



Ministry of Agriculture and Livestock

Agricultural Development Support Program (ADSP)

End of Program Evaluation Report

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Cover Photo: Small holder Dairy Farmer taking milk to collection centre, Choma, Southern Province, Jacob Chisha, July, 2014



RuralNet Associates Limited
P. O. Box 51311,
6465 Libala Road, Kalundu
Lusaka, ZAMBIA
Tel: +260-211-293529,
Fax: +260-211-295178
Email: ruralnet@ruralnet.co.zm
Web: www.ruralnet.co.zm

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Acronyms

ABT	Agribusiness and Trade
ADSP	Agricultural development Support Program
AMIC	Agricultural Marketing Information Centre
BOZ	Bank of Zambia
CDT	Cotton Development Trust
DBZ	Development Bank of Zambia
EPFC	Eastern Province Farmers' Cooperative
FNDP	Fifth National Development Plan
ID	Institutional Development
IPM	Integrated Pest Management
KPI	Key Performance Indicator
MAL	Ministry of Agriculture and Livestock
MGF	Matching Grant Facility
MIIF	Market Improvement and Innovation Facility
NAP	National Agriculture Policy
NCO	National Coordination Office
NEWU	National Early Warning Unit
PAD	Project Appraisal Document
PDO	Project Development Objective
PMC	Project Management and Coordination
PQPSU	Phytosanitary Services Unit
PRSP	Poverty Reduction Strategy Paper
RDA	Road Development Agency

RRIF	Rural Roads Improvement Facility
SCCI	Seed Control and Certification Institute
SFAE	Support to Farmers and Agribusiness Enterprises
SNDP	Sixth National Development Plan
TORs	Terms of Reference
ZARI	Zambia Agriculture Research Institute

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Other important stakeholders from the Agriculture Sector with whom the Consultants interacted were from the Cotton Development Trust (CDT), the various Farmers' Groups at district and community levels and more importantly the Small Scale Farmers. Our appreciation also goes to the various other stakeholders we interacted with during our study in Lusaka, Choma, Chongwe, Rufunsa, Katete and Chipata districts.

Last but not the least, the World Bank is saluted for providing technical guidance to the study team as well as funding without which this assignment would not have taken place.

¹The Review Team consisted of Team Leader Mr. Stephen Tembo, John Kunda, Jacob S Chisha and Mulima N.Mubanga all of RuralNet Associates Limited

Executive Summary

1. Introduction

Background

Agriculture is the mainstay of many African economies, Zambia included. This is evidenced by the strides made by Government to develop policies and programmes to support agriculture with the view to developing the smallholder sector. To achieve this, government has recognized the role private sector plays in agriculture development and this has birthed strategies and programmes to foster public-private partnerships.

One such program is *'the development of commercial smallholder sector through improvement of value chain linkages between producers and downstream processing and marketing organizations'*, under the Agriculture Development Support Program (ADSP). The ADSP was made up of three (3) components that would support and facilitate smallholder commercialization. In addition, the program aimed at strengthening the smallholders' access to markets and competitiveness of functioning and emerging agricultural commodities.

Programme objectives and strategies

The ADSP had one immediate objective:

'To advance smallholder agriculture commercialization along value chains'

This was to be achieved through the following:

- (a) providing resources for working capital and term lending for capital investments in productive and marketing assets/activities to improve productivity, quality and efficiency of supply chains;
- (b) targeted investments into public/collective goods, such as feeder roads and into key public service functions; and
- (c) building market, technical and managerial knowledge of farmer groups and producer organizations through extension services.

Evaluation purposes

An independent end of program evaluation was commissioned in April 2014 by Ministry of Agriculture and Livestock (MAL) and the World Bank based on the Terms of Reference (**Appendix 1**). The Team started work in July 2014. The evaluation had several purposes as follows:

- (i) assess the extent to which the objectives and goals of ADSP were realized;
- (ii) assess the relevance of the Program in the context of Zambia sector priorities and needs, including program design elements, effectiveness of program implementation arrangements as well as service delivery systems;
- (iii) verify the beneficiaries (by gender) reached through the program and assess the effectiveness of program results;
- (iv) assess the program achievements in upgrading agricultural value chains (type, quality, efficiency, governance) where smallholders participated; this included at minimum three indepth analysis of the most relevant value chains supported by the program;
- (v) assess cost-effectiveness of program strategies and interventions, by also giving specific examples where possible; and
- (vi) assess sustainability options for key program benefits beyond program duration.

2. Major Findings

Summary- realization of ADSP evaluation objectives

Objective	Overview of the extent to which the objective has been realized
1. Assess the extent to which the objectives and goals of ADSP were realized	• ADSP implementation made considerable progress in achieving its goals and objectives including promotion of PPPs, strengthening value chains designed around smallholders both of which are the focus of this report; • The two critical focus areas of ADSP, namely improvement in household income levels as well as improving quality of services delivered to small holders have both been considerably realized. For instance, 96% of the dairy value chain enterprise beneficiaries cited an improvement in their household income. On the other hand, the beneficiaries of the groundnut value chain enterprise were satisfied with training (96% of the respondents); market information (87%), and; new equipment (84%).
2. Assess the relevance of the Program in the context of Zambia sector priorities and needs, including program design elements, effectiveness of the program implementation arrangements as well as service delivery systems	• The Program was aligned to Zambia's country policies and development frameworks. In terms of sector priorities and needs, the program drew heavily from existing policies and programmes aimed at improving smallholder participation in agriculture and markets. These included Fifth National Development Plan (2006-10) and the National Agriculture Policy. The Revised Sixth National Development Plan (R-SNDP 2013-16) and the National Agriculture Investment Plan (NAIP 2014-18) have carried over a number of important development issues stipulated in the FNDP. These frameworks provided a basis around which the Program would steer its activities. • The design of the Program took cognisance of the socio-economic and institutional variables among others to support the realization of project goals and objectives. The macroeconomic and private sector environment was favourable to support the Program such that the project achieved a disbursement rate of over 99 %; to show that private sector involvement in agriculture and markets was high. • The effectiveness of the program implementation arrangements was

	well structured: first, the project was rightly housed at the MAL (and particularly the Policy and Planning Department) and second, various stakeholders were identified and involved in the implementation to facilitate efficient service delivery of services under the project components. Notwithstanding the foregoing, whilst the project was housed in the Policy and Planning Department, it would have been better off in the Agribusiness and Marketing unit for purposes of sustainability and continuity. Further, stakeholder involvement should have been adequately done at the district and community levels in addition to the national level. Sufficient involvement of stakeholders at all levels has serious implications on the performance of the project and sustainability of project outcomes.
3. Verify the beneficiaries (by gender) reached through the program and assess the effectiveness of program results	• The project anticipated that female beneficiaries would be reached through organised farmer groups and supply chains. Findings on the three (3) value chains (dairy, honey and groundnuts) analysed revealed that female participation stood at below 34 per cent. • The project criteria in selecting beneficiaries was not wholly gender sensitive but rather demand driven regardless of gender. The females were to be reached through the sub-grantees by ensuring that there was a certain level of female participation in the smallholders groups and/or cooperatives.
4. Assess the program achievements in upgrading agricultural value chains (type, quality, efficiency, governance) where smallholders participated; this included at minimum three in-depth analysis of the most relevant value chains supported by the program	• The programme made considerable achievement in promoting and upgrading agricultural value chains involving smallholders, albeit at varying levels. Out of the three value chain interventions focused on (groundnuts, dairy, honey and fish), groundnuts had the highest impact though it fell short of achieving its desired potential. One segment of the value chain (production) was particularly vividly promoted. For instance, between 2008 and 2013 when ADSP started funding of the Choma Dairy Cooperative, milk collection increased ten-fold. • More needs to be done in improving all segments of the value chain, particularly the processing segment.
5. Assess cost-effectiveness of program strategies and interventions, by also giving specific examples where possible	• The project had mixed results as far as achieving cost effectiveness of program strategies and interventions in that the strategies and interventions were different across the three components. Some of these strategies helped in significant achievements recorded in sub-components like the RRIF under the SFAE component.
6. Assess the sustainability options for key program benefits beyond program duration	• The ADSP had measures in place that would promote sustainability of project activities and strategies after the program has phased out. These included involving various stakeholders under the three (3) components. • Under the Institutional Development (ID) component, a number of activities under ADSP were aligned to improving the capacity in the provision of key public good services by the MAL associated institutions in support of the commercialisation of smallholder producers. This will provide a certain level of sustainability in terms of service delivery to agro-business enterprises and smallholder producers; subject to regular funding to undertake activities to support

	the service provision. • Under the Support to Farmers and Agribusiness Enterprises (SFAE) component, the MIFF sub-component has an element of sustainability as it involved private sector agro-business entrepreneurs who will continue to run with their project since they have found both the suppliers of produce from the smallholders and market to sell their products. In addition, the use of smallholder groups and cooperatives is another option to facilitate sustainability of the activities after the project has phased out. • The RRIF component did not adequately involve the local councils (at district level) and the communities in the selection of feeder roads to work on. The sense of ownership will be lacking as both the council and communities will depend on RDA to maintain and rehabilitate the roads. However, depending on funding from government, the councils can maintain the feeder roads. This makes sustainability of this component difficult as it is subject to regular funding from government.
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3. Major Conclusions and Recommendations

- (i) The focus and design of ADSP aimed at promoting smallholder commercialization along value chain was an excellent idea. This is critical to bringing and linking smallholder producers to markets. This is what will promote smallholder production and productivity in a sustainable way with little subsidies from government. However, the operationalization of this concept in a manner that would warrant and promote adequate smallholder participation in value chain activities needed to be more thought through. The evaluation team noted poor linkages between the smallholder and various levels/stages of the value chain. This resulted in the smallholders not taking full advantage of the benefits and potential ADSP offered. For instance, less than 45% of female headed households were able to access market information, a basic element for anyone to actively participate in any market. The processing/value addition level/stage of the value chain in case of the Choma Dairy Value Chain project should have been given more attention to increase the amount of milk processed from a meagre 10%. This has serious implications on household income, and consequently the wellbeing of smallholders. **Recommendation:** similar future interventions should ensure that thorough analysis of key challenges, issues and opportunities facing smallholders at every level/stage of the value chain for a given value chain intervention is undertaken. The analysis should include the potential benefits at each level/stage of the value chain that would accrue to smallholders. Programming should thus include addressing of the identified challenges in order to ensure an optimal flow of benefits to smallholders. This may entail minimizing the coverage of such interventions in order to maximize the intended impact to the targeted smallholder beneficiaries.

- (ii) Related to the above point, the evaluation identified considerable weaknesses in the capacities of a number of sub-grantees. Such weak capacities led to under performance and in some cases a total absence of financial benefits accruing to the smallholders. This implies that there was inadequate scrutiny of sub-grantees. The sub-grantee assessment seems to have lacked depth and comprehensiveness. The result has been a number of sub-grantees failing to deliver benefits to the intended smallholders. **Recommendation:** for future programming, it will be crucial to undertake a detailed institutional assessment of the would be sub-grantees which among other things should focus on: number of staff; their skills and qualifications, and; experience of the institution in the field under consideration.

- (iii) The project design had a good framework aimed at promoting gender equality. Understandably, this was a desirable consideration given the perpetual challenges female beneficiaries face in taking advantage of development initiatives given their relatively poorer resource base. However, at implementation level, this excellent idea was not aggressively pursued. The demand-driven nature of the interventions meant that no deliberate effort was undertaken towards including female beneficiaries in the various interventions. As noted in the major findings in this document related to the four value chain interventions that were evaluated, the gender disparity was a matter of great concern. In one case the ratio of male to female beneficiaries was 10 to 1. **Recommendation:** for future programmes of a similar nature, it will be crucial to ensure that measures aimed at reducing the gender disparity between female and male beneficiaries are translated from the design all the way to the implementation level. It is necessary to come up with deliberate procedures and arrangements that will promote female participation. This could include lower proportions of matching grant requirements compared to their male counterparts.

- (iv) The monitoring and evaluation system designed to track the performance of sub-grantees did not perform to expectation. For instance, there was inadequate tracking of performance of the 27 sub-grantees in terms of their key activities on the ground. Such tracking of performance needs adequate resources. This appeared to be a challenge in the manner ADSP was designed as the M&E component was poorly human resourced and had inadequate leveraging and synergising with other M&E systems. In addition, the end of programme evaluation found little evidence of sub-grantees being sufficiently capacity built to monitor and evaluate their own interventions, and linking up sub-grantee simplified M&E systems to the centralized one at the Programme Coordination Unit (PCU). **Recommendation:** For future programming, there will be need to design a sufficiently effective M&E system that would facilitate the tracking of progress at sub-grantee level. Sub-grantees should also be capacity built and assisted to set up simple M&E systems that would facilitate reporting of progress on Key Performance Indicators. This would reduce the workload and extent of M&E coverage that the PCU would be engaged in.

PART I: INTRODUCTORY

1. INTRODUCTION

1.1 Background

The Government of the Republic of Zambia (GRZ) through the Ministry of Agriculture and Livestock (MAL) and with financial support from the World Bank implemented the Agricultural Development Support Program (ADSP) for a period of over 6 years from October 2006. The Program addressed some of the key agricultural challenges in Zambia with a view to advancing commercialization of smallholder agriculture along selected value chains. The specific Project Development Objective (PDO) was to support increased commercialization of smallholder agriculture through improved productivity, quality and efficiency of value chains with participation from smallholders.

In order to achieve the Project Development Objective (PDO) and other intermediate goals, the Project implemented various activities organized around three components; namely, Support to Farmers and Agribusiness Enterprises (SFAE), Institutional Development (ID), and Project Management and Coordination (PMC).

The Support to Farmers and Agribusiness Enterprises Component had three sub-components; namely (a) Supply Chain Credit Facility, (b) Market Improvement and Innovation Facility, and (c) Rural Roads Improvement Facility. The Institutional Development Component consisted of support to selected Ministry of Agriculture and Livestock Departments. Support to these departments was provided with a view to improving the public sector's capacity to provide core public services required to enhance smallholders' access to markets as well as improve their productivity and quality. The Project Management and Coordination Component aimed at strengthening the Ministry's project implementation capacity through the establishment of the National Coordination Office (NCO) within the Ministry.

Following ADSP phase out after a substantial implementation period, MAL commissioned an end of project evaluation to assess the status of implementation, achievement of objectives, relevance of the project to sector priorities and needs and impact on beneficiaries. In this regard, MAL hired RuralNet Associates Limited to conduct an end of programme evaluation of ADSP.

1.2 Scope of the Evaluation

The objectives of the assignment are specified in the Terms of Reference (see **Appendix 1**). The assignment involved assessment of the performance of the whole Program by analysing (i) achievements of each component and sub-component and (ii) the effectiveness in leveraging synergies across components using a value chain framework.

The specific objectives of this assignment were to:

- (i) assess the extent to which the objectives and goals of ADSP were realized,
- (ii) assess the relevance of the Program in the context of Zambian sector priorities and needs, including program design elements, effectiveness of program implementation arrangements as well as service delivery systems,
- (iii) verify the beneficiaries (by gender) reached through the program and assess the effectiveness of program results,
- (iv) assess the program achievements in upgrading agricultural value chains (type, quality, efficiency, governance) where smallholders participated; this included at minimum three in-depth analysis of the most relevant value chains supported by the program,
- (v) assess cost-effectiveness of program strategies and interventions, by also giving specific examples where possible and
- (vi) assess sustainability options for key program benefits beyond program duration.

1.3 Methods and Approaches

Table 1 summarises how the specific objectives of the evaluation were dealt with.

Table 1: Objectives and how they were realized

Specific objective	How the objective was dealt with
i) assess the extent to which the objectives and goals of the ADSP program were realized	• We dealt with this by assessing higher level Key Performance Indicators (KPI's), i.e. outcome and impact level. • The above entailed careful selection of KPIs for analysis that would provide or show the most evidence. • We ensured that the KPIs were drawn from the revised results framework. • Other critical KPIs were used to deal with the objectives of the evaluation.
ii) assess the relevance of the Program in the context of Zambian sector priorities and needs, including program design elements, effectiveness of program implementation arrangements as well as service delivery systems	• Key country development frameworks were considered, as well as strategies and policies (including; Agricultural Chapter of the Fifth National Development Plan as well as the Sixth National Development Plan, the Vision 2030 and the National Agricultural Policy). An assessment was undertaken of the ADSP objectives, components and activities in terms of the extent to which they were aligned to the country frameworks, strategies and policies. • Design elements: This entailed an assessment of the extent to which the socio-economic, institutional and other variables were supportive to the realization of the project goals and objectives. • Effectiveness of program implementation arrangements and Service delivery systems: An assessment of the appropriateness of systems ADSP put in place for the delivery of services and other outputs was undertaken.
iii) verify the beneficiaries (by gender) reached through the program and assess the effectiveness of program results,	• This was carried out by ensuring the desegregation of collected data, first by male versus female headed households and secondly, by gender of participating individuals in programme activities within a given household.
iv) assess the program achievements in	• Four most relevant and appropriate ADSP product value chains were identified, namely dairy, honey, fish and groundnuts.

upgrading agricultural value chains (type, quality, efficiency, governance) where smallholders participated; this should include at minimum three indepth analysis of the most relevant value chains supported by the program	• For each of the three value chains: the various levels of the value chain from production all the way to consumption were identified. • For each stage of the value chain, an assessment was undertaken regarding the extent to which smallholders were participating; the actual nature of their participation; the activities (and the level of resource utilisation to realise the activities they were participating in); quality of the services; the beneficiary satisfaction of the services received and; the organisational structures obtaining that facilitated effective implementation of the activities, among others.
v) assess cost-effectiveness of program strategies and interventions, by also giving specific examples where possible	• This entailed an assessment of various resources (financial, human, equipment and time, among others) used for the realisation of each of the program strategies and interventions. • The initial budget of each of the resources under review was scrutinized and compared with the actual budget in order to determine the difference between the two.
vi) assess sustainability options for key program benefits beyond program duration.	• The exit strategy aspects under implementation were assessed, the level of implementation they had reached and the extent of results which these exit strategy initiatives were already producing were examined. • The extent to which smallholders and other beneficiaries owned the ADSP activities, vision, virtues, and aspirations was examined. • The extent to which smallholders and other beneficiaries were contributing towards the implementation of ADSP activities was reviewed. • The extent of multiplier effects was examined. • The extent to which the capacities of various implementing institutions had been built at various levels (national, district and community) was assessed.

Apart from elements outlined in the Table above, the extent to which the assumptions made at the design stage of ADSP obtained during the implementation of the program was also assessed. This provided an appreciation of the extent to which the environment which obtained during the implementation of ADSP was supportive to Program implementation.

Methodology

Existing Document Review

The consultants conducted a document review of existing documents about the project. The documents reviewed documents included the Project Appraisal Document (PAD), baseline studies, component evaluation reports, progress reports, evaluations of other similar programs, annual narrative and financial reports. ADSP Revised Results Framework was also reviewed (see **Appendix 2**)

Development of Sampling Frame

Though the Project Appraisal Document (PAD) had a target of 65,000 direct beneficiaries under ADSP², the demand driven nature of ADSP made it difficult to deal with specific numbers of the target beneficiaries. In this regard, the consultants had to construct a sampling frame before the field work could start. This entailed a pre-visit of three provinces (eastern, southern and western) for the purpose of data collection to facilitate the construction of a beneficiary sampling frame. Given the limitation on the budget and time frame, the close to 30 projects that were funded by ADSP were categorized into three components. From each of these three components, a project was randomly selected for evaluation. A decision was made later on to increase the value chain projects selected for evaluation to four, namely; groundnuts, dairy, honey and fish.

The quantitative and qualitative sampling details are presented in the two Tables below by value chain intervention.

Quantitative Sampling Details

Component	Beneficiary Population	
	Target	Actual
Dairy	400	412
Honey	247	41
Fish	53	9
Groundnuts	510	504
Total	1,210	966

Qualitative Sampling Details

Component	Focus Group Discussions (FGDs)			Key Informant Interviews (KIs)	
	Men	Women	Mixed	Community	District
Dairy	3	2	0	5	2
Honey	1	1	0	0	2
Fish	0	0	0	0	0
Groundnuts	1	1	1	0	3
Feeder Roads					
1. Choma	3	3	0	9	3
2. Katete	1	1	0	1	2
3. Chongwe	2	2	1	5	1
Total	11	10	2	20	13
Grand Total	23			33	

²Project Appraisal Document, November, 2005 (Draft)

Due to the limitation in timeframe and resources, it was not possible to undertake a comprehensive data collection and analysis that would include a control sample.

Tools used

Both quantitative and qualitative (see **Appendix 8** for list of stakeholders consulted) approaches were used to conduct the evaluation. These are explained in detail in the subsequent sections.

Quantitative Survey

Before the survey, 12 Research Assistants (RAs), i.e. 4 per Team and 3 Supervisors (one per Team) were identified and trained for 5 days. The training included pre-testing of the data collection instruments in Chongwe district for the purpose of fine-tuning the instruments as well as enhancing the RAs' data collection expertise, skills and confidence. The Team Leaders were drawn from RuralNet.

Mobile data collection was undertaken for the quantitative survey (see **Appendix 5** for the quantitative instruments) using the Open Data Kit (ODK) software. Special tools were also designed for counting traffic (see **Appendix 6**).

Qualitative Survey

RuralNet conducted qualitative survey in the same communities that the quantitative survey was carried out. This was aimed at enriching the survey findings of the quantitative survey as well as providing an opportunity for triangulation of results. The qualitative survey involved use of Focus Group Discussions (FGDs), Key informant interviews and Field Observations. Among the key issues that were focused on were the quality of services and the extent of beneficiary satisfaction. In each community, FGDs were conducted with men only; women only and both men and women for the purpose of verification and validation. See **Appendices 3 and 4** for qualitative lists.

In addition, Key Informant Interviews (KII) were conducted with community leaders, traders, entrepreneurs and agribusinesses participating in the programme and relevant government officials as well as extension workers at the district and community levels respectively among others.

Different checklists were developed for different stakeholder categories, namely; national level stockholders such as government, Cooperating Partners, etc.; community level stakeholders (for FGDs); traders; entrepreneurs; agribusinesses among others.

Data Analysis and Reporting

Data analysis was undertaken following cleaning. The Statistical Package for Social Sciences (SPSS) was used for analysis. Data analysis has been undertaken by gender as well as by enterprise. Chi Square and other tests were done on selected variables to enrich the analysis. Data interpretation and reporting followed the analysis.

1.4 Structure of the Report

The structure of the report is anchored in the Terms of Reference (ToRs) which are contained at **Appendix 1**, arranged in the evaluation criteria approach. Consequently, apart from the introductory part, the report has the following major components:

- (i) design,
- (ii) relevance,
- (iii) effectiveness,
- (iv) efficiency, and;
- (v) Sustainability.

1.5 Limitations

As already alluded to above, the target group was not determined at the start of the programme, given the demand driven nature of the programme activities. Consequently, this posed a challenge with respect to sampling frame construction. To alleviate this challenge, the Research Team undertook pre-visits aimed at collecting data on the selected projects to facilitate the construction of the sampling frame for beneficiaries.

The *second* limitation is that the End of Programme/End line Evaluation was undertaken after ADSP had phased out. On account of this fact, it was not always easy to find stakeholders who had been involved in programme implementation as they had dispersed.

Thirdly, some beneficiaries were involved with the programme for a short period and it was shortly after it had started in 2006. Between that period and now, there has been a long passage of time, posing a challenge with the recall period.

Fourth, limitations imposed by the demand driven nature of the interventions required an elaborate exercise aimed at the construction of a sampling frame. This should have included a listing exercise based on each of the value chain intervention areas under focus. Unfortunately, there was a limitation in the time frame and resources. This implies that a rigorous analysis of the results is a challenge. Consequently, the evaluation team has had to use the “Case Study Approach” which though less rigorous is one of the most practical options under the circumstances.

PART II: MAJOR FINDINGS

2. DESIGN ISSUES

The following design issues are dealt with:

- (i) Involvement of stakeholders;
- (ii) Consideration of gender issues in the design;
- (iii) Organizational structure – implementation;
- (iv) Appropriateness of implementation strategies;
- (v) Appropriateness of assumptions, and;
- (vi) Housing of the programme.

Each of these will be discussed below.

2.1 Involvement of key stakeholders

The project involved a variety of stakeholders in its implementation. The Feeder Roads Improvement Facility, though at the design stage it was envisaged that the District Councils will be instrumental in the collection of levies on agricultural products to fund the maintenance of the rehabilitated feeder roads³, the Local Authorities however, seem not to have been adequately involved in the selection of priority roads and in some cases even in the monitoring of the rehabilitated/maintained roads. This was the case in Choma and Chongwe districts. The communities through which these roads pass could also have been more involved especially in the recruitment of unskilled labour. In Choma and Chongwe it revealed that the Contractors who worked on the roads came with own work force including unskilled labour. More involvement of the communities could have enhanced ownership.

2.2 Consideration of Gender Issues

The PAD envisaged that the project would directly benefit some 65,000 commercialising small holders who were already participating in organised supply chains. The criteria for identifying beneficiaries were not wholly gender sensitive, but rather project investments were decided based on a demand driven basis regardless of gender. It was anticipated that through the sub-grantees, female beneficiaries would be reached and benefit from the ADSP.

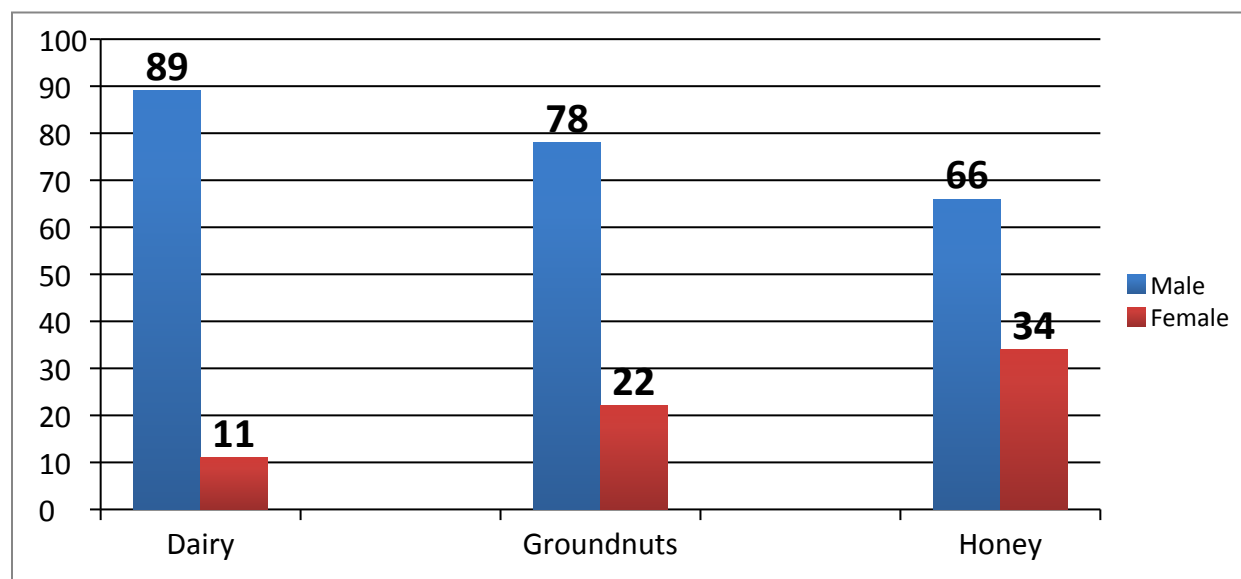
This could have been more targeted to ensure that both male and female beneficiaries were reached through the project intervention. The PCO's Progress Report⁴ indicated that the ADSP had reached out to **130,675 beneficiaries**, thereby surpassing the original target of **65,000**

³PAD, page 17

⁴Agricultural Development Support Program: Summary of Project Implementation Progress Update as of 31 March 2014

beneficiaries with over **50%** being female beneficiaries. This scenario, however was very different on the ground with female beneficiaries being below 34% .Findings from the evaluation based on the four (4) value chain commodities⁵ reveal that there were more male beneficiaries compared to the females.The Choma milk collection centre and dairy processing plant project only had 11%(45) female smallholders whilst 89% (368) were male. For the export market access by smallholder producers of processed groundnuts in Chipata and Katete districts had 22% female (149) and 78% (355) male beneficiaries. The improved honey collection, processing and marketing in Kaoma district by smallholders had 34% female (34) and 66% (27) male beneficiaries. This gender disparity is illustrated in **Figure 1**.

Figure 1: Gender proportion of beneficiaries for the Dairy, Groundnuts and Honey value chains



2.3 Organisational structure - implementation

The project set an organisation structure for implementation purposes. For details see **Appendix 7**. At the helm of the structure was the National Project Steering Committee (NPSC) which provided guidance to project implementation and resolved issues of policy nature.

To assist with the project coordination and management, the project set up the National Coordination Office (NCO) which was integrated within the existing structures of the Department of Policy and Planning of the Ministry of Agriculture and Livestock (MAL). The NCO was anchored in the policy and planning unit in view of the departments' mandate for overall Policy formulation and coordination, programme planning, monitoring and evaluation, budgeting and donor co-ordination and mainstreaming gender and HIV/AIDS and other cross cutting issues **within ministerial programmes**⁶.

⁵ The four (4) value chains are fish, dairy, honey and groundnuts. However, the fish value chain could not be

⁶<http://www.agriculture.gov.zm>

In our opinion, the structure described above was appropriate as it enabled the project objectives to be achieved as described in **Chapter 4** below.

2.4 Appropriateness of implementation strategies

The implementation strategies per component were appropriate and these are discussed below in sequence.

The Institutional development component of the project was implemented directly by MAL (department of Policy and Planning, Information Department of Agribusiness and Marketing, Seed Control and Certification Institute, Zambia Agricultural Research Institute) and the Cotton development Trust. The performance of the AMIC, ZARI and CDT which were part of the scope for this evaluation are discussed later.

The Market Improvement and Innovation Facility (MIIF) engaged the services of an independent Secretariat-administrator (Africare). The function of the Secretariat was to coordinate and manage the MIIF which provided the matching grants for eligible interventions proposed and implemented by agribusiness investors. A total of 27 enterprises benefitted from the MIFF under this arrangement.

The Feeder Roads Improvement Facility was implemented by the Roads Development Authority (RDA) and the National Roads Fund Agency (NRFA) managed the road funding responsibility. The arrangement was appropriate and is in line with the current Zambian legislation.

2.5 Appropriateness of assumptions

Five (5) assumptions were made during the ADSP design:

- (i) Unfavourable macroeconomic conditions and changing private sector environment may reduce demand for the project investments;
- (ii) Limited market opportunities may dampen demand for investments into value chains;
- (iii) Coordination of implementation among several agencies could delay implementation;
- (iv) Resources of the project are mostly captured by the elite groups and agro-business operators; and
- (v) Smallholders to agribusiness operators' arrangements are skewed in favour of agribusinesses

Out of the five (5) assumptions three did not obtain, that is, 'unfavourable macroeconomic conditions and changing private sector environment may reduce demand for project investments'; and 'limited market opportunities may dampen demand for investments into value chains'. Evaluation findings are summarised in **Table 2** below.

Table 2: Appropriateness of Assumptions

Assumption	The extent to which the assumption obtained (End of Programme)	Comments
Unfavourable macroeconomic conditions and changing private sector environment may reduce demand for project investments	This did not obtain	The project achieved a disbursement rate of over 99%
Limited market opportunities may dampen demand for investments into value chains	This did not obtain	
Coordination of implementation among several agencies could be cumbersome and could delay implementation	This obtained	Some delays were occasioned in the authorisation of disbursements from the Central Bank and Ministry of Finance
Resources of the project are mostly captured by the elite groups and agro-business operators	This obtained	Demand driven and matching grant arrangement limited the number of eligible beneficiaries
Smallholders to agribusiness operators' arrangements are skewed in favour of agribusinesses	This did not obtain	There was a good mix in the type of enterprises supported under the Support to Farmers and Agribusiness Enterprises component

The above analysis shows that the environment in which the ADSP operated was conducive in that the macroeconomic conditions and private sector environment were favourable given the policy direction that the government put in place in the NAP and SNDP to support smallholder. This is supported by the over 99 per cent disbursement rate achieved by the project.

2.6 Housing of the programme

The correct housing of a project has serious implications on its performance on account of the supportive technical, professional, experience and other elements that are vital for successful implementation performance.

The project was housed in the Department of Policy and Planning. The Policy and Planning Department has a role of ensuring that policies and objectives of the Ministry are maintained and coordinated in an effective manner on a continuous basis as well as reviewing these policies and objectives and making necessary changes to reflect the current demands of the agricultural sector. The Department also has the mandate for overall Policy formulation coordination, programme planning, monitoring and evaluation, budgeting, donor co-ordination and mainstreaming gender and HIV/AIDS and other cross cutting issues within ministerial programmes.

However, due to the project emphasis on smallholder agriculture commercialisation through the strengthening of the smallholder's access to markets and the competitiveness of functioning and emerging agricultural commodities, the ADSP could have been better placed in the Agribusiness and Marketing Department of MAL. This is because most of the project components are agribusiness related.

3. RELEVANCE

The relevance of ADSP was assessed with respect to the following aspects:

- (i) Country policies and development frameworks;
- (ii) Beneficiaries of various categories, and;
- (iii) Various institutions.

3.1 Country policies and development frameworks

The key policies and development frameworks focussed on are (see **Table 3** below):

- (i) The Revised Sixth National Development Plan (R-SNDP 2013-20160
- (ii) The National Agriculture Policy (NAP), and;
- (iii) The National Agriculture Investment Plan (NAIP) under the African Union (AU)/New Partnership for Africa's Development (NEPAD)'s Comprehensive Africa Agriculture Development Programme (CAADP) facilitated by the Common Market for Eastern and Southern African (COMESA).

The ADSP was highly relevant to Zambia's country policies and development frameworks considering that it built on existing policies and programmes aimed at improving smallholder participation in agriculture.

Agriculture remains the priority sector in achieving sustainable economic growth and reducing poverty in Zambia. In addition, over 80 per cent of rural population depends on agriculture-related activities for their livelihood. The growth of this sector is, therefore, important for the attainment of the long-term vision for Zambia which is to be become 'a prosperous middle income nation by 2030'.⁷

During the Sixth National Development Plan (SNDP) period objectives, strategies and programmes were identified to guide the sector. The NAP was recently reviewed to accommodate emerging issues such as increasing rural incomes and reduce poverty. The objectives, strategies and programmes/measures are summarised in table 2.

The National Agricultural Policy (NAP) states that agriculture generates between 16 and 20 per cent of the Gross Domestic Product (GDP) and provides livelihood for more than 70 per cent of the population. The sector absorbs about 67 per cent of the labour force and remains the main source of income and employment for both rural women and men, whose population is 4,012,580 and 3,906,636 ⁸ respectively.

⁷ SNDP Chapter on Agriculture, Livestock and Fisheries, p 121

⁸ CSO, Census of Population and Housing 2010

The National Agriculture Investment Programme (NAIP) has four major components, namely: (i) Sustainable Natural Resources Management; (ii) Agricultural Production and Productivity Improvement (crops, livestock and aquaculture); (iii) Market Access and Services Development, and; (iv) Food and Nutrition Security and Disaster Risk Management. The four would be supported by two types of support services: Knowledge support systems and Institutional Strengthening, as well as various cross-cutting issues including: Gender; Environment; Other sector policies & on-going plans, and; decentralization.

Table 3: Relevance and Appropriateness of ADSP to country policies and development Frameworks

ADSP Component	Country Policies and Development Framework	Specific Area of Linkages
Support to Farmers and Agribusiness Enterprises	Revised Sixth National Development Plan (R-SNDP)	Objective: To diversify and attain national and household food security. Strategies: a) Promote and strengthen community participation in improving productivity through cooperatives and farmer organizations; b) Promote agricultural mechanization (through appropriate technology); c) Promote and strengthen equal participation of male and female farmers in improving production throughout-grower schemes; and d) Promote PPPs in research, infrastructure development and programmes. Programmes: Crop Production and Productivity Improvement Programme: • Extension Services Enhancement Sub-programme • Farm Block Development Sub-programme • Seed Development Sub-programme • Research Development sub-programme • Gender welfare sub-programme
		Objective: To promote the development of competitive, efficient and transparent public and private sector driven marketing system for agricultural commodities and inputs. Strategies: a) Facilitate the development of market infrastructure such as feeder roads, storage and market facilities; b) Promote improved agricultural commodity processing, marketing, distribution and storage; and c) Facilitate access to credit particularly for small and medium-scale farmers. Programmes: Agricultural Marketing Development and Investment Promotion
		Objective: To promote fish trade and marketing. Strategies: a) Promote improved fish processing, marketing, distribution and storage; and b) Promote value addition to fish and fisheries products. Programmes: Fisheries Marketing Development and Investment Promotion Programme
		Objective: To increase agricultural production and productivity. Measure: a) Promote research in improved crop varieties and certified seed.
	National Agricultural Policy (NAP)	Objective: To increase investment in agriculture Research and Development (R&D). Measure: a) Promote Public Private Partnerships (PPPs) in agricultural R&D.
		Objective: To improve the efficiency of agricultural markets for inputs and outputs. Measure:

		a) Promote access to agricultural market inputs; b) Strengthen the capacity of farmer groups and cooperatives in production, processing, marketing and trade; and c) Promote livestock, crops and fisheries marketing systems.
	NAP	Objective: The overall objective of the National Agricultural Investment Plan (NAIP) is “to facilitate and support the development of a sustainable, dynamic, diversified and a competitive agricultural sector that assures food security at household and national levels and maximizes the sector's contribution to GDP” (NAP, 2012). Measure: a) Private sector led agricultural growth that significantly contributes to national GDP

3.2 Relevance to Beneficiaries of Various Categories

The project targeted the following categories of beneficiaries:

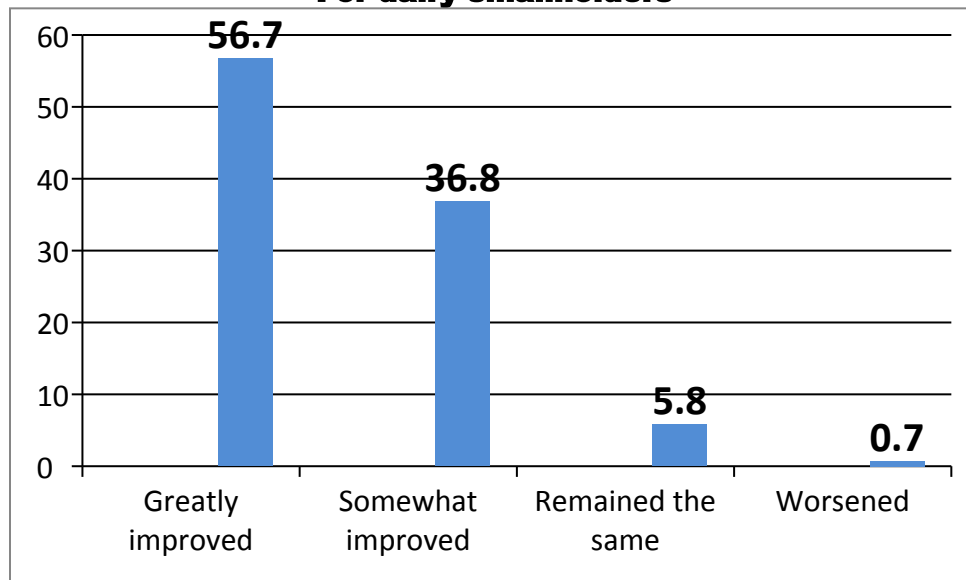
- i) Smallholders participating in an organised supply chains, traders, entrepreneurs and agribusinesses. This was done through the Supply Chain Credit Facility, MIIF, and the Feeder Roads Improvement Facility. The extent to which the desired outcomes of each component and sub-component were achieved is discussed in the appropriate sections.
- ii) Institutional Support to the following departments/institutions:
 - ✓ National Early Warning Unit (NEWU)
 - ✓ Policy Analysis Unit (PAU)
 - ✓ Monitoring and Evaluation Unit
 - ✓ Agricultural Marketing Information Centre (AMIC)
 - ✓ Agribusiness and Trade (ABT)
 - ✓ Seed Control and Certification Institute (SCCI)
 - ✓ Zambia Agriculture Research Institute (ZARI)
 - ✓ Cotton Development Trust (CDT)

The categories of beneficiaries are discussed below in relation to relevance of the ADSP by establishing the project impact on their livelihood.

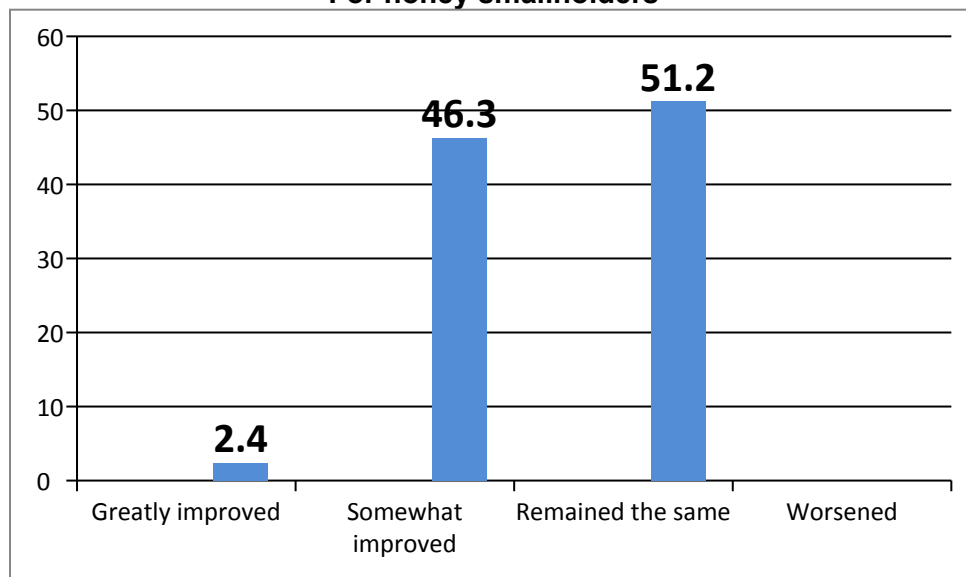
Smallholder beneficiaries

The evaluation established a general improvement in livelihood in terms of income for the dairy, honey and groundnuts smallholders. Ninety three (93) per cent of the dairy smallholders interviewed perceived an improvement in household income whilst the proportion for the groundnut farmers was 59% and 49% for the honey smallholders. See **Figures 2-4**.

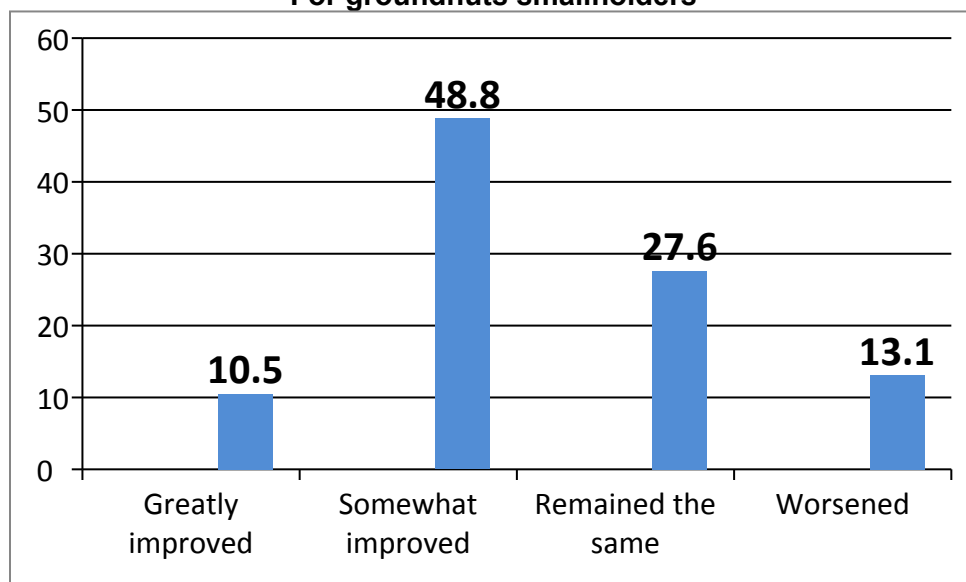
**Figure 2: Improvement in livelihood in terms of income
For dairy smallholders**



**Figure 3: Improvement in livelihood in terms of income
For honey smallholders**



**Figure 4: Improvement in livelihood in terms of income
For groundnuts smallholders**



3.3 Various Institutions

For the purpose of evaluation three (3) departments/institutions were visited: AMIC, ZARI and CDT. Each one is discussed in turn below.

3.3.1 Agriculture Marketing Information Centre (AMIC)

Through the ADSP support, the AMIC department greatly benefited. Capacity was built for all the staff in Eastern and Southern Provinces to collect and produce a local bulletin on market information for various commodities on monthly basis. Dissemination was done through community radio stations in the following pilot districts: Choma, Livingstone and Monze in Southern Province and Chipata, Petauke and Lundazi in Eastern Provinces. Despite having benefited greatly from the support, they are faced with challenges in database management coupled with internet connectivity with some districts to sustain the compilation and production of the monthly bulletins and dissemination. Another challenge is the running cost of airtime on some community radio stations.

3.3.2 Cotton Development Trust (CDT)

ADSP strengthened the capacity of the CDT to supply increased pre-basic cotton seed to the cotton industry by providing irrigation system infrastructure and other farm equipment. The CDT has capacity to undertake research, produce and distribute foundation seeds has been further enhanced. Certification of the seed is done by the Seed Control and Cerification Institute. After the support, CDT has increased the production of pre-basic cotton seed from 19.2 metric tons in 2005 to 60.9 metric tons in 2013.

3.3.3 Zambia Agricultural Research Institute (ZARI)

ADSP support to the institution facilitated tests and surveillances in parts of Zambia considered endemic with various pests such as the fruit fly and potato nematode, and diseases such as the American Foul Brood. The findings from the surveillances and tests helped in trade negotiations. For instance, Zambian honey was not considered organic and was previously subjected to radiation which compromised the organic aspect of the honey; but through the surveillance it challenged that requirement.

In addition, through ADSP the capacity of the staff has been enhanced and improved and they are now able to provide plant quarantine services and issue Phytosanitary certificates for export including plant import permits for a variety of products.

4. EFFECTIVENESS

This section assesses the extent to which project objectives under each of the project components have been realized. The project logical framework identified a number of indicators to be used in measuring achievement. These have been tracked by the project in its regular reporting process and were used to assess project achievements during the evaluation.

According to the PAD, the project development objective was **‘to advance smallholder agriculture commercialisation along value chains’**. This was to be achieved through:

- a) Providing resources for working capital and term lending for capital investments in productive and marketing assets/activities to improve productivity, quality and efficiency of supply chains;
- b) Targeted investments into public/collective goods such as feeder roads and into public service functions; and
- c) Building market, technical and managerial knowledge of farmer groups and producer organizations through extension⁹.

It was envisaged that this objective would be achieved through implementing the three components of the project namely:

- (i) Support to Farmers and Agro-business Enterprises (SFAE);
- (ii) Institutional Development (ID); and
- (iii) Project Management and Co-ordination (PMC).¹⁰

Generally there were mixed results in as far as achieving project objectives were concerned. The evaluation noted that there were variations in the levels of achievement within project components. For instance, whereas the Feeder Roads sub-component of the Support to Farmers and Agribusiness Enterprises component of the project recorded significant achievement, the Supply Chain Credit Facility under the same component did not achieve much. Details of the assessment on the extent to which project objectives were realised are discussed in the sections below. These are discussed below component by component.

4.1 Support to Farmers and Agro-business Enterprises

Objective 1:

To raise smallholder productivity and income and improve links between producers and markets.

⁹ Project Appraisal Document, Agriculture Development Support Project (ADSP), p 4

¹⁰ Due to the nature of activities relating to this component, it has not been treated separately as such in this write-up.

Raising the productivity of smallholders and guaranteeing them a produce market is cardinal to increasing their incomes and livelihoods. In the context of the ADSP, this objective was going to be achieved through implementing three sub-components. These included:

- i. **Supply Chain Credit Facility:** This was a demand driven line of credit for short, medium to long term loans to support investment intended to improve supply chains of existing and emerging contract farming systems.

Although the Terms of Reference did not cover the assessment of this facility, the evaluation noted that this facility faced some challenges during implementation. There were some project design flaws that hindered the implementation of the facility. The Bank of Zambia (BOZ) was designated as the Apex Unit responsible for disbursing the credit to eligible institutions. This presented a conflict in the roles of BOZ who are traditionally the regulator of the financial market but were also expected to implement this facility.

Therefore, in 2009, the Apex Unit role was moved to the Development Bank of Zambia (DBZ). Another change that accompanied this movement was that the funds earmarked for this facility were instead used to support staff capacity development in the Enterprise Development Fund which had a line of credit for agricultural development.

Lesson Learned: The lesson learned is that a proper institutional analysis should have been conducted at feasibility study stage to determine the appropriate institution to assume the Apex Unit role during project implementation.

- ii. **Market Improvement and Innovation Facility:** The facility was meant to provide financial resources on a matching grant basis to among other things, facilitate the development of innovative business linkages between smallholders and other actors in the supply chains as well as introduce innovative technologies. Eligible entities included quasi-government institutions and cooperatives, small scale farmer organizations and private enterprises.

Originally, this facility was contracted to Africare, firstly for 2 years which was extended to 4 years. However, due to high administrative costs, the matching grant facility was moved to MAL in 2012 under the charge of the Agribusiness Specialists.

- iii. **Feeder Roads Improvement Facility:** This facility was intended to finance the rehabilitation and maintenance of selected feeder roads in areas of high agricultural potential viz. Choma, Chongwe, Chipata, Katete and Lundazi Districts. A total of 1,300 kilometres was earmarked for rehabilitation and maintenance.

Table 4: Summary of Indicators Relating to Objective One

SN	Log-frame Indicator	Indicator Values (Targets)				
		Unit	Baseline	End line	Target	Achievement
1.	Technologies demonstrated by the project in the project areas	No	0	40	-	100%
2.	Beneficiaries directly targeted through the MIIF matching grants	No	0	27	-	100%
3.	Rural roads rehabilitated	Km	0	1,131	1,300	87%
4.	Average vehicle traffic on improved roads	No	0	-	-	-

Each of the indicators in **Table 4** above is discussed below.

Technology Demonstration (Indicator 1)

Various technologies were supposed to be demonstrated in different areas that had received support from the project under the MIIF sub-component. Each sub-grantee was expected to demonstrate this technology at each stage of the value chains implemented. The Progress Report indicated a one hundred (100) per cent achievement of this indicator but the evaluation findings established that while some sub-grantees had received funding they never applied the funds to the activities they had indicated in their business plan. A case in point is River Bank Fisheries which was a commercial fish processing project linked to out-grower scheme which received funding under the Matching Funds facility but never got to implement the project. No technology was demonstrated in this regard.

Beneficiaries Directly Targeted With Matching Grants (Indicator 2)

A total of 30 applications were approved for funding although 2 withdrew on account of failure to raise the matching funds. As at August 2014, 90% of the funds had been disbursed to the eligible applicants. This was a commendable achievement.

However, while disbursement of funds to the eligible applicants was plausible, the evaluation saw this as simply a means to achieving an end. The end in this case was to ensure that the funds disbursed were used for the intended purpose i.e. benefiting project beneficiaries through the various activities that were presented in the sub-recipients' business plans. It was observed that in most cases (at least for the sub-recipients in the sample), ADSP was satisfied when the sub-recipient met the requirements to trigger disbursement of funds and such funds were disbursed. In the case of River Bank Fisheries for instance, there was no evidence of the project having been implemented even though the company had received all the funds it had applied for. Ubuchi Capital enterprises on the other hand did not provide the necessary inputs to enable the project beneficiaries engage in the production of honey. Instead, the company was buying honey from the farmers who had been organized by another organization. Details on the performance of the companies visited are discussed under the value chains section.

Rural Roads Rehabilitated (Indicator 3)

The component was implemented under the Output and Performance Based Contracts through the Road Development Agency (RDA). RDA opted to do road rehabilitation and maintenance through contracts as opposed to using district councils due to inadequate capacity in the district councils regarding plant and equipment and personnel. Contracts were for 5 years and started with rehabilitation followed by maintenance.

In the ADSP Revised Results Framework, this indicator was intended to measure the total number of kilometres of the targeted roads rehabilitated and maintained. As indicated earlier, a total of 1,300 km was done in all the 5 districts. This evaluation visited three of the five districts to assess the project's level of achievement based on this indicator (see **Table 5** below for details). These were Chongwe/Rufunsa,¹¹Choma and Katete. In each of the districts visited a number of roads were sampled for this purpose. Table 5 presents the names of the roads selected in each district with corresponding number of kilometres targeted and achieved.

Table 5: Sampled Roads and kilometres achieved

District	Name of Road	Target (km)	Actual (km)
Choma	RD622 M11-Simunzele	16.626	16.626
	RD505 Mapanza (M11) – Moolala	29.468	29.468
	Road M11-Road D538 – Macha Maize depot	13.299	13.299
	A1- MachaChubo	17.377	17.377
	U19- Simunzele Sch.-Macha	29.271	29.271
Chongwe/Rufunsa	RD480-U17 T4-Mwachilele-RD149	18.27	18.27
	U19 T4-Kanakantapa join with A2	27.59	23.00
	A1 Loop from RD480 to Kasisi Road by Antioch Sch.	29.52	29.52
Katete	RD412 T4 –Adoni	18.78	18.78
	U29 T6 - Mbinga-Katete	17.83	17.83
	U22 T4 – Kalumbi School	4.2	4.2
	RD687 RD411 – Munyamadzi – RD411	19.86	19.86
	RD411 T4 – ChomaLupande	38.06	38.06
	R300 Vulamkoko join with RD411 – T4	11.16	11.16

The roads were done to acceptable standards. They were widened and raised. This has significantly contributed to the flow of traffic especially during the marketing season for inputs and produce. Both suppliers of agricultural inputs and buyers of agricultural produce found it easier to conduct business due to the improved state of the roads.

In addition other road users such as traders also had ease access to sources of their merchandise. The improved condition of the roads has also made it easier for community members to move their patients to the health facility. This used to be a challenge before the roads were worked on.

However, there are challenges that have come with the improved roads such as over speeding which sometimes leads to children being knocked down and an increase in the level of thefts of animals because the thieves find it easier to get in and out of the communities with their stolen items.

¹¹ Some of the roads that were worked on in Chongwe are now under the newly established Rufunsa District which was part of Chongwe District originally.

Average Traffic Levels on Improved Roads (Indicator 4)

Following the improvement in the condition of the roads, traffic flow increased significantly. In the Results Framework review, this indicator was intended to measure average traffic flow per year. The evaluation conducted a three day traffic census for selected roads. Two week days and one day at the week end were selected for this. The findings showed that the volume of traffic increased twofold or even more especially during the marketing season from July – November.

4.2 Institutional Development

Objective 2:

To improve the public sector's capacity in providing key public good services that are required to support agricultural commercialisation.

For the purpose of this evaluation, the institutions that were targeted to receive support from the project were:

- (i) The Agriculture Marketing Information Centre (AMIC);
- (ii) The Cotton Development Trust (CDT); and
- (iii) The Zambia Agricultural Research Institute (ZARI).

Each one of these institutions is discussed in detail below.

4.2.1 Agriculture Marketing Information Centre (AMIC)

Support to AMIC was aimed at upgrading the marketing information system in order to help improve the delivery of up-to-date and accurate market data to satisfy the needs of farmers, traders and processors and build capacity for staff in information management.

4.2.2 Cotton Development Trust (CDT)

ADSP provided support to CDT to strengthen the capacity of the CDT to supply an increased amount of pre-basic cotton seed to the cotton industry and to establish an Integrated Pest Management Department.

4.2.3 Zambia Agricultural Research Institute (ZARI)

Project support to ZARI was to strengthen the capacity of ZARI to comply with emerging SPS requirements in order to help Zambian agribusinesses to take advantage of export opportunities. **Table 6** below summarizes Objective two indicators.

Table 6: Summary of indicators relating to objective two

SN	Log-frame Indicator	Indicator Values (Targets)				
		Unit	Baseline	End line	Target	Achievement
1.	Target smallholders and agribusinesses receiving accurate and relevant market information on time	%	0	-	-	-
2.	Enterprises/commercial smallholders receiving adequate food safety and phytosanitary services through ZARI	%	0	50	50	100
3.	Quality foundation cotton seeds produced, controlled and distributed by CDT	Ton	21.9	60.9	90.5	39
4.	Average pesticide spray among smallholder cotton producers as a result of adoption of IPM practices in test areas	No.	0	0	-	-

Timely Dissemination of Agricultural Market Information (Indicator 1)

Capacity was built for all the staff in Eastern and Southern Provinces to collect and produce a local bulletin on market information for various commodities on weekly basis. Dissemination was done through community radio stations in the following pilot districts: Choma, Livingstone and Monze in Southern Province and Chipata, Petauke and Lundazi in Eastern Province.

While agriculture marketing information was disseminated in a timely manner it is difficult to quantify the number of small holders and agribusinesses that were reached through the radio as this depended on who had tuned in. Challenges experienced involved management of the central data base, staff turnover, poor internet connectivity in the districts, among others. This has made it difficult to maintain the dissemination of weekly marketing information.

Provision of Phytosanitary Services (Indicator 2)

Following the financial support received from ADSP, the Plant quarantine and Phytosanitary Services Unit (PQPSU) had its capacity built to enable it to better provide phytosanitary services to enterprises and commercial smallholders. The performance of the unit in relation to this

indicator may be best appreciated in terms of the increase in the amount of money the unit has been generating through inspection fees and laboratory results annually. This has doubled from project inception to date from about K500, 000 to K1 million.¹²This may be attributed to an increase in awareness among people involved in cross border trade about the services the institution provides.

Production and Distribution of Quality Foundation Cotton Seed (Indicator 3)

The CDT head quartered in Mazabuka aims to produce good quality foundation cotton seeds which are supplied to the ginners and subsequently to the out growers. Three varieties are in use according to the ecological zones: Chureza variety for Eastern and parts of Muchinga Province; CDTII for Central and CDT-V for Southern Province.

ADSP has strengthened the capacity of the CDT to supply increased pre-basic cotton seed to the cotton industry by providing irrigation system infrastructure and other farm equipment. The CDT has capacity to undertake research, produce and distribute foundation seeds. Certification of the seed is done by the Seed Control and Certification Institute. CDT has increased the production of pre-basic cotton seed from 19.2 metric tons in 2005 to 60.9 metric tons in 2013.

Adoption of Integrated Pest Management Practices (Indicator 4)

Trials in Integrated Pest Management had been conducted mainly at Magoye in Mazabuka. However, due to logistical problems, these trials to ascertain average pesticide spray among smallholder cotton producers as a result of adoption of IPM practices in test areas had not been done. Therefore, it has not been possible to assess the impact of adopting IPM practices in improving cotton yields and reduction costs of herbicides.

¹²Key Informant Interview with the Principal Agriculture Research Officer

5. EFFICIENCY

This section will look at the linkage between the utilization of resources and their outcomes. The common practice is to ensure minimum possible resource utilization for maximum possible benefits or outputs. To do this requires availability of data which should be organized in a manner that links outputs to their respective budget expenditure lines. This evaluation looked at efficiency in relation to capacity building, procurement of equipment and time.

5.1 Capacity building (Personnel)

Most of the institutions supported by the project had provision for building the capacity of institutions through training personnel. The training was either in form of short or long term training. About 250 members of staff from different institutions benefited from this support. The training was mostly obtained either locally or regionally. ADSP did well to have pursued this activity in this manner to maximise the use of resources. This is because training overseas costs close to double the amount of what would be spent locally. Besides there are other advantages of pursuing training locally or regionally one of them being the direct relevance of such training to the local environment.

5.2 Procurement of Equipment

Although the evaluation did not have interface with the person in charge of procurement, it concluded that the equipment that was purchased for different institutions was the best money could get. This is mainly because all procurement for the project was centrally done through the MAL Procurement Unit and strictly followed the laid down tender procedures as stipulated in the Public Procurement Act No. 12 of 2008.

5.3 Time Element

Time is of cardinal importance in as far as implementation of the project is concerned. How time is used has a direct bearing on the delivery of project outputs. In the case of the ADSP, there were delays in the procurement of goods and services because procurement personnel were not directly hired by the project. In addition to their routine work under the MAL, they also assumed the responsibilities of all procurement for the project.

The original plan was that all staff would be civil servants but later hired some positions from the open market. Although the use of civil servants was a cheaper way of staffing the project compared to hiring staff from the open market, the plan proved costly following the departure of the Project Co-ordinator, the Chief Procurement Officer, the Procurement Officer and the Accountant in 2012.

Delays were also reported in the disbursement of funds to sub-recipients under the MIIF. For instance, in the case of the EPFC the company continued receiving funds even when the project it was piloting had come to an end in 2010. The 3rd instalment was paid out in April 2011 while the 4th and 5th instalments were made in June 2011 and June 2012 respectively giving a full year

between the instalments. In essence there should have been 4 instalments but ended up with 5. For an agriculture project this loss in time has potential to affect achievement of outputs.

6. SUSTAINABILITY

Sustainability in this context is concerned with the continuity of the increased commercialization of smallholder agriculture through improved productivity, quality and efficiency of value chains where smallholders participate after the agricultural development support programme (ADSP) has phased out. This is cardinal if outputs and emerging outcomes that have resulted following considerable financial, human and other resource investments into the ADSP implementation are to be perpetuated beyond project life. Three key areas linked to sustainability are discussed below:

- (i) Institutional structures;
- (ii) Mainstreaming ADSP activities into government programmes, and;
- (iii) Capacity building.

These are discussed below in sequence.

6.1 Institutional structures

The establishment and strengthening of appropriate institutional structures at various levels to deal with the ADSP was a strategic intervention towards the promotion of sustainability of the ADSP efforts. Two levels are dealt with, the national level and the district level. At the national level, we have the national coordination office and institutions associated to the Ministry of Agriculture. The district cooperatives and community organizations will be discussed at the district level.

6.1.1 The National Coordination Office (NCO)

The NCO as the project management and coordination unit, was housed in the Ministry of Agriculture was built on already existing systems and structures within the Ministry to strengthen its capacity long after the project has ended. It was anchored in the policy and planning unit of MAL. In view of this, it would have been better placed in the department responsible for agribusiness herein, Agribusiness and Marketing Department.

6.1.2 Institutional Development

At the national level, this was done through the institutional development component aimed at improving the public sector's capacity to providing key public good services that are required to support agricultural commercialization. The ADSP provided capacity building support to the following institutions associated with the MAL: Department of Policy and Planning; Department of Agribusiness and Marketing; Seed Certification and Control Institute; and Zambia Agricultural Research Institute. In addition, the Cotton Development Trust a public-private sector institution received limited support. Whilst the support is commendable, it concentrated on activities that were somewhat one off and subject to regular funding which the government is unable to.

Similarly for the RRIF component, the RDA was identified as the key institution to undertake the support network of roads in selected potential agricultural productivity. This was at the national level. In terms of capacity building for the local councils was not adequate as they were deemed to lack the capacity to undertake the work. The ADSP provided an opportunity to build the local councils capacity but it was not utilized. Under the RRIF component, it is quite evident that the institutional capacity building at the district level was not adequate.

The support given to the stated institutions is critical to the continuity of the respective activities undertaken long after the project has phased out. While it is evident that a number of the activities require regular funding as already alluded to, the success factor is that they have gained the necessary equipment, knowledge and skills to facilitate services towards the commercialization of smallholder agriculture.

6.1.3 District Cooperatives and Community Organizations

- (i) *District Level:* At the district level, the project deliberately involved existing institutions and structures on the ground to build as well as enhance their capacities to facilitate execution of part of the measures devoted to smallholder productivity improvement. These institutions and structures include district cooperatives and community organizations that support contract farming and out-grower schemes within the agribusiness sector.

For instance, in Kaoma district the Zambia Works Economic Development Ltd is on the ground to assist smallholder producers to improve their productivity and earn sustainable incomes through bee keeping. They are already supporting 50 active bee keepers and by the end of 2014, the number is expected to increase to 300 bee keepers. One of the avenues that they use to support the bee keepers is to equip them with the basic skills and knowledge in bee keeping including providing them with the equipment to increase and improve their yield.

- (ii) *Community Level:* At the community level, the community cooperatives and organizations are working closely with the district cooperatives and organizations to organize the community to take part in activities that support smallholder producers. In the case of the bee keepers, the community benefits from this as it is an avenue to diversify to another agricultural activity besides depending on maize growing to earn income. This has benefited the smallholders as they are now able to increase the production and equipped with knowledge on bee keeping. Their livelihoods have also somewhat improved as they now have another source income.

The institutional development, district cooperatives and community organizations have the greatest potential for promoting the sustainability of project activities; given that the project was built on already existing structures that are tasked with the responsibility to develop commercial smallholder sector through improvement of value chain linkages between producers and downstream processing and marketing organizations involved in the production of high quality and high value products.

6.2 Mainstreaming ADSP activities into government programmes

Strengthening smallholders' access to markets and the competitiveness of functioning and emerging agricultural commodities by focusing on high potential agricultural areas and value chain approach; are among the issues surrounding the smallholder agriculture that have been included in the work plans and budgets of MAL departments. This is evidenced by some of the activities from the ADSP being taken up by some departments. The activities that have been taken up include the extension and technology development, and the matching grant facility. Under extension and technology development, there is a project on irrigation at MAL funded by the World Bank. For the MGF this is something that is still being discussed as it was deemed successful.

6.3 Capacity building

Capacity building forms a critical part of any development initiative as it equips various actors and stakeholders to play their expected roles towards the realization of set objectives. In the case of the ADSP, capacity building was mostly done at the national level and specifically to MAL departments and associated institutions. While the support was appreciated and timely for the institutions concerned, the likelihood of them sustaining the programmes and activities is minimal due to the lack of regular funding.

The capacity building support to the MAL departments and associated institutions included disseminating market information to smallholders; provision of phyto sanitary services and quality seed; and acquisition of equipment among others. In order to provide these services, for instance, the phyto sanitary services, there is need to conduct surveillances which require regular funding.

It is quite evident that the capacity building support received by the various departments and institutions under the ADSP requires regular funding for the activities to be sustained. The status quo, however is that there is no government funding for the stated activities. Going forward, these activities should be funded or at least budgeted for by the respective institutions to ensure continuity. Some of the institutions such as ZARI are in the process of lobbying government to use part of the fees collected for the services they provide to undertake the surveillance.

7. VALUE CHAIN FRAMEWORK ANALYSIS

The development of value chains through which agricultural commodities and products reach final consumers facilitated the improvement of supply chain linkages between producers and downstream processing and marketing organisations to produce and market high valued diversified products which give farmers the best possible price.

According to the progress report, the ADSP successfully supported 27 agribusinesses promoting agricultural commercialization along 14 key commodity value chains in 22 districts and 8 provinces with a demonstration of 40 beneficiary innovative technologies.

For purposes of this evaluation, four (4) commodity value chains, namely groundnuts, honey, fish and dairy are discussed out of the 27 that were targeted by ADSP. This is largely due to the potential these commodities have in terms of value addition and more so smallholder producers are involved in these commodities. Out of the four commodities, groundnuts and dairy are discussed in more detail as they were easier to analyse, given their relatively larger sample sizes of 504 and 413 respectively. On the other hand, honey and fish were difficult to analyse on account of their small sample sizes of 41 and 9 respectively.

The following value chain stages have been considered as they were the most commonly noted:



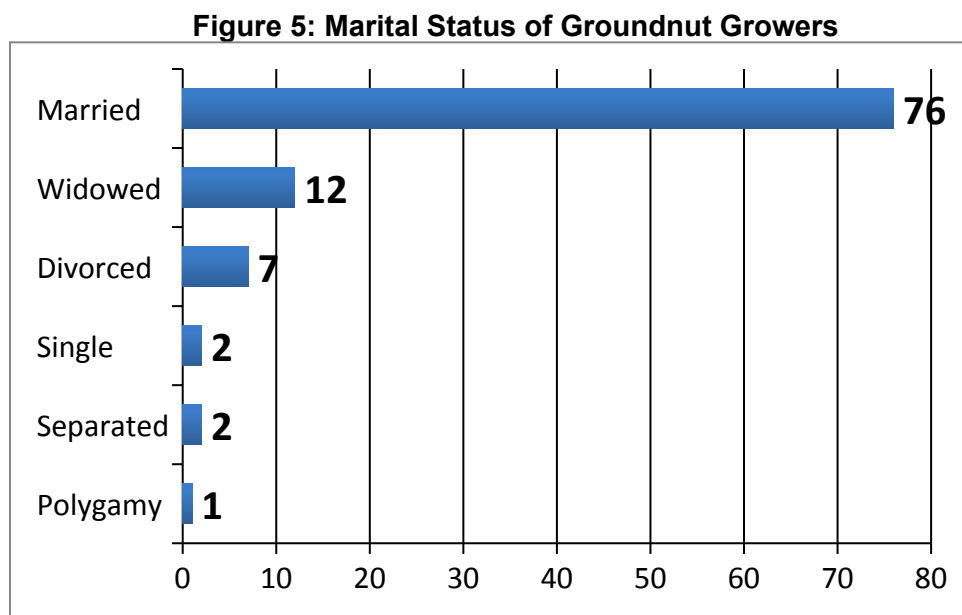
7.1 Groundnuts

7.1.1 Sample size and age of household head

The 504 sample size was drawn from Chipata (355 respondents) and Katete (149 respondents). Both districts had Respondents at their prime age, with adequate experience as well as energetic enough to respond to development interventions. Katete had older respondents by 5 years (44.4 compared to Chipata 39.4). The difference in average age by five between the two districts may be attributed to the different levels of urbanization between the two. The more urbanized Chipata (as a provincial capital of Eastern province) has a more youthful age. This could have resulted in less incentives for the younger people to leave their respective villages in search of a better life. On the other hand, Katete being more rural may have resulted into a situation where younger people may have migrated out of their respective villages to areas where they would have better access to social and other services.

7.1.2 Marital status

Marriage positively impacts on household stability in terms of livelihoods and otherwise, through among other things, improved status of family labour. The majority of the respondents were married (76%). Details of married status are provided in **Figure 5** below.

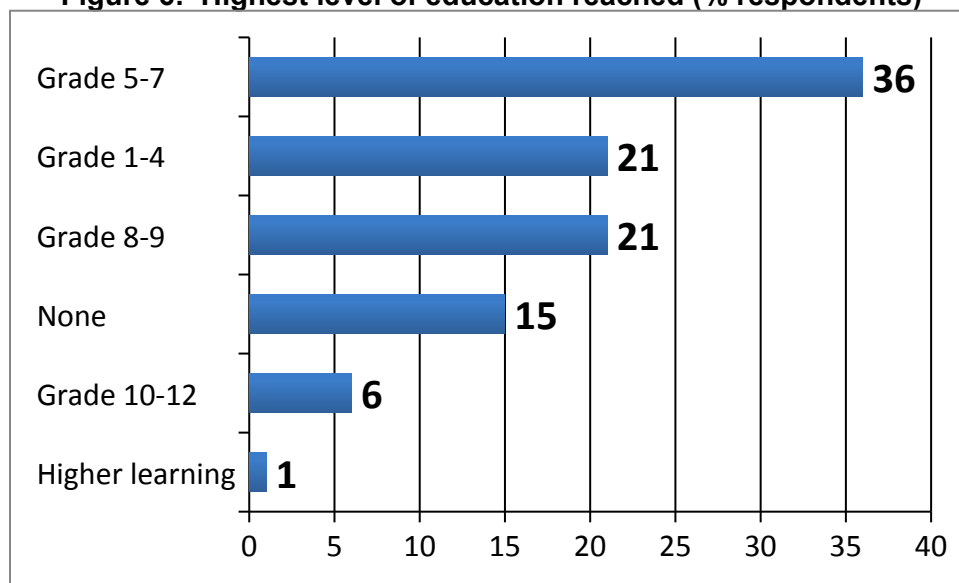


7.1.3 Education level of groundnut producers

The level of education reached does have an impact on the extent to which producers may analyse issues, including their responsiveness to specific development interventions. The highest proportion (36%) of producers went as far as grade 5 to 7 only. Of this proportion, Chipata had 42% while Katete had 23%. On the other hand, 15% of the groundnut producers had no education at all with a district analysis of 11% Chipata and 26% Katete. **Figure 6** below presents details. The difference in the education levels between the two districts is significant.¹³

¹³ P=0.000

Figure 6: Highest level of education reached (% respondents)



A significant proportion (84%) of the 504 farmers were growing groundnuts before they stated supplying to the Eastern Province Farmers' Cooperative Ltd (EPFC) whereas 16% began to grow groundnuts because they could sell to EPFC.¹⁴

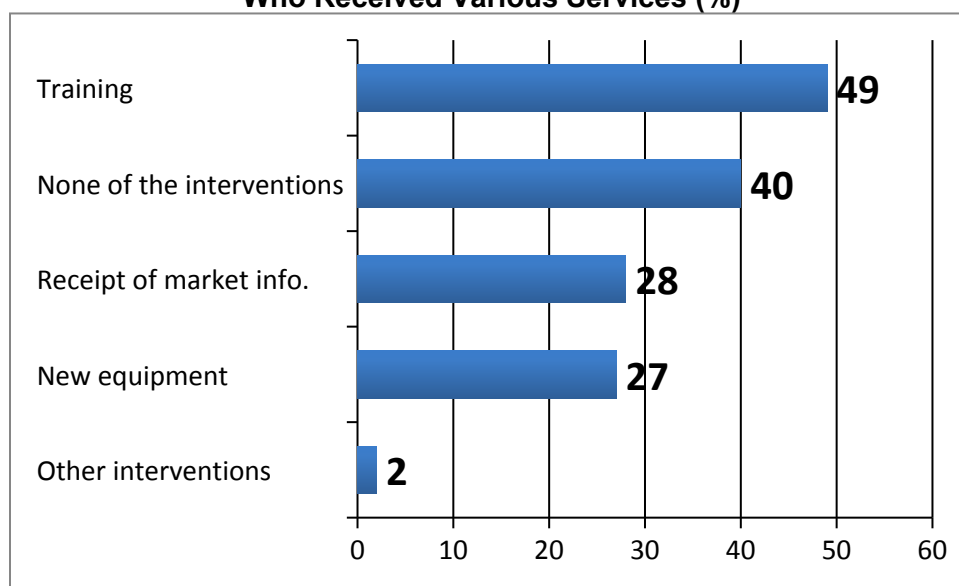
7.1.4 Supporting Services

Groundnut farmers received various supporting services from EPFC to facilitate their production and productivity (see **Figure 7** below for details). Of all the services received by farmers, training accounted for the highest proportion of farmers (49%) followed by market information at 28%. On the other hand, 40% did not receive any of the services. Training was offered in a number of areas the key ones being: improved production techniques; post-harvest losses; aflatoxin control, and seed multiplication. Of the 49% who received training, the district analysis was 44% for Chipata and 60% for Katete. Consequently, in terms of proportions, more groundnut farmers in Katete received training than their counterparts in Chipata. This difference was significant.¹⁵

¹⁴ P=0.000

¹⁵ P=0.001

**Figure 7: Proportion of Groundnut Farmers
Who Received Various Services (%)**



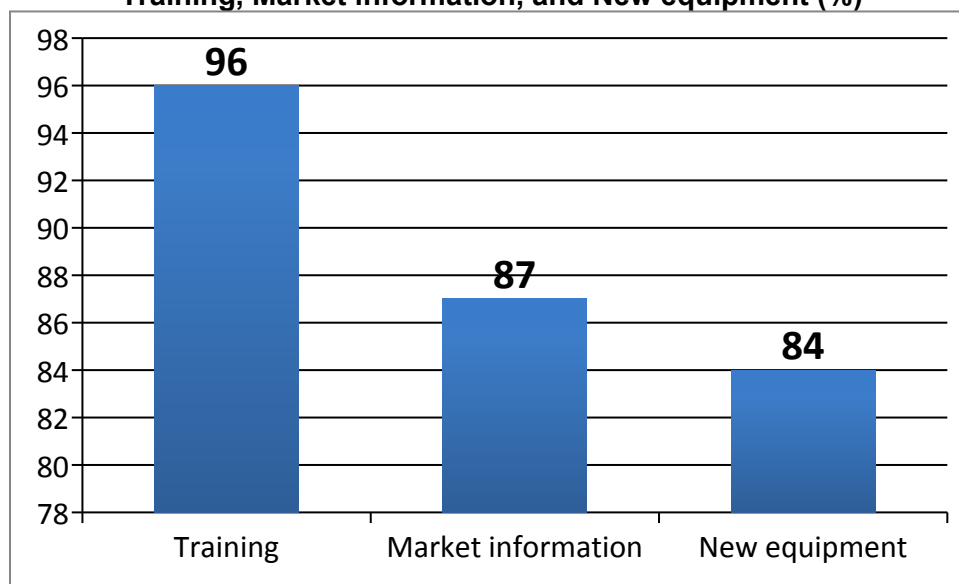
Level of beneficiary satisfaction with services

Groundnut farmers were asked about the extent to which they were satisfied with various services provided by EPFC. Generally speaking, the majority of the groundnuts farmers were satisfied with services received regarding training, market information and receipt of new equipment. Training had the highest proportion of those who were satisfied at 96% and new equipment had the least at 84% (see **Table 7** and **Figure 8** below).

Table 7: Various levels of satisfaction with services provided by EPFC (% respondents)

Level/Extent	Training	Market information	New equipment
Satisfactory	96	87	84
Poor	4	12	7
Very poor	0	1	9

Figure 8: Proportion of groundnut farmers who were satisfied with Training, Market information, and New equipment (%)

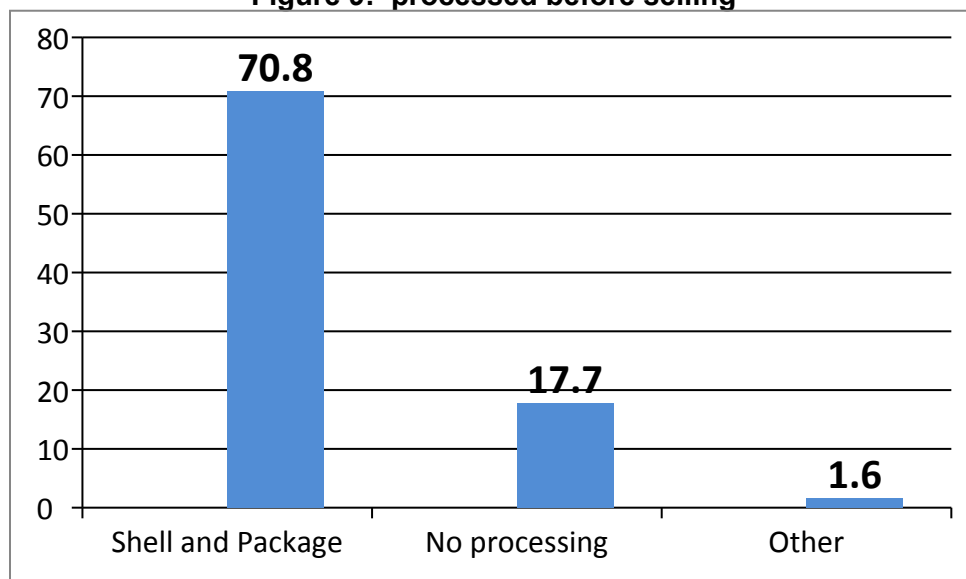


Of the three services in **Table 6** above, new equipment had the highest proportion of those who cited poor service (a total of 16% with 9% citing very poor and 7% citing poor) followed by market information at 13% (1% very poor and 12% poor), see **Table 6** above for details.

7.1.5 Processing of Groundnuts

The sub-grantee was Eastern Province Farmers Cooperative for an Aflatoxin Free Groundnuts Management and Export Pilot Project in eastern Province (Chipata, Katete, Petauke and Nyimba). For the groundnuts only 19% processed groundnuts before selling and 81% did not. Two reasons account for this. Firstly, shelling groundnuts is a labour intensive activity and most households were labour constrained. In trying to address this EPFC purchased and distributed 6 groundnuts shellers to selected farmer groups. However, considering the huge number of its out-growers (453) the equipment was inadequate to facilitate shelling of groundnuts. Secondly, most buyers preferred buying unshelled groundnuts because it could be stored for a longer period in shells than when it was shelled. In its shelled form, it was susceptible to aflatoxin. See **Figure 9** for details.

Figure 9: processed before selling



Less one fifth (20%) processed¹⁶ their shelled groundnuts. The reasons for not processing included inadequate labour, inadequate time and lack of market information. The most cited reasons were inadequate labour and inadequate time (both cited by 25%). The least cited reason was lack of equipment at 12% (see **Table 8** for details).

Table 8: Reasons for not processing groundnuts

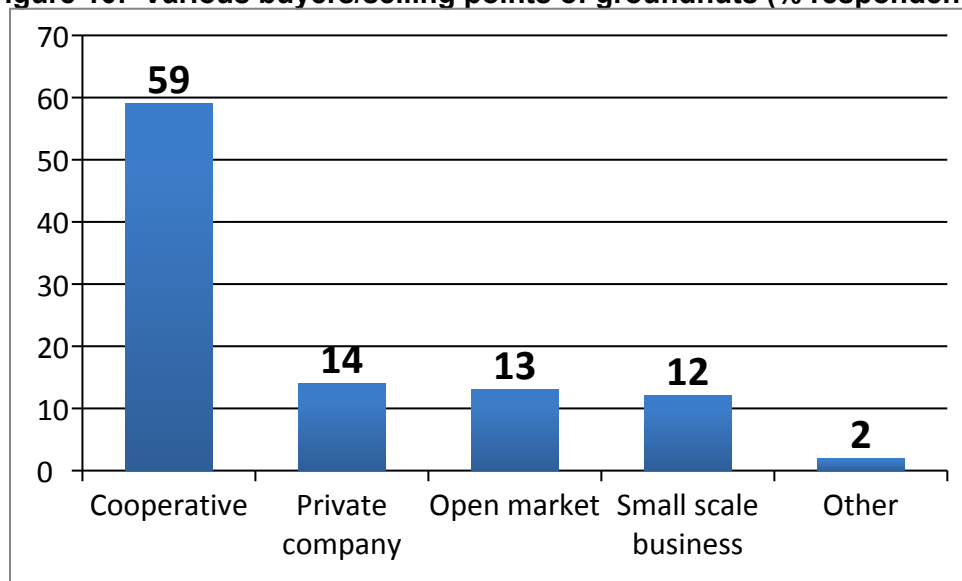
Reason	Percentage Respondents
Inadequate labour	25
Inadequate time	25
Lack of market information	24
Other reasons	15
Equipment	12

7.1.6 Buyers/selling of Groundnuts

Groundnut farmers sold their crop to various buyers, including the Cooperative and private companies. Farmers also bought their produce on the open market. The highest proportion of farmers sold to the Cooperative (59%) followed by private companies (14%), see **Figure 10** below for details.

¹⁶ This was simple processing such as the one for use as a substitute for cooking oil.

Figure 10: Various buyers/selling points of groundnuts (% respondents)

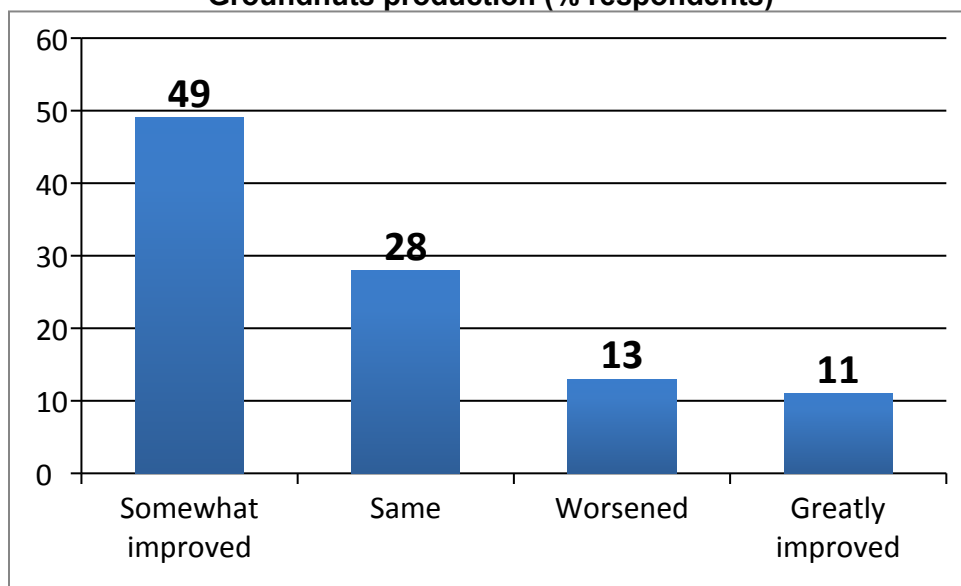


7.1.7 Household income improvement on account of groundnuts

Farmers were asked whether their household income level had improved on account of their involvement in groundnut production. At least 60% of the farmers indicated that their income had improved, of which 11% said the income levels had greatly improved. However, 13% reported that their income levels had worsened, see **Figure 11** below for details.

Farmers were asked about the most important sources of income. More than 90% (close to 93%) cited sell of livestock. On account of the vulnerability of rain-fed agriculture due to erratic rainfall, a number of studies have shown that the major source of small scale income is shifting from crop to livestock sales. Income from crop sales is increasingly being used to invest into livestock production due to the latter's relative stability on arising from adverse weather conditions.

Figure 11: Whether household income improved on account of Groundnuts production (% respondents)



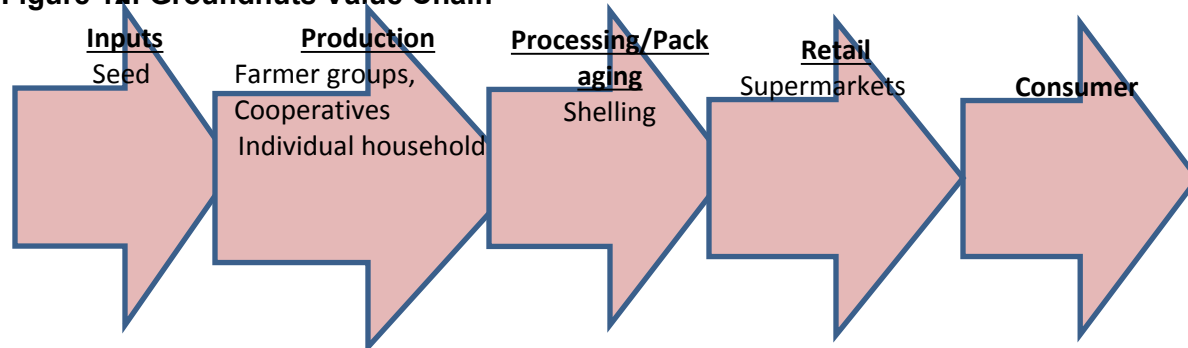
7.1.8 Market access

Just over half (51%) of the respondents have access to market information. Of these, close 70% find it useful while the rest (30%) did not find it useful.

7.1.9 Summary of value chain issues-Groundnuts

In terms of the value chain stages, these are illustrated in **Figure 12** below. These are inputs, production and processing/packaging, retail and consumer.

Figure 12: Groundnuts Value Chain



7.2 Dairy

7.2.1 Sample size and age of household head

The dairy intervention aimed at improving the performance of the Choma Dairy Co-operative Union (CDCU) in terms of the value chain. The total sample size was 413 households out of which only 11% were female headed. The sample was drawn from seven primary cooperatives, of which close to half (49%) were from Masopo and Mbabala/Sedumbwe dairy cooperatives who contributed almost equal proportions (i.e. 24% and 25% respectively).¹⁷ The difference in the proportions of the sample size from the various co-operative societies was significant.¹⁸

The average age of household heads was 41. This age is deemed prime in terms of productivity, including those of an economic nature. The female heads of households were aged 43.5 while their male counterparts were aged 40.6.

7.2.2 Marital status

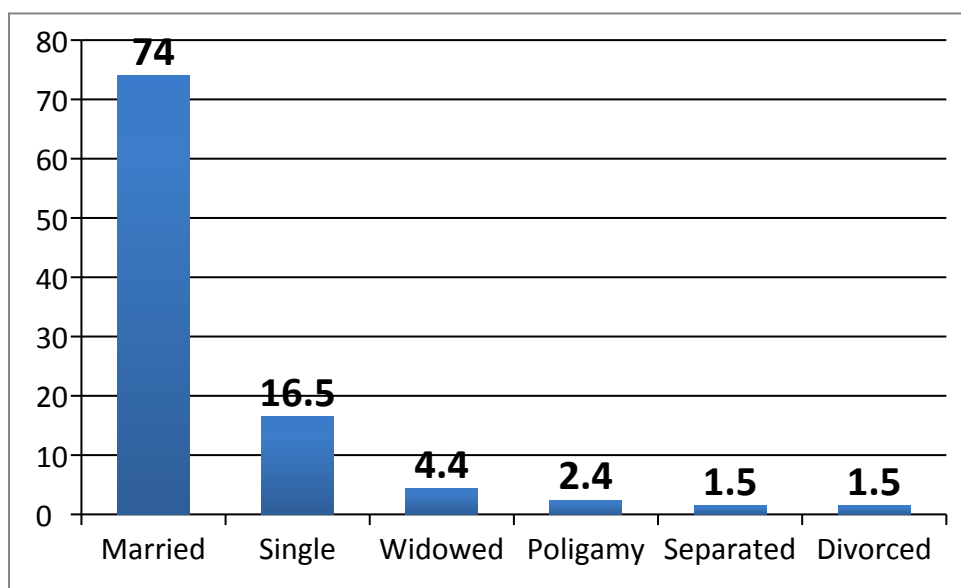
As expected, the highest proportion (74%) of the heads of households interviewed were married. There was a huge significant disparity in the proportion of the marrieds in terms of gender desegregation.¹⁹ For instance, 81% of the male heads of households were married compared to 16% their female counterparts. This could be as a result of polygamous marriages (where several women could be married to one man) as well as widowhood, where 35.6% of women were widowed compared to 0.5% of their male counterparts. See **Figure 13** below for details.

¹⁷ On account of the proportionate sampling techniques used, it follows that those primary societies with a larger number of members contributed more to the total sample size and vice versa.

¹⁸ P=0.000

¹⁹ P=0.000

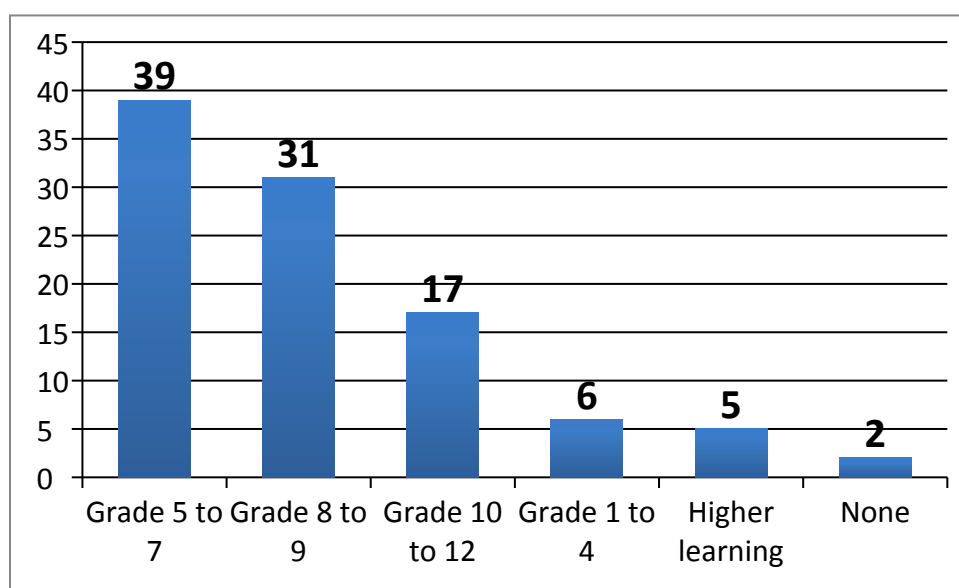
Figure 13: Marital Status



7.2.3 Education level

As the case of groundnut farmers in Chipata and Katete noted in **Section 7.1** above, the highest proportion (39% of which 40% were male and 33% female) of household heads went as far as grade 5 to 7, followed by those who went as far as grade 8 to 9 (31%, same proportion for both male and female). Those without education were 2% (again same proportion for male and female), see **Figure 14** for details in terms of overall education levels attained.

Figure 14: Education level attained



7.2.4 Supporting services

At least 94% of the households were supplying to their local cooperative. Of these, 63% were involved in milk production before they started supplying to the cooperative (65% male and 42% female). The implication is that 31% of the 94% were not involved in any milk production before they got involved with their respective co-operatives. In this regard, the co-operatives may have directly or indirectly impacted on them to engage in this enterprise.

On average, female headed households nominally owned more dairy animals than their male counterparts (11 compared to 6, see **Table 9** and **Figure 15**) though this was not significant.²⁰ Nonetheless, female headed households on average produced significantly more liters of milk per day, double that produced by their male counterparts (see **Figure 16**).²¹ This suggests that female headed households are better managers of this particular enterprise than their male counterparts. In this regard, greater investment for women would yield greater results in terms of the desired impact.

Table 9: Average number of animals owned

Gender of HHH	Average and Standard Deviation	
	Mean	Standard deviation
Male	6	9
Female	11	25
Overall	6	11

²⁰ P=0.08

²¹ P=0.007

Figure 15: Average number of dairy animals owned by gender

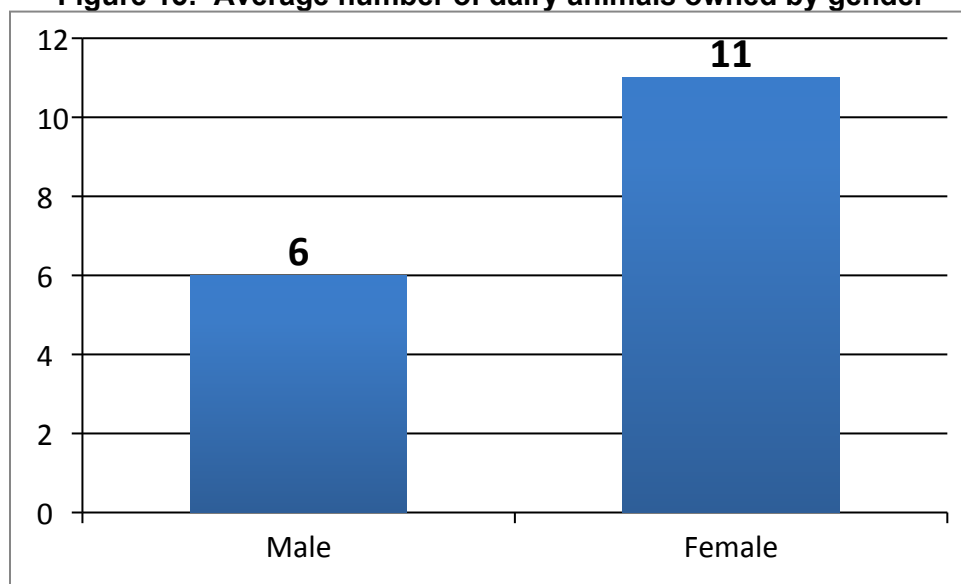
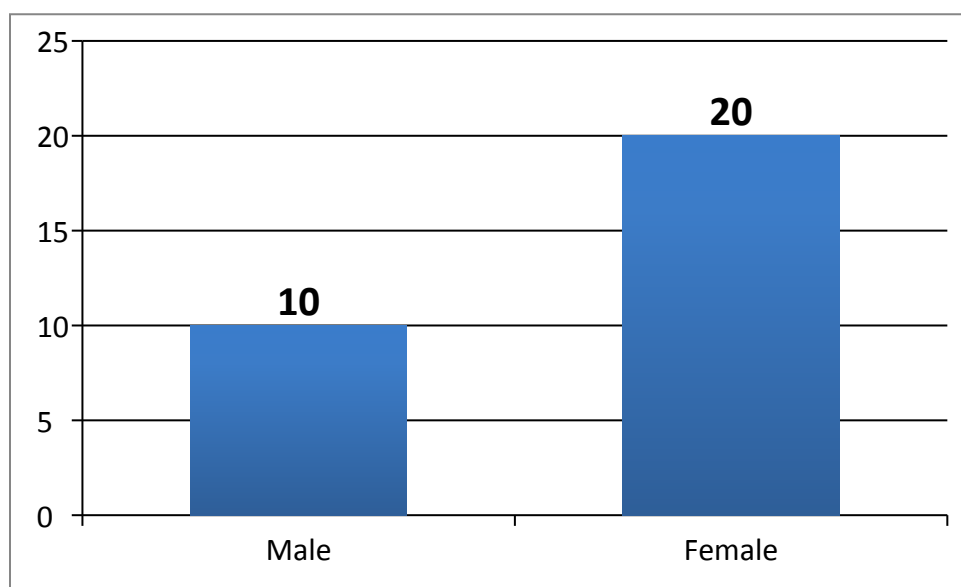


Figure 16: Milk Production by Gender of HHH (liters/day)



Supplementary feeding had the highest proportion of respondents (72%) out of all the support services provided by the local co-operative society, followed by new milking methods (64%). Just over one fifth (23%) of the respondents did not receive any support services from their co-operative society (see **Table 10** for details). This suggests the fact that dairy farmers appreciated the value of the enterprise and were keen to be part of it regardless to whether

they received any support or not. Analysis of the services received by gender showed that there is no significance difference between male and female headed households.

Table 10: Type of support received from local co-operative society (% respondents)

Nature of Support	Desegregation by Gender		Respondents
	Male HHH	Female HHHs	
Supplementary feeding	71	82	72
New milking methods	63	73	64
Artificial insemination	46	42	46
Market information	41	31	40
None	25	13	23
Other ²²	8	9	9

Level of beneficiary satisfaction with services

The level of beneficiary satisfaction with the four key services provided by the co-operative societies was very high. This ranged from 95% (artificial insemination) to 99% for the other three (see **Table 11** for details). On the other hand, artificial insemination had the highest proportion of those who felt the service was poor (5%). These remarkably impressive results suggest that ADSP's support to the co-operative societies did contribute to improved performance of the farmer organizations to the satisfaction of the respective members.

Table 11: Level of satisfaction-services provided by the cooperative (% respondents)

	Artificial Insemination	Supplementary feeding	Milking methods	Market information	Other
Satisfactor y	95	99	99	99	88
Poor	5	1	1	1	10
Very poor	0	0	0	0	2

7.2.5 Processing

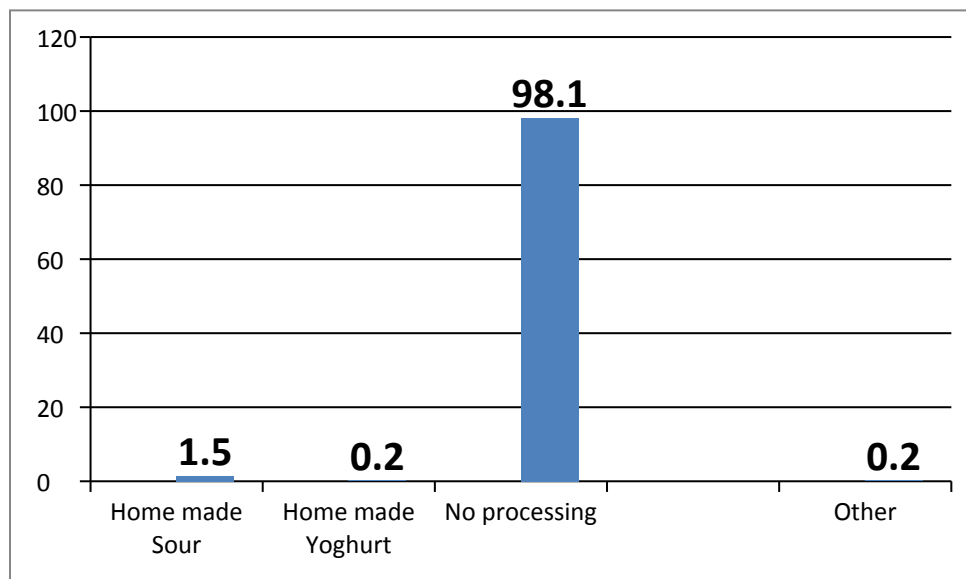
For the dairy value chain, only less than 10% of the milk collected by the Choma Dairy Cooperative Society is processed for value addition into cheese and yoghurt. The remainder in the excess of 90% is sold as raw milk to Parmalat²³. This was also confirmed by the smallholder dairy producers as illustrated in **Figure 17** below. According to **Figure 17** below, at least 98% of the smallholder dairy farmers were note involved in milk processing. Of the less than 2% who

²² Other support included: encouragement to sell to the local co-operative; general animal well-being and; pass-on programme.

²³Interview with the Manager, Choma Dairy Cooperative held on 11th August, 2014.

were involved in milk process, the highest proportion (1.5%) did the home made sour milk while a bare 0.2% did the home made yoghurt.

Figure 17: Proportion of Milk Processed before selling



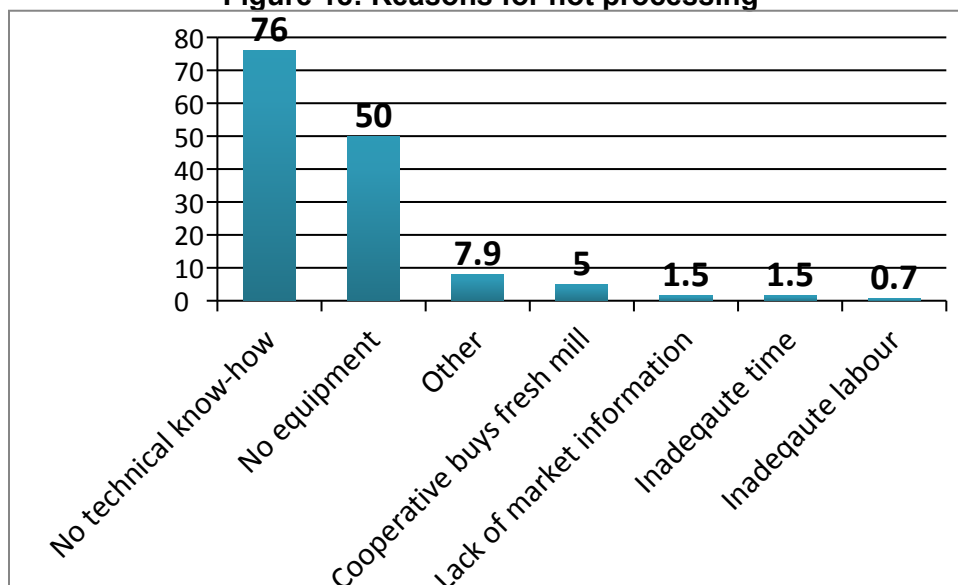
Of the more than 98% who were not involved in milk processing, the majority (76%) cited lack of technical know-how followed by those who cited a lack of processing equipment (50%). The least cited reason was inadequate labour (0.7%) while inadequate time and lack of market information were both at 1.5% (see **Table 12** and **Figure 18** below for details).

The Chi test showed no significant difference between male and female headed households in the reasons given for not processing.

Table 12: Reasons for not processing by gender household head (% respondents)

Reason	Gender		Overall
	Male	Female	
No technical know-how	76	82	76
No equipment	50	46	50
Other	8.6	2.3	7.9
Cooperative buys fresh milk	5.3	2.3	5
Lack of market information	2	0	1.5
Inadequate time	1.7	0	1.5
Inadequate labour	0.6	2.3	0.7

Figure 18: Reasons for not processing



Other reasons for not processing milk included: inadequate money; fresh milk has higher demand/fresh milk is more profitable hence it sells anyway, and; low outputs making it redundant for any processing as whatever is produced, would be consumed anyway.

7.2.6 Buyer/selling

As expected, the majority of the dairy farmers sell their milk at Choma dairy and its affiliate local cooperatives. It is interesting to note that some farmers have begun to sell their milk to private companies (8.5%), and still others at more open markets (3.6%). The difference in proportion between male and female headed households in terms of where milk is sold was not significantly different, see **Table 13** for details.²⁴

Table 13: Where most milk is sold (% gender respondents)

Where milk is sold	Gender		Overall
	Male	Female	
Choma dairy coop union & affiliate cooperatives	87.5	91.2	87.8
Private company	8.7	6.7	8.5
Open market	3.8	2.2	3.6

7.2.7 Household income improvement on account of dairy production

²⁴ Values were between P=0.2 and P=0.6

The respondents were asked the extent to which their household income had improved on account the enterprise they were involved in. **Table 14** below summarizes the results. As many as 94% indicated that their income had improved (with almost 57% saying it had greatly improved and almost 37% mentioning that it had somewhat improved). Only close to 6% cited that their income had remained the same.

Table 14: Improvement in household income by gender of HHH (% respondents)

Level	Gender		Overall
	Male	Female	
Greatly improved	56	62.2	56.7
Somewhat improved	38.9	20	36.8
Same	4.9	13.3	5.8
Worsened	0.3	4.4	0.7

Overall, sale of livestock was the second most important cited source of income (31%) after sale of milk (nearly 49%), see **Table 15** and **Figure 19** for details.

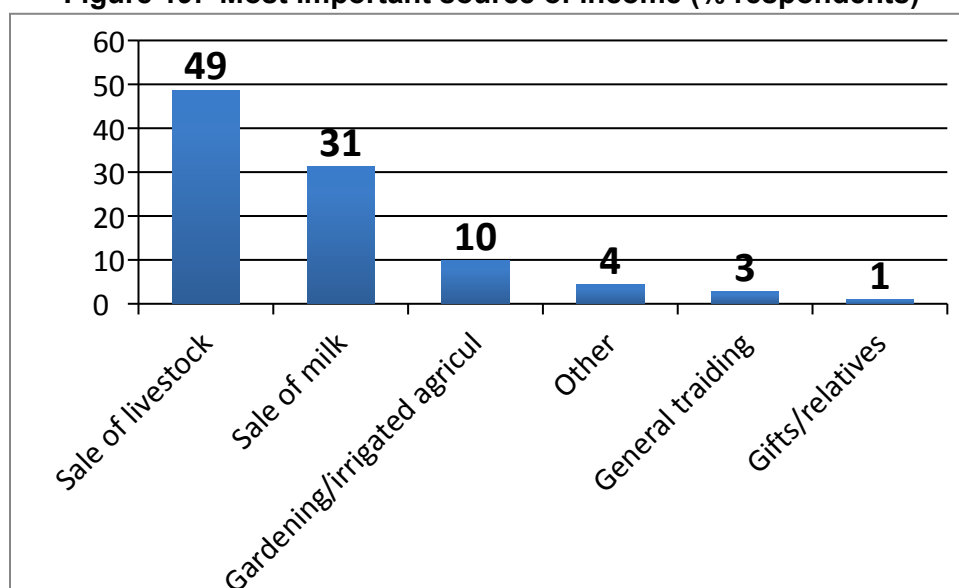
Table 15 below shows that both male and female headed households had sale of milk as a significant source of income, cited among the top two sources. For female headed households, sale of milk was the most cited, accounting for 44.4% while for male headed households it was the second most important source cited by nearly 30% (see **Table 15** for details). The proportion of female headed households who cited gifts/relatives as a source of income was three times that of their male counterparts. This suggests that female headed households are more vulnerable than male headed ones, a finding that has been established by many studies. The difference in income sources between male and female headed households was significant.²⁵

Table 15: Most important source of income by gender HHH (% respondents)

Source	Gender		Overall
	Male	Female	
Sale of livestock	51.6	24.5	48.7
Sale of milk	29.6	44.4	31.2
Gardening/irrigated agriculture	9.8	11.1	9.8
Other	3.8	8.9	4.4
General trading	2.7	2.2	2.7
Gifts/relatives	0.8	2.2	1

²⁵ P=0.05

Figure 19: Most important source of income (% respondents)



7.2.8 Market access

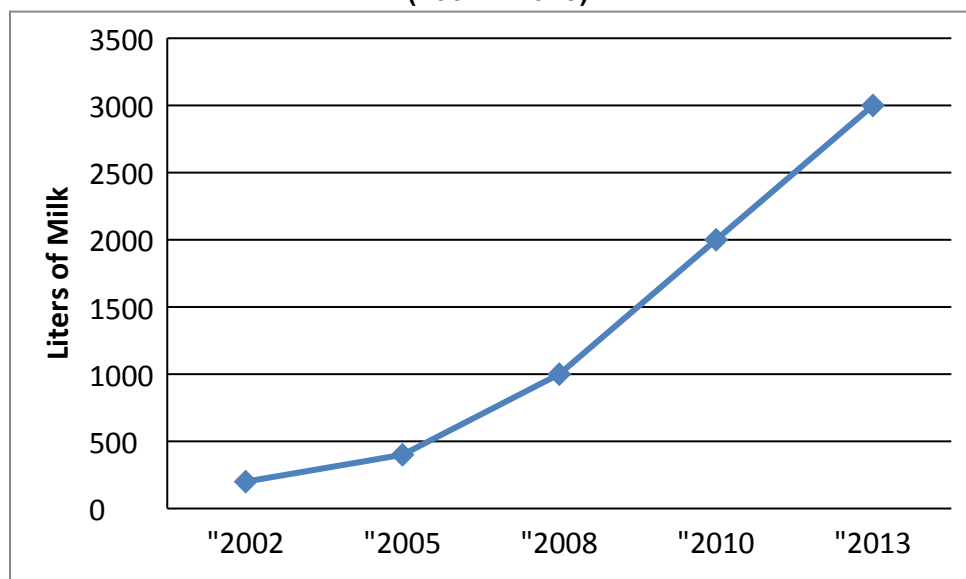
Market access is crucial for sustained smallholder farmer production and productivity. The evaluation sought to find out about farmers access to a key market facilitatory fact, i.e. market information. At least 56.9% have access to market information of which 58.4% were male and 44.4% female. Of those who had access to market information (i.e. 56.9%), 63% found the information useful.

The expectation was to have a higher proportion of those who had access to market information than the 56.9% (a situation which was worse in case of female headed households as the majority, i.e. more than 55%, could not access such information). The organized nature of the dairy farmers around cooperatives should have made it easier for farmers to access market information.

7.2.9 Summary of value chain issues – dairy

Out of all the value chain interventions ADSP has supported, the dairy enterprise in Choma seems to have the greatest potential in terms of improving the livelihood of the smallholder farmers, including enhanced household income levels. With respect to the various stages of the dairy value chain the best performing stage has been the production (see **Figure 20** below). For instance, when ADSP began to fund CDDCU, milk production per day was at around 300 litres. However, in 2013, the figure rose to about 3,000 litres per day during the rainy season and 2,500 litres during the dry season.²⁶ Clearly, this is an exponential growth in milk production. **Figure 20** below is illustrative of this point.

**Figure 20: Average Daily Milk Production in Liters by CDDCU
(2002 – 2013)**



Source: ActionAid, January 2014

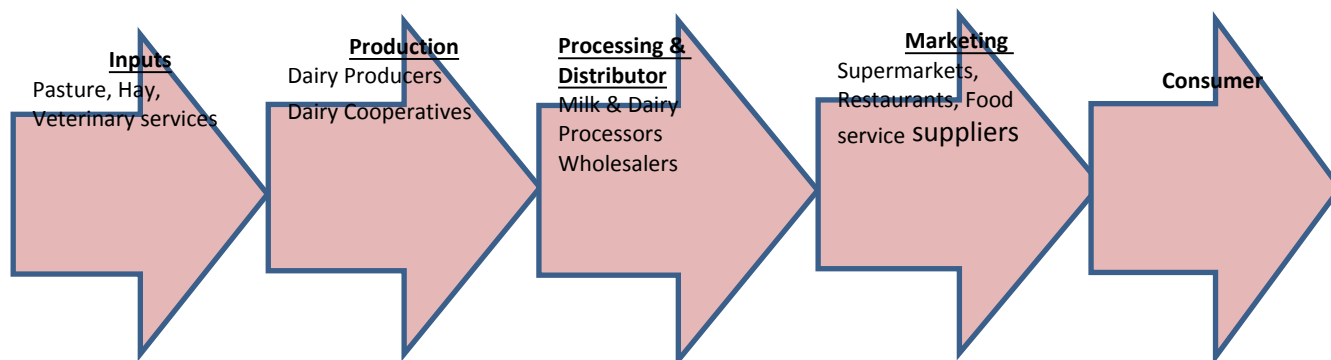
According to the End of Programme Evaluation findings, processing is the worst performing stage of the dairy enterprise value chain (see **Figure 21** for Dairy Value chain stages). This is on account of the fact that only 10% of the total amount of milk delivered to CDDCU is processed.²⁷ The rest (90%) is sold to Parmalat. The low processing capacity at CDDCU is as a

²⁶ ActionAid, Zambia Case Study on Impact of Aid on the Private Sector, January 2014, RuralNet Associates Limited.

²⁷ KII with CDDCU management, July 2014.

result of inadequate equipment as well as an absence altogether of certain crucial equipment that would both broaden and enhance the processing capacity. Though presently there are some milk products that are being processed such as cheese and yoghurt, the quality of these leaves much to be desired. In addition, the poor branding makes it difficult to penetrate lucrative markets.

Figure 21: Dairy Value Chain

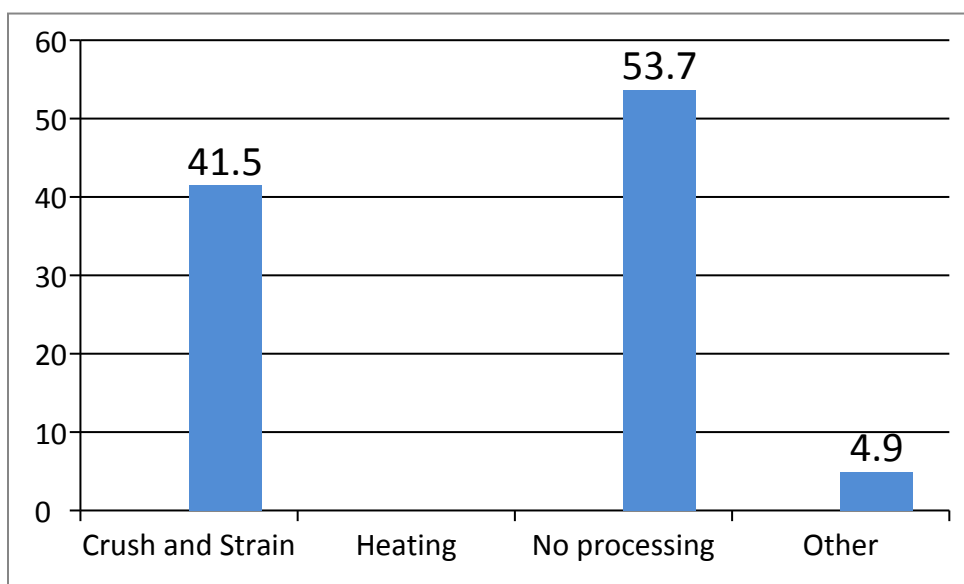


7.3 Honey

The honey value chain was under the MGF with Ubuchi Enterprises Ltd being the sub-grantee. A local organization, Zambia Works Economic Development Ltd is on the ground to provide training on promotion of bee keeping and improved honey collection techniques. It also organises logistics on the ground on behalf of Ubuchi by way of organizing the bee keepers through their cooperatives and communities. Zambia Works and Ubuchi have been working together to provide a market for the honey produced by bee keepers in Kaoma district.

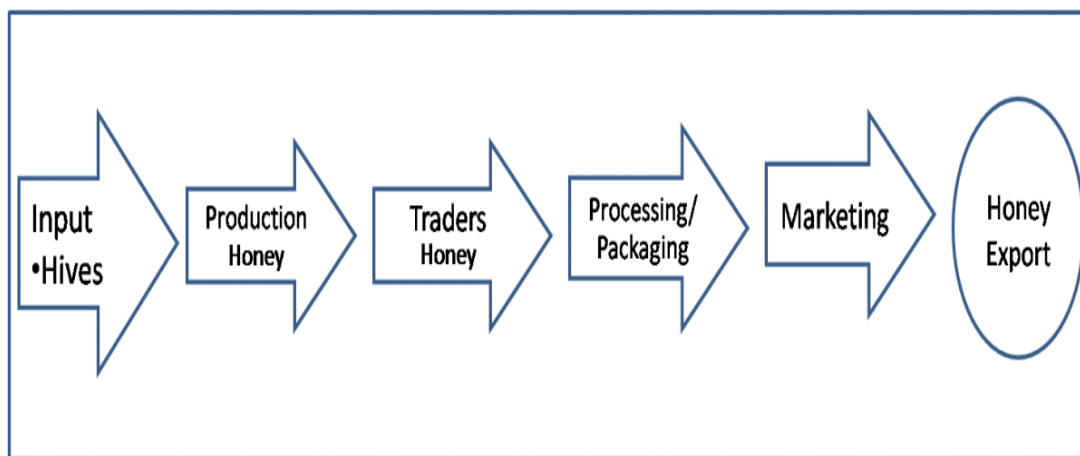
In the case of honey, the proportion of smallholders not processing the honey before selling stood at 54 per cent. This is because the buyer, Ubuchi Enterprises preferred to purchase the honey unprocessed so that the quality could not be compromised. Another reason established is the lack of technical know-how and more so the lack of equipment to process the honey. At least 42 per cent of the smallholders crushed and strained the honey for sell to fellow villagers and visitors passing through their communities. See **Figure 22** for details.

Figure 22: Proportion of honey processed before selling



In terms of the value chain stages, honey went through 6 stages as illustrated in **Figure 23**.

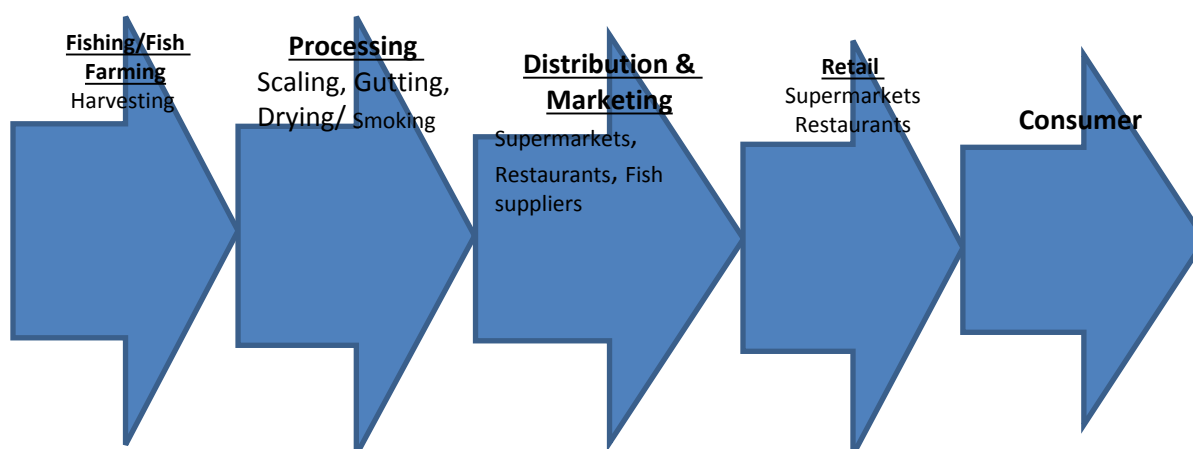
Figure 23: Honey Value Chain



7.4 Fish

The fourth and last value chain enterprise that was evaluated is fish whose sub-grantee was Riverbank Fisheries Ltd. Riverbank Fisheries was to establish a fisheries out-grower and process fish into smoked and dried fillets. Findings on the ground revealed that no activities were implemented. Given an ideal scenario the value chain stages should have been as illustrated in **Figure 24** below.

Figure 24: Fish Value Chain



PART III: MAJOR CONCLUSIONS AND RECOMMENDATIONS

1. The focus and design of ADSP aimed at promoting smallholder commercialization along value chain was an excellent idea. This is critical to bringing and linking smallholder producers to markets. This is what will promote smallholder production and productivity in a sustainable way with little subsidies from government. However, the operationalization of this concept in a manner that would warrant and promote adequate smallholder participation in value chain activities needed to be more thought through. The evaluation team noted poor linkages between the smallholder and various levels/stages of the value chain. This resulted in the smallholders not taking full advantage of the benefits and potential ADSP offered. For instance, less than 45% of female headed households were able to access market information, a basic element for anyone to actively participate in any market. The processing/value addition level/stage of the value chain in case of the Choma Dairy Value Chain project should have been given more attention to increase the amount of milk processed from a meagre 10%. This has serious implications on household income, and consequently the wellbeing of smallholders. **Recommendation:** similar future interventions should ensure that thorough analysis of key challenges, issues and opportunities facing smallholders at every level/stage of the value chain for a given value chain intervention is undertaken. The analysis should include the potential benefits at each level/stage of the value chain that would accrue to smallholders. Programming should thus include addressing of the identified challenges in order to ensure an optimal flow of benefits to smallholders. This may entail minimizing the coverage of such interventions in order to maximize the intended impact to the targeted smallholder beneficiaries.
2. Related to the above point, the evaluation identified considerable weaknesses in the capacities of a number of sub-grantees. Such weak capacities led to under performance and in some cases a total absence of financial benefits accruing to the smallholders. This implies that there was inadequate scrutiny of sub-grantees. The sub-grantee assessment seems to have lacked depth and comprehensiveness. The result has been a number of sub-grantees failing to deliver benefits to the intended smallholders. **Recommendation:** for future programming, it will be crucial to undertake a detailed institutional assessment of the would be sub-grantees which among other things should focus on: number of staff; their skills and qualifications, and; experience of the institution in the field under consideration.
3. The project design had a good framework aimed at promoting gender equality. Understandably, this was a desirable consideration given the perpetual challenges female beneficiaries face in taking advantage of development initiatives given their relatively poorer resource base. However, at implementation level, this excellent idea

was not aggressively pursued. The demand-driven nature of the interventions meant that no deliberate effort was undertaken towards including female beneficiaries in the various interventions. As noted in the major findings in this document related to the four value chain interventions that were evaluated, the gender disparity was a matter of great concern. In one case the ratio of male to female beneficiaries was 10 to 1.

Recommendation: for future programmes of a similar nature, it will be crucial to ensure that measures aimed at reducing the gender disparity between female and male beneficiaries are translated from the design all the way to the implementation level. It is necessary to come up with deliberate procedures and arrangements that will promote female participation. This could include lower proportions of matching grant requirements compared to their male counterparts.

4. The monitoring and evaluation system designed to track the performance of sub-grantees did not perform to expectation. For instance, there was inadequate tracking of performance of the 27 sub-grantees in terms of their key activities on the ground. Such tracking of performance needs adequate resources. This appeared to be a challenge in the manner ADSP was designed as the M&E component was poorly human resourced and had inadequate leveraging and synergising with other M&E systems. In addition, the end of programme evaluation found little evidence of sub-grantees being sufficiently capacity built to monitor and evaluate their own interventions, and linking up sub-grantee simplified M&E systems to the centralized one at the Programme Coordination Unit (PCU). **Recommendation:** For future programming, there will be need to design a sufficiently effective M&E system that would facilitate the tracking of progress at sub-grantee level. Sub-grantees should also be capacity built and assisted to set up simple M&E systems that would facilitate reporting of progress on Key Performance Indicators. This would reduce the workload and extent of M&E coverage that the PCU would be engaged in.

Appendices

Appendix 1: Terms of Reference

AGRICULTURAL DEVELOPMENT SUPPORT PROGRAM

TERMS OF REFERENCE FOR ADSP END OF PROGRAM EVALUATION

INTRODUCTION

The Government of the Republic of Zambia through the Ministry of Agriculture and Livestock and with financial support from the World Bank is implementing the Agricultural Development Support Program (ADSP). The Project is addressing some of the key agricultural challenges in Zambia with a view to advancing commercialization of smallholder agriculture along selected value chains. The specific Project Development Objective (PDO) is to support increased commercialization of smallholder agriculture through improved productivity, quality and efficiency of value chains where smallholders participate.

In order to achieve the Project Development Objective (PDO) and other intermediate goals, the Project is implementing various activities organized around three components; namely, Support to Farmers and Agribusiness Enterprises (SFAE), Institutional Development (ID), and Project Management and Coordination (PMC).

The Support to Farmers and Agribusiness Enterprises Component has three sub-components; namely (a) Supply Chain Credit Facility, (b) Market Improvement and Innovation Facility, and (c) Rural Roads Improvement Facility. The Institutional Development Component consists of support to selected Ministry of Agriculture and Livestock Departments. Support to these departments is being provided with a view to improving the public sector's capacity to provide core public services required to enhance smallholders' access to markets as well as improve their productivity and quality. The Project Management and Coordination Component aims at strengthening the Ministry's project implementation capacity through the establishment of the National Coordination Office (NCO) within the Ministry.

RATIONALE

The Project commenced in October 2006 and has now been implemented for a period of over six (6) years. During the period, a number of activities have been implemented and milestones and results have been achieved. However the Project also experienced some challenges which in some cases slowed down implementation while in other cases lengthened the period of implementation, thereby resulting in cost over runs. Following a substantial implementation period, the Ministry has decided to commission an end of the project evaluation to assess the status of implementation, achievement of objectives, relevance of the project to sector priorities and needs and impact on beneficiaries even if some of the activities are yet to close. The period of project implementation is sufficient to warrant an end of the project evaluation.

OBJECTIVES OF THE ASSIGNMENT

The specific objectives of this assignment are to:

- i) assess the extent to which the objectives and goals of the ADSP program were realized,

- ii) assess the relevance of the Program in the context of Zambian sector priorities and needs, including program design elements, effectiveness of program implementation arrangements as well as service delivery systems,
- iii) verify the beneficiaries (by gender) reached through the program and assess the effectiveness of program results,
- iv) assess the program achievements in upgrading agricultural value chains (type, quality, efficiency, governance) where smallholders participated; this should include at minimum three in-depth analysis of the most relevant value chains supported by the program
- vi) assess cost-effectiveness of program strategies and interventions, by also giving specific examples where possible and
- vii) assess sustainability options for key program benefits beyond program duration.

SCOPE OF THE STUDY

The assignment will involve assessment of the performance of the whole Program by analysing (i) achievements of each component and sub-component and (ii) the effectiveness in leveraging synergies across components using a value chain framework. Details of each component or sub-component are presented below.

1. Project Development Objective (PDO)

The Project M&E System operated a Results Framework which regularly updated key performance indicators for assessing the progress towards achieving the PDO. This could be a good starting point for this assessment. However other primary data may be required to help assess quality and efficiency issues.

The Program has targeted a significant number of beneficiaries at different stages along the value chain e.g. farmers, agribusiness, public service providers. It will be important to evaluate the extent to which these have benefitted equitably. Gender disaggregation of beneficiaries is important to determine the actual level of women participation in the value chains, including the provision of improved public support services. To what extent are beneficiaries satisfied with the services delivered by the program Implementing Agencies.

2. Market Improvement and Innovation Facility (MIIF)

The MIIF aims to provide financial resources on a matching grant basis for the development of innovative business linkages between smallholder producers and other actors e.g. Agribusiness Enterprises, Cooperatives and Farmer Associations in selected agricultural value chains. The evaluation of this sub-component will focus on (i) the design and implementation process and (ii) the results achieved vis-à-vis the stated objectives of MIIF. The evaluation should include in-depth analysis of selected value chains along different dimension (i.e. innovation, commodity, market linkages, district scope, quality and efficiency, cost-effectiveness). Consultant will also make statement on sustainability of the interventions supported.

3. Rural Road Improvement Facility (RRIF)

The aim of the RRIF is to improve smallholder farmer's access to input and produce markets and the competitiveness of their agricultural commodities by among other things, improving road networks in selected districts (Choma, Chongwe, Katete, Chipata and Lundazi) identified and selected on the basis of their agricultural potential. A total of 1,131 kilometers was targeted in all the five districts.

The Project is already undertaking an impact assessment under this sub-component by using a well structured instrument. The Consultant will therefore use outputs of the impact assessment and other relevant sub-component reports to analyse the performance of this specific sub-component.

4. Zambia Agricultural Research Institute

Program support to ZARI is aimed at strengthening the capacity of ZARI to comply with emerging Safety and Phytosanitary Service (SPS) requirements in order to help Zambian agribusinesses to take advantage of export opportunities. In this sense ZARI provides several types of services to its clients and carries out various associated surveillance works. The study will therefore, focus on assessing the change in quality of services delivered to its clients, including clients satisfaction with ZARI services. . The evaluation should also provide evidence for the effectiveness of the services provided in the context of agribusiness development and the effect on trading of processed and non-processed agricultural goods. A baseline survey report of ZARI clients satisfaction will be made available as a source document to the consultant.

5. Agricultural Market Information Centre

Support to the Agricultural Market Information Centre (AMIC) is aimed at improving the capacity of AMIC to collect and analyze price data for strategic and planning purposes. In addition the support includes upgrading of the market information system in order to help AMIC improve the delivery of up-to-date and accurate market information to satisfy the needs of farmers, agro-traders and agro-processors to help with their trade negotiations.

Another area concerns dissemination of market information through a bulletin and through community radio stations. The evaluation will therefore focus on assessing the effectiveness of the intervention, including the level of improvement in service provision measured by the use of and satisfaction with AMIC services by key user groups. A baseline report will be made available as a source document to the consultant.

6. Cotton Development Trust

The project aims to strengthen the capacity of the CDT to supply an increased amount of pre-basic cotton seed to the cotton industry and to establish an Integrated Pest Management Department. The study is expected to evaluate the effectiveness of Program support to the cotton value chain and the predicted socio-economic effects on the cotton farming and cotton industry in Zambia. (Any baseline???)

METHODOLOGY

A mixed methods approach (i.e. combining quantitative evaluation techniques with qualitative methods) should be applied for this evaluation. These may include literature reviews, key informant interviews, field surveys of target beneficiaries and other rapid appraisal methods. The

consultant will be expected to propose an evaluation approach as part of an inception report which will be discussed and approved by the ADSP National Coordination Office at the MAL.

GUIDING PRINCIPLES AND STANDARDS

The evaluation should be an external, systematic and objective assessment of the ADSP. It should be in conformity with internationally recognised standards, in particular those developed by the OECD-DAC evaluation network and the United Nations Evaluation Group.

SUMMARY OF EXPECTED OUTPUTS

The evaluation team should prepare an inception report describing the intended scope, approach and methodology for the evaluation (by xx date) and a final ProgramEvaluation Report with Annexes (by xx date). The inception report should be submitted to NCO for approval before proceeding with the full evaluation. The evaluation report will be a key input into the preparation of the ADSP Project Completion Report. The consultant will prepare and submit five (5) copies of the Draft Report and 10 copies of the Final Report after incorporating input from stakeholders. In addition to the hard copies, the consultant will submit a soft copy of the reports at every stage of submission.

STAFF COMPOSITION, QUALIFICATIONS AND EXPERIENCE

The Consultant should be experienced in preparing evaluations of agricultural and rural development programs and also have technical expertise in primary data collection and analysis. Knowledge of project management is important. The team should have a skill mix that includes Project management, socio-economic analysis, agriculture and rural development experience, statistical analysis, value chain analysis and mapping.

The Team Leader should have an advanced degree in Development Studies, Agricultural Economics or Agribusiness Management, with at least 10 years experience in project management, socio-economic analysis and evaluation theory. The team leader will work with two other professional staff at university degree level in Agricultural Economics, Statistics, Agribusiness Management, or Economic Geography, or Social sciences with demonstrated expertise and knowledge of monitoring and evaluation, statistical analysis and sampling techniques.

LIST OF REPORTS AND SCHEDULE OF DELIVERABLES

The study will take approximately 5 months (20 weeks) to complete. Major activities to be undertaken by the Consultant team including submission of key reports are tabulated in the chart below:

Item	Time (weeks)
Mobilization and Inception report	2
Training & development of data collection tools	2
Field work	6

Data entry, cleaning & analysis	3
Draft report	3
Stakeholder input	2
Final report	2

FACILITIES AND OTHER LOGISTICAL SUPPORT TO BE PROVIDED TO THE CONSULTANT BY THE CLIENT

The Consultant will organize their own office space and will use their own transport, office equipment (computers, photocopiers, power point projectors), support staff and other relevant equipment.

The Client will provide copies of any relevant material that may be required by the Consultant. These will be supplied either in electronic or hardcopy forms. The Client may also provide advisory services on logistical arrangements for field work should the consultant require this.

Appendix 2: ADSP Revised Results Framework

PROJECT DEVELOPMENT OBJECTIVE	OUTCOME INDICATORS	USE OF OUTCOME INFORMATION
Supporting increased commercialization of smallholder agriculture through improved productivity, quality and efficiency of value chains where smallholders participate	1. Agricultural exports for target value chains (tons/year)	Review evidence of economic, social and environmental impacts and their sustainability
	2. Targeted commodities produced by smallholder households (tons/year)	Evaluate the project's contribution to sector growth and exports
	3. Average income per household in targeted areas (ZMK)	Ensure that the process of targeted supply chain development achieves expected results. Otherwise re-orient project to remove constraints to market driven agricultural growth
	4. Smallholder households growing targeted crops (number)	Provide a means of assessing levels of participation in various commodities targeted by the project
	5. Direct Project Beneficiaries (number), of which female (%)	WB Core indicator. Ensure gender participation and impact based on all project sub-components
INTERMEDIATE RESULTS	RESULTS INDICATORS	USE OF RESULTS MONITORING
Component 1: Support to Farmers and Agribusiness Enterprises		
Supply Chain Credit Facility (SCCF):	6. Volume of Bank Support to DBZ (US\$)	Impact of the project in supporting institutional capacity support to manage credit
Market Improvement and Innovation Facility (MIIF):	7. Technologies demonstrated by the project in the project areas (number)	Impact of the project on the generation of new but simple technologies/ innovations that can easily be accessed and beneficial to smallholder producers. This indicator is also covering ZARI, SCCI and CDT activities
	8. Beneficiaries directly targeted through the MIIF matching grants (number)	Assess the impact of the facility on beneficiaries and their absorptive capacity of Matching Grants
Rural Road Improvement Facility (RRIF):	9. Rural roads rehabilitated (Km)	WB key indicator. Assess the relevance of project investments in removing the transport infrastructure constraints which limit expansion and

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		efficiency of supply chains.
	10. Average vehicle traffic on improved roads (vehicles/month)	Assess the relevance of project investments in removing the transport infrastructure constraints which limit expansion and efficiency of supply chains

INTERMEDIATE RESULTS	RESULTS INDICATORS	USE OF RESULTS MONITORING
Component 2: Institutional Development		
Early Warning Unit (EWU):	11. Contacts/users of MACO website (number)	Assess the extent to which the website becomes a convenient way of accessing MACO key policy documents and statistics
Seed Control and Certification Institute (SCCI):	12. Seed certified for sale by the seed testing laboratory in Choma (tons/year)	To assess SCCI capacity to undertake research, produce, control and distribute seeds
	13. Seed of finger printed varieties made available on the Zambian seed market disaggregated by crops (tons/year)	To assess the results of the new biotechnology equipment installed at SCCI to finger print seed
Zambia Agricultural Research Institute (ZARI):	14. Enterprises/commercial smallholders receiving adequate food safety and phytosanitary services through ZARI (%)	To assess both the quality and capacity of ZARI to provide food safety and phytosanitary services to clients
Agricultural Marketing Information Centre (AMIC):	15. Target smallholders and agribusinesses receiving accurate and relevant market information on time (%)	To assess the quality and capacity of AMIC to collect, process and disseminate relevant market information on time
Cotton Development Trust (CDT):	16. Quality foundation cotton seeds produced, controlled and distributed by CDT (tons/year)	To assess CDT capacity to undertake research, produce, control and distribute foundation cotton seeds
	17. Average pesticide spray among smallholder cotton producers as a result of adoption of IPM practices in test areas	To assess the impact of adopting IPM practices in improving cotton yields and reducing costs of herbicides
Component 3. Project Management and Co-ordination		
Functioning M&E System	** M&E system regularly updated with unequivocal data collection/analysis methods, baseline and targets established	To assess NCO ability to timely identify major constraints and continuously improve project implementation and achievement of

		outcomes
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Appendix 3: ADSP FGD Value Chain Checklist

- 1) How were you selected to participate in this project? Why?
- 2) What form of agreement exists between you and the sub grantee?
- 3) What was your experience working with the sub grantee (Eastern Province Cooperative Union, Choma Dairy Cooperative Union etc.)?
- 4) What benefits did you get from the program?
- 5) How would you rate the participation of men against women on the program? Was this the same in your farmer group?
- 6) In what form did you sell your produce to the sub grantee?
- 7) Where there other buyers of your produce other than the sub grantee? Who were they?
- 8) Were you given any standards to adhere to for your produce? What happened if one failed to observe the standards?
- 9) What major challenges did you face working with the project and what suggestions would you make to improve future operations of similar interventions?
- 10) Now that the project is over, what are your future plans?

Appendix 4: KII FOR DAIRY VALUE CHAIN CHECKLIST

RURALNET ASSOCIATES LTD
END EVALUATION OF THE ADSP PROJECT
DISCUSSION GUIDE FOR RRIF FGD

1. How did you become beneficiary of the MIIF?
2. What form of agreement existed between your entity and the ADSP?
3. What was your experience working with ADSP?
4. What benefits did you get from the programme?
5. How would you rate the participation of men against women on the programme?
6. What are your main products and where do you sell?
7. Which other companies are in similar business and how is the competition
8. What major challenges did you face working with ADSP and what suggestions would you make to improve future similar assistance?
9. Now that the project is over, what are your future plans

APPENDIX 5: QUANTITATIVE QUESTIONNAIRES

GROUNDNUTS, DAIRY, HONEY AND FISH VALUE CHAINS

QUANTITATIVE QUESTIONNAIRE FOR CHIPATA AND KATETE COMMUNITIES - GROUNDNUTS

SECTION 1: DEMOGRAPHIC AND BACKGROUND CHARACTERISTICS

Question Number
Questions and Filters

Responses

Response Codes	Skip			
Q1.1	Are you the head of the household?	Yes No	1 0	
Q1.2	Record sex of the Respondent	Male Female	1 2	

Q1.3

Respondent's relationship to head of household

Self

Spouse	1	
Child	2	
Niece/Nephew	3	
Parent	4	
Other (specify)	5	
	888	

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	Record sex of the household head?	Male Female	1 2	SKIP IF Q1.1 =4
Q1.5	What is your marital status? <i>(READ the list and ask them to select which one best fits their situation.)</i>	Single Never been married Single then but Divorced Single then but Widowed Married for the first time Married previously Divorced Married but Separated Currently Married but also Widowed In polygamous marriage Other _____ DON'T KNOW NO RESPONSE	1 2 3 4 5 6 7 8 9 888 999	
Q1.6	How old are you? (Probe when respondent was born; estimate the best answer)	Age In Completed Years Don't Know No Response	[][] 888 999	
Q1.7	What is the highest level of school successfully completed by you? Interviewer, please note the following equivalent standards and grades for: Sub A to standard 3 = Grades 1 - 5 Standards 4 to 6 = Grades 6 - 8 From 1 to 3 = Grades 8-10 From 4 to 5 = Grades 11-12	Grade 1 to 4 Grade 5 to 7 Grade 8 to 9 Grade 10 to 12 Higher learning None Other (specify) _____ Don't know No response	1 2 3 4 5 6 7 888 999	

Q1.
8

How many are you in this household?

[]

Q1.9

How many members of this family are 15 years and above?

[]

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Q1.10

How many are 60 years and above?

[]

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2.0 PRODUCTIVITY AND AGRIBUSINESS INFORMATION

No .	Question and Filters	Categories	Codes	Skip
Q2 .1	Do you belong to any agricultural association	Yes No	1 2	
Q2 .2	Which organisation is this?	Bwacha Dairy and Agric Coop. Soc. Mutandalike Dairy Coop Soc. Choma Dam Dairy and Agric Coop Soc. Masopo Dairy Coop Mbabala/Sendumbwe Dairy cooperative Coop Soc. Kanchomba Dairy and Agric Cop Soc.	1 2 3 4 5 6	
Q2 .3	Has your group received any financial or material support	Yes No	1 2	
Q2 .4	Who provided that support	Choma Dairy coop. Union Other commercial entities Others specify...	1 2	
Q2 .5	What commodities have you been producing (Multiple responses possible)	Dairy Poultry Honey Field crops Mushroom Others Specify	1 2 3 4 5	

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Q2 .6	When did you start dairy farming?	Year		
Q2 .7	What was your production output per day at that time?		----- Litres/day	
Q2 .8	What is the production output as at now?		 litres per/day	
Q2 .9	What can you attribute the difference to	Increase in dairy cattle herd Change in feeding regime Improvement of the herd Support from CCDCU Other Specify	1 2 3 4	
Q2 .10	In the past three years, have you been trained in any new dairy rearing techniques	Yes No	1 2	
Q2 .11	Which ones are these	Artificial Insemination Supplementary feeding New milking methods Others, specify....	1 2 3	
Q2 .11	When were you trained in them	One year ago Two years ago Three years ago Four years ago More than five years ago	1 2 3 4 5	
Q2 .12	How much processing do you do to your milk at farm level	Just package for on ward transmission to collection center Make sour milk Make Home Made Yoghurt Others specify	1 2 3	
Q2 .13	Where do you sell most of your milk?	Open Market Private company Choma Dairy Cooperative Union Others, specify	1 2 3 4	
Q2 .14	What kind of support have you received through CDCU intervention(s)?	Training in improved production techniques Acquisition of new equipment Market information, Others Specify(specify) None	1 2 3	

Q2 .15	How would you rate each support/service received through ADSP intervention?	Training in improved Production techniques Acquisition of new equipment Market information Others Specify(specify)	Write option NR 999	DK 888
			999	888
			999	888
			999	888
			999	888
Options for Q2.15 Very satisfactory Satisfactory Poor Very poor				
Q2 .16	Do you have access to market information services	Yes No	1 2	
Q2 .17	How useful is this information?	Very useful Useful Not useful	1 2 3	

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Q2.18	What are the 5 most important sources of income in your hh in order of priority? (DO NOT read the list. Tick items mentioned and write the corresponding number in the space provided to show priority).			No.	DK	NR	
		Sale of Milk	1	_____	888	999	
		Sale of livestock	2	_____	888	999	
		Sale of rain fed crops	3	_____	888	999	
		Gardening/Irrigated agriculture	4	_____	888	999	
		Beer brewing	5	_____	888	999	
		Fish-farming	6	_____	888	999	
		Fishing	7	_____	888	999	
		Fish mongering	8	_____	888	999	
		Piecework/ casual labour	9	_____	888	999	
		Sale of fruits	10	_____	888	999	
		Piecework	11	_____	888	999	
		General trading (retail)	12	_____	888	999	
		Barter trading	13	_____	888	999	
		Gifts/relatives	14	_____	888	999	
		Blacksmithing	15	_____	888	999	
		Bricklaying	16	_____	888	999	
		Pit-sawing	17	_____	888	999	
		Roof-making	18	_____	888	999	
		Honey-hunting	19	_____	888	999	
		Bee-keeping	20	_____	888	999	
		Charcoal-burning	21	_____	888	999	
		Pit-sawing	22	_____	888	999	
		Mushroom collection	23	_____	888	999	
		Munkoyo collection	24	_____	888	999	
		Munkoyo brewing	25	_____	888	999	
		Collection of wild fruits	26	_____	888	999	
Other(specify)_____	27	_____	888	999			
Other(specify)_____	28	_____	888	999			
Other(specify)_____							

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Q2.19	How much money was earned from each of the income sources mentioned in Q201 in 2012/13? (Where appropriate, probe amounts per week or month and then add up total for the year)				Kwacha		
					DK	NR	
				Sale of livestock	1		
				Sale of rain fed crops	2		
				Gardening/Irrigated agriculture	3	888	999
				Beer brewing	4		
				Fish-farming	5	888	999
				Fishing	6		
				Fish mongering	7	888	999
				Piecework/ casual labour	8		
				Sale of fruits	9	888	999
				Piecework	10		
				General trading (retail)	11	888	999
				Barter trading	12		
				Gifts/relatives	13	888	999
				Blacksmithing	14		
				Bricklaying	15	888	999
				Pit-sawing	16		
				Roof-making	17	888	999
				Honey-hunting	18		
				Bee-keeping	19	888	999
				Charcoal-burning	20		
				Pit-sawing	21	888	999
				Mushroom collection	22		
				Munkoyo collection	23	888	999
				Munkoyo brewing	24		
				Collection of wild fruits	25	888	999
				Other(specify)_____	26		
		Other(specify)_____	27	888	999		
		Other(specify)_____	28				
				888	999		
				888	999		

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Q2.19	What gender of household members engage in the various income sources in Q2.16 and Q2.17 above? (DO NOT read the list. Circle items mentioned and write the number of persons participating in the spaces provided). B = Both (redundant) F = Female M = Male DK = Don't Know NR = No Response	<table> <thead> <tr> <th></th><th></th><th></th><th>M</th><th>F</th><th>DK</th><th>NR</th></tr> </thead> <tbody> <tr><td></td><td>Sale of livestock</td><td>1</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Sale of rain fed crops</td><td>2</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Gardening/Irrigated agriculture</td><td>3</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Beer brewing</td><td>4</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Fish-farming</td><td>5</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Fishing</td><td>6</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Fish mongering</td><td>7</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Piecework/ casual labour</td><td>8</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Sale of fruits</td><td>9</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Piecework</td><td>10</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>General trading (retail)</td><td>11</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Barter trading</td><td>12</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Gifts/relatives</td><td>13</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Blacksmithing</td><td>14</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Bricklaying</td><td>15</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Pit-sawing</td><td>16</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Roof-making</td><td>17</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Honey-hunting</td><td>18</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Bee-keeping</td><td>19</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Charcoal-burning</td><td>20</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Pit-sawing</td><td>21</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Mushroom collection</td><td>22</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Munkoyo collection</td><td>23</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Munkoyo brewing</td><td>24</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Collection of wild fruits</td><td>25</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Other(specify)_____</td><td>26</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Other(specify)_____</td><td>27</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> <tr><td></td><td>Other(specify)_____</td><td>28</td><td>_____</td><td>_____</td><td>888</td><td>999</td></tr> </tbody> </table>				M	F	DK	NR		Sale of livestock	1	_____	_____	888	999		Sale of rain fed crops	2	_____	_____	888	999		Gardening/Irrigated agriculture	3	_____	_____	888	999		Beer brewing	4	_____	_____	888	999		Fish-farming	5	_____	_____	888	999		Fishing	6	_____	_____	888	999		Fish mongering	7	_____	_____	888	999		Piecework/ casual labour	8	_____	_____	888	999		Sale of fruits	9	_____	_____	888	999		Piecework	10	_____	_____	888	999		General trading (retail)	11	_____	_____	888	999		Barter trading	12	_____	_____	888	999		Gifts/relatives	13	_____	_____	888	999		Blacksmithing	14	_____	_____	888	999		Bricklaying	15	_____	_____	888	999		Pit-sawing	16	_____	_____	888	999		Roof-making	17	_____	_____	888	999		Honey-hunting	18	_____	_____	888	999		Bee-keeping	19	_____	_____	888	999		Charcoal-burning	20	_____	_____	888	999		Pit-sawing	21	_____	_____	888	999		Mushroom collection	22	_____	_____	888	999		Munkoyo collection	23	_____	_____	888	999		Munkoyo brewing	24	_____	_____	888	999		Collection of wild fruits	25	_____	_____	888	999		Other(specify)_____	26	_____	_____	888	999		Other(specify)_____	27	_____	_____	888	999		Other(specify)_____	28	_____	_____	888	999
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Thank you for your time

QUANTITATIVE QUESTIONNAIRE FOR RUFUNSA COMMUNITY- FISH

SECTION 1: DEMOGRAPHIC AND BACKGROUND CHARACTERISTICS

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Questions and Filters

Responses

Response Codes	Skip			
Q1.1	Are you the head of the household?	Yes No	1 0	IF YES SKIP TO Q1.4
Q1.2	Record sex of the respondent	Male Female	1 2	

Q1.
3

Respondent's relationship to head of household

Self

Spouse	1			
Child	2			
Niece/Nephew	3			
Parent	4			
Other (specify)	5			
	888			
Q1.4	Record sex of the household head?	Male Female	1 2	

	What is your marital status? <i>(READ the list and ask them to select which one best fits their situation.)</i>	Single Never been married Divorced Widowed Married Separated In polygamous marriage Other _____ DON'T KNOW NO RESPONSE	1 2 3 4 5 6 7 888 999	
Q1.6	How old are you? (Probe when respondent was born; estimate the best answer)	Age In Completed Years Don't Know No Response	[][] 888 999	
Q1.7	What is the highest level of school successfully completed by you? Interviewer, please note the following equivalent standards and grades for: Sub A to standard 3 = Grades 1 - 5 Standards 4 to 6 = Grades 6 - 8 Form1 to 3 = Grades 8-10 Form4 to 5 = Grades 11-12	Grade 1 to 4 Grade 5 to 7 Grade 8 to 9 Grade 10 to 12 Higher learning None Other (specify) _____ Don't know No response	1 2 3 4 5 6 7 888 999	

Q1.
8

How many people are you in your household?

[]

--	--

Q1.9

How many are between 15 and 59 years above?

[]

--	--

How many are 60 years and above?

[_____]

--	--

2.0 PRODUCTIVITY AND AGRIBUSINESS INFORMATION

No.	Question and Filters	Categories	Codes	Skip
Q2.1	What commodity have you been or were you supposed to supply (for Riverbank Fisheries Ltd)?	Honey Fish Other (specify).....	1 2 3	
Q2.2	Were you involved in this activity before you started working with Riverbank Fisheries?	Yes No	1 2	If no skip to Q2.7
Q2.3	How many fish ponds did you have before you started supplying fish to Riverbank Fisheries? (Indicate number)		[_____]	
Q2.4	How much fish were you harvesting per pond then? (Indicate number)		[_____]	
Q2.5	How many fish ponds do you have now?		[_____]	
Q2.6	How much fish do you harvest per pond now?		[_____]	
Q2.7	Have you received any of the following interventions from Riverbank Fisheries?	Training in improved production techniques Acquisition of new equipment Market information None Others Specify(specify)	1 = Yes 2 = No 1 = Yes 2 = No 1 = Yes 2 = No 1 = Yes 2 = No	If no for all responses, skip to Q2.9
Q2.8	How would you rate each support/service received through the intervention?	Training in improved production techniques Acquisition of new equipment Market information	1 2 3 Write option NR _____ 999	DK 888 888

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		Others Specify(specify)	4	_____ 888 999	
				_____ 888 999	
				_____ 888 999	
Options for Q2.8					
			Very satisfactory	1	
			Satisfactory	2	
			Poor	3	
			Very poor	4	
Q2.9	How much processing is done to the fish before selling? (Do not read the list) (Multiple responses possible)	Scaling Gutting Filleting Smoking Drying No processing at all Other (specify)..... Other (specify).....	1 2 3 4 5 6 7 8		
Q2.10	If no processing is done, what is the reason? (Multiple responses possible)	No processing equipment No technical know- how Lack of market information Other (specify).....	1 2 3 4		
Q2.11	Where do you sell most of your fish?	Open market Government agency Private company Small scale businesses Cooperative Other (specify).....	1 2 3 4 5 6		
Q2.12	Has there been an improvement in your livelihood in terms of income?	Greatly improved Somewhat improved Has remained the same It has worsened	1 2 3 4		
Q2.13	Do you have access to market information services?	Yes No	1 2		If no skip to Q2.15
Q2.14	How useful is this information?	Very useful Useful	1 2		

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		Not useful	3																																									
Q2.15	What is the most important source of income in your hh? (DO NOT read the list. Circle item mentioned).	<table border="0"> <tr> <td></td> <td></td> <td></td> <td>DK</td> <td>NR</td> </tr> <tr> <td>Sale of livestock</td> <td>1</td> <td>888</td> <td>999</td> <td></td> </tr> <tr> <td>Sale of rain fed crops</td> <td>2</td> <td>888</td> <td>999</td> <td></td> </tr> <tr> <td>Gardening/Irrigated agriculture</td> <td>3</td> <td>888</td> <td>999</td> <td></td> </tr> <tr> <td>Beer brewing</td> <td>4</td> <td>888</td> <td>999</td> <td></td> </tr> <tr> <td>Fish-farming</td> <td>5</td> <td>888</td> <td>999</td> <td></td> </tr> <tr> <td>Fishing</td> <td>6</td> <td>888</td> <td>999</td> <td></td> </tr> <tr> <td>Fish mongering</td> <td>7</td> <td>888</td> <td>999</td> <td></td> </tr> </table>				DK	NR	Sale of livestock	1	888	999		Sale of rain fed crops	2	888	999		Gardening/Irrigated agriculture	3	888	999		Beer brewing	4	888	999		Fish-farming	5	888	999		Fishing	6	888	999		Fish mongering	7	888	999			
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THANK YOU FOR YOUR TIME

Appendix 7

SECTION 1: DEMOGRAPHIC AND BACKGROUND CHARACTERISTICS

Questions and Filters

Responses

Respondent's relationship to head of household

Self

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	What is your marital status? <i>(READ the list and ask them to select which one best fits their situation.)</i>	Single Never been married Divorced Widowed Married Separated In polygamous marriage Other	1 2 3 4 5 6 7 888	
		NO RESPONSE		
Q1.6	How old are you? (Probe when respondent was born; estimate the best answer)	Age In Completed Years Don't Know No Response	[][] 888 999	
Q1.7	What is the highest level of school successfully completed by you? Interviewer, please note the following equivalent standards and grades for: Sub A to standard 3 = Grades 1 - 5 Standards 4 to 6 = Grades 6 - 8 Form1 to 3 = Grades 8-10 Form4 to 5 = Grades 11-12	Grade 1 to 4 Grade 5 to 7 Grade 8 to 9 Grade 10 to 12 Higher learning None Other (specify) _____ Don't know No response	1 2 3 4 5 6 7 888 999	

How many people are you in your household?

[0]

How many members of your household are between 15 and 59 years?

[]

How many members of your household are 60 years and above?

[]

2.0 PRODUCTIVITY AND AGRIBUSINESS INFORMATION

No.	Question and Filters	Categories	Codes	Skip
Q2.1	What have you been			

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	supplying to Eastern Province Farmers Co-operative Ltd?			
Q2.2	Were you involved in this activity before you started supplying to Eastern Province Farmers Cooperative Ltd?	Yes No	1 2	If no skip to Q 2.5
Q2.3	How much land did you cultivate before you started supplying to Eastern Province Farmers Cooperative Ltd? (Indicate if lima, acres, or hectares)		[]	
Q2.4	How many 50kg bags did you harvest then? Indicate number and whether shelled or unshelled		[] Shelled [] Unshelled	
Q2.5	How much land are you cultivating now? (Indicate if lima, acres, or hectares)		[]	
Q2.6	How many 50kg bags are you harvesting now? Indicate number and whether shelled or unshelled		[] Shelled [] Unshelled	
Q2.7	Have you received any of the following support/service from Eastern Province Farmers Co-operative Ltd?	Training in improved production techniques Training in post harvest losses control Training in aflatoxin control Training in seed multiplication Market information, Acquisition of new equipment	1 = Yes 2 = No 1 = Yes 2 = No 1 = Yes 2 = No 1 = Yes 2 = No 1 = Yes 2 = No 1 = Yes 2 = No	If no for all responses, skip to Q2.9

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		None	1= Yes 2= No	
		Others Specify(specify)	-----	
Q2.8	How would you rate each support/service received through the intervention?	Training in improved production techniques Training in post harvest losses control Training in aflatoxin control Training in seed multiplication Market information, Acquisition of new equipment	Write option _____ _____ _____ _____ _____ _____	DK NR 888 999 888 999 888 999 888 999 888 999 888 999
Options for Q2.8 Very satisfactory 1 Satisfactory 2 Poor 3 Very poor 4				
Q2.9	How much processing is done to the groundnuts before selling? (Do not read the list) (Multiple responses possible)	Shell only Shell and package No processing Other (specify)..... Other (specify).....	1 2 3 4 5	
Q2.10	If no processing is done, what are the reasons? (Multiple responses possible)	No processing equipment No technical know-how Lack of market information Inadequate labour Inadequate time Other(specify)..... Other (specify).....	1 2 3 4 5 6 7	
Q2.11	Where do you sell most of your ground nuts?	Open market Private company Small scale businesses Cooperative (EPFC) Other (specify)..... Other (specify).....	1 2 3 4 5 6	
Q2.12	Has there been an improvement in your	Greatly improved Somewhat improved	1 2	

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	livelihood in terms of income?	Has remained the same It has worsened	3 4	
Q2.1 3	Do you have access to market information services?	Yes No	1 2	If no skip to Q2.15
Q2.1 4	How useful is this information?	Very useful Useful Not useful	1 2 3	

Q2.15	What is the most important source of income in your hh? (DO NOT read the list. Select appropriate response).	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 5%;"></th> <th style="width: 10%; text-align: center;">DK</th> <th style="width: 10%; text-align: center;">NR</th> </tr> </thead> <tbody> <tr><td>Sale of livestock</td><td>1</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Sale of rain fed crops</td><td>2</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Gardening/Irrigated agriculture</td><td>3</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Beer brewing</td><td>4</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Fish-farming</td><td>5</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Fishing</td><td>6</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Fish mongering</td><td>7</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>casual labour</td><td>8</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Sale of fruits</td><td>9</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Piecework</td><td>10</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>General trading (retail)</td><td>11</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Barter trading</td><td>12</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Gifts/relatives</td><td>13</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Blacksmithing</td><td>14</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Bricklaying</td><td>15</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Pit-sawing</td><td>16</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Roof-making</td><td>17</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Honey-hunting</td><td>18</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Bee-keeping</td><td>19</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Charcoal-burning</td><td>20</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Mushroom collection</td><td>21</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Munkoyo collection</td><td>22</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Munkoyo brewing</td><td>23</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Collection of wild fruits</td><td>24</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> <tr><td>Other(specify)_____</td><td>25</td><td style="text-align: center;">888</td><td style="text-align: center;">999</td></tr> </tbody> </table>			DK	NR	Sale of livestock	1	888	999	Sale of rain fed crops	2	888	999	Gardening/Irrigated agriculture	3	888	999	Beer brewing	4	888	999	Fish-farming	5	888	999	Fishing	6	888	999	Fish mongering	7	888	999	casual labour	8	888	999	Sale of fruits	9	888	999	Piecework	10	888	999	General trading (retail)	11	888	999	Barter trading	12	888	999	Gifts/relatives	13	888	999	Blacksmithing	14	888	999	Bricklaying	15	888	999	Pit-sawing	16	888	999	Roof-making	17	888	999	Honey-hunting	18	888	999	Bee-keeping	19	888	999	Charcoal-burning	20	888	999	Mushroom collection	21	888	999	Munkoyo collection	22	888	999	Munkoyo brewing	23	888	999	Collection of wild fruits	24	888	999	Other(specify)_____	25	888	999
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THANK YOU FOR YOUR TIME

Spouse Child Niece/Nephew Parent Other (specify)	1 2 3 4 5 6		KEY 1 0 1 0	IF YES SKIP TO Q1.4
Q1.4	Record sex of the household head?	Male Female	1 2	
Q1.5	What is your marital status? <i>(READ the list and ask them to select which one best fits their situation.)</i>	Single Never been married Divorced Widowed Married Separated In polygamous marriage Other _____ DON'T KNOW NO RESPONSE	1 2 3 4 5 6 7 888 999	
Q1.6	How old are you? (Probe when respondent was born; estimate the best answer)	Age In Completed Years Don't Know No Response	[][] 888 999	

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	What is the highest level of school successfully completed by you? Interviewer, please note the following equivalent standards and grades for: Sub A to standard 3 = Grades 1 - 5 Standards 4 to 6 = Grades 6 - 8	Grade 1 to 4 Grade 5 to 7 Grade 8 to 9 Grade 10 to 12 Higher learning None Other (specify) _____ Don't know No response	1 2 3 4 5 6 7 888 999	

Q1. How many people are you in your household?

[9]
[0]

How many are between 15 and 59 years?

[]

How many are 60 years and above?

[]

2.0 PRODUCTIVITY AND AGRIBUSINESS INFORMATION

No.	Question and Filters	Categories	Codes	Skip
Q2.1	What have you been supplying to Ubuchi Capital Enterprises Ltd?			If no skip to Q2.3
Q2.2	Were you involved in this activity before you started supplying to Ubuchi Capital Enterprises?	Yes No	1 2	
Q2.3	How many bee hives did you have before you started supplying honey to Ubuchi Capital Enterprises? Indicate number		[]	
Q2.4	How much honey were you producing then?			
Q2.5	How many bee hives do you have now? Indicate number		[]	
Q2.6	How much honey are you producing now?			
Q2.7	Have you received any of the following services from Ubuchi Capital Enterprises Ltd?	Training in improved production techniques	1 = Yes 2 = No	If no for all responses,
		Acquisition of new equipment	1 = Yes 2 = No	

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		Market information	1= Yes 2 = No	skip to Q2.9
Q2.8	How would you rate each support/service received through the intervention?	Training in improved production techniques Acquisition of new equipment Market information Others Specify(specify)	1 2 3 4	Write option DK NR _____ 888 999 _____ 888 999 _____ 888 999 _____ 888 999
Options for Q2.8 Very satisfactory 1 Satisfactory 2 Poor 3 Very poor 4				
Q2.9	How much processing is done to the honey before selling? (Do not read the list) (Multiple responses possible)	Crush and strain Heating No processing Other (specify).....	1 2 3 4	
Q2.10	If no processing is done, what are the reasons? (Multiple responses possible)	No processing equipment No technical know- how Lack of market information Other (specify).....	1 2 3 4	
Q2.11	Where do you sell most of your produce?	Open market Government agency Private company Small scale businesses Cooperative Other (specify).....	1 2 3 4 5 6	
Q2.12	Has there been an improvement in your livelihood in terms of income?	Greatly improved Somewhat improved Has remained the same It has worsened	1 2 3 4	
Q2.13	Do you have access to market information services?	Yes No	1 2	If no skip to Q2.15
Q2.14	How useful is this information?	Very useful Useful Not useful	1 2 3	

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Q2.15	What is the most important source of income in your household? (DO NOT read the list. Circle item mentioned).			DK	NR
		Sale of livestock	1	888	999
		Sale of rain fed crops	2	888	999
		Gardening/Irrigated agriculture	3	888	999
		Beer brewing	4	888	999
		Fish-farming	5	888	999
		Fishing	6	888	999
		Fish mongering	7	888	999
		Piecework/ casual labour	8	888	999
		Sale of fruits	9	888	999
		Piecework	10	888	999
		General trading (retail)	11	888	999
		Barter trading	12	888	999
		Gifts/relatives	13	888	999
		Blacksmithing	14	888	999
		Bricklaying	15	888	999
		Pit-sawing	16	888	999
		Roof-making	17	888	999
		Honey-hunting	18	888	999
		Bee-keeping	19	888	999
		Charcoal-burning	20	888	999
		Mushroom collection	21	888	999
		Munkoyo collection	22	888	999
		Munkoyo brewing	23	888	999
		Collection of wild fruits	24	888	999
		Other(specify)_____	25	888	999
				888	999

THANK YOU FOR YOUR TIME

Appendix 6: RRIF COMPONENT- TRAFFIC COUNTER ON SELECTED FEEDER ROADS

a. Choma District

Name of Traffic Counter: GWEN MAZAKAZA

Name of Road and Code:

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus			16	21	15	23	20
Truck			22	20	35	40	26
Pick up 4x4			28	57	68	60	47
Car			37	56	63	67	38
Motor Cycle			58	70	85	85	81
Ox Cart			16	31	22	26	17
Bicycle			115	167	160	141	133

Name of Traffic Counter: DORCAS MUNSANJE

Name of Road and Code: MAPANZA (M11)-MOBOOLA

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus			16	10	7	13	4
Truck			18	12	4	10	9
Pick up 4x4			58	40	45	54	56
Car			28	15	20	10	16
Motor Cycle			55	55	51	30	68
Ox Cart			20	8	3	5	4
Bicycle			98	135	140	145	183

Name of Traffic Counter: FELIX MANDIA JR

Name of Road and Code: M11-MACHA MAIZE DEPOT D538

District

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus			20	20	20	25	18
Truck			24	25	30	55	20
Pick up 4x4			43	33	35	31	21
Car			68	75	65	75	90
Motor Cycle			26	20	25	27	33
Ox Cart			2	4	3	10	3
Bicycle			38	31	45	57	42

Name of Traffic Counter: CHONA CHIYANIKA

Name of Road and Code: M11-SIMUNZELE RD622

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus			2	1	2	4	1
Truck			17	27	31	58	15
Pick up 4x4			9	17	11	24	9
Car			18	7	23	27	6
Motor Cycle			28	20	16	25	11
Ox Cart			9	22	14	42	7
Bicycle			327	438	371	539	322

b. Chongwe/ Rufunsa District

Name of Traffic Counter: NOMSA .C. TEMBO / CHOLA MWAPE/ EMMANUEL MWALE

Name of Road and Code: RD 480-U17

District: Chongwe

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus				6	5		15
Truck				50	42		61
Pick up 4x4				16	15		96
Car				32	19		95
Motor Cycle				1	3		13
Ox Cart							1
Bicycle				49	25		185
Walking				86	99		300

Name of Traffic Counter: NOMSA CHISOMO TEMBO

Name of Road and Code: U19

District: Rufunsa

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus							
Truck					2	6	
Pick up 4x4					1		
Car					2	2	

Motor Cycle						1	
Ox Cart						1	
Bicycle						7	
Walking					28	10	

Name of Traffic Counter: OBED MATANDA

Name of Road and Code: A1

District: Chongwe

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus				7	23		
Truck				37	30		
Pick up 4x4				43	22		
Car				40	17		
Motor Cycle				11	4		
Ox Cart					2		
Bicycle				89	91		

Katete District

Name of Traffic counter: GILBERT BANDA

Name of Road and Code: RD412 T4-ADONI

District: Katete/Sinda

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus		10				10	10
Truck		23				45	65
Pick up 4x4		16				20	45

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Car		18				35	30
Motor Cycle		20				25	40
Ox Cart		21				20	15
Bicycle		45				50	80

Name of Traffic Counter: AARON MVULA
Name of Road and Code: U29 T6-MBINGA-KATETE
District: Katete

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus		1					
Truck		29				22	17
Pick up 4x4		12				12	11
Car		28				43	41
Motor Cycle		32				30	25
Ox Cart		13				2	10
Bicycle		1,368				355	1,045

Name of Traffic Counter: ADAMSON ZULU
Name of Road and Code: U22 T4-KALUMBI SCHOOL
District: Katete

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus							
Truck		2					1
Pick up 4x4		1				6	
Car		6				6	7
Motor Cycle		2				7	2
Ox Cart		9				8	2
Bicycle		157				97	124

Name of Traffic Counter: ETALA PHIRI
Name of Road and Code: RD411 MUNYAMADZI-RD411
District: Katete

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus		25				25	40
Truck		87				103	113

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Pick up 4x4		88				93	108
Car		146				112	132
Motor Cycle		148				120	125
Ox Cart		58				93	85
Bicycle		422				330	370

Name of Traffic Counter: ISAAC CHINOMBA

Name of Road and Code: R300 VULAMKOKO JOIN WITH RD411-T4

District: Katete

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus		6				13	6
Truck		39				24	18
Pick up 4x4		26				19	9
Car		137				99	74
Motor Cycle		28				23	14
Ox Cart		29				9	6
Bicycle		361				269	232

Name of Traffic Counter: CHIBAKA DAVID

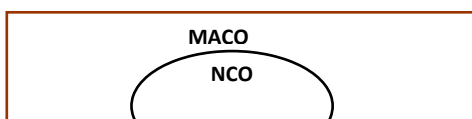
Name of Road and Code: RD411 T4-CHOMA-LUPANDE RIVER

District:

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bus							
Truck						2	4
Pick up 4x4						1	4
Car		16				12	20
Motor Cycle		13				12	14
Ox Cart		5				4	4
Bicycle		209				260	103

Appendix 7: Project Implementation Organization Chart

NATIONAL PROJECT STEERING COMMITTEE



CO



Appendix 8: List of Stakeholders Consulted

District/Organisation	Name and Position held
Chipata	
Ministry of Agric. And Livestock (MAL), Dept. of Agribusiness & Marketing	Mr. Kwibisa Malimba, Senior Economist
MAL	Mr. Chinyanta Kambole, Acting Senior Agriculture Officer
MAL	Mr. Liywali Liywali, District Marketing Development Officer
Eastern Province Farmers' Cooperative (EPFC)	Mr. Watson Sakala, Chief Executive Officer
EPFC	Mr. Penias Maimisa, Operations Manager
Katete	
Katete District Council (KDC)	Mr. Moffat Nyirenda, Director of Works
KDC	Mr. Mabvuto Phiri, Community Development Officer
EPFC	Mr. Chepesani Mbewe, Field Facilitator
MAL	Mr. Robby Musendo, District Agriculture Coordinator (DACO)
Mbinga Primary School	Ms. Ajesi Mbuzi, Senior Teacher
Lusaka	
National Coordination Office (NCO)	Mr. Sylvester Mwanza, ADSP Project Coordinator
NCO	Mr. Nkweto Tembo, ADSP Project Accountant
Zambia Agriculture Research Institute (ZARI)	Dr. Kenneth Msiska, Principal Agriculture Research Officer
Ubuchi Enterprises Limited	Mr. J. Mbewe,
Chongwe	
Chongwe District Council (CDC)	Mr. Alfred Moya, Council Secretary

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CDC	Ms. Laura Mulenga, Director of Works
CDC	Mr. John Chibwe, Road Foreman
Riverbank Fisheries Ltd	Mr. Mwenya James, Director
Namanonga Primary School	Mr. Justine Chinzete, Acting Senior Teacher
Kanakantapa Farming Block	Mr. Professor Sianyeula, Agricultural Camp Officer
Shop owner/trader	Mr. Shadreck Chinyama
Choma	
Choma Dairy Cooperative Union	Mr. Kennedy Katongo, Manager
MAL	Mr. Goliath Chooye, DACO
MAL	Mr. Fundi Banda, Senior Agriculture Officer (SAO)
Choma Municipal Council	Muchindu Simoloka
Simunzele Basic School	Ms. Etambuyu Iwake, Head Teacher
Simaubi Basic School	Mr. Henry Gwaba, Head Teacher
Kaoma	
Zambia Works Economic Development Ltd	Mr. Kalengo, Branch Manager
Zambia Works Economic Development Ltd	Mr. Kamwengo Kalesa, Field Extension and Trainings Officer
Rufunsa	
	Mr. Gabriel Phiri