

**TOWARDS SUSTAINABLE AGRICULTURE  
IN EASTERN PROVINCE?**

**MID-TERM EVALUATION OF WORLD VISION  
ZAMBIA INTEGRATED AGROFORESTRY PROJECT**

Prepared by

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## LIST OF ACRONYMS

ADP	Area Development Program
AFT	Agroforestry Technology
ASIP	Agricultural Sector Investment Program
AWPs	Annual Work Plans
BDFs	Block Development Facilitators
BEOs	Block Extension Officers
CAWs	Community Agricultural Workers
CEMP	Community Environmental Management Project
CEOs	Camp Extension Officers
CFs	Contact Farmers
CHWs	Community Health Workers
CLUSA	Co-operative League of the United States of America
CLUSA/NRMP	CLUSA Natural Resources Management Program
ESP	Environmental Support Programme
FAs	Farmer Associations
FAO	Food and Agriculture Organization of the United Nations
FASAZ	Farming Systems Association of Zambia
FG	Farmer Group
FY	Financial Year
GFs	Group Facilitators
GIS	Geographic Information System
ICRAF	International Center for Research in Agroforestry
IFTs	Improved Fallow Technologies
JFM	Joint Forest Management
JFMP	Joint Forest Management Plan
LCMS	Living Conditions Monitoring Survey
LFs	Lead Farmers
LWF	Lutheran World Federation
MACO	Ministry of Agriculture and Co-operatives
MIS	Management Information System
MTENR	Ministry of Tourism, Environment and Natural Resources
NAIS	National Agricultural Information Service
NGO	Non Governmental Organization
NRM	Natural Resources Management
PM	Project Manager
POTC	Producer Owned Trading Company
PRA	Participatory Rural Appraisal
PU	Production Unit
RCF	Rural Credit Facility
RIF	Rural Investment Fund
SAP	Structural Adjustment Program
SCAFE	Soil Conservation and Agroforestry Extension
SMC	Seed Management Committee
SO	Strategic Objective
TA	Technical Assistance
TBAs	Traditional Birth Attendants
UNZA	University of Zambia
USAID	United States Agency for International Development
VRMAC	Village Resource Management Area Committee
WVI	World Vision International
WVIAP	World Vision Integrated Agroforestry Project
WVZ	World Vision Zambia
ZIAP	Zambia Integrated Agroforestry Program

## EXECUTIVE SUMMARY

### ***Background and Objectives***

Zambian agriculture is currently constrained by the high cost and often-late delivery of inputs (especially fertilizer) and the normal involvement of smallholder farmers in the agricultural marketing economy. This can to a large extent be attributed to the stringent economic Structural Adjustment Programme (SAP) of the nineties, which abolished subsidies and government involvement in agricultural marketing. Faced with this scenario, many farmers found it difficult to access cheap fertilizer and find markets for their produce. Crop yields have declined as a result of less fertilizer being used and the deterioration of soil fertility worsened by poor land management. Without government support, many farmers fought a losing battle against soil fertility depletion, lack of access to fertilizer, lack of improved seed, inadequate agricultural services and lack of market information and (less or no) access to markets due to poor infrastructure.

In an attempt to redress the situation, World Vision proposed an integrated agroforestry project (IAP) whose goal was to improve rural household food security, through increased farmer productivity (per hectare crop yield) and increased participation in markets. To undertake this initiative, World Vision is being supported with a grant of \$3,944,096 from USAID Zambia Local Mission, of which \$726,616 constitutes indirect costs. World Vision has also provided \$335,493 as a cost-share to assist in financing the program from non-federal funds in accordance with 22 CFR 226.23.

The programme covers the districts of Chipata North, Chipata South, Katete, Chadiza and Mambwe in Eastern Province. All target districts are food deficit areas because of reduced yields caused primarily by declining soil fertility, and a cropping system, which is characterized by the monocultural cultivation of maize. The target districts cover about 18,533 square kilometers with a total population of 0.68 million.

The project commenced in October 1998 and is to run for five years up to September 2003. It is implemented in close collaboration with the Ministry of Agriculture and Cooperatives (MACO) Department of Field Services, the International Center for Research in Agroforestry (ICRAF) and local communities. The project also collaborates with the Cooperative League of the United States of America (CLUSA) to facilitate the promotion of agribusiness farmer groups. The University of Florida is also a partner and is charged with independently monitoring adoption pathways of the technologies being promoted.

It is against this background that USAID/Zambia commissioned this Mid-Term Evaluation of the WVIAP specifically to find out whether (1) investments in agroforestry activities have had or are having a beneficial impact; (2) to identify the elements of successful investments that can be repeated to improve ongoing or future investments and (3) if investments were not achieving the intended results, how to reorient that investment so that it does achieve the intended results.

The successful implementation of the project would contribute positively to USAID/Zambia's Strategic Objective (SO)1, which is "Increased Rural Incomes of Selected Groups".

### ***Summary of Methodology***

The evaluation covered field visits to activity sites (Observations & transect walks) in Chipata North, Chipata South, Katete, and Chadiza districts. Project staff and their collaborators were interviewed. Groups of farmers were interviewed in focus group discussions, group meeting and/or as individual key informants. Relevant project documents such as periodic reports, annual reports, financial and other management process reports, etc were also reviewed. The data collected using the Participatory Rural

Appraisal (PRA) was complemented by an individual household questionnaire. The data from questionnaires was processed using the Statistical Package for Social Scientists (SPSS), while qualitative data was analyzed for content.

### **Main Findings**

1. The review found that the fallow species found on farm in target areas are *Sesbania sesban*, *Tephrosia vogelii*, *Pigeon peas (Cajanus cajan)* and *Gliricidia sepium*. A situation now exists where farmers can obtain seed of *Sesbania sesban*, *Tephrosia vogelii* and *Pigeon peas* from fellow farmers but seed of *Gliricidia sepium* is still not readily available. Though the technologies being promoted (especially the IFT) take time to show results, indications for those farmers who planted maize after cutting the fallows had improved yields with their maize cobs being bigger and heavier in spite of the unfavorable weather in the previous season. The planting of a shorter maturing variety of maize, Pool 16, enhanced the yields.
2. Through community sensitization and training, using mostly lead farmers, the number of farmers testing the IFTs has tremendously increased from 500 in financial year (FY) 1999 to date reaching a total of 15,000 in FY2001 exceeding the project target of 12,000 to be attained by FY2003. The total and average area under different IFT tree species has also increased tremendously from 300 ha FY1999 to 3,900 ha in FY2002.
3. In an effort to improve farmer productivity through IFTs as a sustainable agricultural practice, the program through its collaboration with ICRAF trained its staff, lead and contact farmers and MACO field extension workers in these technologies for onward transmission to farmers. The lead and contact farmers were very critical as they provided continuous first hand contact with the communities. These trained contact farmers belonged to farmer groups. Out of the originally targeted figure of 50 in the first year, the number of lead farmers has increased to 159. The lead farmers, after being trained go out to recruit farmers. Each lead farmer on average recruits about 125 farmers per year.
4. Other sustainable practices promoted to enhance agricultural productivity are crop diversification and soil and moisture conservation. Under crop diversification, farmers were provided with planting materials of cassava, maize (var. *Pool 16*), cowpeas and groundnuts under the principle of community based seed multiplication to diversify their cropping base. The early maturing variety of cassava, *Maniopola*, was included in the package in order to assist, and it did, for those who planted the crop in hunger periods around January/February.
5. Notwithstanding that AFT contributes to soil and moisture conservation, not many activities have been done in soil and moisture conservation per se due to lack of equipment. However, farmers have been sensitized to practice minimum tillage, pot-holing, mulching, green manuring, contour ridging with vetiver grass, which some have started practicing, and construction of storm drains. However, it should be noted that conservation farming demand is community driven. For example, there is need for the community to come together and construct storm drains where necessary.
6. There are indications that the improvement in agricultural productivity has occurred. Farmers have been able to increase incomes through the value of increased production on land improved with improved fallows. The improved crops harvested represent cash, which the farmer would have needed to buy maize for home consumption. As per Co-operative Agreement #611-A-00-98-00004-00 governing this project, if a group is involved in the dissemination of a production technology that increases rural family food access, then that increased food is valued at market prices to determine how it contributes to SO1 achievement, even though it may be consumed by the family. The yields have increased from less than 1 ton/ha for farmers who neither applied



agroforestry or inorganic fertilizer to approximately 3.5 ton/ha for farmers who grew crops in improved fallows.

7. Another strategy to increase rural incomes of the target communities was to develop and increase farmers' access to market information and participation in markets. Pursuant to this, the project's Marketing Component mobilized farmers into marketing groups whose capacity would then be built to develop them into mature business concerns by the time they start having excess production for the markets. The idea was that farmers should be able to source for inputs, negotiate forward market contracts and be able to market their produce in a profitable manner. The project's mandate not including provision of credit to farmers or buying farmers' produce has however affected the morale of farmers making it difficult to mobilize them into these groups. The project was mandated to provide training to farmers so that they could look at farming as a business and was also mandated to link farmers to markets and service providers. Despite sensitization and training, farmers still ask for input credit from the project and when the project would buy their produce. Some farmers are skeptical of bulking their produce at depots on account of not trusting the group leaders. In spite of these shortcomings the project managed to link the farmers to AFRICARE to source for inputs on credit in 2000/01 season and later facilitated the marketing of produce worth about US \$ 12,010. Some groups (about 2) are doing well and managed to organize markets for their members last season.
8. The project has also had positive impact on both staff and target communities. Farmers are now seeking additional knowledge on agricultural related issues and the zeal of the project staff to deliver services has increased. Looking at participating farmers by gender showed that there are more men who are substantive members of the farmer groups than there are women. However, there are some numbers of women hidden behind every substantive male figure that represents a male-headed household. Youths also participate through their families. It is recommended that the project tries to aggregate the data of co-operators into "married, single, female-headed household, male or joint headed household as well as age."

### **Recommendations**

1. Farmers feel that it is too early for this project to wind up their activities because they still require the services being delivered. Some farmers have started adopting by planting larger fields of improved fallows and feel that they still need help on how to manage these and the post fallow crops.
2. Since ICRAF has previously been active in all the project sites, it is recommended that the project should extend or expand to completely new areas like Petauke, Lundazi and Nyimba should Phase II of the project be considered. Full characterization of project sites in terms of the biophysical, environmental, social cultural and economic conditions should be done. This will make scaling up of similar technologies easier. Stronger linkages to MACO - Research and UNZA would make this easier. Strengthening community seed multiplication (especially for *Gliricidia sepium*) at farm level in order to promote increase in the areas under improved fallow should be encouraged in order to enhance sustainability in the in the long run.
3. Farmers with more land should be encouraged to increase the sizes of plots under improved fallows in order to maximize on benefits. More farmers also still require training in sustainable agricultural practices since as of now only a few farmers have seen the benefits of IFTs. Management and control of bush fires and livestock in the dry season is needed. Farmers need to be trained in early burning and making of fireguards. The relationship the project has made with local leadership should be strengthened to enhance these efforts.

4. The WVIAP should be encouraged and facilitated to synthesize and publish their findings and experiences in order to enable others to learn about the strategies that they have put in place to reach such big numbers. This is a big challenge and additional resources will be required to especially publish in both international and local Journals. However, the project does appreciate the importance of this exercise and will explore ways on how best it can be done. Already a quarterly Newsletter is being launched. The project has also had two articles published in the Groundup Magazine published by PELUM to which the project subscribes. The project has also successfully made presentations at international fora. It is recommended that the project management at Chipata headquarters be aggressive in sourcing for literature, which in turn should be shared with field staff. Maybe they should subscribe to some of the major relevant journals.
5. The project should consider increasing the amounts of food crop seed given to farmers under the crop diversification component because farmers complain that the amounts are too small. Maybe the hecterage and the ability of a farmer to plant should be considered when giving out seed. However, according to project management, the project has experienced great difficulties in procuring improved varieties of seed such as that given to the farmers hence the quantities given out being small. This necessitated the rationale that farmers should be able to select good seed from their yields for future use under the community based seed multiplication program. Once the farmers pay back the seed at a ratio of 1 to 2, new farmers benefit and the numbers of participating farmers increases. Although small, the seed multiplies once planted and farmers need to appreciate the importance of generating more seed from the little that they are given. Under the same component, the project should consider replacing cowpeas with beans since cowpeas has high disease and pest pressure and that USAID does not encourage use of chemicals.
6. Soil / Moisture equipment should be acquired and distributed. Pegging and drip and bucket equipment is needed.
7. Lead farmers need remuneration (maybe not salaries but some kind of allowances) for the extra time and effort they put in to sustain community involvement in project activities. This is in light of the amount of work that they do at the time when they are supposed to be tending to their own fields. They can then use that money to pay people who would in turn work in their fields while they are away training other farmers as well as distributing inputs. This being unsustainable in the long run, one of the options is for the communities themselves to devise a way of paying for the service being provided by the lead farmer. The project has in the past encouraged farmers served by the lead farmer to help the lead farmer in his field. Perhaps this approach should be looked at critically for broader implementation. Lead farmers who have not been given their certificates indicated that they still want them so that their peers can recognize them.
8. The marketing unit should continue to collaborate with CLUSA and other stakeholders with similar objectives to WVIAP's marketing strategy. This will benefit the project to broaden and develop strategic alliances with reliable partners for the benefit of the farmers.
9. Farmers should be aware that legumes used in improved fallows should not be treated as a single package but rather as an input into the whole package. In other words, those farmers who can afford fertilizer should use it in combination with IFTs for maximum benefit.

# **PART I: BACKGROUND AND METHODOLOGY**

## **CHAPTER 1: INTRODUCTION**

### **1.1 Brief Description of the Eastern Province**

Located between 10 – 15 degrees South Latitude and 30 – 33 degrees East Longitude, Eastern Province covers an area of about 70,000 square kilometers and its population was estimated at 1, 300, 973 in 2000 (CSO 2001). It has an estimated farming population of 151,300 farm families with a total crop area of 245,000 hectares of which about 58% is ploughed by hand (MAFF, 1999).

The province has two of its districts (Chama and Mambwe) in Agro-ecological Region I while the rest of the districts fall in Region II. Soil types range from Sandy loams to clay loams on the plateau (Region II), while the valley (Region I) consists of clay loams to silt. Rainfall ranges from 600 – 1000 mm and between 400 and 650 mm per annum in the respective regions.

Farming is the most widespread activity. The region is good for groundnuts and cotton production. Pressure on forests for agricultural land is increasing rapidly due to rapid production increase and declining soil fertility in cultivated lands. Thus there is great need for sustainable utilization/management of these Miombo woodland-based forests.

### **1.2 Background to the World Vision Zambia Integrated Agroforestry Project (ZIAP)**

The liberalization of the economy in the early 1990s brought economic shocks to the small-scale farmers when Government removed subsidies on key market inputs. Many farmers found it difficult to access cheap fertilizer and find markets for their produce. This resulted into farmers having low and declining crop yields due to limited fertilizer use and declining soil fertility exacerbated by poor natural resource management practices. Without Government support, soil fertility depletion, lack of access to fertilizer, lack of improved seed, inadequate agricultural services and lack of farmers' participation in markets adversely affected the livelihood of many farmers.

To reverse the situation, World Vision sought and received an agreement from the United States Agency for International Development (USAID) in October 1998 to implement the WVIAP. The goal of the project is to improve household food security and incomes through increased agricultural productivity by promoting adoption of low-cost sustainable agricultural production techniques such as improved fallows, soil-moisture conservation and improved variety technologies. The project also aims at increasing farmers' access to extension services, training, market information and market participation.

### **1.3 Purpose and Objectives of the Evaluation**

#### **1.3.1 Purpose**

The purpose of this evaluation was to obtain quantitative evidence of investment impact on rural incomes and adoption of improved fallows. Where quantitative evidence was not available or relevant, qualitative descriptions of impacts and processes were provided.

The evaluation included assessing the impact of the project and identified ways to improve implementation and has, in this report, presented to USAID/Zambia Mission issues for consideration regarding the options whether to extend, expand or cut short the project.

### **1.3.2 Specific Objectives of the Evaluation**

The Specific objectives of the evaluation were:

1. To determine whether USAID investments are achieving their desired impact, why or why not.
2. To generate ideas on how the impact of USAID investments in World Vision Integrated Agroforestry Project (WVIAP) activities can be improved.
3. To generate ideas on how WVIAP experiences can influence ongoing or future USAID and other institution investments in increasing rural incomes, improving food security or managing natural resources.
4. Make recommendations to USAID/Zambia Mission for consideration whether to extend, expand or cut short the project.
5. Package relevant findings so that systematic or national level impact from evaluation lessons learned might be achieved with specific reference to the Zambian context.

## **1.4 Methodology**

### **1.4.1 Study Design and types of data**

There are two basic designs of programme evaluative research: summative and formative evaluation. Summative evaluation primarily aims at assessing organisational performance with emphasis on reviewing the efficiency and effectiveness of a program/project as compared to its goals and resource inputs.

On the other hand, formative evaluation lends itself to providing an input in *organisational learning*, that is, it focuses on processes with an intention to improve the organisation's mode of operation, its operational approaches and procedures as well as its performance. The aim is to gain better understanding of the complex and intricate processes of organisational behaviour in order to establish knowledge and insight needed to strengthen the operations of the organisation should the program be found worth continuing.

This evaluation leans more on the later category. As such two basic categories of questions ran through the whole investigation:

- (a) Questions that will provide a systematic documentation and description of the various elements and processes and structures of the project; and
- (b) Questions that will result in explanations of why things are as they are observed/experienced to be. The explanatory questions are closely inter-linked with and builds on the descriptive ones.

The review sought and collected both quantitative data and qualitative information from the project offices, collaborating partners and beneficiaries.

### **1.4.2 Selection of study sites and respondents**

The evaluation covered four (4) districts, namely: Chipata North, Chipata South, Katete, and Chadiza where the project activities were said to be well established and the project has staff stationed there. Mambwe and Chadiza districts are the latest areas the project has moved to with the former being the most recent and the project only operates through the MACO staff.

### **1.4.3 Data Collection and Analysis**

The review used the following tools to collect data:

- Reviewing relevant project documents such as periodic reports that is annual reports, financial and other management process reports, etc.
- Group discussions and topical/thematic interviews with project staff
- Interactive discussions with beneficiaries (PRA)
- Field visits to activity sites (Observations & transect walks). The review team conducted physical tours of the improved fallows within a radius of 25 kilometres.
- Key informant interviews with collaborators and community leaders
- Focus group discussions (FGD), in-depth interviews with key informants, case studies, and interactive discussions with professional staff of agencies

The data collected using PRA was complemented by an individual household questionnaire. The data from questionnaires was processed using the Statistical Package for Social Scientists (SPSS), while qualitative data was analyzed for content.

## PART II: FINDINGS

### CHAPTER 2: PROJECT RATIONALE

This section aims to establish whether the project is addressing the needs of the intended beneficiaries as perceived by the beneficiaries themselves as well as the professional staff serving the local communities. To achieve this the consultants identified the needs expressed by the beneficiaries during the project's baseline study, reviewed the process that was used to identify the needs addressed by the project and assessed whether, from the point of view of the beneficiaries, the project is addressing their felt needs in the area of concern. Professional staff serving in relevant government departments, traditional leaders as well as other key informants from the communities were interviewed.

#### 2.1 Project Identification Process

The idea to have the WVIAP appears to have been ignited by World Vision's experience with the nature of the problems faced by many of the beneficiaries to their Area Development Programs (ADPs) and the frequent requests that WV has hitherto received for fertilizer loans. Notwithstanding the conviction and evidence that already existed on non-sustainability of credit or any other forms of intervention to facilitate resource poor farmers' access to inorganic fertilizers, the WV undertook a baseline study at the beginning of the project to consolidate the nature and extent of the problem specific to the target areas. The study used both a formal survey questionnaire and Participatory Rural Appraisal (PRA) methodology to collect primary data from the would-be target areas.

This evaluation study team has established that the baseline yielded sufficient and appropriate key data/information and indicators that can be used to monitor changes in the areas the project is intervening. There is a logical relationship between the problems that were identified/confirmed by the baseline study and the project activities. A cause-effect relationship exists between project activities so far undertaken and the stated outcomes, as will be seen in the sections that follow.

#### 2.2 Needs of Rural Farmers in the Target Areas

The baseline survey undertaken at the beginning of the project in April 1999 confirmed the following as the main problems inhibiting the productivity of small-scale farmers in the Eastern Province:

- (a) Deteriorating soil fertility
- (b) Inability to access inorganic fertilizers
- (c) Inability to purchase improved seed
- (d) Inadequate agricultural extension services
- (e) Lack of market information and (less or no) access to markets due to poor infrastructure

Other studies undertaken in Zambia, including the Agricultural Sector Investment Program (ASIP) Sector Performance Analysis reports (1998-2000), indicate that the following are also major problems affecting smallholder farming in the country:

- (f) Low levels of technology
- (g) Inadequate family labour for many small scale farmers
- (h) Lack of credit
- (i) Low farm production
- (j) Food insecurity during critical periods in the farming season
- (k) Poor storage and lack of processing for perishable crops and
- (l) Low incomes.

## **2.3 Objectives and Components of the Project**

### **2.3.1 Objectives of the project**

The main objectives of the project are therefore to:

1. Improve farmer productivity (per ha crop yields) through the introduction and adoption of sustainable agricultural practices.
2. Improve farmers' access to agricultural extension and training
3. Develop and increase farmers' access to market information

### **2.3.2 Components of the project**

In order to achieve these objectives the WVIAP has the following components:

**Administration:** This is responsible for the management and overall coordination/support to the activities of the field-based components.

#### **Objective 1: Improve farmer productivity**

- **Agroforestry Activities**

Four fallow species are used by the project, namely: *Sesbania sesban*, *Tephrosia vogelii*, *Pigeon peas* and *Gliricidia sepium*.

- **Crop Diversification**

The project has been providing on the basis of community based seed multiplication, crops such as cassava (Var. *Maniopola*), maize (var. *Pool 16*), cowpeas (Var. *Lutembwe*) and groundnuts (var. *MGV4*) to enable farmers diversify their cropping base.

- **Soil and Moisture Conservation**

The activities done so far are the provision of vertiver grass for use in contour ridges and construction of storm drains in Katete and Chipata. In collaboration with other partners, farmers have received training in conservation farming, contour farming, mulches and cover crops and use of animal manure.

#### **Objective 2: Improve Farmers' access to Agricultural Extension and Training**

The project has been providing training in improved farming methods in collaboration with other partners like ICRAF and MACO.

#### **Objective 3: To develop and increase market information and farmer access and participation in markets**

The marketing unit has trained farmers on how to source for markets, take care of produce, conduct a cost benefit analysis, keep records, store produce, etc. However, this component is only active in two districts (Chipata North and South).

## 2.4 Policy Environment

In 1991 the new liberal Government undertook to implement the Structural Adjustment Programme (SAP) with a view to redress the economic decline Zambia had slid into during the previous state-controlled monopoly economy. This, among other things, entailed the withdrawal of state participation in marketing of agricultural commodities and removal of subsidised loans for inputs, both, which were unsustainable. However, the benefits of adherence to SAP conditions have not immediately delivered a positive impact on majority of the low income groups, with effects more biting on the rural sectors of the economy, where poverty levels, including food insecurity have soared.

Although the 1996 Living Conditions Monitoring Survey (LCMS) recorded a drop in poverty levels between 1993 and 1996, this was short-lived as the incidence and depth of poverty shot up between 1996 and 1998, and it appears worse now. In 1998 nearly 73% of the Zambian population were surviving below the poverty line, with 58% in extreme poverty. The intensity and proportion of poverty in rural areas (83% of the rural population are poor) is more than that of urban poverty (56%) although the increase in national average is attributed more to the increase in urban poverty. The rural poor have fewer options than the urban poor. For them there are no other opportunities outside farming. This is the more reason why ZIAP, which aims at raising the sustainability of productive capacity and marketing capability of resource poor farmers, is critical to reducing rural poverty and enhancing food security in Zambia in general and Eastern Province, in particular.

From 1996 to December 31, 2001 the Zambian Government through the Ministry of Agriculture and Cooperatives (MACO), has been implementing the Agricultural Sector Investment Program (ASIP) as the overall strategy for guiding public sector, private sector and non-governmental organization (NGO) involvement in agriculture in Zambia. ASIP activities were implemented through twelve sub-programs. The project under review falls under the "Extension and Information, Marketing and Trade and Land Administration and Use", three of the sub-programmes of ASIP.

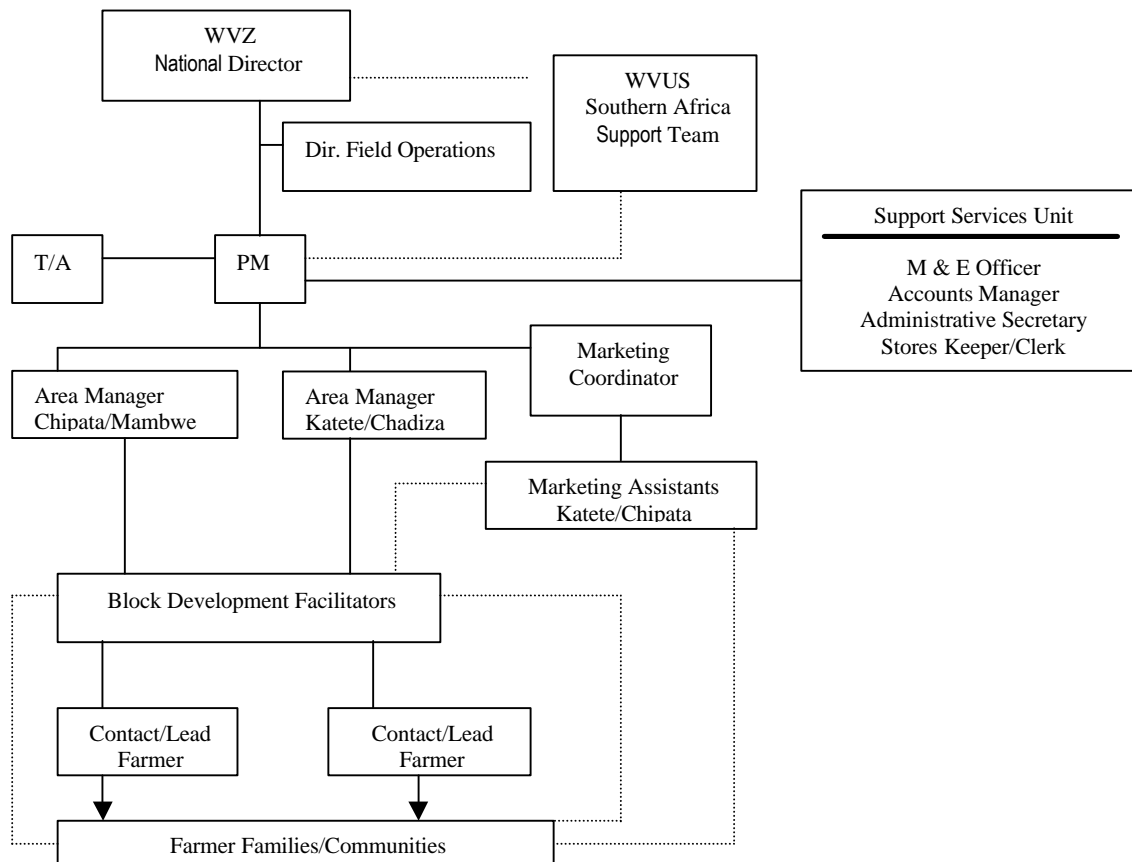


## CHAPTER 3: PROJECT IMPLEMENTATION

### 3.1 Organization and Management

The project is implemented through a Project Manager based in Chipata who reports directly to the National Director. Two Area Coordinators assist him; one based in Chipata responsible for Chipata North, Chipata South and Mambwe districts while the other is responsible for Chadiza and Katete districts. Seven Block Development Facilitators (BDFs), 3 in Katete; 1 in Chadiza; 1 in Chipata North; 2 in Chipata South, and none in Mambwe districts assist these Area Coordinators. There is also a Marketing Unit being manned by a Coordinator assisted by two Marketing Assistants. The administrative support services include one accountant, one administrative assistant, one Management Information Systems (MIS) Coordinator, 1 data technician, 2 clerks, 1 office attendant, 4 drivers, 1 office attendant and a gardener. The management structure of the project is shown in Figure 1.

**Figure 1: Management structure of service delivery**



### 3.2 Components of Project Implementation

The project endeavours to build on what currently exists. The project builds on the knowledge, techniques, capabilities, and strategies of local farmers and institutions. These values are affirmed, strengthened and expanded. Modifications of these in the form of interventions become possible and advisable as time provides project experience and as farmers become aware of new options and decide to adopt them. Every effort has been made to work closely with ICRAF and MACO Extension Service. This entails that project activities compliment what these other institutions provide rather than competing with them. It is imperative that the most important component of project activities, extension service, be provided at community level. This means that project staff has to be available when needed by farmers. The project provides extension work by making contacts with farmers, discovering and affirming local cropping strategies, promotion of improved fallow technologies (IFTs), on farm demonstrations, promotion of improved crop varieties and promotion of improved market infrastructure development. Project staff also makes every effort to respect farmers. This determines what should be done, on what scale it should be attempted and how it should be done

### 3.3 Identification of Project Location

The location of the project was chosen because of the openness of the farmers and government extension workers to try out new ideas in an attempt to address the issues of soil productivity. The 5 districts are within reach of Msekera Research Station where ICRAF is very active and therefore easily offers technical assistance. Some 500 farmers in the area had already tried out *Sesbania sesban* and *Tephrosia vogelii*, two of the agroforestry species, which were considered. World Vision International (WVI) workers had received numerous requests from farmers in the area concerning issues of fertilizer. Therefore these factors did not in any way compromise but rather complimented the objectives of the project.

### 3.4 Financial Aspects of Implementation

Late disbursement of funds has had negative impacts on project activities especially in the first financial year. According to project financial reports, the project ran out of funds in the middle of the first year making it difficult for activities to be done on time. Members of staff worked for 2 months without pay affecting morale (Table 1). However, funding improved in the third and fourth quarters when funds from USAID were approved and disbursed.

**Table 1 : Budgeted and Actual Expenditure for the Financial Year Ending September 2001**

Item	Budgeted Amount (US \$)	Actual Amount (US \$)	(%) Difference	Comments
Salaries and Benefits	442,000	395,000	10	Delayed Disbursements
Training Expenses	72,000	58,213	20	Additional Funding
Traveling	110,576	78,240	29	Delayed Disbursements
Office Costs	47,160	36,241	23	Delayed Disbursements
Capital	8,800	2,564	71	Awaiting Procurement
Professional Services	93,000	149,021	-60	University of Florida Consultancies

Source: WVIAP Financial Reports

Currently disbursements from the World Vision Zambia (WVZ) Country Office are made every month but these have to wait for the report for the previous month from Chipata indicating what has been spent, the balance in the account and the amount requested for the following month. This has to be received by the 15<sup>th</sup> of the month to avoid disruptions in the cash flow. Late disbursement of funds seems to have ceased affecting timely undertaking of project activities as can be seen from Table: 2.

**Table 2: Budgeted and Actual Expenditure for the Financial Quarter Ending March 2002**

Item	Budgeted Amount (US \$)	Actual Amount (US \$)	(%) Difference	Comments
Salaries and Benefits	157,785	154,240	2	
Training Expenses	29,000	18,528	36	Field days and tours not completed
Traveling	31,000	28,493	8	Trips not undertaken
Office Costs	18,282	18,387	1	
Professional Services	56,400	25,937	54	Consultancies by WVUS not yet undertaken

Source: WVIAP Financial Reports

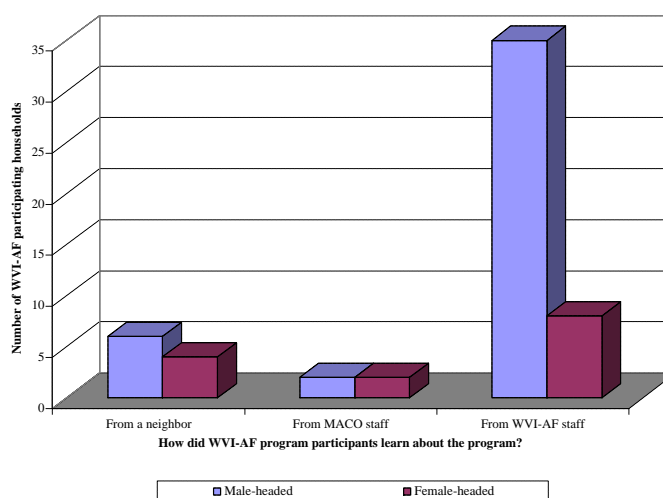
The proportion of the amount of money spent at different levels of project implementation from inception to date is shown in Table 3.

**Table 3: Level of Expenditure at Different Levels of Project Implementation over Years**

Project Level	Disbursements (US \$) per Year							
	1999		2000		2001		2002	
	Total	% Total	Total	% Total	Total	% Total	Total	% Total
WVUS	155,306	19.3	145,672	19.3	428,876	36.5	71,255	19.3
WVZ	3,953	0.5	5,241	0.7	13,471	1.1	652	0.2
Chipata	646,409	80.2	604,777	80.0	731,190	62.3	297,830	80.5
<b>Total</b>	<b>805,668</b>	<b>100.0</b>	<b>755,690</b>	<b>100.0</b>	<b>1,173,537</b>	<b>100.0</b>	<b>369,737</b>	<b>100.0</b>

### 3.5 Identification of Beneficiaries

Initially, WVIAP came to the communities and started sensitizing them on food security and income issues and also on the importance of sustainable management of the land resource. Figure 2 shows the main sources of information from the project to the beneficiaries.



**Figure 2 Ways through which participating households learnt about the WVI-AF program by gender of household head**

Most (73 %) of the WVIAP member households learned of the program through a WVIAP group facilitator. The rest indicated having learned of the program through fellow farmers/neighbours (17 %) and through Ministry of Agriculture and Cooperatives (MACO) staff (7 %). The category 'From neighbor' is most likely to represent spontaneous adoption (Figure 2).

The project was explained to the farmers and they were encouraged to choose lead and contact farmers. Wherever groups were in existence, these were used and strengthened. The overall strategy was to train farmers on aspects of sustainable agricultural practices with special emphasis on growing improved fallow species. Farmers were also trained in issues of soil/moisture conservation and marketing.

### **3.6 Nature and Type of Services Delivered**

The most important services the project delivers to rural families are agricultural extension services and training. The areas covered mostly are the introduction and adoption of sustainable agricultural practices and increased farmers' access to agricultural extension, training, markets and market information. These services were identified through a baseline survey that was conducted earlier in the communities involved. These services are delivered through community sensitisation and training workshops for farmers. Since project inception, there has been a lot of joint training workshops for WVI staff by ICRAF and the ministry of agriculture. These workshops have produced a well-versed cadre in WVIAP who have then gone ahead and trained farmers, some of whom have become Lead Farmers. These lead farmers have become crucial in the way these services are delivered because they live in the communities with the target population. The lead farmers understand the socio-economic and cultural conditions under which these farmers operate and therefore are very useful in how these services are delivered. In the absence of WVIAP project, other organisations like Lutheran World federation (LWF), MACO – Extension wing and Soil Conservation and Agroforestry Extension (SCAFE) can theoretically deliver similar services. However, it would practically be impossible for such organisations to deliver the services to the extent that WVIAP has or would. This is because most of these organisations are very thin on the ground and do not have the expertise and resources that WVIAP has. The core business of WVIAP is to deliver IFTs of which it has a comparative advantage through having a well-qualified cadre to do that.

### **3.7 Collaborations and Partnerships with Other Institutions**

The program is collaborating with MACO, ICRAF, the Co-operative League of the United States of America Natural Resources Management Program (CLUSA/NRMP), LWF and AFRICARE among others. The greatest of all partnerships have been with the communities themselves.

The program collaborates with the extension service of MACO in dissemination of agroforestry, crop diversification, soil and water conservation technologies mostly through the field staff at block and camp level where these are available. Farmer to farmer information/technology transfer is emphasized and, local Seed Management Committees (SMCs) have been put in place in order to enhance continuation and sustainability of program activities at the end of the project. At the district level, the institutions plan together for training of farmers and capacity building of staff. In Chadiza and Mambwe districts, the project activities are much reduced, and are working through MACO.

The program also collaborates with ICRAF, which develops agroforestry technology (AFT), in conducting trials and disseminating the technology. ICRAF works in partnership with MACO, as it does not have the comparative advantage to disseminate the AFT it develops to farmers on the ground. With regard to WVIAP, ICRAF:

- (a) Provided the first seed in 1998 while WVIAP was still sourcing from other sources
- (b) Trained trainers and provided literature (extension material, some of which was translated into the local language) in nursery development and management to WVIAP staff, Lead Farmers (LFs), Camp Extension Officers (CEOs) and Block Extension Officers (BEOs)
- (c) Provided their demonstrations on farmers' fields to WVIAP farmers

- (d) Organizes joint field days with WVIAP and participated in monitoring and evaluation and was in general on hand to answer technical questions
- (e) Collects data on farmers' improved fallows for socio-economic analysis
- (f) Co-hosted students undertaking various research on adoption pathways of agroforestry technology by students/staff from the University of Florida. This was a key ingredient for the success of the project as it provided for a close monitoring of adoption pathways in the process of disseminating the technologies through out the targeted area. This provided advice to project implementers as to when and where strategic changes need to be made in the implementation model.

This partnership has helped in the AFT reaching more farmers on the ground.

The collaboration with LWF is at management and field level. At management level, especially in Katete District, the two institutions attend each other's field demonstrations and may sometimes arrange joint field days in AFT. Quite often WVIAP provides seed to LWF and LWF lends equipment and implements for soil conservation activities to WVIAP. At field level, the collaboration is however not very strong because the WVIAP workers cover larger areas per individual and because of high staff turn over at LWF and lower qualifications of LWF staff.

The project also linked their farmers to the Africare Rural Credit Facility (RCF) in order to enable the farmers acquire farming inputs to implement the improved technologies they have been exposed to.

Collaboration with other NGOs is through the NGO Forum through which the institutions share their experiences in the field and share Annual Work Plans (AWPs) and agree on who had what resources to operate in which areas. Organizations such as CLUSA and Plan International are also members of this forum.

The project has been trying to involve the communities in all phases of project planning and implementation in order to develop a sense of ownership within these communities. Project services have become demand driven. For example, communities would request for booklets for a field day while they would meet the other necessary requirements. Even for project arranged field days, the project would only contribute a goat for lunch while the communities contribute to meet the other requirements such as mealie meal. Farmers also contribute towards the cost of field visits. Some farming communities are successfully hosting field days fully sponsored by themselves.

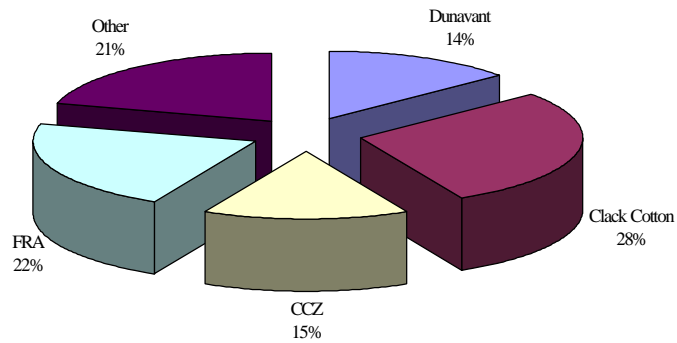
In order to improve service delivery and impact WVIAP should:

- (a) Link its farmers to the other marketing arrangements like CLUSA's Producer Owned Trading Company (POTC) and Farmer's Friend, or other marketing organizations who provide physical markets to farmers. The POTC, for example, is buying produce from non-CLUSA members in an attempting to meet its processing capacities and trading contracts. During the time of the review, WVIAP's farmers were complaining of lack of markets for their produce, especially groundnuts.
- (b) In partnership with ICRAF, documented a synthesis of its experience thus availing people in the nation as well as the region knowledge on the processes it has gone through in this innovative program, including characterization of the areas they are working in and monitoring what is happening in the cropping systems. This would have great relevance to program expansion.
- (c) Arranged to channel some of the funds, used for research under the University of Florida, through local research institutions such as the University of Zambia (UNZA) to fund locally generated research agenda. This would assist in solving problems related to AFT development in the project areas.

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<sup>1</sup>Where as WVIAP field workers (Block Development Facilitators) have some professional qualifications in agriculture, those at LWF (Project Organisers) are merely School Leavers

The WVIAP does not, as its mandate, provide credit for inputs to farmers. However, the main credit providers to the project area are shown in Figure 2.



**Figure 3. The most important supplier of credit services in the WVIAP program area, as perceived by the respondents**

The 'other' category in Figure 3 represents Africare (7 percent) Farmers' Friend (6 percent), PAM (5 percent), World Vision International (2 percent) and cooperatives (one percent).

## CHAPTER 4: PERFORMANCE AND IMPACT OF THE PROJECT

### 4.1 What Difference did Project Implementation Make

In efforts to improve farmer productivity through IFTs as a sustainable agricultural practice, the program through its collaboration with ICRAF trained its staff, lead farmers and MACO field extension workers in these technologies for onward transmission to farmers. The lead farmers were very critical as they provided continuous first hand contact with the communities. These trained contact farmers, one of each belonged to a farmers group. Out of the originally targeted figure of 50 in the first year, the number of lead farmers has increased to 159 (Table 4).

**Table 4: Number of Lead Farmers Trained by Gender and District**

Gender	Number of Lead Farmers/District					Total
	Chadiza	Chipata North	Chipata South	Katete	Mambwe	
Male	12	27	31	50	9	129
Female	1	15	9	4	1	30
<b>Total</b>	<b>13</b>	<b>42</b>	<b>40</b>	<b>54</b>	<b>10</b>	<b>159</b>
<b>Target as per Co-operative Agreement</b>						<b>50</b>

Source: WVIAP Data Base

The training of lead farmers has been very instrumental in the successful implementation of the project. The knowledge these lead farmers have gained will remain in the community and be shared with many others for a long time. Even in the absence of the project or MACO Field Officers, these farmers will continue with what they have learnt. Farmer to farmer extension is a very positive way of disseminating information to farmers.

Through community sensitization and training, using mostly the LFs, the number of farmers testing the IFTs has tremendously increased from 1999 to date reaching a total of 13,066 by the year 2001 exceeding the project target of 12,000 by the year 2003 (Table 5). According to project staff, the current number of farmers who planted IFTs is more than 15,000.

**Table 5: Number of farmers Planting Improved Fallows Planted by Gender by District by Year**

District	Year	Number by Category			Total	
		Gender		Groups	Actual	Target by 2003
		Male	Female			
Chipata North	1999/00	943	473	3	1,419	3,000
	2000/01	2,363	1,769	8	4,140	
Chipata South	1999/00	746	562	11	1,319	3,000
	2000/01	2,181	1,581	23	3,785	
Katete	1999/00	736	211	4	951	3,000
	2000/01	2,444	1,064	9	3,517	
Mambwe	1999/00	0	0	0	0	1,500
	2000/01	192	79	0	271	
Chadiza	1999/00	0	0	0	0	1,500
	2000/01	956	393	4	1,353	
<b>Total</b>	1999/00	<b>2,425</b>	<b>1,246</b>	<b>18</b>	<b>3,689</b>	<b>12,000</b>
	2000/01	<b>8,136</b>	<b>4,886</b>	<b>44</b>	<b>13,066</b>	

Source: WVIAP Data Base

The total and average area under different IFT tree species has also increased tremendously. Table 6 compares the total and average areas of these species with those obtaining in 1999 at the time of the baseline survey.

Other sustainable practices promoted to enhance agricultural productivity were crop diversification and soil and moisture conservation. Under crop diversification, farmers were provided with planting materials of cassava (Variety *Maniopola*), maize (Variety *Pool 16*), cowpeas (Variety *Lutembwe*) and groundnuts (Variety *MGV4*) under the principle of community based seed multiplication to diversify their cropping base. Table 7 shows the targeted and actual number of beneficiaries of seed distribution for crop diversification during the 2000/01 season and the theoretical value of the produce.

**Table 6: Total and Average Area per Farmer of Different Agroforestry Species Planted by Years**

Species	Area Per Year			
	Total (Ha)		Average (Ha)	
	1999/00	2000/01	1999/00	2000/01
<i>Cajanus cajan</i>	4.25	183.75	0.10	0.20
<i>Gliricidia sepium</i>	59.00	54.25	0.15	0.20
<i>Sesbania sesban</i>	213.00	357.75	0.15	0.22
<i>Tephrosia vogelii</i>	431.25	2,825.50	0.18	0.25
<b>Total</b>	<b>1,207.25</b>	<b>3,921.25</b>	<b>0.15</b>	<b>0.22</b>
<b>Baseline Figures (1999)</b>		<b>1.39</b>		<b>0.20</b>

Adapted from: WVIAP Data Base

With regard to soil and moisture conservation, not much has been done due to lack of pegging equipment. However, farmers have been sensitized to practices such as conservation tillage (pot-holing), mulching, green manuring, contour ridging with vertiver grass, which some have started practicing, and storm drain construction in Katete and Chipata. This is notwithstanding that the improved fallows themselves are part of conservation farming because of their characteristic of retaining moisture.

**Table 7: Number of farmer beneficiaries who planted improved crop varieties in 2000/01 season and theoretical value based on area planted, average yields obtained and prices at time of harvest.**

Crop	Number of farmer beneficiaries				2001 Target	Area (ha)	Yield tons/ha	Price/ton (ZMK)	Total Value (\$)
	Male	Female	Group	Total*					
Maize	2,996	1,702	10	4,848	4,000	1,177	2.88	350,000	339,000
Cowpea	1,918	1,444	15	3,587	4,000	844	1.08	900,000	234,000
Groundnut	175	85	7	372	500	67	1.40	1,500,000	40,000
Sorghum	25	8	0	33	0	8	1.00	150,000	343
Cassava	925	325	1	1,266	1,400	312	16.00	750,000	1,070,000
<b>Total**</b>	<b>6,035</b>	<b>3,564</b>	<b>33</b>	<b>10,106</b>	<b>9,900</b>	<b>2,408</b>	-	-	<b>1,684,000</b>

\*- Total includes members of farmer groups that usually comprise between 15 and 25 members. For computational purposes, the minimum number (15) is used in the totals.

\*\* - This total is not equal to the number of beneficiaries

Source: WVIAP Quarterly Reports

Though the technologies being promoted (especially the IFT) take time to show results, indications for those farmers who planted maize after cutting the fallows had improved yields with their maize cobs being bigger and heavier in spite of the unfavorable weather in the previous season. The planting of a shorter maturing variety of maize, *Pool 16*, enhanced the yields. The early maturing variety of cassava, *Maniopola*, also helped in hunger periods around January/February for those that planted the crop.

This improvement in productivity has not yet transferred to actual increase in rural incomes. However, measuring impact on USAID's SO 1 (Increased Rural Incomes of Selected Groups) through income effects of increased agricultural productivity and using the method suggested in the "Detailed Implementation Plan" of the Project entails that the income level has increased as the calculation based



on this formula<sup>3</sup> is a factor of the number of farmers adopting the technology and this has increased as shown in Table 7. Actually, the 4,000 ha (Table 6) under fallow to date represent a production of 14,000 tons of maize. This figure translates into US\$2.8 million worth of increased rural income and a saving of US\$545,455 in fertilizer expenses. Furthermore, Table 8 shows that most of the respondents showed that their incomes are either higher or are same as they were in 1998 as a result of being part of the WVIAP. The reasons for these opportunities and challenges cited as perceived trends in household incomes are given in Table 9.

**Table 8. Perceived income trend between 1998 and 2002 by household head's gender and whether or not the household was a member of the WVI-AF program**

Gender of household head and membership to WVI-AF program	Perceived income trend between 1998 and 2002		
	Income is higher in 2002 than it was in 1998	Income is the same in 2002 as it was in 1998	Income is lower in 2002 than it was in 1998
<b>Male-headed households</b>			
Number in sample	51	12	19
% that were program members	71	58	11
<b>Female-headed households</b>			
Number in sample	15	10	8
% that were program members	47	50	0
<b>All households</b>			
Number in sample	66	22	27
% that were program members	65	55	7

Another strategy to increase rural incomes of the target communities was to develop and increase farmers' access to market information and participation in markets. Pursuant to this, the project's Marketing Component mobilized farmers into marketing groups whose capacity would then be built to develop them into mature business concerns by the time they start having excess production for the markets. The idea was that farmers should be able to source for inputs, negotiate forward market contracts and be able to market their produce in a profitable manner. Table 10 shows the number of farmer organizations in the Project.

It was anticipated that 30 groups of about 20 farmers each would be established in the first year and that this would increase to 100 groups by the end of the second year, 150 by the end of the third year, rising up to 300 by the end of the project, at which time at least 50% of all target farmers would be impacted by this marketing initiative.

<sup>3</sup> ICRAF data show net benefit to farmers of ZMK 237,016 in year 3 of maize production on improved 2-year fallows X estimated number of adopters of improved fallowing. This means that rural incomes increase as the number of adopters increases.

**Table 9. Opportunities and challenges cited as reasons for perceived trend in household income**

Factor	Reasons cited by households for their perception about change in income between 1998 and 2002					
	Households that think income has increased		Households that think income has not changed		Households that think income has reduced	
	WVI-AF members	WVI-AF non-members	WVI-AF members	WVI-AF non-members	WVI-AF members	WVI-AF non-members
Crop marketing	-Producer prices have increased -Higher marketing opportunities, -Cash cropping has increased	-Producer prices have increased -Higher marketing opportunities	-Producer prices have remained low	-Poor crop marketing		Producer prices are low
Agronomic practices	-High yielding varieties introduced -Other improved agronomic practices	-Crop diversification -Other improved agronomic practices				
Agricultural inputs	-Input loans available	Input loans available		-Accessibility to agricultural inputs has remained the same	-Input delivery system inadequate	-Input delivery system inadequate
Financial management	-Income reinvestment more now	-Income reinvestment more now				
Land availability		-Farm land has increased				
Soil fertility				-Declining soil fertility		-Declining soil fertility
Weather					-Bad weather (drought, etc)	-Bad weather (drought, etc)
Farm implements						-No farm implements
Food security challenges						-Spend a lot of time looking for food

It has, however, been difficult to interest farmers in this initiative because the project does not provide inputs and does not physically buy the farmers' produce. Despite sensitization and training (Table 11) farmers still ask for credit for inputs from the project and when the project would buy their produce. Some farmers are skeptical of bulking their produce at depots on account of not trusting the group leaders. In spite of these shortcomings the project managed to link the farmers to AFRICARE to source for inputs on credit in 2000/01 season and later facilitated the marketing of produce worth about US \$ 12,010. Some groups (about 2) are doing well and managed to organize markets for their members last season.

## 4.2 Empowerment: What has Changed as a Result of the Project

### 4.2.1 Changes on Target Population

The training that is being conducted in the target population is beginning to bear fruit in that farmers have now learnt better and sustainable farming practices. The number of farmers who have at least planted a fallow crop has increased to more than 15,000. More farmers are now consistently looking for information on how to manage these fallows and also how to manage the subsequent crops after the fallow phase. Some farmers who have been trained in marketing aspects have now started sourcing for markets on their own. Farmers have been taught aspects of proper planting, crop management, harvesting, grading, storage, cost benefit analysis, record keeping, etc. Some farmer groups in the visited areas now put their produce together and wait for an appropriate time to sell when prices are a bit more favourable.

**Table 10: Participating Farmer Organizations in Marketing Activities by District by Year**

District	Year	Number Per District					
		Farmer Associations	Farmer Groups	Depots	Farmers		
					Male	Female	Total
Chipata N	1999/00	3	27	0	273	340	613
	2000/01	4	37	7	377	334	711
	2001/02	6	38	6	530	297	827
Chipata S	1999/00	3	27	0	409	297	706
	2000/01	4	22	4	256	232	488
	2001/02	4	24	4	245	222	467
Chadiza	1999/00	0	0	0	0	0	0
	2000/01	0	0	0	0	0	0
	2001/02	0	0	0	0	0	0
Katete	1999/00	5	21	0	465	281	746
	2000/01	3	10	2	252	89	341
	2001/02	0	0	0	0	0	0
Mambwe	1999/00	0	1	0	15	15	30
	2000/01	0	0	0	0	0	0
	2001/02	0	0	0	0	0	0
<b>Total</b>	<b>1999/00</b>	<b>11</b>	<b>76</b>	<b>0</b>	<b>1,162</b>	<b>933</b>	<b>2,095</b>
	<b>2000/01</b>	<b>10</b>	<b>69</b>	<b>13</b>	<b>885</b>	<b>655</b>	<b>1,540</b>
	<b>2001/02</b>	<b>10</b>	<b>62</b>	<b>10</b>	<b>775</b>	<b>519</b>	<b>1,294</b>

Source: WVIAP Data Base

#### **4.2.2 Changes on Project Staff**

The project staff now has increased knowledge of not only IFTs but also overall agricultural extension methodologies. This is so because at inception, project staff that was raw from colleges underwent a lot of training with ICRAF and MACO. They have also learnt a lot through reading literature supplied by ICRAF. Their zeal to provide extension messages to farmers has increased.

#### **4.2.3 Changes on Community Groups**

There is increased interest in community groups to source for agricultural extension messages. This is evident in adjacent communities where WVIAP is not working. Farmers there appreciate what their neighbours are learning and want similar services for themselves. Where the project is working, there is increased awareness of sustainable agricultural practices.

Initially, when the project first went to the target communities, sensitisation meetings were held. After this, groups were formed and lead and contact farmers were chosen. In certain instances, groups, which had been in existence for other activities by various organisations, were brought together and their organisations were strengthened. When these groups realised that WVIAP was dedicated to providing good quality service, the farmers also worked hard to realise positive results. Some of these farmer groups have also gone to the extent of drafting constitutions and byelaws, which spell out how they operate.

#### **4.2.4 Changes on Agricultural Extension Providers**

Since numbers of farmers have increased through efforts by project staff, government extension providers are also reporting the same numbers as those of lead farmers. Lead farmers used by project staff have become increasingly important in the provision of agricultural messages. On the most part, government has no resources to facilitate the work of the extension workers. Facilitation of these workers through working with WVIAP has motivated and inspired them.

#### **4.2.5 Reduction in Barriers to Useful Agricultural Production Technologies**

The project has to a large extent reduced barriers to farmers accessing useful agricultural technologies by training lead farmers who live within the communities with farmers. Though the number of lead farmers can and probably should be increased, farmers have really benefited from their presence at the moment because all the activities the project initiated with farmers pass through the lead farmers. The lead farmers are committed, hard working and sacrifice quite a lot for the benefit of the project. They have to be with the farmers, either distributing inputs, conducting training, collecting data or making physical checks on how the project is progressing instead of working in their fields especially in the rain season. Generally, farmers rate the quality of the agricultural services being delivered to the community as fair.

#### **4.2.6 Changes in Farmers' Attitudes to Improved Agricultural Practices**

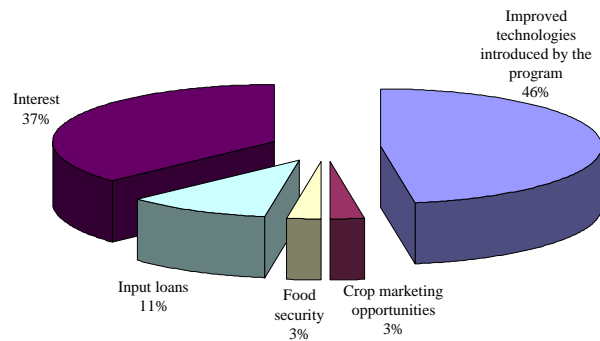
The attitudes of farmers towards IFTs have changed. Earlier most farmers considered planting of trees to be a waste of time. This was because some of them thought they were too old, or they felt that they did not have enough land or were simply not sure of the benefits. But having seen from neighbours what the IFTs can do, more and more farmers are willing to take up the practice. Farmers have gained knowledge on how to take care of these IFTs in terms of planting like *Sesbania sesban* need to be put on the nursery while *Tephrosia vogelii*, *Pigeon peas* and *Gliricidia sepium* can be planted directly. Putting up a nursery requires a lot of labour and hence few farmers prefer growing *Sesbania sesban*. Farmers are aware that *Gliricidia sepium* has the ability to coppice (or re grow) after being cut and is thus the most preferred fallow species. Unfortunately the seed of *Gliricidia sepium* is not readily available.

Due to changes in attitudes, farmers can now organise themselves to attend field days at Msekera Research Station. When they organise a field day in their own communities, they even provide food to fellow farmers. When they have a shortfall in terms of money for fuel, for instance then they ask the project to assist. At times they organise their own field days and just inform WVIAP and ICRAF to attend and provide some technical information.

**Table 11. Training Sessions Undertaken for Marketing Groups by Years**

Type of Training Session	Year									Collaborators
	2000			2001			2002			
	No. of Sessions	Attendance		No. of Sessions	Attendance		No. of Sessions	Attendance		
		Total	% Women		Total	% Women		Total	% Women	
Leadership Skills	6	306	39.9	0	0	0.0	0	0	0.0	CEOs, BEOs, NAIS
Business Planning/Cost Benefit Analysis	2	54	59.3	0	0	0.0	0	0	0.0	Financial Management Officer (MACO)
Depot Marketing and Business Concept	0	0	0.0	2	84	32.1	0	0	0.0	CEOs, Shoprite, Eastern Voice
Garlic Production and Marketing	0	0	0.0	1	41	46.3	0	0	0.0	Marketing Consultant
Groundnuts Marketing	0	0	0.0	6	219	33.3	5	169	39.6	Food Legumes Research Team (MACO)
Business Planning	0	0	0.0	0	0	0.0	1	29	31.0	None
Record Keeping	0	0	0.0	0	0	0.0	5	379	51.7	CEOs
<b>Total</b>	<b>8</b>	<b>360</b>	<b>49.6</b>	<b>9</b>	<b>344</b>	<b>37.2</b>	<b>11</b>	<b>577</b>	<b>40.8</b>	
<b>Total Attendance to Date</b>	<b>1,281 (42.5% Women) Representing about 1.3% of the farmers impacted by the marketing initiative</b>									

Source: Rural Group Formation



**Figure 4. Proportions of the interviewed WVIAP program member households citing various reasons for joining the program**

#### **4.3.1 Nature of Farmer Participation in Project Implementation**

“Community participation”, hereafter called participation, is not a new concept but it has always meant different things to different people. In this study participation has three dimensions: a Product, a Process and Performance. As a product, community participation is an end in itself that should be sought. People have the right and duty to participate in the execution (that is, planning, implementation and management) of projects that affect their lives. It underlies an acceptance of democratic principles and practices.

The study established that the farmers have participated through the various stages of project cycle, starting first with providing information to the baseline survey. It should be noted, however, that the farmers did not choose the package of services to be provided, nor did they prioritise them. Scientists and professional staff determined the nature of the project. The acceptance by farmers to participate in project activities lies in the fact that it addresses their fundamental basis of livelihood - agriculture. The study found that given a choice on how they would have addressed the declining soil fertility issue, farmers have a higher affinity to choosing the unsustainable shortcut of loans for chemical fertilizers. Even among participating farmers the study got responses of wanting “a bit of fertiliser to use in the interim” before the fallows mature.

As a process, community participation is a means to improve project results.

*“If people participate in the execution of projects by contributing their ingenuity, skills and other untapped resources, more people can benefit... and the outcome corresponds better to the needs and priorities of the beneficiaries”*(UNCHS-Habitat, 1984: 6).

The beneficiaries participated in the process of service delivery. In addition to attending courses offered by the project, farmers groups chose suitable individuals among themselves who underwent intensive training to prepare them to work as lead farmers (LFs) and contact farmers (CFs). LFs and CFs are volunteer community agricultural workers (CAWs). The use of CAWs reduced the cost of service delivery from what it would have been if paid project staff were used in their place.

Finally, as performance (impact), participation is a self-generating activity, which stimulates people to seek participation in other spheres of projects or activities in their society.

*“Participation builds up a self-reliant and co-operative spirit in communities; it is a learning process whereby people become capable of identifying and dealing actively with their problems”* (Ibid).

Arising from their motivation in participating in initial program activities, farmers in the areas covered by the study are demanding for more services from the project and MACO field services. One repeated demand was that for the marketing component that has not yet covered all the areas where the improved fallows are. Figure 4 shows the different motivations farmers had for participating in the program. Most of the respondents (46 %) were interested in learning about the improved technologies introduced by the programme.

#### **4.3.2 Characteristics of Farmer Groups in WVIAP**

The review established that no conditional characteristics were set for farmers who should participate in the activities of the project. Membership was open to all farmers living in the selected target villages. From the start the project did its part to sensitize the communities and those that were willing joined and partook in the testing of improved fallows and other activities on offer. The socio-economic characteristics that one would find among participating farmers exist in as natural a way as they could, without deliberate manipulation or choice by the project. Their mix of membership may reflect the socio-cultural possibilities (and acceptability?) in the areas of operation

However, once the farmers joined to be part of the participants, the project introduced a locality-based group structure (called farmer groups or FG in short) to facilitate delivery of impact messages and related services. Within these FGs some farmers were chosen to undergo intensive training that would prepare them to become lead or contact farmers (details on the efficacy and limitations of this system has been described above under the structure of service delivery). Under the marketing section a number of FGs formed a depot and these depots formed Farmer Associations (FAs).

Ordinarily (improved fallow-based only) the FGs did not have an elaborate executive. It only had a chairperson, secretary and the group CF, who is a communication link between the FG, the LF and sometimes the BDFs. There was no treasurer because these ordinary groups have not kept any group money yet. However, the FGs that are covered by the marketing section of the project have treasurers and business record keeping starts at that level. The review established that while most of the marketing facilitated groups may be as without money as the ordinary FGs, their minds are set to make profit from both their farm and non-farm ventures as a result of the training they have received (details of training have been discussed above). This had generated *positive envy* from groups that have not received the service.

#### **4.3.3 Gender and Participation in project activities**

A quick look at lists of participants shows that there are more men who are substantive members of the farmer groups than there are women. However, there are some numbers of women hidden behind every substantive male figure that represents a male-headed household. It is likely that there are more women executing the activities that the registration statistics may not reveal. In addition to the mere numbers of women and men who register in their own right, the critical issue that requires to be addressed is to determine what the presence of these individuals entails in terms of the participation in decision making, contribution to activities, sharing of responsibilities and benefits. In other words, what is the nature of participation of women and men in the program? At what level in the executive structures of the farmer groups are they placed and why?

Many of the women that have been recorded as participants are either not married (widowed, divorced, and single) or are in marriage where the man's role in household decision-making is "less significant"<sup>4</sup>.

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<sup>4</sup>It was reported that in some polygamous marriages the man/husband does not live fulltime with one of the wives. She stays at her own village (matrilocal), more independent of the husband who treks to her house when it is her turn to be kept company at night.

Discussions with participating farmers showed that the main reasons affecting women's participation centre on the status and traditional gender roles of women. Women who are married in patrilocal tradition have less authority to enter membership of activities with implications to farmland use. They keep away from such social contracts and leave it to their husbands, who control access to the family land, to determine.

This finding is not exception to WVIAP alone; it is a common feature in Zambia. For example in a recent review of farmer participation in the Rural Investment Fund (RIF) that covered four provinces, similar trends were observed as shown in Table 12. Discussion on gender and representation on decision-making committees of the farmer groups that benefited from sub-program grants from RIF revealed that most of the few women on the executive committees occupied "junior" positions or were deputies while the men held the substantive positions. However, when it came to the trust to look after money (that is, the post of Treasurer) women were preferred over men in most cases (Kasuta, 2002).

**Table 12: Membership by Gender of Selected RIF Facilitated Farmer Groups**

Farmer Group Name	Project type	Total Membership		Executive	
		Male	Female	Male	Female
Kapitolo Market	Market shed & Storage	19	15	4	7
Kamalamba Cooperative	Market shed & Storage			9	1
Katuyola Farm Club	Poultry Unit	5	5	3	2
Mukoma Farmer's Club	Fish ponds	17	12	7	3
Kucha Farmers	Piggery	9	3	4	2
Ipafu Settlement	Irrigation pump	29	4		
Chitashi farmers' Club	Fish ponds	11	6	4	2
Andele Group	Piggery	12	8	5	5
Kambulu Farmers	Poultry	10	5	3	3

Source: Kasuta, (2002), *Review of the Participatory Approach in Rural Investment Fund, MACO*

#### **4.3.4 Youths Participation in Project Activities**

An area gaining attention in rural development programmes is the participation of the youths. This is in recognition of the fact that the youths constitute a larger proportion of the Zambian population, apparently more than that of women as a separate category. The younger age groups ranging from 0 to 34 years account for 83% while about 45% of the total population are aged between 0 and 14 years. The youths aged between 15 and 24 years account for 24% of the population. Given that poverty levels are higher and more intense in the rural areas than in the urban areas the natural response of the youths has been to migrate to urban centers. This fact makes the participation of the youths, inseparable to the measure of success of poverty reduction programs.

This study did not collect the numerical ages of the beneficiaries. This makes quantitative age distribution of the project beneficiaries not possible. However, visual age categorization of the farmers that were interviewed provided indicative information on the beneficiaries. It was visibly evident that the young families are participating alongside the older ones in WVIAP. However, the youthful households appear to be the most affected by inadequate land because these are given chip off land by the former, who are their parents.

Children generally aged between 7 and 15 assist their parents in weeding the improved fallow fields. Some basic schools are also participating in the planting of improved fallows on their production unit (PU) fields. The significance of children participation in WVIAP activities is that the technology being advocated becomes part of their socialisation. Once these practices become internalised by the children as part of their cultural practices, a lasting adoption of improved fallow technology will be achieved.



#### 4.3.5 Sustainability of Farmer Groups

A direct question was always asked by the review team to the participating farmers on “will you be able to continue the agroforestry activities if World Vision left next year at the end of this phase?” Without exception, the response was always “Do not take away this project from us as yet. There is still more that they should teach us.” While this reflects the need for WV to consolidate the work they have started, farmers went into detail on what the project has taught them which they know and can continue doing with minimal support. Those groups and individual farmers have demonstrated different levels of proficiency in the technology they have been taught/introduced to by the project. The following indicators show that the project has sown some seeds of sustainability:

- ✓ Farmers demonstrated happiness with the technology.
- ✓ Some farmers have started planting larger fields of improved fallows even before experiencing a post-fallow crop
- ✓ There are trained CAWs (LFs and CFs) within the project areas
- ✓ Seed for some of the fallow species is readily available, except for *Gliricidia sepium*
- ✓ Farmers have been taught basics of seed production techniques
- ✓ Farmers showed willingness, and eagerness sometimes, to share the seed with new testers at no cost (free)
- ✓ All concerned institutions, traditional leaders and MACO staff at the province and district levels, are in full support of the technology. One traditional leader who was visited took the review team to his seed plots of *Tephrosia Madagascar* and *Gliricidia sepium*.

However the risks to the sustainability of the project activities for now include:

- ✓ Lack of resources for MACO to take over even mere monitoring of already established farmers. For example, the review team found that in the visited blocks there are more camps that have no CEOs than those with staff.
- ✓ Lead farmers and contact farmers expressed their weariness about lack of material support from their farmers and the project to cushion them against the risk of exposing their own households to food insecurity because of spending too much time on serving other farmers for free.
- ✓ It is not known what the post fallows will bring and how farmers will manage it.
- ✓ Some farmers think that IFTs should completely replace the use of inorganic chemical fertilizer. This is a wrong notion because these legumes should be seen as an input into the farming systems rather than a sole package.

In comparison, farmer groups that have received market training have an added advantage of business knowledge and articulated issues of farming as a business better than those that have not. Some of these groups have seen the need to and organized ways of making money for running their groups, including pooling their produce for marketing and setting/negotiating prices.

## PART III: IMPLICATIONS

**Table 13. Reaction to extending, expanding or cutting short the WVIAP Cooperative Agreement**

Decision	USAID		Beneficiaries	
	Advantages	Disadvantages	Advantages	Disadvantages
Extending time	<p>More lessons will be learnt on how to implement a similar project elsewhere</p> <p>Post-fallow crop farm management issues will be learnt and possibly solved</p>	<p>More time and resources will be needed</p>	<p>They will benefit fully from the different species of the IFTs</p> <p>The training received will be put to good use</p> <p>More Lead and Contact Farmers will be trained</p>	NIL
Expanding area covered	<p>More impact of USAID investment will be felt</p>	<p>Danger of spreading thinly</p>	<p>More farmers will be availed the technologies being promoted</p> <p>Food security and income</p>	NIL
Cutting short the project	<p>Money saved</p>	<p>The objectives would not have been achieved fully</p> <p>No post fallow lessons will be learnt</p>	NIL	<p>Farmers who haven't experienced the benefit of IFTs will be deprived of the much needed technical knowledge</p>

## CHAPTER 5: LESSONS LEARNED

### 5.1 Lessons for USAID/Zambia

Agricultural extension messages and services can have a positive impact on peoples' livelihoods if they were delivered cost effectively like the case of WVIAP project. As long as staff working in the project is well remunerated with adequate operational funds provided on time, they are likely to deliver as outlined in the cooperative agreement.

### 5.2 Lessons for WV and other NGOs

- ❖ *Benefit of using suitably qualified personnel:* One undeniable factor that has contributed to the promising success of the WVIAP is that from the start the project has only employed correctly qualified staff. A common wrong practice among many NGOs involved in development work is that they employ less and non-qualified personnel as their field staff to be supervised by few good caliber superiors based at some project administration center either at national office or district level. Table 14 shows the staff qualification at WVIAP which underscores wise matching of tasks and personnel qualifications plus a good mix of gender, which should be replicated in any effort to extend or replicate the project to other areas. The project should be encouraged to source for relevant literature for their staff, if possible it should subscribe to relevant journals.

**Table 14: Key Personnel and their Qualifications**

Position	Gender	Education Level	Specialization	Experience (Years)
Project Manager	Male	B Sc; M Sc; Ph D	General Agriculture; Tropical Crop Production; Agronomy, Farming systems, Project Management	20
Marketing Coordinator	Male	Diploma	Social Development; Agricultural Engineering	16
Area Coordinator 1	Male	BA Education; Management training Course	Geography; gender and Development; Agroforestry	13
Area Coordinator 2	Male	B Agric Sc; M Sc	Crop Science; Agronomy	13
M & E Officer	Male	B Sc; M Sc	Animal Science; Agronomy	
Grant Accountant	Male	ZDA	Accountancy	
Marketing Assistant 1	Female	BBA	Marketing	7
Marketing Assistant 2	Female	Diploma	Marketing	
Block Facilitator 1	Female	Diploma; Certificates	Human Nutrition; Poultry Production; Management for Women in Agriculture; Secretarial Course	20
Block Facilitator 2	Male	B Sc; Diploma	Agricultural Economics; Agriculture Business Management	
Block Facilitator 3	Male	Diploma	Animal Science	6
Block Facilitator 4	Male	Certificate	Forestry	3
Block Facilitator 5	Female	Certificate	General Agriculture	3
Block Facilitator 6	Female	Certificate	General Agriculture	3
Block Facilitator 7	Female	Certificate	General Agriculture	3
Data Technician	Female	Diploma Certificate	Forestry and Remote Sensing, Project Management	3
Administrative Assistant	Female	Diploma; Advanced Certificate; Certificates	Personnel Management and Industrial relations; Industrial Relations; HIV/AIDS Counseling; Secretarial	23

Source: WVIAP Records

## 5.2 Lessons for MACO

- ❖ Effective extension requires constant training and retraining of staff in the new technologies. Although all the Coordinators and BDFs under the project are qualified personnel, their training in the new technology they were to advocate proved to have increased their level of confidence in their work.
- ❖ *Use of Lead farmers as frontline extension workers:*  
The problem of shortage of field staff at camp as well as at block levels has persisted for a long time. By 1996 the ratio of frontline extension staff to farmers averaged 1:300; which, according to the MACO, is one third less than what is required to meet the needs of smallholder farmers. The situation currently is worse (estimated at 1:600) than it was at that time. The staff levels have continued to drop below their level at the time of the project baseline study in 1999.

The Zambian Government should consider use of Community Agricultural Workers (CAWs)<sup>5</sup> who are fast becoming popular (and is proving successful, also) among NGOs and other projects as a fast track approach to reducing the staff to farmer ratio. The case of ZIAP has provided evidence that with adequate training provided to CAWs, MACO would only require to employ well qualified Block Extension Officers (BEOs) and use less money on providing the training and logistical support to both the CAWS and BEOs than what is required to do the impossible task of staffing all the agricultural camps.

This innovation will not be totally new to the civil service mode of service delivery because that is what is happening in the other social sectors. For example, in the health sectors there are community health workers (CHWs) and traditional birth attendants (TBAs).

## 5.4. Lessons learned to improve on impact

- ❖ Farmer based tree seed orchards have proved to be very beneficial for scaling up. This has served the project both time and money in procuring seed. With this strategy, the project managed to attract 4,350 farmers to plant at least one of the improved fallow species on a one lima plot (WVIAP Annual Report 2000). This has encouraged farmers to test the IFTs.

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<sup>5</sup> CAWs are called different names by different projects/NGOs. The ZIAP has Lead Farmers (LFs) for senior CAWS and below the LFs are contact farmers (CFs).

## CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

### 6.1 Conclusions

- ❖ With fourteen months remaining before the current Agreement comes to an end, the project has already overshot its target of 12, 000 farmers using IFTs. It is evident that great interests in the beneficiary and non-beneficiary communities in adopting the technologies (i.e. IFT, crop diversification, soil & moisture conservation and training in business and marketing skills) of the project has been developed. Though AFT, which is the main thrust of the project takes time to bear results, there have been significant indications of the positive impact on the household food security and income situation of the adopters. This impact has been augmented by effects from other components of the project. With time, the impact is anticipated to be more intense and widespread in the communities. In order to consolidate these initial achievements, there is need to extend the project so that a bigger spectrum of the target communities can have post fallow experiences and be able to stand on their own. Extending the project will also provide an opportunity to consolidate the methodologies used in the current phase and identify issues for further research and refinement. This would provide a firmer basis for extension to other regions by World Vision or other organisations.

### 6.2 Recommendations

In order to improve project implementation and impact, the review team recommends that:

- ❖ After those farmers who planted their first fallow in the year 2000 have harvested a second post fallow crop, it will be worthy-while for the project to conduct a detailed interim-evaluation that will explore the prevalence of the change indicators that were identified in the baseline study.
- ❖ Any effort to replicate or extend the project should carry with it the positive features of the current ZIAP, such as employment of appropriately qualified staff and gender balancing.
- ❖ Since ICRAF has previously been active in all these areas, the project should extend or expand to completely new areas like Petauke, Lundazi and Nyimba. Full characterization of project sites in terms of the biophysical, environmental, social cultural and economic conditions should be done. This will make scaling up of similar technologies easier. Stronger linkages to MACO - Research and UNZA are recommended.
- ❖ Strengthening and encouraging community seed multiplication (especially for *Gliricidia sepium*) at farm level in order to promote increase in the areas under improved fallow. This takes care of the fact that seed of agroforestry species is expensive but growing them for the purpose of selling seed may not be lucrative in the long run.
- ❖ Farmers with more land should be encouraged to increase the sizes of plots under improved fallows in order to maximize on benefits. More farmers also still require training in sustainable agricultural practices since as of now only a few farmers have seen the benefits of IFTs.
- ❖ Management and control of bush fires and livestock in the dry season is needed. Farmers need to be trained in early burning and making of fireguards. The relationship

the project has made with local leadership should be encouraged to enhance these efforts.

- ❖ The WVIAP should be encouraged and facilitated to synthesise and publish their findings. This will enable others to learn about the strategies that they have put in place to enable them reach such big numbers.
- ❖ The project should consider increasing the amounts of food crop seed given to farmers because farmers complain that the amounts are too small. Maybe the hecterage and the ability of a farmer to plant should be considered when giving out seed.
- ❖ The project management at headquarters should be aggressive in its sourcing of literature which in turn should be shared with field staff. It is recommended that the project should subscribe to some of the major relevant journals.
- ❖ Soil / Moisture equipment be acquired and distributed. Pegging and drip and bucket equipment needed.
- ❖ The Project should continue issuing of certificates to Lead Farmers. This is another form of motivation and, besides the LFs need them for recognition by their peers.
- ❖ The review recommends that some form of payment be worked out for the Lead Farmers, who are bearing a disproportionate share of community participation. This is in light of the amount of work that they do at the time when they are supposed to be tending to their own fields. They can then use that money to pay people who would in turn work in their fields while they are away training other farmers as well as distributing inputs.
- ❖ Cowpeas have disease pressure, and since USAID does not encourage use of chemicals, maybe project should consider giving beans instead.
- ❖ The marketing unit should link the farmer groups to organisations that are buying produce. This process should also be used as an opportunity to give farmers hands on experience on price negotiation. Linking farmers to credit providers is a risky issue that the project should continue avoiding, as any failures resulting from such contracts will have negative implications on the project.
- ❖ Farmers should be aware that legumes used in improved fallows should not be treated as a single package but rather as an input into the whole package. In other words, those farmers who can afford fertilizer should use it in combination with IFTs for maximum benefit.

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## ANNEXES

### Annex 1: Terms of reference

Activity Title: Concurrent Evaluation of two USAID/Zambia Activities;

- Cooperative League of the USA Natural Resources Management Program (CLUSA/NRMP) Mid Term Evaluation, and
- World Vision Integrated Agroforestry Project (WVIAP) Mid Term Evaluation

#### I. INTRODUCTION

With regard to the two projects identified in the title of this statement of work, USAID/Zambia would like to find out whether investments in natural resources management and agroforestry activities have had or are having a beneficial impact. If so, USAID/Zambia would like to identify the elements of successful investments that can be replicated to improve ongoing or future investments. Finally, if an investment were not achieving the intended results, USAID/Zambia would like to know how to reorient that investment so that it does achieve the intended results.

In support of Zambian economic liberalisation, USAID/Zambia has initiated and supported activities that stimulate rural economic growth since 1991. Under USAID/Zambia's Country Strategic Plan for the 1998 - 2003 period, Strategic Objective 1 (SO 1) is "increased rural incomes of selected groups."

Approximately 5 million of Zambia's 10 million people live and work in rural areas. SO 1 investments aim at increasing the incomes of rural families working together in groups. Hopefully, rural families working as groups will result in more cost effective (and less risky) technology dissemination, training, rural finance, output marketing and forest management skills service delivery. Lower service delivery costs will contribute to more sustainable, customer responsive and profitable service delivery agencies. Finally, more sustainable and profitable service delivery will result in increased rural family opportunities to improve their productivity and incomes.

SO1 activities spring from rural family problem and opportunity identification. They are intended to encourage rural family contributions to solving their social or economic problems, enhance women's contribution to rural economic growth and encourage government food security and rural finance policies that promote private initiative.

During the March – April, 2002 period, two of SO1's projects will be evaluated. CLUSA/NRMP and WVIAP are both earmarked for mid-term evaluations.

Following receipt of an unsolicited proposal from CLUSA, the Natural Resources Management Program in Eastern Province, Zambia, began in October 1998. This 5 year, \$3.8 million activity promotes involvement of communities living around gazetted forests in the management forest resources while encouraging them to undertake productive agricultural activities outside the forests. CLUSA NRMP targeted to have four community forests under community management over five years while the communities working in groups would deliver a cumulative amount of \$10.7 million of produce to agribusiness markets.

Another unsolicited proposal, this time submitted by World Vision International resulted in the World Vision Integrated Agroforestry Project. This 5 year \$3.9 million project also began in



October 1998. The project promotes the use of improved fallows to improve soil fertility and cut the use of expensive inorganic fertilizers.

## **II. OBJECTIVE**

The objective of this solicitation is to obtain technical consultancy services from the contractor to comprehensively assess the two projects identified above. Each project evaluation shall result in a separate evaluation report. The objective of performing the evaluation of the two activities under one contract is to obtain lessons learned that may be applicable to both the projects objectives (rural incomes, food security, forest management) in order to positively influence ongoing or future activities or investments. The contractor is therefore required to provide a third report encapsulating lessons learned and describing their implications across activity objectives.

## **III. PURPOSE**

The purpose of the evaluation is to obtain quantitative evidence of investment impact on rural incomes and forest management (CLUSA) and adoption of improved fallows. Quantitative evidence should be presented over time to illustrate any growth or reduction in investment impact during project implementation. Where quantitative evidence is not available or relevant, qualitative descriptions of impacts and processes shall be provided.

The evaluations shall include assessment impact of the project and identify ways to improve implementation and shall recommend to Mission for consideration whether to extend, expand or cut short the projects. The contractor shall package relevant findings so that systemic or national level impact from evaluation lessons learned might be achieved with specific reference to the Zambian context.

Finally, the CLUSA NRMP experiences may indicate how community capacity to manage natural resources, and the benefits accruing from natural resources management, can be increased. The contractor shall package relevant findings so that systemic or national level impact from evaluation lessons learned might be achieved with specific reference to the Zambian context.

#### **IV. SCOPE OF ACTIVITY**

The Contractor shall carry out the following tasks for each project:

##### **WORLD VISION INTEGRATED AGROFORESTRY PROJECT MID-TERM EVALUATION**

###### **i) Background**

The five year, \$3.9 million World Vision Integrated Agroforestry Project (WVIAP) was initiated in October 1998 to promote the use nitrogen fixing tree species in fallows in order to improve soil fertility and assist resource poor farmers cut the use of inorganic fertilizers. The project targeted to involve 12,000 farmers by its final year.

###### **ii) Evaluation Objectives**

The primary WVIAP evaluation objective is to determine whether USAID investments are achieving their desired impact, why or why not. A second objective is to generate ideas on how the impact of USAID investments in WVIAP activities can be improved. A final objective is to generate ideas on how WVIAP experiences can influence ongoing or future USAID and other institution investments in increasing rural incomes, improving food security or managing natural resources.

###### **iii) Evaluation Questions**

1. What are the results identified in the Cooperative Agreement? Who are the beneficiaries? Has WVIAP made progress in achieving those results? Why or why not? The evaluator should present findings on an annual and overall basis. Has the program been successful in making significant contributions to USAID/Zambia's SO 1 in line with the results framework?
2. How is the project organized and implemented? What are the most important components of project implementation? How was the project's location identified? How much cooperative agreement financing is expended in Zambia (actual and percentage figures)? What percentage is expended in Lusaka and what percentage is expended in rural areas where WVIAP works?
3. Is the project demand driven? Do beneficiaries find it relevant to their circumstances? How does the project identify what the beneficiaries want? Is this approach effective in identifying what the beneficiaries want? How effectively do the beneficiaries participate in project implementation?
4. What specific services does the project deliver to rural families? How are these services identified? How are they delivered? Are these services delivered cost-effectively? Are the services relevant to rural families? Could other institutions deliver these services if WVIAP did not? In terms of incentives, finance, personnel resources and other variables what would other institutions need to deliver similar services? Has WVIAP worked with local institutions to foster continuation and sustainability of programs and services when the project ends?
5. What partnerships with public or private sector institutions has the project created to enhance the delivery of services to rural families? What additional partnerships might enhance service delivery?

6. Is there significant participation by women in the project? Is the program beneficial to women participants? Why? How can more women participate in and benefit from the project?
7. What are the social and economic characteristics and organization of project supported village management and area management committees? What are their relative strengths and weaknesses with regard to capacity building, income and investment management, linkages with agribusiness, knowledge and utilization of agricultural technologies, and skill levels to undertake additional welfare enhancing activities? What additional skills may be required to make these institutions more effective and self-reliant especially beyond USAID assistance?
8. Are there any significant policy constraints to program implementation? Is the program supportive of stated Zambian government policy of agricultural liberalization and establishment of a private sector led economy? Has the project been influenced by government policy? Why or why not? Has the project influenced government policy? How?
9. What lessons learned during WVIAP implementation could lead to improved WVIAP impact? What lessons learned should inform decisions on potential extensions to the project time frame and potential increases in project financing? What are the advantages and disadvantages, particularly to beneficiaries and USAID, of extending, expanding or cutting short the WVIAP Cooperative Agreement?
10. What lessons learned from the WVIAP implementation could lead to improved future USAID investments in food security, rural incomes and natural resource conservation?
11. How can USAID/Zambia best utilize the lessons learned to inform Zambian food security, agricultural extension and natural resource management policy dialogue?

#### **iv) Performance Reports and Previous Project Assessment**

As required in the Cooperative Agreement, WVIAP prepares quarterly and annual performance reports that are submitted to USAID/Zambia. Prior to the start of every new activity year, the project staff submits an annual workplan. A monitoring and evaluation plan for the entire cooperative agreement time period is in place.

### **V. DELIVERABLES**

#### **A. Commencement**

During the first week of implementation, the consultant (s) shall meet with the SO1 team leader and his staff to answer questions, clarify tasks, obtain relevant contacts, obtain documents and establish an implementation plan.

#### **B. Draft Report**

After Twenty one (21) working days of contract implementation, the team will submit a draft summary report to USAID (5 copies of each project). In the report, the contractor shall summarize major findings and recommendations. Three working days after this submission, the contractor shall make presentation to USAID, the government of Zambia and other select

partners. The presentations will briefly describe the methodology and summarize the preliminary findings, conclusions and recommendations of the evaluations. The contractor shall take note of the oral questions and comments from meeting participants and finalize the report within 3 working days.

### **C. Final Report**

The Contractor shall submit the final report to USAID after thirty (30) working days of contract implementation. The final report shall address all comments from the review meeting above. Ten (10) hard copies of the evaluation report of each program and an electronic copy in Word 2000 must be submitted.

The final report of the project evaluation, shall be concisely written and shall include an Attractive Cover Page, Table of Contents, Executive Summary, List of Acronyms, the Main Report in compliance with the Scope of Work, a Statement of Conclusions and a Statement of Recommendations. The body of each of the reports must describe the relevant country context in which the project was developed and carried out, and provide the information on which conclusions and recommendations are based. The reports shall present quantitative evidence of project impact whenever possible using graphs and tables. Sidebars of success stories are also requested, where appropriate. The reports shall include attractive photographs of project activities either taken by evaluation team staff or obtained from USAID/Zambia. The final report shall be user friendly. Depending on the findings, the reports may provide the basis for substantial future dialogue with private and public sector investors and inform future USAID strategic intervention.

The three final evaluation reports shall also have annexes that include current status project inputs and outputs if these are not readily indicated in the body of the report. Other required annexes to the reports are: technical and management issues raised during assessment requiring elaboration, the project evaluation scope of work, a description of the methodology used in assessment, bibliography of documents reviewed and a list of agencies contacted, individuals interviewed and other relevant information.

In addition to the three final project evaluation reports, ten (10) copies of a stand-alone report synthesizing CLUSA NRMP and WVIAP lessons learned that have applicability to food security, rural income and community natural resource conservation is also required. This report shall include an appropriate introduction describing the document's contents, a main body laying out lessons learned from the two project interventions that have relevance to ongoing or future food security, rural income or natural resource conservation activities, and a concluding chapter containing recommendations on how lessons learned can be disseminated to beneficially influence future investments. Again, the report shall be prepared as indicated in paragraph C above.

## **VI. TECHNICAL DIRECTIONS**

Technical Directions during the performance of this work shall be provided by the Cognizant Technical Officer of the two projects. Further, the contractor team shall work closely with the USAID activity manager involved with the projects.

## **VII. LOGISTIC SUPPORT**

The contractor is responsible for providing in-country transportation and secretarial support while in Lusaka and Eastern Province. The consultant will also make own field trip travel arrangements. USAID/Zambia or local partners may be consulted on logistics of sourcing field transport. It must be noted that USAID/Zambia will not be able to provide any office space for the contractor.

## **VIII. TEAM COMPOSITION**

The evaluation team should at the least comprise of:

- i) Agronomist – with agro-forestry background or experience
- ii) Forester or Natural Resource Management specialist
- iii) Sociologist – with experience in community mobilization
- iv) Economist – with micro-enterprise experience or agribusiness background or experiences.

## **Annex 2: List of Key Persons interviewed**

1. Dr Cassim Masi	Project Manager
2. Ms Grace Gaviao	Administration Assistant
3. Mr. Edward Mwangamba	Marketing Coordinator
4. Mr. Charles Kawimbe	Area Coordinator, Katete
5. Mr. Ernest Silungwe	Acting Area Coordinator, Chipata
6. Mr. Donald M Phiri	Monitoring and Evaluation Officer
7. Ms Jennipher Sakwiya	Marketing Assistant
8. Ms Eustacia B Miyanda	Marketing Assistant
9. Ms Mary Tembo	Block development facilitator, Katete
10. Mr. Kapaya Katongo	Block development facilitator, Katete
11. Ms Mercy Mukuka	Block development facilitator, Katete
12. Mr. Patrick Chalwe	Block development facilitator, Chadiza
13. Mr. Listy K Jere	Block development facilitator, Chipata South
14. Ms Alice Namuyamba	Block development facilitator, Chipata South
15. Mr. Martin Seshakanu	Provincial Agricultural Coordinator, Eastern Province
16. Mr. Moses Kapuka	Senior Agricultural Office, Chipata
17. Senior Chief Nzamane	
18. Mr. James Ngalamila	District Agricultural Coordinator, Chadiza
19. Mr. Mwale S. Msanide	District Agriculture Officer, LWF-Katete
20. Ms Bridget Njobvu	Block Extension Officer, Katondo, Chipata South
21. Mr. Jackson Mbawo	Camp Extension Officer, Katondo, Chipata South
22. Ms Rosa Katanga	Agroforestry Extensionist, ICRAF, Chipata
23. Dr Paramu Mafungoya	Project Leader, Zambia ICRAF Project, Chipata
24. Mr. Musukwa	CEO, Msandile Agricultural Camp
25. Nason Phiri	Lead Framer,
26. Victor Phiri	Lead Farmer, Mukanda Agric. Camp
27. Mr. Tyson Phiri	Tephrosia and Gliricidia demo farmer
28. Mr. John Zulu	Tephrosia demonstration farmer
29. Ms. Elizabeth Milambo	Lead farmer, Msandile 1&2
30. Ms. Mallen Chulu	Lead farmer
31. Ms. Christine Daka	V/Chairperson, Khamalidyesa Marketing Group
32. Mr. Mutetwa	Secretary Khamalidyesa Marketing Group,
33. Elizabeth Nyirenda	Finance Chairperson, Chimfinzi Marketing Group
34. Cathrine Soko Mwale	DMBC Chairperson
35. Agness Jere	Vice Secretary, Chiyanjano Marketing group
36. Drina Musimuko	Chairlady, Zuwa Women's Club
37. Fackson Zulu	Mandombi Agro Group
38. Payani Mitti	Contact framer, Luona area
39. Esau Hara	Vice Chairman and Contact Farmer, Chimfinzi
40. Godfrey Njovu	DMBC Chairperson, Kanyanja Ago Group
41. William Moyo	Head Teacher, Langa Basic School, IFT Farmer
42. K.S. Mbale	Head Teacher, Luona Basic School, IFT Farmer
43. Bridget Njovu	Block Supervisor, Kasenengwa Agric Block
44. Lydia Zulu	Secretary, Kasiwake Women's Marketing Group
45. Mary Mulanzi	Member, Kasiwake Women's Group (Marketing)
46. Mercy Sakala	Treasurer, "
47. George Shawa	Contact Framer, Tionane Farmer Group
48. Jasiel Zulu	Lead Farmer, Luona Area
49. Ruth Phiri	Teacher- Luona Basic, Treasurer-Women Market. Grp
50. Teddy Tembo	Chairman, Chidika FG/Marketing

### ***Annex 3: Itinerary For Field Work***

Wednesday, 05/06/2002:	Travel to Chipata
Thursday, 06/06/2002:	Morning – Project Briefing by Project staff Afternoon – Review Project Documents and Reports
Friday, 07/06/2002:	Morning – Interview Collaborators (PACO and DACO's Offices) Afternoon – Visit Senior Chief Nzamane
Saturday, 08/06/2002:	Group Discussions and Household Interviews with farmers in Musandile Area, Chipata North
Sunday, 09/06/2002:	Morning: Interview with DACO, Chadiza and BDF Chadiza
Monday, 10/06/2002:	Briefing by Katete Project Staff and then Group Discussions and Household Interviews with farmers in Kazala Area. Late Afternoon: Interview with District Agriculture Officer, LWF-Chipata
Tuesday, 11/06/2002	Group Discussions and Household Interviews with farmers in Katondo Area, Chipata South Late Afternoon – Interview with ICRAF project staff
Monday, 17/06/2002:	Morning – Wrap up meeting with project staff and move on to wrap up with CLUSA/NRMP  Afternoon – Depart for Lusaka