because the animals invade the land in the neighbourhood owing to the fact that there is no leeway for the animals to move freely.

- **Principle 2:** *Investments do not jeopardize food security but rather strengthen it.*

The Chiansi investment project has even generated regret from some members of the Chanyanya Cooperative. The investment has deprived some indigenous people from growing maize in large volumes since the land that they were relocated to is small in radius and to some extent less fertile compared to that which was contributed towards the project.

This according to some respondents has ignited hunger to their households. A visibly annoyed resident lamented that she would not have managed to take her children to school if the project was introduced during the time when her children were still in school; as she was able to raise more money after cultivating on the larger land mass she earlier occupied.

Although meetings on relocation modalities were held and some households concerned consented to the relocation process, the previous location is considered much more fertile compared to the new location. This has hampered productivity among some people as they are unable to cultivate maize for food as well as economic gain.

- **Principle 3:** *Processes relating to investment in agriculture are transparent, monitored, and ensure accountability by all stakeholders, within a proper business, legal, and regulatory environment.*

There are general feelings that transparency might be lacking on the Chiansi project as there has been a lack of consistency on the data provided by InfraCo on the amount of land involved in the Chanyanya pilot project. The Chiansi Irrigation Briefing paper prepared by InfraCo in March 2010; the InfraCo official project webpage and the InfraCo documentary on the Chanyanya project contain inconsistent information regarding the breakdown on how land is distributed in the project.

- **Principle 4:** *All those materially affected are consulted, and agreements from consultations are recorded and enforced.*

This requires clarity on: a) procedural requirements b) the character of agreements reached in such consultations and c) how the agreements can be enforced. Given that the land involved would be owned by different households, it is difficult for all involved to reach an agreement with the investor under the same terms and conditions. The voices of dissent among some completed project point to the fact that agreements were not necessarily reached with all those affected before such investments were effected; hence this principle was not adequately observed.

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- **Principle 7:** *Environmental impacts of a project are quantified and measures taken to encourage sustainable resource use, while minimizing the risk/magnitude of negative impacts and mitigating them.*

There are general concerns that regulations on environment are often evaded. In Zambia, large-scale investors must provide an environmental impact assessment to the Zambia Environmental Management Agency (ZEMA) at time of purchase, but often this is not done. Many investors start production without contacting the ZEMA, despite the existence of the regulation (Arslan Aslihan *et al*, 2011). Though this concern, the environmental impact assessment for the Chiansi was conducted and the report produced.

Suggested Recommendations

Irrigation and Productivity – What is quite apparent from the study is that there is still a lot of scope for the agriculture sector to improve, especially if more attention is devoted to the small scale farmers. They account for more than 70 percent of the farmers and dominate the farming of maize, millet, sorghum, groundnuts and cotton. The study has identified some issues that need urgent attention to ensure that small-scale farmers' productivity is enhanced.

For instance, access to irrigation is poor; this can be attested by the use of buckets and watering can system by small scale farmers. Productivity of their produce can be increased if farmers use alternative sources of irrigation, such as installation of pumps, have provisions of harvesting rain water and its storage.

Implementation gaps are also very apparent in the implementation of the irrigation policy. Although updating the standards and guidelines for the planning, design and construction of irrigation schemes to benefit small scale farmers is provided for, this is yet to commence on a large scale. The fact that about 76, 62 and 50 percent of the farmers had no access to any form of irrigation in Copperbelt, Eastern and Southern Province respectively is worrisome. There is need to scale up the implementation of the irrigation policy to enhance agriculture productivity by small scale farmers.

Seed Usage – The National Agriculture Policy provides that there would be regularisation of the seed sector through seed testing, seed crop inspection, variety registration, variety protection and enforcement of seed quality standards to facilitate seed trade, quarantine and other seed related issues. Although cotton farmers indicated that they receive quality seeds throughout-grower schemes offered by the ginneries companies, the groundnut sector still has challenges. The groundnut farmers indicated that they use recycled seeds, largely available from informal sources; hence the policy is not being effectively implemented.

Although the NAP provides for the development of the informal seed sector by providing accessibility of the sector to breeders/basic seed from research, findings reveal that farmers are unable to sort groundnuts according to varieties and grades due to lack of capacity in sorting techniques.

In addition, groundnut farmers are reluctant in adopting new and improved varieties – this may be due to information asymmetry and hence the need to organise

training programmes at ground level regarding the use of new and improved varieties which will enhance productivity and also improve the delivery of effective extension services. There is also need to open seed banks at provincial level. This is also something that the implementation of the policy would have gone a long way in addressing.

Extension Service – Although farmer groups and farmer field schools and the use of electronic and print media as communication tools to support extension information delivery are strategies identified by the NAP, the implementation is yet to kick off in earnest. As reported in the study, farmers indicated that they were only visited by extension officers three times in a year and only about 71, 78 and 84 percent of farmers in Copperbelt, Eastern and Southern Province respectively who were interviewed indicated that they had access to extension services.

Since the DACOs confirmed this and attributed it to under-staffing, it is quite apparent that the implementation of the policy needs to be enhanced to increase access to extension services. In order to have an effective and efficient extension service delivery, there is need to build capacity in terms of adequate staffing and operation efficiency, and increasing access to extension services requires the office of the DACOs to open sub branches in every 10 km radius.

Access to Finance – The NAP is also yet to deal with the issue of access to finance, despite the fact that the NAP proposes to create a fund for access by farmers through appropriate financial institutions and to encourage group lending. All the farmers who were interviewed indicated that they lack access to credit schemes offered by financial institution; this can be attributed to the fact that the cost of borrowing in Zambia is high and not favourable to the small-scale farmers.

Thus, it is recommended that the government should start to put in place measures that ensure that access to credit by small scale farmers is enhanced, in line with the NAP. The government should promote the provision of micro finance through cooperative system and encouraging the establishment of self help groups. There is need to encourage contract farming with the private sector while the government plays the regulatory role.

Marketing Support – Although NAP promises strategies that facilitate market information flow among stakeholders in various regions, including facilitating the provision of

rural infrastructure such as roads, rural storage infrastructure and developing market centres, marketing is still a challenge for small scale farmers. The groundnut sector's marketing channels are largely informal. Findings also reveal that in the three provinces, the storage facilities being used by farmers are not well developed, leading to post harvest losses. Challenges with regards to pest control, record keeping and fire safety arrangements etc. also compound matters.

In the livestock sector, the farmers face challenges due to non-existent cold storage facilities (government should take initiatives and encourage private investment to build storage facilities), making it difficult for the small-scale farmers to continuously produce goat meat and beef. Thus, provisions on marketing in the NAP call for urgent implementation. In amplifying implementation, there is need to establish provincial call centres/ information cells. There is also need of capacity building workshops to disseminate market information that are arranged by the state and other key stakeholders to disseminate market information.

Cooperative Development – The strategies identified by the National Cooperative Development Policy would also enhance the performance of small scale farmers. The development of a legal and institutional framework to facilitate the re-orientation and reforming of the co-operative organisation and ensuring that the Ministry responsible for cooperatives has a physical presence in all the districts of the country through field staff directly dealing with cooperative matters is provided for. Cooperative farming should be encouraged to ensure productive returns to the farmers. Restructuring of existing cooperative organisations is required in terms of its staffing and operational efficiency.

Livestock Development – There is also need for a change of attitude if goat and beef production are to be enhanced in Zambia. All the farmers indicated that they use free scavenging methods to feed the goats, with no formalised feeding schemes in place. The same is equally

true for beef production, which is largely reliant on traditional pastures as inputs into the farming activity. There is need for orientation of small scale farmers as well as capacity building support to ensure that the need to treat both goat and beef farming as a business, which would also call for some investments.

The government support towards this would also go a long way in enhancing productivity. The current extension policy does not cover livestock, thus there is also need to have a clear extension policy that covers both the crop and livestock sector comprehensively with effective implementation.

Investment and Land Acquisition by Investors – There are also some issues that need attention to ensure that the investment is in line with the PRAI. There is need to ensure that the existing rights to land and associated natural resources are recognised and respected by ensuring that some households do not lose land against their will. There is also need to ensure that full information is disclosed to the farmers when land is being acquired as a way of respecting rights to land.

Instances where uptake by the displaced farmers is too low in newly invested areas might imply that the investment is jeopardising food security as farmers' production would become lower than the situation before the investment. Efforts should also be enhanced to ensure that all those materially affected by the huge investments are consulted, and agreements from consultations are recorded and enforced.

One challenge that is also apparent is the weak land tenure system among the farmers. As found out in the report, the predominant form of land ownership is customary land ownership, with only 37.5 percent of the respondents indicating that they had title deeds. Among these, about 70 percent were from Copperbelt province, an urban province. Having title deeds would go a long way in helping the farmers to unlock credit, as these could be used as collateral. There is need for a relook into the land tenure system to ensure that more farmers have title deeds to their land.

This Policy Brief has been prepared by Simon Ngona, Centre Coordinator and Cornelius Dube, Economist, CUTS International, Lusaka for OXFAM Zambia as part of the project entitled 'Assessment of the Status of the Zambia's Agriculture Sector Development Framework and its Impact and Contribution to Improvement of Small Scale Producer's Livelihoods' implemented by CUTS International, Lusaka on behalf of OXFAM Zambia. This Policy Brief is meant to inform and educate readers and provoke debate on specific issues.