A Profile of the

# COMMUNITY-BASED MONITORING SYSTEMS

of

# THREE ZAMBIAN RURAL DEVELOPMENT PROJECTS

**National Parks and Wildlife Services ADMADE Program**

**CARE Livingstone Food Security Project**

**CLUSA Rural Group Business Program**

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**November 1998**

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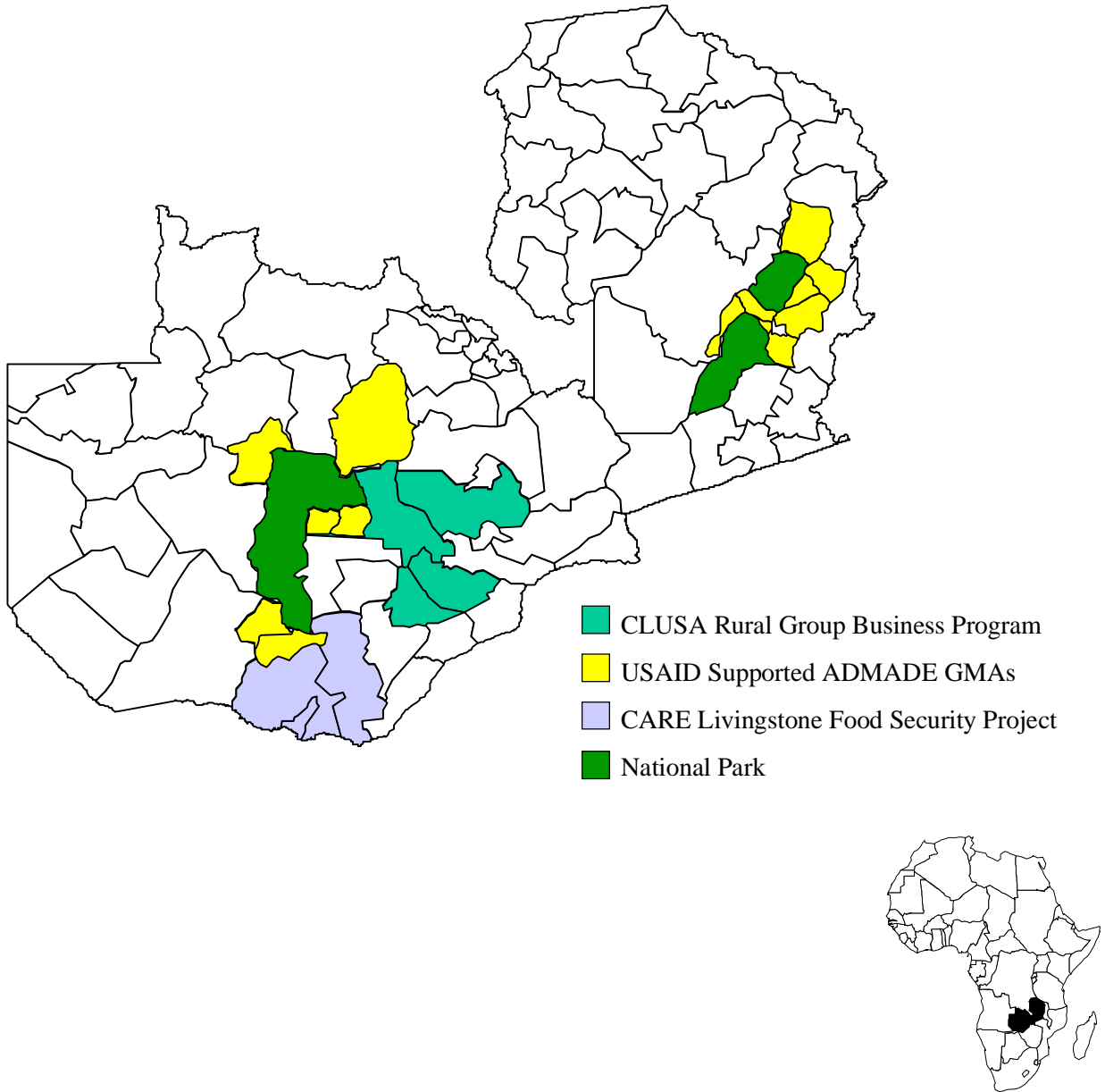## Table of Contents

## Acronyms

| | |
|---|---|
| **ADMADE** | Administrative Management Design (the NPWS project for community-based wildlife management in GMAs) |
| **ADO** | Agricultural Development Office (one of the units of USAID/Zambia) |
| **AMC** | Area Management Committee (a federation of Village Management Committees in the LFSP) |
| **CBO** | Community Based Organization |
| **CDC** | Community Development Committee (a unit level committee in ADMADE GMAs) |
| **CLUSA** | Cooperative League of the USA (implementing agency of RGBP) |
| **CMS** | Credit Management Services (a private lending institution used by the RGBP) |
| **CSM** | Community Self Monitoring (a ledger book for village level monitoring in the LFSP) |
| **FMC** | Financial Management Committee (a unit level committee in ADMADE GMAs) |
| **GIS** | Geographic Information System |
| **GMA** | Game Management Area (semi-protected areas bordering national parks) |
| **LFSP** | Livingstone Food Security Project (a CARE project which implements food security interventions in Southern Province) |
| **M&E** | Monitoring and Evaluation |
| **NPWS** | National Parks and Wildlife Services (Zambian government agency) |
| **PRA** | Participatory Rural Appraisal |
| **RGB** | Rural Group Business |
| **RGBP** | Rural Group Business Program (a small business development project implemented by CLUSA/Zambia) |
| **RMC** | Resource Management Committee (a unit level committee in ADMADE GMAs) |
| **USAID** | United States Agency for International Development |
| **VAG** | Village Action Group (the lowest-level CBO in ADMADE) |
| **VMC** | Village Management Committee (a village level group in the LFSP) |
| **WCRF** | Wildlife Conservation Revolving Fund (fund set up to manage revenue from safari hunting) |

## Acknowledgements

**Project Locations**



CLUSA Rural Group Business Program
USAID Supported ADMADE GMAs
CARE Livingstone Food Security Project
National Park

## Executive Summary

Monitoring is an essential element of virtually all rural development projects. Information from monitoring activities is needed for planning purposes, daily management, assessing impact, education, and evaluating the conceptual framework, among others. Projects which function through community based organizations have an additional need to integrate community participation in the monitoring system.

This paper presents a case study of the monitoring systems of three community based rural development projects funded by USAID/Zambia. The CARE Livingstone Food Security Project, CLUSA Rural Group Business Program, and the National Parks and Wildlife Services (NPWS) Administrative Management Design (ADMADE) program each strive to meet project information needs through training and development of community based monitoring. For each project reviewed, the rationale behind the monitoring system is explored and data flow is mapped out. Differences and similarities are explored, and new techniques are proposed for assessing the value and performance of monitoring. Developing case studies such as these will add to the body of knowledge on monitoring and help develop systems which maximize the benefits of community participation in monitoring.

## Introduction

This report presents a profile of the monitoring systems of three rural development projects in Zambia. All three projects receive funds from USAID/Zambia's Agricultural Development Office (ADO) under Strategic Objective One: *To raise the rural income of selected groups.*

The intended audience for this report includes:
- staff of USAID/Zambia
- staff of the rural development projects assisted by USAID/Zambia
- other USAID units
- others interested in community based monitoring

All three projects profiled here have strived to integrate monitoring into their activities. Administrative Management Design (ADMADE) is a program of the National Parks and Wildlife Services which links community development and wildlife conservation. The CARE Livingston Food Security Project (LFSP) strives to improve the food security of farmers in southern province by improving local planning and management capacity, offering greater access to low-rainfall seed varieties, and developing water harvesting structures. The Cooperative League of the USA (CLUSA) Rural Group Business Program (RGBP) helps small scale farmers get organized into groups to take advantage of improved farming methods and strengthen their competitiveness in a recently liberalized economy.

For each project I have tried to present:
- an overview of the goals and activities of the project
- the objectives of the monitoring system
- the philosophy/strategy behind design of the monitoring program
- logistics of monitoring
- examples of monitoring materials
- monitoring data which pertains to USAID/Zambia's Strategic Objective One performance indicators

The overall goals in profiling the monitoring strategies of these three programs in a single document include:
- to stimulate thought on specific aspects of monitoring design and practice by highlighting similarities and differences of the three monitoring programs
- to explore in greater depth different interpretations of the word 'community' in community-based monitoring
- to improve our understanding of the influence of the institutional context in which a project operates (i.e., goals and mission, infrastructure, local development history, donor agenda, organizational structure, management style, social norms) on monitoring design and practice
- to illustrate how monitoring can influence project management
- to offer these case studies as the raw data for additional dialogue and research on principles of effective monitoring

At a more local and immediate level, the information presented in this report will hopefully:
- supplement the documentation of LFSP, RGBP, and ADMADE to outline their monitoring goals, philosophy, and data flow
- inspire the leadership of LFSP, RGBP and ADMADE to recognize the strengths of their monitoring programs and opportunities for collaboration and evolution
- help USAID/Zambia understand project level monitoring issues, guide the development of reporting frameworks and requirements, prioritize the institutional capacity building needs of their partners, improve future project planning, and identify opportunities for cross-pollination between projects
- present thought-provoking examples and resources for other rural development professionals wishing to implement or strengthen community based monitoring

## Working Definition of 'Monitoring'

'Monitoring' is a broad term, and discussions about 'monitoring' can become unfocused and ambiguous unless a working definition is established. For the purposes of this paper, I am using a fairly simple and broad definition of monitoring as *the systematic collection of information*.

Implicit in this definition is that the same type of information is recorded on a regular, or at least predictable, basis, and that information is recorded in some way (e.g., on paper).

Not implicit in this simple definition of monitoring are the elements of:
- monitoring designed around specific goals
- consistency and objectivity in measurement
- mechanisms in place for summarizing, analyzing, and disseminating data
- other aspects of research design, such as a hypothesis testing, representative sampling, control groups, etc.

Although these additional elements are certainly desirable in most cases, it may be useful for discussion purposes to use a definition which only specifies systematic data collection. Otherwise we may eliminate from discussion many real life examples of 'monitoring,' that nevertheless aren't tied to a specific goal, hypothesis, consistent methodology, systematic analysis, etc. Secondly, by not attaching too much connotative baggage to this term, we force ourselves to articulate the methodological issues and broader framework in which monitoring

plays a role, hence avoiding the unfocused dialogue that can stem from multiple perceptions of the same term. Thus although 'monitoring' by itself may not a very useful descriptor, forcing ourselves to use qualified terms like 'impact monitoring' or 'the monitoring hypothesis' leads to a more productive discourse.

## ADMADE[1]

### *Project Overview*

ADMADE is a program (not a separate institution) of the National Parks and Wildlife Services (NPWS) for management of wildlife in Game Management Areas (GMA). The ultimate objective of ADMADE is to conserve wildlife in GMAs through a partnership between the private safari hunting industry, government, and local communities. Operationally, a portion of the revenue for safari hunters is returned through the Wildlife Conservation Revolving Fund (WCRF) to the local communities, who use the money for community development projects and law enforcement.

As illustrated in Figure 1, the ADMADE organizational design at the Unit level calls for a three-tiered structure of community based organizations. Village Action Groups (VAG) are comprised of elected representatives from a cluster of villages. Leadership of the VAG in turn belongs to unit level committees for financial management, community development, and resource management. These three management committees then make recommendations to the community resource board, which has final say over how financial resources are used.

ADMADE is in operation in about 22 of the 39 GMAs in Zambia. The success of ADMADE in implementing its activities varies significantly across GMAs. It is operating most successfully in about 12 GMAs, primarily in the Luangwa Valley. Training and oversight of the program is provided by the Nyamaluma Institute for Community Based Resource Management, a NPWS facility near Mfuwe in Eastern Province.

### *Monitoring Goals*

The information needs for any effort to sustainably manage a biologically complex resource (such as large mammals) are significant. Further information needs arise when the management process involves a partnership between government, rural communities, private businesses, and donors. ADMADE is in just such an unenviable position, and as such has a wide range of information needs for multiple stakeholders and purposes.

Activities for managing wildlife include planning law enforcement actions, staffing, setting quotas, and land use planning. To guide these actions monitoring information is needed about wildlife population levels, legal and illegal hunting, habitat conditions, and human disturbances.

To maintain community development (and by extension public support), information is needed on revenues and expenditures, human needs, and specific enterprises. In addition, all stakeholders have an interest in monitoring program impact for both wildlife and people.

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[1] ADMADE, c/o Nyamaluma Institute for Community Based Resource Management, P.O. Box 82; Mfuwe; Zambia; fax: 260-62-45077; email: admade@compuserve.com

### Monitoring Strategies

Many of the strategies for monitoring in ADMADE are framed by two conditions: (i) a mandate to manage an extremely large area, and (ii) meager resources to run the program. These factors complicate and restrict options for monitoring, as well as other activities, and as such the monitoring design must concur with the practical reality. ADMADE has tried to meet those challenges in by:

- recruiting local residents to collect data
- providing centralized training on monitoring, backed up by field visits when possible
- centralizing processing and analyzing data
- using Geographic Information System (GIS) software to include the spatial dimension of monitoring data in analyses
- supplementing field data on habitat and encroachment with satellite imagery
- using standardized data forms and data collection procedures to help meet the high standards of data quality needed for measuring trends in wildlife populations
- trying to avoid falsification of data by not offering financial incentives for monitoring
- using multiple indicators when possible to measure the same phenomenon (since independent cross-check of data is not feasible)

### Information Flow

As illustrated in Figure 2, there are three main sources of monitoring data in ADMADE Units. Virtually all of the natural resource monitoring data originates from village scouts. Village scouts are based at camps located throughout the unit; there are usually 2-5 scout camps in a unit. Scouts collect monitoring data on two types of field patrols. Anti-poaching patrols are 1-10 day foot patrols with the primary purpose of catching poachers. In each patrol, one scout, who has been trained at Nyamaluma, is the designated data recorder. These scouts record signs of poaching activity (e.g., snares, camp sites, gun shots, tracks), actual encounters with poachers, carcasses, wildlife sightings, bushfires, and waterholes (see Figure 3). On safari hunting patrols, one village scout accompanies a safari client and the professional hunter. Records include hunting success, hunting effort, and trophy size (see Figure 4).

The other major areas of record keeping at the community level are financial records. Revenue for ADMADE Units comes through the WCRF, which is housed in Chilanga (Lusaka). Units receive a total of 37.5% of all safari licenses (paid by safari clients), and 100% of concession fees (paid by safari operators). Revenue to Units is used for resource management and community development in almost equal proportions. At the Unit level, records are kept on how much revenue is expected from Chilanga based on the number of animals killed, and how the revenue is used. The exchange of information and money between the WCRF in Chilanga and Units in the bush is perhaps the most problematic link in ADMADE, both in design and practice.

Visiting teams from Nyamaluma oversee and inspect all activities in the Units including monitoring, and facilitate the flow of information between Units and Chilanga (e.g., quota recommendations). ADMADE staff from Nyamaluma have also recently started to systematically monitor unit performance, measuring indicators such as the use of revenue for resource management and community development, management capacity, and community awareness (see Figure 5).

## *Bibliography*

See various proposals, quarterly and annual reports submitted to USAID/Zambia. 1991-98.

Lewis, D. M. (1993). Human sensors vs satellite sensors: horizons for conservation in Africa, *Proceedings of the Thirteeth Annual ESRI User Conference* (Vol. 1, pp. 195-201). Redlands, CA: Environmental Systems Research Institute, Inc.

Lewis, D. M. (1995). Importance of GIS to community-based management of wildlife: lessons from Zambia. *Ecological-Applications, 5*(4), 861-871.

Lewis, D. M., & Alpert, P. (1997). Trophy hunting and wildlife conservation in Zambia. *Conservation Biology, 11*(1), 59-68.

Scott, Guy. (1998). *ADMADE '98*. Lusaka, Zambia: Mano Consultancies.

National Parks and Wildlife Services. (1990). *ADMADE Dataform Handbook*. Nyamaluma, Zambia: National Parks and Wildlife Services.

National Parks and Wildlife Services. (1993). *ADMADE monitoring designs and methodologies*. Mfuwe: National Parks and Wildlife Services, Nyamaluma Community-Based Wildlife Management Centre.

National Parks and Wildlife Services. (1995). *ADMADE Unit Monitoring Summary Report, 1993-94*. Nyamaluma: Nyamaluma Institute.

National Parks and Wildlife Services. (1995). *ADMADE Unit Monitoring Summary Report, 1995*. Nyamaluma: Nyamaluma Institute.

National Parks and Wildlife Services. (1996). *A Portfolio Sample of Monitoring Results from Selected Units in the ADMADE Programme, 1996*. Nyamaluma: Nyamaluma Institute.

National Parks and Wildlife Services. (1996). *ADMADE Institutional Framework and Evaluation of Programme Objectives*. Nyamaluma: Nyamaluma Institute.

**ADMADE Organization**

**Management Structures**

| Geographic Area | NPWS | Community | Private |
|---|---|---|---|

GMA — Warden

Unit(s) — Unit Leader

Community Resource Board
- Chief (Patron)
- Financial Mgmnt Comm
- Resource Mgmnt Comm
- Community Dvlpmt Comm

Village Area Groups

VAG Comm

Hunting Block(s)

Liason Officer — Professional hunter / Safari operator

Legend:
- Game Management Area
- Unit
- Hunting Block
- Village Area Group
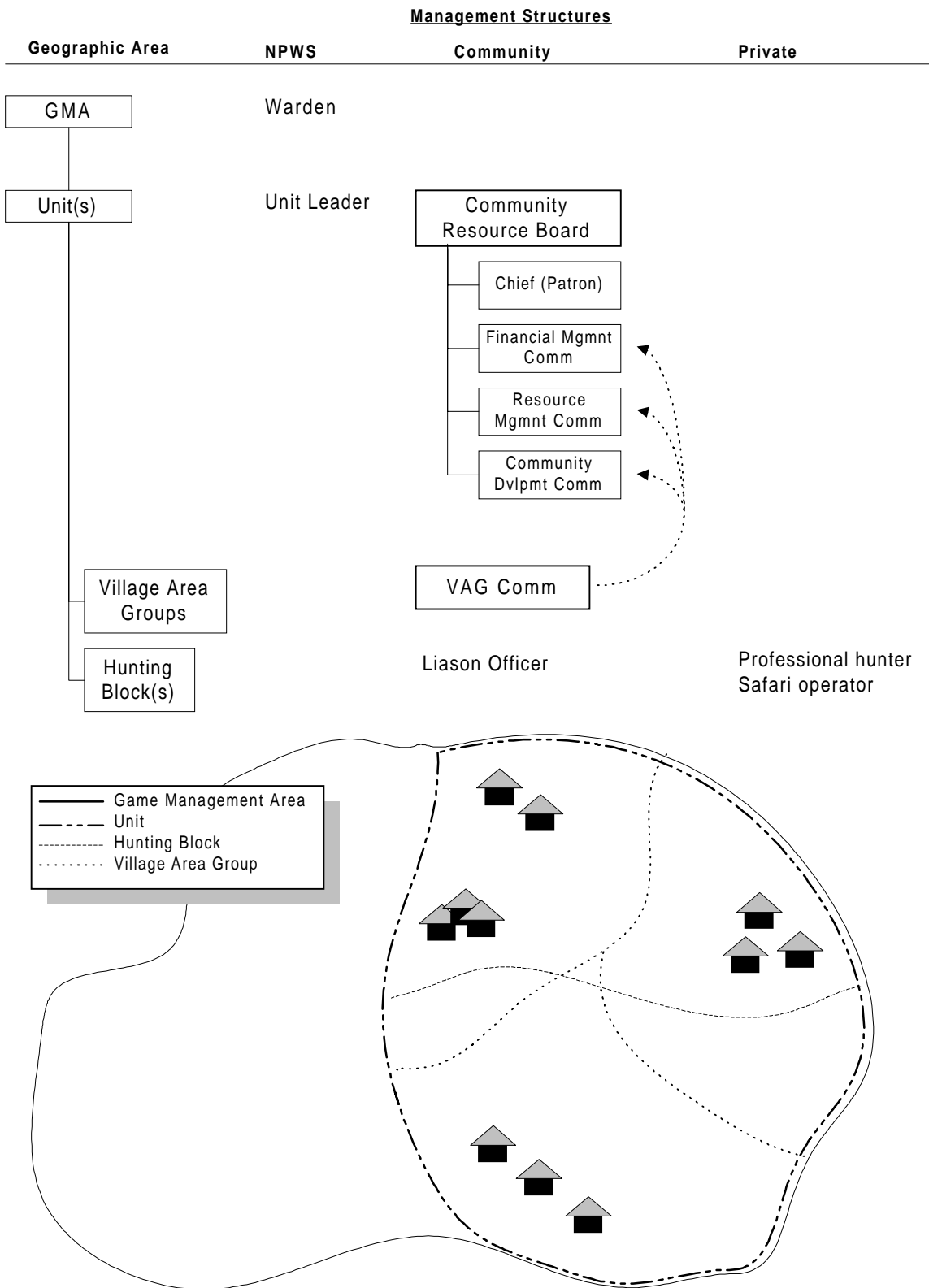
Figure 1 - ADMADE Organization

### Information Flow in ADMADE
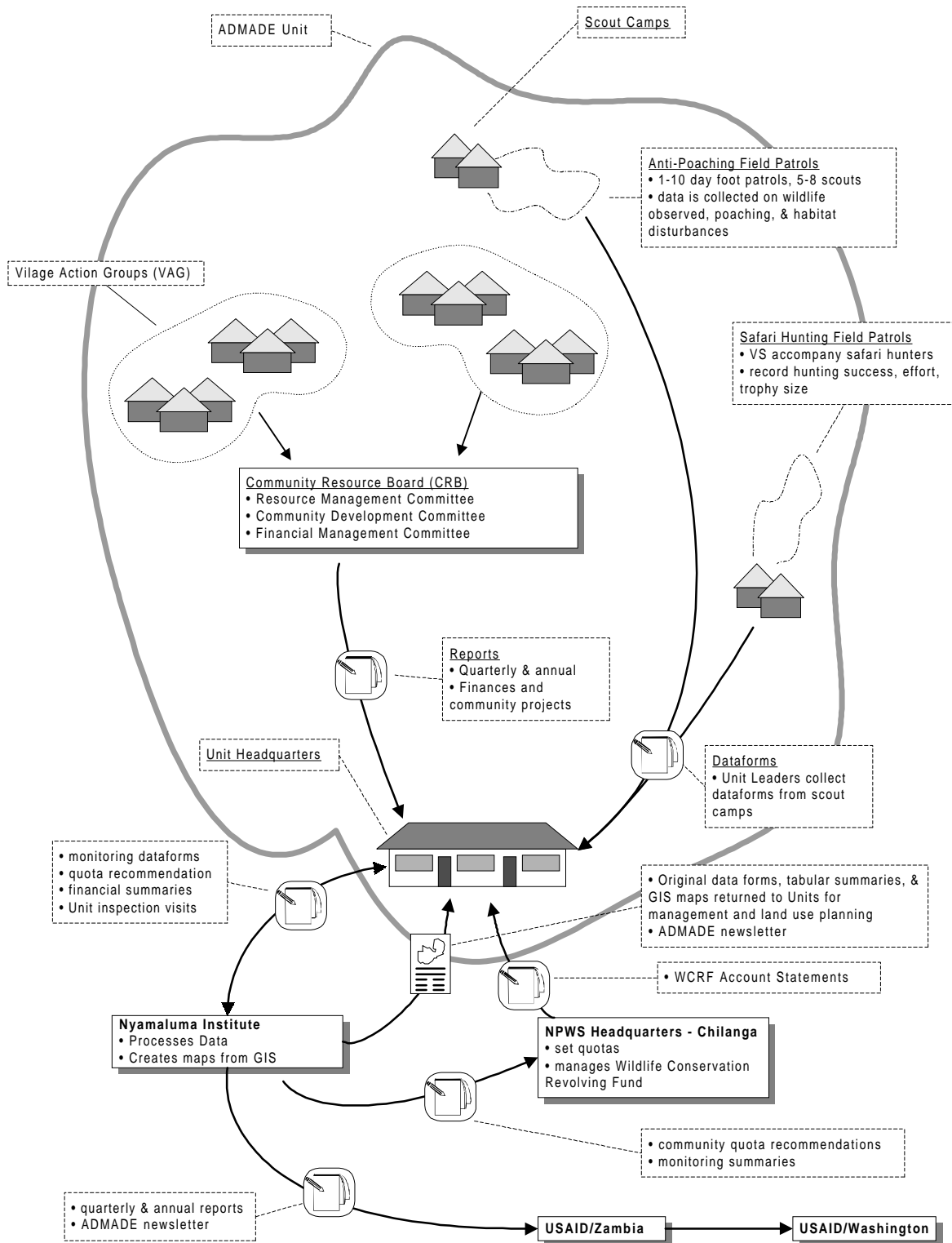


Figure 2 - ADMADE Information Flow

**NPWS/ADMADE/FLDPAT1**

**FIELD PATROL DATA SHEET (1)**

Group leader _____  Group members/Class _____

Which camp (or camps) do members of patrol party originate from: _____

Date departed _____  Time departed _____  Date Arrived _____  Time Arrived _____

Ration taken (kg units for m-meal, salt, beans, kapenta) _____

Ration returned _____

Ammunition taken (specify calibre) _____

Ammunition returned _____

Number of groups of poachers encountered: _____  Number of poachers arrested _____  Number of poachers escaped _____

Provide grid numbers where groups were encountered _____

Give grid numbers for grids the patrol visited _____

| Name | Age | Village | District | NRC No. | Chief | Offence |
|------|-----|---------|----------|---------|-------|---------|
|      |     |         |          |         |       |         |
|      |     |         |          |         |       |         |
|      |     |         |          |         |       |         |
|      |     |         |          |         |       |         |
|      |     |         |          |         |       |         |

Firearms confiscated _____

Ammunition confiscated _____

Ivories confiscated _____  Give weight (kg) for each tusk _____

Snares confiscated _____  Snares found on patrol _____

Government trophies confiscated (specify species and part of animal) _____

Other items confiscated _____

Certified complete by Unit Leader _____  Date _____

Figure 3 – ADMADE Anti-Poaching Field Patrol Data Form

# FIELD PATROL DATA SHEET (2)

**RECORDER:** _____

List what species are
being monitored: 1) _____ 2) _____ 3) _____ 4) _____ 5) _____

Using GRID # from base map, provide correct answers to each column item for every GRID visited during the patrol.
(Answers should be given as 0 when no occurrence was observed and the actual value (1,2,3 etc) when an occurrence was observed. In other columns answers should be in descriptive form (words) as appropriate. For "species sighted" column, provide species name in column heading for those species being monitored and give numbers sighted below.

| GRID number | Carcass (Species/#) | # of snares | Water holes | Fresh poacher camp | # Poachers encountered | Bushburn (approx. % of grid) | | Species sighted (specify) Name: | | | | | Gun shots | Other item |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Apr-Jun | Jul-Oct | | | | | | | |
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Below provide any other information pertaining to the patrol of possible importance. Be sure to use grid number to locate data.
(Note: Other information may include, land clearing, timber cutting, fishing activities, nocturnal sounds (lions and leopards), quality trophy for a given species of economic importance, etc.)

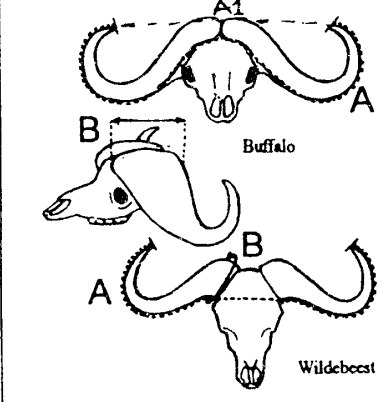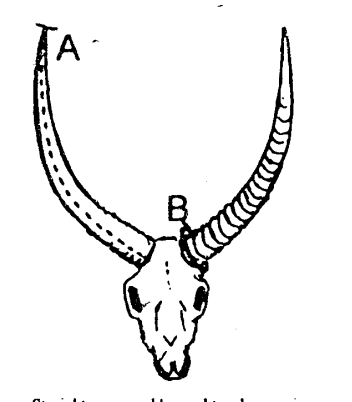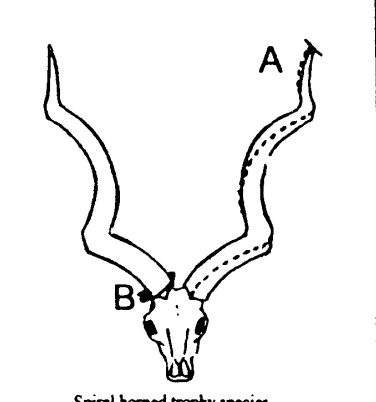Figure 4 - ADMADE Safari Hunting Data Sheet

Figure 4 continued

**<u>SAFARI HUNTING DAILY RECORD SHEET</u>**

(Note: This form should be completed by the end of each hunting day.)

**I – HUNT DESCRIPTION**
Unit _____ Safari operator _____
Date _____ Approx hours spend hunting _____
Recorder _____ Professional hunter _____
Total number of tourists (clients and observers) in hunting party _____
Names of clients _____
Names of observers _____
_____

Observations
1. Sightings of huntable trophies but not hunted    Species _____    Grid _____
   species being monitored:    Species _____    Grid _____
                                       Species _____    Grid _____
                                       Species _____    Grid _____
2. Snares found _____ Grid locations _____
Were they collected (yes/no)
3. Poacher group encountered (yes/no) _____ If yes, grid locations _____
4. Licensed hunters encountered (yes/no) _____ If yes, grid locations _____
Were they a disturbance to client (yes/no) _____ If yes, give details _____
_____

5. Provide details and grid locations to any other human caused disturbance to the safari hunt
_____
_____
_____

**II – HUNTING RESULTS**

| License # | Person who fired gun | Species hunted | Sex | Grid location | Calibre | Successfully killed (yes/no) | Wounded (yes/no) | Hunted as trophy, bait, or both |
|---|---|---|---|---|---|---|---|---|
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**III – OBSERVATIONS AT BLINDS** (lions and leopards)
Species used for bait _____ Grid locations of baits visited _____
Observations

| Grid # | # lions visited | # trophy lions seen | # leopards visited | Methods for securing bait (wire or chain) |
|---|---|---|---|---|
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Figure 5 - ADMADE Sustainability Evaluation Form

## ADMADE Sustainability Evaluation Form

Unit: _____

Date: _____

For period: _____          Recorders: _____

| Criteria | Performance indicators | Values | Constraints (reasons for poor results) | Comments | Information source |
|---|---|---|---|---|---|
| **Sufficient revenue to meet resource management costs** | Management expenditures | | | | |
| | Minimum required management needs=costs | | | | |
| | 40% share earned for year | | | | |
| | Did community leadership approve budget? | | | | |
| | % of budget used on salaries | | | | |
| | % of budget used on vehicle repairs | | | | |
| | % of budget used on field operations | | | | |
| | % of budget used on subsist.ance allowance | | | | |
| | % of budget used fuel | | | | |
| | % of budget used on staff training | | | | |
| | No. of bank transfers to 40% account | | | | |
| | Total amount transferred | | | | |
| | Poacher encounter rates | | | | |
| | Total patrols per year | | | | |
| | Snares collected/patrol days | | | | |
| | Safari client satisfaction | | | | |
| | Geographic distribution of management effort | | | | |
| | Average days/patrol | | | | |
| | No. V/scouts / No. needed | | | | |
| | No. camps / No. needed | | | | |
| **Revenue contributing to improved standard of living for community households** | No. projects for each VAG:  CHITUNGULU VAG<br>KAZEMBE VAG1<br>NTHUMBE VAG2<br>KATABA VAG3 | | | | |
| | Total ZK/total households | | | | |
| | Total ZK spent per VAG:  CHITUNGULU<br>VAG1<br>VAG2<br>VAG3 | | | | |
| | 35% share earned | | | | |
| | Did community leadership approve budget? | | | | |
| | No. of bank transfers to 35% account | | | | |
| | Total amount transferred | | | | |
| | Number of projects by category:<br>Capital projects (e.g., schools, clinics)<br>Food security related<br>Credit loans or financial assistance<br>Services purchased (e.g. teacher salary)<br>Other (please specify under comments) | | | | |
| | Total people employed by all projects | | | | |

| Criteria | Performance indicators | Values | Constraints (reasons for poor results) | Comments | Information source |
|---|---|---|---|---|---|
| **Community is aware of ADMADE income and its link to community development** | No. of ADMADE theatre groups formed<br>No. of snares/patrol day less than prev. yr.<br>Human disturbances in conflict with safari hunting less frequent than prev. yr.<br>% of poacher arrests due to informers<br>No. firearms voluntarily surrendered<br>No. of visits to unit HQ by local residents<br>No. of flip chart presentation to community | | | | |
| **Community able to manage and protect their natural resources** | RMC formed<br>No. annual meetings<br>RMC inspects data & review U/leaders work<br>RMC inspects camps<br>New grids having safari income from prev. yr.<br>Wildlife species showing increases by grid no.<br>                 Species 1<br>                 Species 2<br>                 Species 3<br>                 Species 4<br>                 Species 5<br>V/scout monitoring forms complete<br>Land use plan developed by community<br>Community set own hunting quota<br>(Total animals hunted/total on quota)<br>Trend in number of clients<br>Conservation youth clubs formed | | | | |
| **ADMADE leadership transparent and supportive of local participation** | No of Sub/auth. meetings<br>Minutes of meetings kept at Unit HQ<br>Committee reports given at Sub/auth. meetings<br>B/keeper gives reports at Sub/Auth. meetings<br>S/Auth. members hold meetings in their VAG | | | | |
| **Financial management adequate to maintain accounts, community-based controls, transparent reporting** | Local B/keeper employed<br>Level of training of B/keeper<br>No. of meetings in VAG by B/keeper or FMC chairperson<br>Community accounts inspected over past year<br>FMC Chairperson trained<br>Number of times FMC meets<br>FMC minutes & B/Keeper reports on file at Unit HQ | | | | |

## CARE Livingstone Food Security Project[2]

### *Project Overview*

After four years of recurrent drought in the early 1990s in Southern Province of Zambia, CARE International in Zambia introduced the Livingstone Food Security Project (LFSP) to address the root causes of food insecurity. An initial series of participatory rural appraisal (PRA) exercises identified the core problems which reduce food security and suggested remedial activities. The primary activities of the LFSP include establishing community based organizations (CBO) and building their capacity, introducing drought resistance crop varieties, developing local seed banks, promoting improved farming methods, constructing and rehabilitating water harvesting structures, and developing income generating activities.

Activities within LFSP are implemented through a network of rural groups. The use of rural groups enables LFSP to reach a greater number of rural farmers given the available resources, improves the likelihood of achieving sustainability beyond the project completion date, and perhaps most importantly improves the capacity for local planning and resource mobilization which can have many cascading benefits in other sectors. As illustrated in Figure 6, LFSP has established a three-tiered structure of CBOs in the project area. An individual head of household initially belongs to a farmer group, together with 3-6 other farmers. All farmer groups from a village subsequently form a Village Management Committee (VMC). At the highest level, clusters of VMCs send representatives to form an Area Management Committee (AMC). LFSP currently works with nearly 12,000 farmers in 250 VMCs and 34 AMCs.

The first, and perhaps most successful, intervention of the LFSP was the introduction of a scheme to establish local seed supplies of low rainfall crop varieties. In the seed scheme, rural farmers in the project area borrow an initial supply of improved seed, which they then return plus interest at the end of the season from their harvest (see Figure 7 and Figure 8). After some initial basic training and support, the seed scheme has become administered almost entirely by members of the local community through the VMCs and AMCs.

The introduction of new drought resistant seed varieties is complemented by extension training on improved farming methods, post-harvest technologies and crop utilization.  The bulk of the extension services are provided by LFSP field staff, however private agribusiness and MAFF extension officers are increasingly being used to provide training and logistical assistance. To a limited extent, farming inputs such as trigger pumps are available on a loan basis.

As highlighted in the initial round of PRA exercises, the primary concern for people in the project area is the lack of year-round water. Hence another major thrust of the project focuses on development of water harvesting structures, such as dams, weirs, and boreholes. Construction and rehabilitation of water structures is complemented by developing local capacity to maintain water structures, and linking water supply projects with action research on improved natural resource management (e.g., soil conservation practices to reduce siltation in water storage areas).

The LFSP is administered from a central office in Livingstone with a branch office in Kalomo. The core field staff consists of eight extension officers who spend roughly four days a week in

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the field, using motorbikes to visit AMCs and VMCs. They are supported by support staff in administration, accounting, water engineering, action research, training, M&E, and small economic assistance.

## *Monitoring Goals*

At the community level, the goals of monitoring in LFSP include:

- providing relevant information for managing a revolving seed scheme
- expanding the adoption of new crop varieties and farming technologies by illustrating their benefits
- assessing whether project activities are improving household livelihood and food security (and why)
- identifying the root causes of food insecurity and prioritizing development needs
- providing background information for soliciting additional assistance
- identifying the best selection of seed varieties based on market demand and comparative advantages
- ensuring responsible and equitable management of community resources

At the project level, monitoring serves to:

- measure project impact in terms of the program objectives
- provide a basis for day-to-day management decisions
- help plan phase-out and expansion
- guide the development of a marketing strategy
- prioritize and plan new activities
- select topics and areas for additional focused research
- identify training needs
- document best practices
- review the validity of the conceptual framework

## *Information Flow*

As illustrated in Figure 9, there are several information streams within LFSP. With regard to dissemination and use of monitoring data, some information flows remain mostly within communities themselves. Other regularly collected information is designed to primarily serve project level needs. Still other monitoring activities meet needs at multiple levels. We can also see variance in terms of how systematically and consistently different sources of information are collected, processed, and applied.

### *Community Self-Monitoring Book*

The Community Self-Monitoring (CSM) book is perhaps LFSP's most innovative mechanism for collecting household level data on vulnerability and food security. In each VMC, there is a designated person who maintains the CSM. This person may be the VMC Chairman, Secretary, or a literate member of the community. Once a year, after the main harvest, the CSM officer visits each household in the village and records information about household demographics, assets, agricultural production, food availability, and coping strategies (see sample page in Figure 10). The CSM is used in general meetings of the AMC and by LFSP field staff for applied research on an as needed basis.

*Food Production Trends Survey*
The Food Production Trends Survey (FPTS) is an annual survey of 215 randomly selected households throughout the project area. It records information on agricultural production, food availability, and anticipated strategy for coping with food shortages. Because the participants initially were randomly selected, and the same informants are interviewed each year, the FPTS provides a more representative and valid measure of project impact. In addition, since the FPTS collects the same kind of data as the CSM, it could also be used, at least in theory, as a mechanism to cross-check the CSM.

*Seed Scheme Records*
Operating a lending scheme for improved seed varieties is perhaps the most information intensive, on-going activity within LFSP at the community level. Largely independently, CBOs have been able to apply for seed loans from LFSP, distribute these loans to individual farmers, and use the repayments to build local seed banks.

Record keeping for the seed scheme occurs mostly at the level of the VMC and AMC. VMCs screen seed requests from farmer groups based on input needs, capacity, and credit history. AMCs screen loan requests from VMCs based on similar criteria.

*Applied Research*
This category of "monitoring" encompasses a variety of activities, including PRA exercises, case studies, technical papers, baseline surveys, and program reviews. This group of activities is certainly based on information about rural communities, but is less "community-based" in the sense that they are conducted by project staff and driven by project needs (which in turn of course ultimately benefit communities). Nevertheless, community members are important stakeholders of these activities, and are active participants in collecting and analyzing information.

## Monitoring Strategies
*Community Participation in the Design Process*
Several underlying currents characterize most of LFSP activities including monitoring. Participation from the community is well integrated into the core monitoring activities. In the case of the CSM and seed scheme records, representatives from communities are involved not only in the data collection process but also in the design of the monitoring system and selection of indicators. This insures that CBO officers understand why these indicators were selected, and increases the likelihood that data will be collected properly.

*Self-Dependency and Room for Innovation*
The LFSP training program for community based monitoring integrates a number of strategies that enable relatively independent data collection and encourage innovation. To begin with, the selection of attendees for CSM training is flexible. Participants don't have to be members of a VMC or AMC, they only need to have basic literacy and an interest in collecting monitoring data. The CSM training itself is very hands-on and participatory, giving participants practical experience in collecting and using household level data. The CSM itself is essentially a blank ledger book. This not only avoids creating a dependency on pre-printed forms, but also permits adaptation and innovation in formatting the data and selection of indicators. Some VMCs have gone beyond the suggested guidelines for the CSM by including more detail or additional indicators.

*Simplicity*
The indicators selected for community based monitoring, namely the CSM and seed scheme records, have been selected to be simple, intuitive, and direct. The CSM records data on household demographics, assets, food production, and anticipated coping strategy. These are fairly intuitive and unambiguous variables to measure, increasing the sustainability and adherence to the guidelines.

*Field support*
All activities including monitoring conducted within LFSP are supported by frequent support from project field staff. Project extension officers spend roughly 4 days a week in the field, and are able to maintain close contact with the AMC and VMC officers in their area. This frequent contact serves as a stimuli for CBO officers to carry out their monitoring duties and provides an opportunity for clarification and problem solving.

## Bibliography
See various proposals, quarterly and annual reports submitted to USAID/Zambia. 1994-98.

Rural Households

Farmer Groups
• 4-7 members
• 1 group leader

| FG | Farmer Group | FG | FG | FG | FG | FG |

Village Management Committees
• represent 8-15 farmer groups
• Chairman, Secretary, Treasurer, Storekeeper

| Village Management Committee | VMC | VMC | VMC |

Facilitators
• elected by VMCs
• link for extension services

Facilitator

Area Management Committees
• represent 3-10 VMCs
• Chairman, Secretary, Treasurer, Storekeeper

| Area Management Committee | AMC | AMC | AMC |

LFSP Field Staff
• extension officers
• water technicians, engineers
• training staff
• PRA teams

Kalomo Office

Livingstone Food Security Project Headquarters

Project Sections

| Admin | Accounts | Water | Agriculture | Capacity Building |
| | | | • Small Economic Assistance Development (SEAD) | • M&E |
| | | | • Action Research | • Training |
| | | | • Seed Scheme | • Gender |
| | | | • Outgrower Scheme | |

Figure 6 - LFSP Organization

**Livingstone Food Security Project Seed Loan Scheme: Distribution**
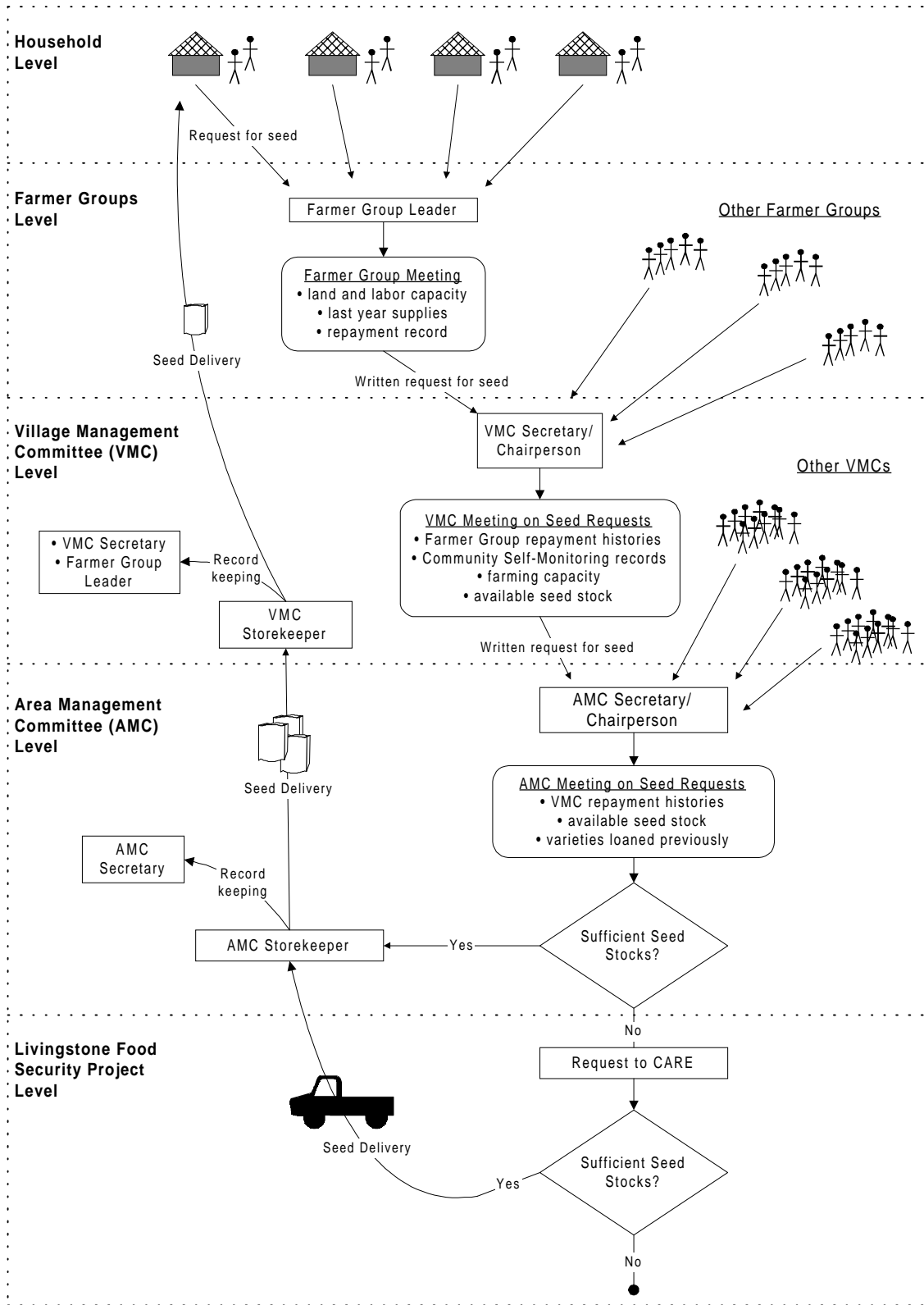


Figure 7 - LFSP Seed Scheme - Distribution

19

**Livingstone Food Security Project Seed Loan Scheme: Repayment**
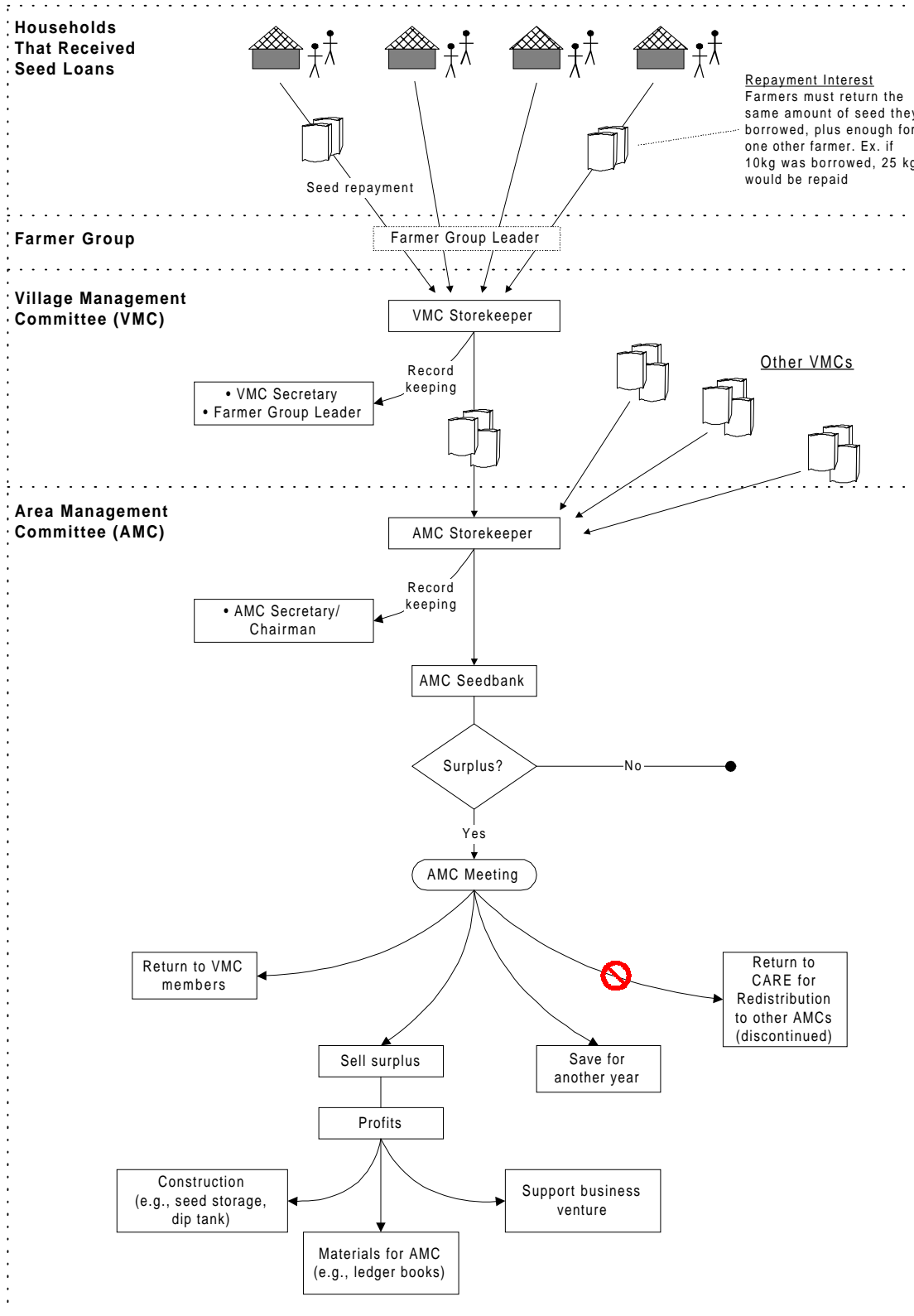


Figure 8 - LFSP Seed Scheme - Repayment

**Livingstone Food Security Project: Information Flow**

**Households**

Community Self Monitoring (CSM) Book
• recorded annually
• demographics
• assetts
• production
• coping strategies

VMC Secretary/Chairman

**Village Management Committee**

VMC   VMC   VMC   VMC

**Area Management Committee**

AMC

Information Needs
• Prioritizing interventions
• Seeking donor aid
• Distributing seed
• Public education

Information Resources
• CSMs
• Seed scheme records (distributions, credit history, demands)
• Meeting minutes (# attendendees, gender)

MAFF Extension Officers

Food Production Trends Survey
• annual survey
• 215 randomly selected households revisited each year
• production, food availability

TrainingReports
• Community Self-Monitoring
• Post-harvest technologies
• Farming methods
• Improved NRM practices

Participatory Rural Apraisals
• initial planning in new areas
• identify intervention priorities
• collect baseline data

Topical Aprraisals
• focused on single intervention
• identify local resources
• leads to action plan

Case Studies
• focus on specific activity within LFSP
• basis of technical papers
• conducted as needed

Extension Officers

Project Level Information Uses
Monthly meeting feedback
Annual planning exercise
Training program development
Expansion/phase out
Quarterly Section Head Meetings
Impact Magazine
Marketing
Donor impact monitoring
Seed variety selection

**Project Level**

Livingstone Food Security Project

CARE/ Zambia

Conferences

Publications

**Donor Level**

Quarterly & annual reports

USAID/ Zambia

Annual Results Report & Resource Request

USAID/ Washington

graphic by Andy Lyons
USAID/Zambia
September 1998

Figure 9 - Information flow in LFSP

21

GOLIATH. S. KATENGWA                                    55 years
Betty   Sitali.                                         52 years


Family   Composition

| Sex | AGE | RELATIONSHIP |
|-----|-----|--------------|
| F   | 16  | daughter |
| M   | 17  | GRANDSON |
| M   | 13  | SON |
| f   | 12  | Granddaughter |
| f   | 11  | daughter |

ASSETS: Cattle, OXEN, 2 ox cart, handhoes, ploughs, goats, pigs, chickens, Radio, bicycle


1995/96   Season

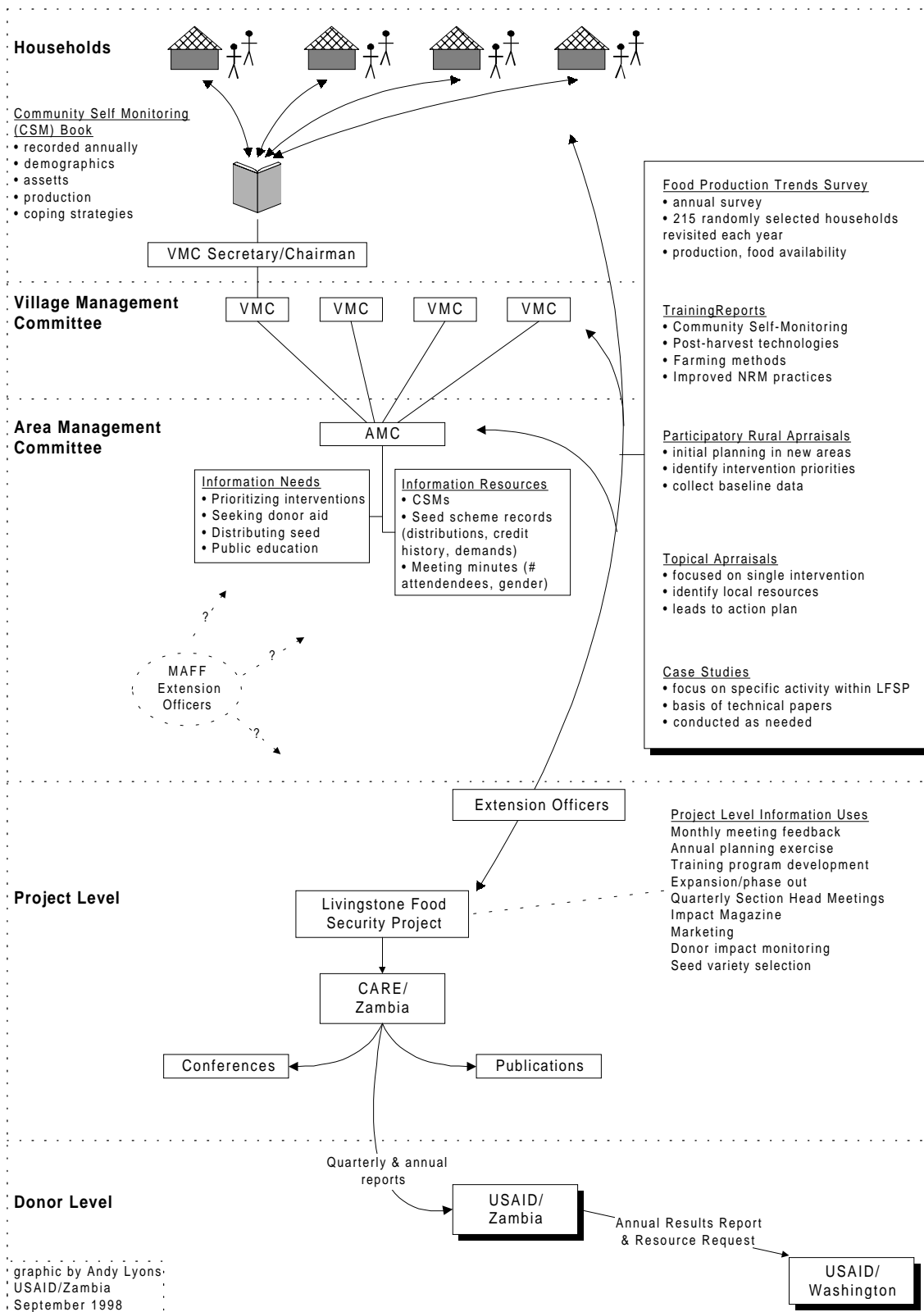| Crop | Variety of Seed | Quantity of Seed | Source or Seed | Area Planted | Harvest | period with food |
|------|------|------|------|------|------|------|
| maize | Local | 20 litres | keep | 3 hect | 43×90kr | may-Dec 96 |
| Sourgh | | 8 litres | | 1 hect | 4×90kg | |
| millet | | 4 litres | | 7 foto | 3×90kg | |
| G/Nut | | ½ litres | | ½ foto | 1×90kg | |
| Nutor | | ½ litres | | 1 foto | Nil | |
| beans | | 1 litres | | ½ foto | Nil | |

Coping Strategy (During hunger period)
Relief food, Sold. ONE cow.

Figure 10 - Sample Page from LFSP Community Self Monitoring Ledger

## CLUSA Rural Group Business Program[3]

### *Project Overview*

The goal of the CLUSA/Zambia's Rural Group Business Program (RGBP) is to help small and emerging farmers develop and manage democratically self-managed, sustainable, and financially viable groups for the purposes of operating group micro-businesses and participating in outgrower programs. The RGBP has been operating in Mumbwa and Mazabuka districts since June 1996, and Chibombo and Monze districts since early 1998. The early years of the program focused on developing group micro-businesses, such as maize marketing, pig keeping, or rural grocery stores. In 1998, the thrust shifted to developing an outgrower program, whereby farmer groups sign contracts before the planting season with agribusinesses, agreeing to grow a specified volume of specified crops for a set price, in exchange for assistance with transport and credit on inputs.

Currently about 4,800 farmers in 280 rural groups participate in the RGBP. RGBP farmer groups typically consist of 15-25 members. Three to six farmer groups in turn federate into depots, which serve as the main bodies for administering the outgrower scheme and extension activities. Each rural farmer group has 1-3 contact farmers, who work with a lead contact farmer from the depot to serve as the focal point for external extension agents and provide services and oversight to farmers in the group.

The frontline soldiers of the RGBP are facilitators, who live in the communities they service and visit each of their 8-14 groups about once a week, providing on-site training and consultation. The field staff support depots and farmer groups with on-site training on effective group organization, training in business skills, and improved farm technologies. The whole program is coordinated by an office in Lusaka, which also serves as an interface between agribusinesses and the depots participating in the outgrower program. Credit for the micro-business ventures and farming inputs is provided by a Credit Management Services (CSM), a private credit agency.

### *Monitoring Goals*

Monitoring in the RGBP has different goals at different levels. The centerpiece activities of the RGPB are the outgrower scheme and micro-enterprises planned and managed by rural farmer groups. Hence the system of record keeping has a very immediate goal – successfully operating these business ventures. Farmer groups and depots quickly learn that record keeping is an integral part of successfully running an enterprise.

At the project level, monitoring data is also used to assess impact, identify needs and opportunities, plan budgets, allocate staff, and improve training materials and methods. At the donor (i.e., USAID) level, information is needed to measure program impact, identify best practices, and coordinate with other similarly focused projects.

### *Monitoring Strategies*

Groups that participate in the RGBP are intended to be gradually weaned from RGBP support services within a couple years of their initial involvement. Hence all aspects of business training that facilitators provide to rural groups, including record keeping, are designed to introduce practices which can be carried maintained after program support ceases. This emphasis on

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[3] CLUSA c/o USAID; P.O. Box 32481; Lusaka; Zambia; tel: 260-03-235747; 235748; email: clusa@zamnet.zm

sustainability is one of the principle characteristics of the record keeping activities in the RGBP, and is achieved by integrating record keeping into daily operations.

CLUSA's methodology for supporting rural group enterprises employs a number of strategies to ensure sustainability in record keeping. These include:
   ♦ classroom and on-site training in record keeping by facilitators to accommodate the information needs and capacity of individual groups and business ventures
   ♦ lack of dependency on externally supplied record keeping materials. (for example, there is no standard form for the primary accounting document, the Profit and Loss Statement)
   ♦ focus on keeping recording keeping systems simple and relevant to day-to-day information needs
   ♦ frequent (e.g., weekly) inspection of written records and monthly CMS monitoring visits
   ♦ a system of information flow (e.g., Profit and Loss statements, facilitator activity reports) that disseminates and aggregates RGB data for analysis at higher levels (e.g., assessing project impact)
   ♦ periodic audits

## Information Flow

As illustrated in Figure 12, the primary sources of monitoring information in the CLUSA RGBP are the farmer groups, depots and facilitators. Farmer groups maintain records about their members, business activity, and loans. Depots keep track of farmer group composition and eligibility for the outgrower scheme, inputs received and distributed, and crops delivered by farmers and picked up by agri-businesses. RGBP facilitators keep track of their activities and record information about group composition and activities.

The main instruments for recording and transmitting information include:
   ♦ profit & loss statements – the treasurer of each RGB is supposed to compile of summary of the business activities during a specified period (usually monthly, but will depend on the specific business). CLUSA/Zambia decided against using a standard form for profit & loss statements to avoid creating dependency on externally supplied paperwork. Instead, facilitators teach their groups the function and elements that should go into a P&L statement, such as total sales, costs of goods, gross margin, operating expenses, profit, and a narrative (see Figure 13).
   ♦ business review report – a business review report is completed at the completion of every business venture. The report is mostly qualitative, reviewing the business goals, personnel performance, problems, and lessons learned (see Figure 14). One of the uses of the business review reports is to glean the lessons learned, which are then compiled as training material for the facilitator handbook (see Figure 15).
   ♦ facilitator monthly activity report – each month RGBP facilitators are required to submit a written report of their activities (see Figure 16). These reports detail the number and composition of new groups they work with, meetings, training, and follow-up.
   ♦ Depot Committee Checklist – this form provides a checklist and evaluation form for the creation of new depots. It helps facilitators and project staff monitor the performance of new depots and ensure that all the essential tasks have are completed (see Figure 16).

*Oversight/management of record keeping*
Much of the capacity-building and oversight of record keeping for rural enterprises comes through facilitators. They provide the on-site training, consultation, and inspection of records, and have the authority to suspend dysfunctional groups from the program when warranted. Facilitators are also the mechanism for summarizing information from each group, as well as their own activities, and sending it to the central office in Lusaka. Facilitators are supported by and supplemented by a project Business Advisor and in some cases a District Coordinator.

*Data Processing and Analysis*
Individual farmer groups are taught to maintain receipt books, bank statements, inventory sheets, and other business records as a standard part of doing business. A financial report from the group treasurer is an expected element of group meetings which can be biweekly or monthly depending on the season. Groups use their records to make decisions about running the business (e.g., deciding quantity of purchases, identifying buyers, planning repayment schedules, organizing transport) and ensure accountability of the members.

## Bibliography

See various proposals, quarterly and annual reports submitted to USAID/Zambia. 1996-98.

Phillips, Ron. (1998). Rural Group Business Program: A History. Paper presented at the International Cooperative Alliance Conference, Nairobi, Kenya. November 1998.
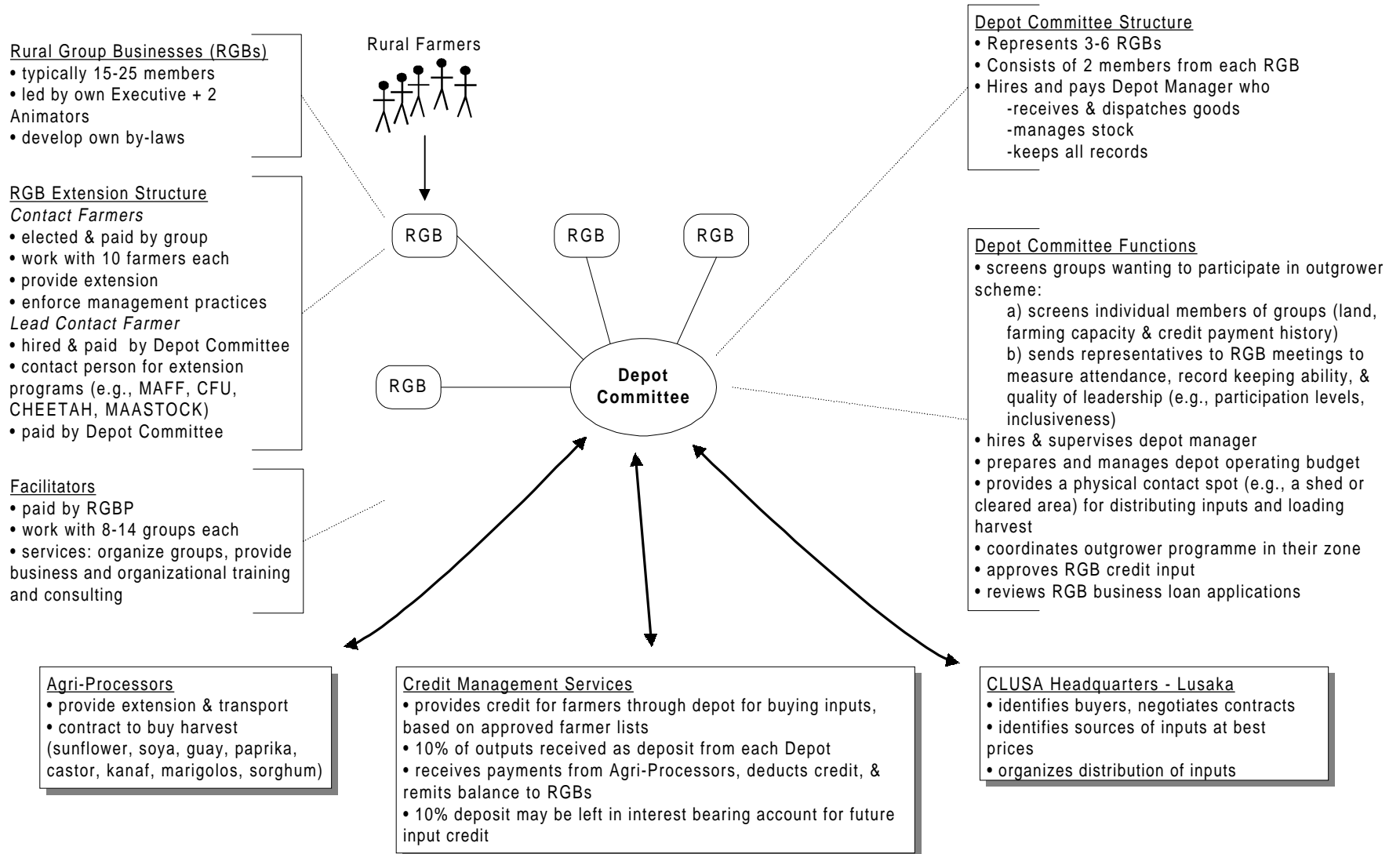
**Rural Group Business Outgrower Program**

Rural Farmers

Rural Group Businesses (RGBs)
• typically 15-25 members
• led by own Executive + 2 Animators
• develop own by-laws

RGB Extension Structure
*Contact Farmers*
• elected & paid by group
• work with 10 farmers each
• provide extension
• enforce management practices
*Lead Contact Farmer*
• hired & paid  by Depot Committee
• contact person for extension programs (e.g., MAFF, CFU, CHEETAH, MAASTOCK)
• paid by Depot Committee

Facilitators
• paid by RGBP
• work with 8-14 groups each
• services: organize groups, provide business and organizational training and consulting

RGB

RGB        RGB        RGB

RGB

**Depot Committee**

Depot Committee Structure
• Represents 3-6 RGBs
• Consists of 2 members from each RGB
• Hires and pays Depot Manager who
    -receives & dispatches goods
    -manages stock
    -keeps all records

Depot Committee Functions
• screens groups wanting to participate in outgrower scheme:
    a) screens individual members of groups (land, farming capacity & credit payment history)
    b) sends representatives to RGB meetings to measure attendance, record keeping ability, & quality of leadership (e.g., participation levels, inclusiveness)
• hires & supervises depot manager
• prepares and manages depot operating budget
• provides a physical contact spot (e.g., a shed or cleared area) for distributing inputs and loading harvest
• coordinates outgrower programme in their zone
• approves RGB credit input
• reviews RGB business loan applications

Agri-Processors
• provide extension & transport
• contract to buy harvest (sunflower, soya, guay, paprika, castor, kanaf, marigolos, sorghum)

Credit Management Services
• provides credit for farmers through depot for buying inputs, based on approved farmer lists
• 10% of outputs received as deposit from each Depot
• receives payments from Agri-Processors, deducts credit, & remits balance to RGBs
• 10% deposit may be left in interest bearing account for future input credit

CLUSA Headquarters - Lusaka
• identifies buyers, negotiates contracts
• identifies sources of inputs at best prices
• organizes distribution of inputs

Figure 11 - CLUSA Outgrower Program

**Information Flow in the CLUSA Rural Group Business Program**

RGB

RGB

RGB

RGB

RGB

RGB

Depot

CMS

**Rural Group Business Records**
• receipt books
• bank statements
• meeting minutes
• monthly profit and loss (P&L) statements
for group business ventures
• member loans and crops planted

**Depot Records**
• RGB composition & eligibility
• stockcards for inputs and crops
• budget and expenditures
• treasurer's book

**Credit Management Services**
• maintains individual savings accounts
• credit per RGB by crop

Facilitators

Business
Advisor

District
Coordinator

**Faciliator Monthly Program Reports**
• new groups formed
• number of meetings
• P&L statements

CLUSA/Zambia
Headquarters
Lusaka

**Quarterly and Annual Reports**
• value of commodities marketed
• number & composition of groups
• value of loans received
• factor productivity

USAID/Zambia

MAFF

**Annual Results Report &
Resource Request (R4)**
• performance indicators as
defined in the results framework

USAID/Washington

Figure 12 - Information Flow in CLUSA RGBP

(M) SIMOONGA RGB   Maz Malabo Malumo

SUGAR TRADING (Bartering with maize
(M)
2 kg of sugar : 4 gallons of
maize )

| Month | 20th may – 20th June | |
|---|---|---|
| Sales – – – – | 341, 000 | |
| Cost of hoods + transport (Sugar) – – | – – 75, 000 | |
| Gross Profit – | – – 266, 000 | |
| OPERATING | EXPENSES | |
| Transport for manager – – | 6, 000 | |
| Empty grain bags – | – 11, 000 | |
| Transport for bags of maize – | – 22, 000 | |
| Depot marketing fee | – – 11, 000 | |
| TOTAL Expenses | – – 50, 000 | |
| Net Profit – | – – 216, 000. | |

Number of bags of
maize sold  – – – 22 × 50kg

Figure 13 - Sample Profit and Loss Statement

Figure 14 - Business Review Report

TUSOLE FARMERS' CLUB

BUSINESS REVIEW REPORT ON BROILER [CHICKEN] PRODUCTION

I. REVIEW OF BUSINESS GOALS AND OBJECTIVES
In August 1997 when the business was selected, the main aim was to enable the RGB realize enough profit so as to do maize marking in 1998. Secondly we had timed to sell our birds during Christmas and New Year festivals. However this did not happen due to that the loan took time to be approved and hence loan dispersal was done in November. Furthermore, four people by then had started rearing broilers within the mission and this hampered our objective of rearing broilers. Therefore we will continue with the same business during maize harvesting because we intend to buy maize and sunflower cake and then formulate our own feed.

During the period, we managed to sell 80 birds at K6,500 and 100 birds at K7,000. We experienced a 5% mortality rate and 14 birds culled. 30 birds were sold in the 6th week, 150 birds in the 7th and 8th weeks respectively.

II. REVIEW OF PROFIT AND LOSS

The projected P&L was lower than the [actual] P&L statement simply because most of the chickens were sold at K7000. We had projected to sell the birds at K6000 but because of quality we had to sell them at K7000 and K6500. The sales were lower in the 6th and 7th week because these weeks fell in the mid of February. However sales increased in the 7th and 8th weeks due to seminars held at the seminar centre and community development project. In addition the workers for the hospital, school and joint board had received their wages therefore they had the means to buy the birds.

All in all, the total sales were higher than projected in the P&L due to the low mortality rate of 5%.

The total expenses were higher than projected because we incurred expenses not projected, eg lime, grass for roofing and polythene plastics. In addition feed costs and transport expenses were higher than projected due to an increase in fuel prices which in turn force the costs of good to raise.

The loan payment was not made on time because when the loan was dispensed, CMS and the RGB overlook the issue of how long it would take for the RGB to receive the batch after putting an order and basing on this calculating the loan payment dates. The first installment was supposed to be on 12th February 1998, however we managed part of the loan.

The lessons learnt on sales was that it pays to project lower than sales being projected higher. This does avoid paper profit. On expenses, at least they should be a mark up of K10000 on every expenses, eg if feed is projected to be bought at K27000 (inclusive of

transport cost) then the actual projection should be K37,000, this would cater for a sudden rise in the cost of feed and transport.

III. REVIEW OF PERSONNEL PERFORMANCE

The manager's performance was satisfactory, poultry production needs extra attention and the manager was extremely dedicated for he worked day and night round the clock. Only 5% mortality rate was experienced during the first batch.

The business was not implemented on time as scheduled earlier on. This was due to the delay of loan dispersal which also led to the delay in ordering chicks, remember, most people were eyeing for the Christmas and New Year market. This took us 20 days to receive the batch because there were a lot of order by the people during that period. Furthermore this meant that our birds were not going to be ready during either Christmas or New Year period as earlier planned in the implementation plan.

The manager was honest he did not keep the business for himself but for the benefit of the RGB and that tasks were shared equally. He maintained the records accurately, complete and up to date. (Books kept stock card, sales book, manager's cash book, and mortality record). The records were updated on weekly basis. However the manager was overloaded hence the executive selected an assistant manager to assist him with records. The two managers reported to the executive and entire membership weekly on Fridays. The overall manager had the right qualifications, he had attended a poultry workshop in Lusaka organized by the RGBP and has practical experience. Furthermore he had good personal characteristics for any member was welcomed to learn from him at any time on poultry management. However some members thought that he was selfish for he did not allow them to enter the poultry house. After learning the poultry management from him did they accept and appreciate his behavior.

The audit committee did conduct three audits and their performance was satisfactory. The results were reported to the membership and were satisfied with the results. Some members didn't do what they were called to do, eg drawing water from the well, replacing and turning the litter. This work was done by animators because we couldn't wait for laggards.

The lessons learnt was that the manager should be responsible in screening member he wants to work with so that he will be held accountable for whatever goes wrong.

IU. BUSINESS OPERATION REVIEW

The following were the problems encountered:

1. Poor quality of feed from Mazabuka Indian. The above problem was quickly identified by the manager upon feed the birds (no label stating composition of feed, expire date, etc.) Solution: Animator made a survey in Mazabuka. The result was that most people have stopped buying from the Indian because of poor quality feed and they were buying from a

new agent of Tiger feeds based in the same area. The RGB also revolved to buy from the new agent.

2. Market was a problem. The institution we had earlier on made contract with where reluctant to buy the birds because the institution were undergoing restructuring, ie joint boards, CDP. Solution: the RGB executive and GF facilitated in making fresh arrangements with the above institutions and they responded positively.
-The advertising team took broilers door to door to esteem customers and to bring places such as the market, drinking places, and churches.
Dressing the chickens and storing them in a refrigerator to avoid incurring extra feeding costs.

3. Manager had a lot of work to do e.g., feeding the birds, vaccinating, updating the records, etc. This was identified by the audit committee. Solution: executive and membership sat down and appointed an assistant manager to do the bookwork. In addition he also acted as a checker eg counting birds, feed, etc.

The lessons learnt was that the RGB must make full feasibility studies particularly where they are to buy Rx feed. Secondly whenever there is a problem the club must sit down and solve it. Thirdly advertising, selling birds door to door to esteemed customers and to busy places, ie market, drinking places and churches increases sales. Lastly every time a contract is made they is need to revise it in order to iron out problems and hence make fresh arrangements.

V. LESSONS LEARNT
-The earlier you identify a problem and solve it the better e.g., poor quality of feed would have led into losing the whole batch if the problem was not quickly identified and solved
-In poultry production, maximum care of the chicks should be in the first three weeks as this will lead to weight gain
-avoiding a lot of people entering the poultry house reduces changes of broilers contracting diseases
-advertising and taking birds door to door and to busy areas helps increase sales
-developing contracts with institutions avoids offers from being turned down. However you need to be in constant contact with the institution to iron out problems that may be experienced before buying your product
-quality pays. The heavier the bird the higher is the selling price
-to avoid feed expenses, its better to slaughter the birds and store them in a refrigerator. In addition ordering of the birds should be timed with selling periods, eg month ends when most people have money

VI. TO AVOID PROBLEMS ENCOUNTERED
-To avoid feeding costs, broilers should be sold starting at 6 weeks old or rent a refrigerator to stock slaughtered birds
-Due to changes in market economy, to avoid unprojected expenses the RGB should at least project 20% more on expenses
-Every member should have a copy of bylaws

-RGB should buy feed from trusted agents

VII. TO IMPLEMENT LESSONS LEARNT

-The art of sharing responsibilities shouldn't be stopped

-Problem identification and solving should be done democratically at an earlier stage

-Taking broilers door to door to esteemed customers and to busy places must continue

-Advertising through posters and proverbs (eg. ku tusole inkunku mweenda) attracts more customers

-Selling birds should start at 6 weeks old

-Manager must screen people he would like to work with


VIII. TO DO DIFFERENTLY IN NEXT BROILER REARING/POTATO MARKETING

-Manager together with executive should select helpers for the manager

-Feed must be bought from reliable and trusted agents

-Every member be responsible in scouting for customers

-To reduce feed costs RGC must formulate its own feed

-ordering of birds must be timed with selling periods when the demand is high eg month ends, Christmas and New Year festivals

-Potatoes (produce) to be sold in Kafue Lusaka and locally

| MAIZE SEED MARKETING | MISTAKES | PROBLEMS | SOLUTIONS | LESSONS LEARNED |
|---|---|---|---|---|
| ORGANIZATION | a. Interference by the Executive in the duties of the Salesman and Manager. They were interested in the commissions being made by the Salesman and the Manager.<br>b. Interference by the Executive Committee in the duties of the Audit Committee. The manager and Salesman never considered the reports coming from the Auditing Committee. | a & b slowed sales. | General meeting was called by the GF and group. The group discussed the duties of the various officers without them being present. The Chairman was then included in the meeting and the minutes of the meeting were read by the Secretary. The officers were asked to reveal their duties and their roles were clarified within the group. | The group saw how dangerous it is to select officers who are not qualified to serve and how this can affect sales figures. |
| BUSINESS PLANNING | *Implementation Plan*<br>The seed was supposed to be with the Manager, but the Chairman ordered the seed taken to his house and took over the duties of the Manager and Salesman.<br><br>*Timing of Seed Order*<br>Some groups ordered the seeds at the wrong time when demand was low = low sales.<br><br>Unexpectedly, the same suppliers came in other areas and told their seed at a cheaper price.<br><br>Some clients who had promised to buy seed from the group were unable to make the purchase. | | The Executive Committee was reshuffled because some of them did not know their roles.<br><br>Some groups introduced a system in which a group member was allowed to get the seed after making a down payment of K10,000. The remaining amount of K2,000 was to be settled in two weeks time. The member was 'screened', proving that he/she could make the balance payment.<br><br>There was a vast marketing campaign in areas where no seed was found. | Order seed when demand is high.<br><br>Introduce a down payment plan. |
| AUDIT/CONTROL | a. Auditing was not done in time – the Committee was reluctant and some of the Managers were stubborn.<br>b. In some RGBs, the Chair was also part of the Auditing Committee. | a. Some Treasurers/Managers lost some documents due to the lack of auditing.<br><br>b. Auditing Committee was reshuffled and the Chair was asked to carry out one duty and the RGB sat down to review the importance of Auditing (transparency). | 1. Some RGBs came to the conclusion that Auditing Committee is separate from the Executive Committee. Needs to be independent.<br><br>2. Must choose officers who are qualified and understand their roles.<br><br>3. Groups realized the importance of proper record keeping for clear transparency. | |

Figure 15 - Sample Page from Lessons Learnt Section of CLUSA Facilitator Handbook

## CLUSA/ZAMBIA
### ACTIVITY REPORT

FACILITATOR: __ELIZABETH__      MONTH: __SEPTEMBER__

**MEETINGS**

| DATE | RGB | TYPE OF MEETING | ATTENDEES /NO | OUTCOME |
|------|-----|-----------------|---------------|---------|
| 8/9/98 | MANKO | Follow-up | Ngwezi Settlers (22) | Encouraged to join group even without being in... |
| 9/29/98 | NGWEZI 'B' | Group meeting | members of RGB (9) | Chairman encouraged members to pay 10% (done) |
| 9/9/98 | KAMUSOLA W. | Business Progress Audit | Executive (4) | Executive to brief members on bus. progress |
| 10/9/98 | MWABUKA men | Contract, Land Prep + 10% payment | Group members (12) | Contract redone, report given on Land Prep progress |
| 14/9/98 | NJELEKA | Problem solving & contract | Members + GF (10) | Members reminded of importance of contract (went well) |
| 15/9/98 | MAKANGALA | Contact meeting | Members (10) | Old group but wants to work with CLUSA |
| 20/9/98 | KAMUSOLA women | Business Reports Auditing | members (10) | Chairlady laid responsible to give report takes to receives |
| 2(1/98 | MWEEMBA women | Contact meeting | members (17) | Old Club but wants to work with CLUSA |
| 24/9/98 | KALAMO CHILIMANG'OMBE + NAMILONGA Depot RGBs | Discussion on Land preparation + 10% | members of 2 Depots (56) | Encouraged to start prep. Land of to Correct inputs |
| 25/9/98 | CHALIMBANA KAMUSOLA, MWABUKA | DC Reports & Encouragement | RGB members | Chairman for DC replaced to improve work |
| 27/9/98 | TUSWAANGANE | Encouragement + correction | Group members | Encouraged to continue work Contact Farmer |
| | | | | |
| | | | | |

**TRAINING**

| DATE | RGB | TOPIC | TRAINEES/ NO | EFFECTIVENESS |
|------|-----|-------|--------------|---------------|
| 3/9/98 | CHITUBA MEENDA | Budgeting | Depot Committee members (3) | Went on well |
| 4/9/98 | NGWEZI B | Budgeting | Depot Committee members (5) | Went on well as was good participation |
| 8/9/98 | MAKANGALA | Demo on CT (Holey Ground) | Group members (10) | Members had already started digging (E) |
| 16/9/98 | NGWEZI Depot | Screening of new groups | D. Committee (4) | Screening Criteria was put in writing |
| 16/9/98 | CHITUBA MEENDA | DC Roles Review + supervisor | DC + members of the Group (8) | Training went on well good participation |
| 22/9/98 | ZONE | Review Duties | Contact Farmers | C.F not working, got inform from friends |
| 23/9/98 | LUJANDO | Land prep Reports | D. Committee | Attendees encouraged to prep. land but 1/10 |
| 11/9/98 | SIMWABA | Budgeting | D. committee members (3) | Not completed as attendance poor |
| 29/9/98 | SIMWABA | Budget completion + Screening completion | D-committee members | Good participation meet regularly being complete |
| 30/9/98 | NGWEZI B' | Supervisor's Roles + Receiving inputs Docu. | Depot Manager | DM ready to receive inputs but to continue training on chemicals |
| | | | | |

Figure 16 - Sample CLUSA Facilitator Monthly Program Report

DEPOT COMMITTEE CHECKLIST
FACILITATOR    Ruth

Depot  _SIMWABA_____

| STEP | DATE |
|---|---|
| Introductory Meeting | 7/98 |
| Selection of Depot Manager | not yet |
| DC Training<br>* Organizational<br>* Marketing<br>* OGS | 7/98 |
| Audit Committee selected | not yet |
| Screening Criteria **in writing** | 8/98 |
| RGBs applied and screened | NIL |
| Crop Mkt organized<br>* marketing structured<br>* forms developed & mastered<br>* budget approved<br>* audit committee functioning | |
| OGS organized<br>* member-RGB contracts<br>* RFB-DC contract signed<br>* RGBs regist fee collected<br>* DC operational budget set<br>* DC regis fee collected<br>* lead Contact Farmers select<br>* member credit approved<br>* RGB credit approv by DC<br>* depot supervisor trained<br>* audit comm appoint & trn | 8/98<br>in process<br><br><br><br>8/98<br>8/98<br>8/98<br>not yet |
| * chemical training done | |

Depot  _CHITUBA MEENDA_____

| STEP | DATE |
|---|---|
| Introductory Meeting | 4/98 |
| Selection of Depot Manager | |
| DC Training<br>* Organizational<br>* Marketing<br>* OGS | 6/98<br><br><br>6/98 |
| Audit Committee selected | |
| Screening Criteria **in writing** | |
| RGBs applied and screened | NIL |
| Crop Mkt organized<br>* marketing structured<br>* forms developed & mastered<br>* budget approved<br>* audit committee functioning | |
| OGS organized<br>* member-RGB contracts<br>* RFB-DC contract signed<br>* RGBs regist fee collected<br>* DC operational budget set<br>* DC regis fee collected<br>* lead Contact Farmers select<br>* member credit approved<br>* RGB credit approv by DC<br>* depot supervisor trained<br>* audit comm appoint & trn | <br>in process<br><br><br><br>6/98<br>8/98<br>8/98 |
| * chemical training done | |

DEPOT COMMITTEE QUALITY ASSESSMENT

DEPOT __Simwaba_____ FACILITATOR _____

1. Are the DC members competent and qualified? <u>Yes</u>

2. Is the Depot Manager competent & qualified? <u>Not yet</u>

   Is he acceptable to all the Committee members? <u>Yes</u>

3. How did the DC members training go? Do they understand their responsibilities? <u>Yes</u>

   Do they understand the Outgrower Programme? <u>Yes</u>

4. Have they prepared screening criteria & procedures in writing for admitting new RGBs? Are they adequate? How well has the DC used them in screening applicant RGBs? <u>No group has</u>

<u>applied yet</u>

5. How well did they structure the marketing exercise? Was the budget prepared realistic? How are they going to finance the marketing?

6. How well is the DC working? Cite examples from actual issues they are working on (shed construction, marketing, selection of camp officer, organizing sale of sprayers/tines/rippers?

7. Can this DC be allowed to participate in the Outgrower Programme? Justify your answer.


- Yes because although now the DC has time to meet and look at any pressing issue e.g., RGB limas. The DC also organized a place (building) that will be used as a collecting point.

- In the process of selecting the supervisor


<u>Chituba Meenda Depot</u>

The DC understand its responsibilities and the programme but the only problem is there are no RGBs around so most duties are not done

Decision: The DC to be met and travel together with the RGB members unless this is a joint session. Information still to be passed through the DC members.

Figure 17 - Depot Committee Checklist and Quality Assessment Form

## Discussion

### *Lessons Learned*

Although the monitoring systems of ADMADE, CARE LFSP, and CLUSA RGBP evolved independently, they share some commonalties that can serve as lessons for community based monitoring in general.

*Ownership of Data*

In all three projects an emphasis has been placed on community ownership of data. In the LFSP, the CSM ledgers never leave the VMC. ADMADE processes all village scout field patrol data forms at Nyamaluma, but they are then returned to the Unit from which they came. In the RGBP, business records are kept with the groups, and facilitators simply copy information as needed. When asked about the key ingredients to making community-based monitoring work, staff from all three projects mentioned the importance of community ownership of data.

*Integrating Data Collection with Other Activities*

When data collection and record keeping become part and parcel of daily activities or administration, monitoring is more likely to function smoothly. In ADMADE GMAs, wildlife monitoring has been integrated into law enforcement activities. Bookkeeping is present in all three projects, and is one of the primary sources of data on income generation and flow. By tapping into necessary administration and management actions, monitoring becomes an integral component of the development enterprise.

*Importance of Oversight*

Close supervision of data collection is another key ingredient in establishing a monitoring program. In CARE and CLUSA's projects, field staff are mostly university trained and make frequent site visits which include inspection of the record keeping. ADMADE, which has very limited resources for field visits, relies primarily on the Unit leaders and officers of the management committees to ensure that data is collected and recorded properly.

Having staff on the ground and near the source of the data collection can prevent problems in data collection which if not caught could render an entire dataset unusable. Field staff can also provide on-the-job training, give clarification on monitoring procedures, and transmit data back to the central office.

*Training*

All three projects reviewed place a heavy emphasis on training in monitoring and record keeping. Training can be in organized classroom workshops, and/or one-on-one in the field with an extension officer. CARE and CLUSA do a combination of classroom and on site training, while ADMADE, which operates in a much larger area, mostly provides classroom training. Written training materials for monitoring are not highly developed in any of the projects, however training programs are universally 'hands-on.' In general, the training programs seem adequate, although more follow-up in the field is always beneficial, particularly in the case of natural resource monitoring in ADMADE which requires more technical skills.

### Innovation and evolution

Innovation and adapting monitoring for local needs is encouraged across the projects in various degrees. CARE and CLUSA do not use pre-printed data forms for their monitoring materials,

and encourage community members to be creative in using information, provided they integrate the minimum set of indicators. Enhancements to the monitoring techniques are  shared with other CBOs through trainings and contact with field staff. The Action Research team at LFSP is experimenting with different types of monitoring, such as soil fertility, water levels, vegetation cover, and field level mapping. Once refined, these types of monitoring may be extended to other areas. ADMADE is currently going through a growth phase and is striving to upgrade its impact monitoring methods to meet the information needs of management under the new wildlife legislation. ADMADE is also beginning to try to improve dissemination of monitoring results with its institutional partners within Zambia and abroad.

### Documentation and Monitoring-the-Monitoring

Measuring characteristics of the monitoring system, such as cross-checking observations for errors in measurement or transcription, has not been rigorously institutionalized in any of the projects reviewed. In the relative scheme of things, analyzing the monitoring process itself may seem a fairly low priority. However keeping track of problems with sampling, measurement, or analysis may illuminate the magnitude of inherent biases, refine methodology, suggest changes in training, and improve institutional memory.

Institutional memory in particular can be a challenge for any small organization, and its importance should not be underestimated. Monitoring activities in the LFSP nearly ground to a halt for one year due to a single change in staff.  To this day, the LFSP remains with one rich dataset on their computer, representing dozens of hours of fieldwork, which can't be analyzed because it was never documented. Monitoring in ADMADE similarly is heavily dependent on a couple of technical staff who are the only ones who can do the compilation and analysis. Regular documentation of the process of data collection and analysis helps projects survive inevitable turnovers in staff, expands the number of project staff who can play a role in monitoring, and can also make a dataset accessible to outsiders who may not be otherwise familiar with the goals and design of the monitoring system.

### Strategies for Integrating Community Participation

The monitoring activities of ADMADE, the LFSP, and the RGBP are all heavily centered around rural communities, but the strategies employed to integrate community participation vary slightly. Communities are of course not homogenous entities, and defining what it means to be a member of a community and what constitutes community participation can be a tricky task. However without getting too detailed, we can make some general remarks about how each project has structured community involvement in monitoring.

ADMADE's foot soldiers for natural resource monitoring are the village scouts. Village scouts are local residents who have been trained and are supervised by NPWS staff. While their job may at times put them at odds with fellow residents of the area, village scouts appear to remain well integrated into community social structures. Members of the ADMADE management committees (i.e., financial management committee, resource management committee, and community development committee), are elected through the village action groups and represent an even better cross section of the unit. As the roles of these committees increase under the new wildlife legislation, their involvement in monitoring will increase and they will assume certain monitoring functions now performed by staff from Nyamaluma. This will result in an even great degree of community participation in monitoring. The design of ADMADE's monitoring

program has by and large been handed down to the local managers, as a means to ensure conformity and in the case of wildlife monitoring estimate trends.

In the LFSP, the CSM ledgers and seed scheme records are almost entirely in the hands of officers of the VMCs and AMCs. Although extension officers provide training and oversight, all of the data is collected and recorded by residents of the local area. VMC and AMC officers are also the primary users of the CSM and seed scheme records, although project staff have access to them on an as-needed basis.

An additional layer of community participation in LFSP comes in the design of the monitoring program. Through PRA exercises and trainings, local residents decide on which indicators to measure and how. Although project staff guiding these exercises ensure a minimum set of performance indicators are measured project-wide, the consultative process nevertheless imparts a sense of ownership and control over the monitoring process. Where community involvement in monitoring could be strengthened in LFSP is in the analysis of data.

Record keeping in CLUSA's RGBP is similar in that the actors in the data collection and analysis are members of the rural communities, but differs slightly in that it is focused almost exclusively on business records. Ledgers maintained by rural groups record transactions and costs, and are used primarily for planning and accountability. Depots keep track of inputs distributed and produced collected for the outgrower scheme, which is ultimately used for calculating how the profits for the entire depot should be distributed. RGBP facilitators provide training, oversight, and dissemination back to the main office, but all of the records are maintained and kept by the groups. Depot meetings provide a local forum for discussing project activities and specific business ventures, and informal discussion also serve to disseminate information about the benefits of participation. Facilitators supplement the local records by monitoring group composition and function, but these are mostly for impact reporting for project and donor leadership.

### Upwards Data Flow
Getting information from the community level to a central repository for analysis is needed for project level impact monitoring and planning. This can be a significant logistical undertaking, and has been a challenge for all three projects. CARE and CLUSA, who have adequate and mobile field staff, make use of their extension officers to transmit summaries of monitoring records to the main office. This system works well, but involves a certain amount of loss of detail when data is aggregated in the field. ADMADE, which operates in a large area and is constrained by a lack of field staff and transport, has found it more challenging to get data from the field. However by collecting the original dataforms for central processing and using a database system, ADMADE staff are able to enter all raw data into their database.

### Standardization
To enable higher level analyses, data collection at the community level must be standardized, in terms of selection of indicators, measurement, and sampling. This presents a potential dilemma for project leadership, who are also interested in empowering communities to have a say in the design their own monitoring system. CARE LFSP has attempted to achieve a balance by insisting on a certain minimum set of indicators for the CSM, but also allowing room for and indeed encouraging innovation at the community level. CLUSA's approach is also a mix of a *top-down* design criteria and local adaptation to meet the particular needs of a particular group or

enterprise. Due to the requirements of wildlife monitoring and the nature of the centralized processing, natural resource monitoring in ADMADE is mostly dictated from above. However steps are being taken to improve the capacity of local staff to understand the selection of indicators and analysis of data. Financial monitoring at the community level is less stringent, but also more straightforward.

### Monitoring and USAID/Zambia's Strategic Objective One

USAID/Zambia, as the primary donor agency for the three projects reviewed here, is one of the major stakeholders of project level monitoring data. ADMADE, CARE, and CLUSA each receive their funding under the guise of USAID/Zambia's Strategic Objective One (SO1): *To raise the rural income of selected groups*. Hence two very reasonable questions from the perspective of the donor are (1) how is project level monitoring contributing to the achievement of SO1, and (2) what is a reasonable level of investment in monitoring to maximize progress of SO1.

*Contribution of monitoring to SO1 achievement*

It goes without saying that a minimum level of monitoring is certainly required to *measure* progress towards SO1. Hence at a minimum, the monitoring system of any project funded under a results-oriented donor such as USAID needs to be able collect data which can be used to evaluate progress towards the objectives and outputs specified in the funding contract. This aspect of monitoring is essentially driven by the need for accountability of donor resources, and is a requirement for continued support. Hence, although it may be somewhat cyclical, we can begin by saying that monitoring contributes to the achievement of SO1 by enabling projects demonstrate impact to continue to receive donor resources to do the activities the increase the rural income of selected groups.

Fortunately there are also more substantive ways in which monitoring contributes to the achievement of SO1. Although the specifics will vary from project to project, in general monitoring can potentially help rural development by informing adaptive management, building local capacity for planning and management, ensuring accountability, improving public education, and evaluating a conceptual framework.

Adaptive management

A simple definition of adaptive management is *using information to make changes in management*. Whether labeled as such or not, all businesses and development projects require information for management and adaptation. For example, farmers need to adapt to changes in market demand or climatic conditions, and wildlife managers need to adapt to changes in wildlife populations. In all three projects reviewed here, management is probably the primary goal of the monitoring activities, and hence it is not surprising that their monitoring systems meet this need fairly well.

Local Capacity Building

The ability to strategically use information is one of the key factors influencing why some rural groups can function better than others. In an increasingly competitive world, those groups which can not evaluate information and base decisions on the best available data will simply be left behind. Because of the high level of community participation in monitoring in all three of these projects, the ability of local residents to collect information for planning and managing enterprises may be the most significant lasting legacy of these projects, even if all other activities

should grind to a halt when the donor investment ends. While building local planning and management capacity is not an explicit component of SO1, it is an integral element of the conceptual frame work and an unequivocal necessity for maintaining impact over the long term.

Strengthening accountability
Achievement of SO1 at the project level would not be possible in an environment with no accountability. Monitoring use of a resource, whether income, agricultural production, or a natural resource such as wildlife, is the first step of ensuring responsible and accountable management. Hence it is also not surprising that this critical role of monitoring is functioning fairly well in all three projects. As an example, monitoring community development projects in certain ADMADE GMAs eventually revealed that most projects were benefiting the local chief. When brought to light in public, this finding resulted in a new way of identifying projects. In the LFSP, farmer requests for seed loans are evaluated based on the records of their past production and previous loans. Without monitoring systems in place, these cross-checks on management would not be possible.

Increasing adoption through public education
In this context, public education refers broadly to all channels, both formal and non-formal, where the benefits and/or pitfalls of an intervention or activity are discussed. For example, when members of a community in the LFSP attend a general meeting of the AMC and hear the production yields of those farmers using new seed varieties compared with the production yields of those using the old varieties, public education is taking place. When the chairman of a CLUSA rural business group writes a summary of a 6 month piggery enterprise and those lessons are shared with other groups via facilitators, public education is taking place. Monitoring data can capture the benefits of a particular intervention or NRM practice, which when presented to a wider audience at the community level will likely translate into increased adoption of activities which support SO1. For interventions whose effects are subtle and long term, such as improved soil fertility practices, institutional monitoring is even more critical for demonstrating benefits and increasing adoption.

Evaluating a conceptual framework
Each project under SO1 is designed around a conceptual framework (or log framework) which ties together the interventions and expected results. For example one part of a conceptual framework might say "The income of rural people are constrained by the high costs of business transactions, thus activities which lower the cost of doing business in rural communities will improve incomes and livelihoods."

These conceptual frameworks, whether spoken or unspoken, are the very core of rural development projects. Everything a project accomplishes or fails to accomplish hinges upon the validity of the conceptual framework. However the history of rural develop is rife with examples of flawed or incomplete conceptual frameworks, often resulting in costly and embarrassing development fiascoes.

A good monitoring system can help evaluate a conceptual framework and guide its evolution. This might be thought of as the 'research' component of monitoring. For example, monitoring data might reveal that lowering the cost of business transactions doesn't always improve rural income, and that there might be another key element required for this type of strategy to be

effective in meeting the objectives. These types of results are invaluable for continuously improving the theory of development and design and prioritization of projects.

The use of monitoring for evaluating a conceptual framework is even greater when data collection and analysis is sustainable beyond donor support through the inclusion of community leadership. All donors try to promote sustainability, but few are able to measure long term impact after project funding ends. Sustainable community-based monitoring might be a way to continue learning about what works and why.

*Monitoring Report Card*

Table 1, although not really a report card in the conventional sense of being an objective assessment, is meant to be a heuristic device to identify the relative strengths and weaknesses of the monitoring systems of CARE, CLUSA and ADMADE in regards to achievement of SO1. Because each project has more than one monitoring activity, these have been separated in different columns. The sample 'grades' for each type of monitoring are of course quite subjective, but are intended to be a measure of the contribution of the monitoring system relative to its *potential*, as opposed to an index upon which to draw comparisons between projects. This type of evaluation matrix would probably be more useful if it was used as a self-assessment tool.

Table 1 – Relative Strengths and Weaknesses of the Contributions of Monitoring Activities Relative to their Potential in Regards to Achievement of USAID Strategic Objective One

| Contribution to SO1 Achievement | Monitoring Activity | | | | | | |
|---|---|---|---|---|---|---|---|
| | ADMADE | | CARE LFSP | | | CLUSA RGBP | |
| | Community Financial Records | Natural Resource Monitoring | Seed Scheme Records | CSM | Food Production Trends | Group Business Records | Outgrower Scheme Records |
| adaptive management | B | A | B | B | n/a | A | A |
| building local management capacity | A | B | A | B | C | A | A |
| ensuring accountability | B | C | A | n/a | n/a | A | A |
| improving public education | B | A | B | C | C | B | B |
| evaluating a conceptual framework | C | B | B | B | B | B | B |

## *Evaluating an investment in monitoring*

A very reasonable question to ask for both donors and implementing agencies is how much monitoring is warranted? At what point do the benefits of more monitoring cease to merit the increased investment in money, time, and manpower? While the answers to these questions certainly will vary from project to project and there are no simple formulas to follow, there are general steps to take when making such an evaluation.

*Define a time frame*

Monitoring has a strong temporal component, so when assessing the value of a monitoring activity one must define an appropriate time frame. If an information need requires long term

data, for example to measure changes in biodiversity, then a different level of investment may be warranted than short term data needs. If, for example, the monitoring time frame is only 3-5 years, then only certain types of trends will be observable, helping define the appropriate level of investment.

*Identify minimum and maximum monitoring scenarios*
There is of course always a minimum level of information needs within an enterprise, if nothing else than for ensuring accountability and meeting donor reporting requirements. There will inevitably also be other information needs for planning, management, paradigm testing, and other research. Designing a few different monitoring scenarios or comparing monitoring options for these additional requirements is the next step to selecting the optimum level of monitoring. When trying to design different monitoring scenarios, it might be helpful to identify what information is absolutely *essential*, which would be *helpful to have*, and which would be *useful but not critical* for the primary stakeholders.

*Calculate resources required for monitoring scenarios*
An intelligent decision on how much investment to spend on monitoring can only be made if one costs out the resources needed for different monitoring options. Resources required for monitoring and analysis can include money for salaries, equipment, training, time, and demands on transport. Costing out resources for monitoring may be easier said than done, as monitoring is often multi-faceted and integrated into other activities. For example, ADMADE village scouts go on patrols whether they monitor wildlife or not, so how much of the cost of patrolling should be assigned to monitoring? CLUSA business groups keep records as a standard part of operating a business venture, but they need a lot of support from field staff for this and other tasks. Costs of data collection can also vary widely, depending on whether you're counting the number of people attending workshops or doing an aerial survey of wildlife.

*Estimate the benefits of monitoring*
As noted in the previous section, the benefits of monitoring towards achievement of a goal such as SO1 are multi-faceted. When evaluating an investment in monitoring or trying to identify the point of diminishing returns, we should first identify which types of benefits are most important for the strategic objective, and what types of benefits will result for each level of monitoring. If possible, the final assessment will of course be easier if the benefits of monitoring are quantified. But even if benefits of monitoring can only be expressed qualitatively, having them all down on paper will make the final evaluation more straightforward.

*Pick the most appropriate level of investment*
Once the benefits and costs of different levels of monitoring are laid out, it is relatively straightforward to identify the limit of diminishing returns, based on the priorities outlined in the project objectives. Monitoring scenarios can be refined and the analysis iterated often as as needed.

## Synergies
Although the design and operation of monitoring in these three projects have mostly evolved independently, there are some striking similarities and complementarities between the three systems. The Cross Pollination Matrix in Appendix II attempts to identify general areas where these three projects can collaborate and share strengths. ADMADE's strongest area of monitoring expertise lies in natural resource monitoring and the use of Geographic Information

System (GIS) software to analyze field data for land use planning. The LFSP is notable for its emphasis on consulting members of the local community in the design process of a monitoring program, and mobilizing community resources for collecting household level socio-economic and food production data. CLUSA's strengths include integrating record keeping with small business training, and using information to develop market linkages and operate an outgrower scheme.

CARE Zambia has developed a self-assessment tool for community organizations which has general application for any project working with CBOs. Dubbed the 'Spider Model', from the final presentation of results as a radar graph, this exercise is intended to assist community organizations define what characteristics are required to be an effective group, and assess their strengths and weaknesses in these categories. See Appendix III.

Other opportunities for collaboration certainly exist with other projects within Zambia and the development community in general. For example, a recent report by Environmental Conservation Association of Zambia (ECAZ) on performance of the Conservation Farming Unit (CFU) identified the lack of criteria for selecting groups to work with CFU as a major factor limiting the success of CF extension efforts. CLUSA's experience in monitoring and screening groups for inclusion into the outgrower scheme could be quite relevant to this need. A number of community-based projects could benefit from studying the LFSP model for collecting household level socio-economic and food production data, and ADMADE's use of mapping to inform land use planning likewise has wide application.

## Recommendations for Additional Work

Like all good research, this study has highlighted more issues for exploration than it successfully addressed. There are a number of areas where additional research or improving methodologies would be helpful for donor leadership, project managers and designers. These include:

- Further work is needed is expressing the value of projects in comparable terms, such as economics. A considerable body of research has been done on developing models for estimating the economic benefits of environmental and health interventions, however these techniques have not filtered down to the projects and donors that need to express their impact in compelling terms.
- While this paper attempted to outline a procedure for measuring the benefits of a monitoring system relative to its costs, refining this approach further and actually testing it on a few projects would likely yield interesting insights.
- The upward and lateral flow of data from the field remains a challenge in community based projects. This could possibly be improved by streamlining monitoring methods or making better use of appropriate information technology.
- None of these projects have attempted to fully utilize all groups in the community for monitoring, such as individual heads of household or students. Developing methods to expand the army of people who use information and think about what it means could open new exciting possibilities.
- Mechanisms for monitoring-the-monitoring are also largely in their infancy, but could result in refinement of techniques and stronger analyses. Confidence limits and discussions of error and bias noticeably absent from most summaries of monitoring data in the projects reviewed.

- Developing conceptual frameworks, curricula, and training materials to strengthen the capacity of local communities to analyze and apply their own monitoring data would result in increased sustainability and expand the audience who can benefit from monitoring.
- Measuring the perceived value of information to a community, in economic and other terms, and understanding the factors which shape these values could help design community-based monitoring systems that can be successfully weaned from project support.

## Appendix I - Monitoring Bibliography

Biodiversity Support Program. (1998). Keeping watch: Experiences from the field in community-based monitoring. *Lessons from the Field 1*.

Center for Development Information and Evaluation. (1996). Selecting Performance Indicators. *Tips, 6*.

Center for Development Information and Evaluation. (1996). Preparing a Performance Monitoring Plan. *Tips, 7*.

Center for Development Information and Evaluation. (1998). Guidelines for Indicator and Data Quality. *Tips, 12*.

Davis, G. E. (1993). Design elements of monitoring programs: The necessary ingredients for success. *Environmental Monitoring and Assessment, 26*, 99-105.

Kremen, C., Merenlender, A. M., & Murphy, D. D. (1994). Ecological monitoring: a vital need for integrated conservation and development programs in the tropics. *Conservation Biology, 8*(2), 388-397.

Macdonald, L. H., & Smart, A. (1993). Beyond the guidelines: Practical lessons for monitoring. *Environmental Monitoring and Assessment, 26*, 203-218.

Margoluis, R., & Salafsky, N. (1998). *Measures of Success: Designing, Managing, and Monitoring Conservation and Development Projects*. Washington, D.C.: Island Press.

Rose, K. A., & Smith, E. P. (1992). Experimental design: the neglected aspect of environmental monitoring. *Environmental Management, 16*(6), 691-700.

Stout, B. B. (1993). The good, the bad, and the ugly of monitoring programs: Defining questions and establishing objectives. *Environmental Monitoring and Assessment, 26*, 91-98.

## Appendix II - Cross-Pollination Matrix

| Beneficiary | Areas of Expertise | | |
| --- | --- | --- | --- |
| | **ADMADE** has expertise in… | **CARE** has expertise in… | **CLUSA** has expertise in… |
| ADMADE | | • Community-based monitoring of household socio-economic variables<br>• Conducting PRA exercises<br>• Self-assessment tools for CBOs<br>• Operating a network of field staff<br>• Technical papers library<br>• Experience and expertise with draught resistant crop varieties<br>• Established CBOs and experienced field staff in Kafue area GMAs | • Small business training methods and materials<br>• Operating a network of field staff<br>• Identifying markets<br>• Developing and operating an outgrower scheme<br>• Microfinance |
| CARE LFSP | • Natural resource monitoring<br>• Computerized mapping<br>• Managing wildlife as a resource in low rainfall areas<br>• Land use planning<br>• Legally empowered community resource boards in GMAs | | • Small business training methods and materials<br>• Identifying markets<br>• Developing and operating an outgrower scheme<br>• Microfinance |
| CLUSA RGBP/NRM | • Land use planning<br>• NRM technologies and training<br>• Long term presence in Eastern Province<br>• GIS and remote sensing technology<br>• Training facilities/materials<br>• Legally empowered community resource boards in GMAs | • Community-based monitoring of household socio-economic variables<br>• Conducting PRA exercises<br>• Self-assessment tools for CBOs<br>• Technical papers library<br>• Experience and expertise with draught resistant crop varieties | |

## Appendix III - The "Spider Model" Self-Assessment Tool for CBOs
(reprinted with permission of CARE International in Zambia)

### Group Assessment Tool: The Spider Model

The spider web model is a tool used in helping organizations explore their own strengths and weaknesses, reflect on their performance, and identify priorities for change. This tool offers a one alternative for analyzing organizational choices, and organizational choices are a crucial influence over developmental effectiveness. It seeks to answer the question of maintaining the capacity building process in the group in the absence of any further intervention.

The name of the monitoring tool is derived from the diagrammatic presentation of the monitoring which depicts the results in the form of a spider web.

### Using the model
Using the spider web model involves the following steps:
1. Development of indicators of indicators of group/organization capacity by the community and the field staff.
2. Selection of the respondents and collection of data
3. Collection and aggregation of data for each indicator.
4. Development of an action plan based on the findings of the exercise.

Detailed presentation of the steps:

### 1. Developing indicators of group capacity
The first step in the use of the model is the discussion with the group on what the consider to be a functioning community based organization or institution. This should clearly define what factors the group considers in arriving at the rating. To facilitate the process, the facilitator would ask questions such as: what is required for the group to function well/Do you consider your own group well functioning? Why, or why not?

There are some basic factors that are important to include when designing the indicators for the model. However, these are not exclusive as any other factors that the communities consider important or are necessary for the particular sector may be included. These basic factors are:
- **Management** under which planning, monitoring, record keeping and level of external assistance can be assessed;
- **Participation** under which how decisions are agreed upon, and women's involvement in decision making can be considered;
- **Leadership** under which choosing of leaders, women's involvement in leadership roles and how group leadership needs are met;
- **Organization** under which the goals and roles of the group are defined, and how decisions are made;
- **Resource mobilization** under which how the group's resources are mobilized and allocated can be assessed;
- **Generation and distribution of benefits** under which how the benefits are generated and whether they are tangible or not. The willingness of the group to join others and share experiences and generated benefits are also under this factor.

On the basis of the information from the focus group discussion, the group will give possible ratings of a group from low capacity to high capacity.  This rating will then be applied to each of the factors identified above.

As an example, the management factor could have four stages from low capacity to high capacity.  These stages are poor management, medium management, good management and very good management.

To assess one factor all the aspects of a given factor must be considered.  For example, management has many aspects among which are planning abilities, record keeping, decision making.  Therefore, to consider the level of management of a group, there is need to separate the management into various aspects.

- Planning of activities
- Assessment of activities and record keeping
- level of independence in decision making

For ease of facilitation during group discussions, the number of aspects of a given factor must be equal to the different levels of the overall capacity of a group as agreed in (1) above.  The most practical is four levels or below.

The next stage is the development of the key questions to assist in the analysis of the level of development.  Each question will focus on the one aspect of the factor.  An example of the questions is as follows:

? How are group activities planned and carried out? [To address the planning aspect]
? Are activities assessed and results recorded? [To address the assessment of activities and record keeping aspects]
? To what extent is external assistance needed from the project and/or other agencies? [To address the level of independence and sustainability]

Each of the key questions will have four levels of development that will range from poor, medium, good and very good.  These levels will be determined by the responses given to the questions.

The last stage is the development of the specific responses that are a guide to the stage of development of a factor.  Each response will be assessed on the basis of a specifically defined point.  For example, the specific responses to the key question on level of independence could be as follows:

To what external assistance needed from the project or other agencies?
- management completely dominated or imposed by outsiders.
- regular assistance from outsiders needed in all major management issues
- external assistance only needed in special cases upon request.
- management independence from outsiders and have capacity to act creatively according to circumstance

Each factor must therefore have specifically defined responses to which the responses given by the respondents can be assessed.  The stages of development of a factor will be restricted to the number of levels as agreed during the discussion.

Other aspects to consider in developing of indicator are:
- The group to be assessed must be involve in the decision of the core factors.
- The role of women in CBO must be given special attention especially where traditionally women are perceived as poor leaders.

**Management factor**
Question 1:     How are group activities planned and carried out?
Question 3:     Are activities assessed and results recorded and documented?
Question 3:     To what extent is external assistance needed from the project or other agencies?

The responses to the above questions are as follows:

| Management Indicator (score) | Poor (1) | Medium (2) | Good (3) | Very Good (4) |
|---|---|---|---|---|
| **How are group activities planned and carried out?** | No planning of activities. Implementation is action oriented without apparent objectives | some activities are planned while others are not. Implementation is however not really related to plan | planning for all activities is done but implementation is too rigid. | All activities are planned. Implementation is according to agreed plans but flexible for adjustment when required |
| **Are activities assessed and results recorded or documented** | No assessment and no recording of activities is done. | Assessment only when something has gone wrong but no records are kept. | Periodic assessment is done and recording is partially done. | Assessment is regularly done and recording of the group activities is always done. |
| **To what extent is external assistance needed from the project or other agencies?** | Management completely dependent on outsiders for all decision making and all activities undertaken by the group. | Regular assistance still needed in major management decisions | External assistance still needed for guidance upon special request. | Management is independent of outside influence and has the capacity to act creatively according to circumstances. |

The scores for each of the responses will be:
1. = poor
2. = medium
3. = good
4. = very good

**2.       Selection of respondents and collection of data**
In the development of indicators, all groups must be present.  The assessment of the group must however be done by dividing the group the executive and the ordinary group members.  These groups could be subdivided further into male and female to bring out the perception of different sexes.

Data collection involves asking each of the  above groups to rate the main group using the questions and responses developed by the whole group.  Good facilitation skills on the part of the facilitator  is a key aspect to obtaining consensus on the stages of development of each factor.

## 3.      Aggregation of data for each indicator

For each of the key questions only one response must be provided by each respondent.  The answer must be given a score for the group from 1 to 4.  The responses from the same individual will therefore be equal to the umber of key questions.

As an example, monitoring results from two respondents to the five factors produced the following results:

|  |  | Management | Organization | Leadership | Generation and distribution of benefits. | Resource mobilization |
|---|---|---|---|---|---|---|
| **Respondent 1** | **Key question 1** | 2 | 3 | 2 | 2 | 6 |
|  | **Key question 2** | 3 | 3 | 2 | 2 | 1 |
|  | **Key question 3** | 4 | 1 | 3 | 1 | 1 |
| **Totals for R1** |  | 9 | 7 | 7 | 5 | 8 |
| **Respondent 2** | **Key question 1** | 3 | 2 | 1 | 3 | 1 |
|  | **Key question 2** | 1 | 4 | 2 | 2 | 2 |
|  | **Key question 3** | 2 | 1 | 1 | 1 | 2 |
| **Totals for R2** |  | 6 | 7 | 4 | 6 | 5 |

R1= respondent number 1
R2 = respondent number 2

## 4.      Diagrammatic presentation or visualization of data

From a central point draw lines equal to the number of factors used in the analysis.  For the above example, five lines or legs of the spider are needed.  From a central point that is equal to zero, divide the line into twelve (12) equal segments.  The number of segments must be equal to the maximum possible score for one factor. Each leg of the spider is allocated to one factor.

From the results of the group discussion, the position of the group on the spider model for each of the factors is marked.  Joining the points together will gives a visual of the position of the group with respect to all the factors considered.

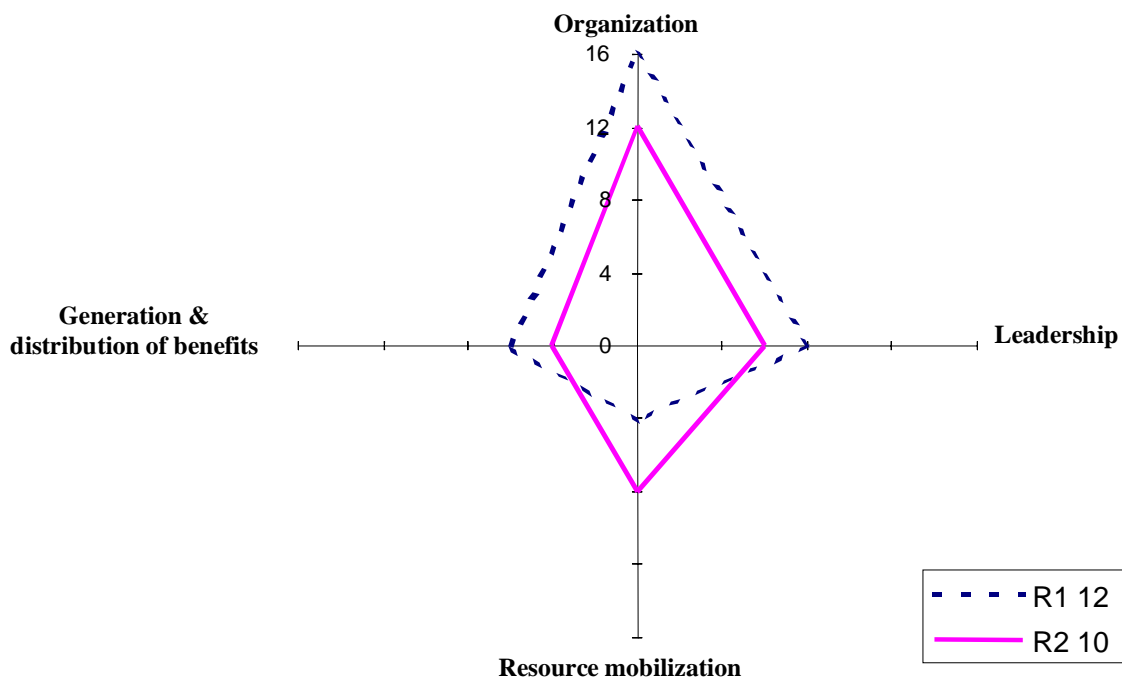The results of this particular exercise would be presented in
Figure 18.

**Figure 18 – Graphic Presentation of Spider Model CBO Assessment**

From the diagram apparently the two groups that carried out the assessment do not agree on any one variable/factor. This could signal lack agreement on all major issues. The levels of development of the individual factors are evident from the position of the point on each of the legs of the spider. From the interpretation of the results the focus would be on what action is necessary to improve the performance of the group.

**5.     Development of action plan**

From the diagram, relative development can be visualized by the position of the point on the leg of the spider. The higher the value of the point on the spider's leg, the higher will be the development factor. The analysis of the results will then focus on what can be done to improve the performance of the group in each of the factors starting with the lowest rating. When there is more than one respondent as is in the example above, the different perceptions must be taken into account to adequately address the perceived deficiencies. An executive committee carrying out a self-evaluation may consider that they are performing very well in one aspect while the general membership may have contrary views. The spider web model will show. The onus is on the facilitator to amicably facilitate the discussion of these differences. The objective is to arrive at a consensus for the development of an action plan for the whole group.

At the end of the discussion the field exercise the following documents should be produced: a spider diagram, notes on each indicator and a draft action plan. In addition there should be a format for the field data for easy reference. Annual assessment will enable the project as well as the group to analyze the changes in the group capacity over time and reassess the action plans.

**Uses of the spider model**

1. The model can be used as a monitoring tool by the project that generates information about the status and changes in the community groups.

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2. The model can be a good tool for raising awareness among group members about the status of their group and instilling in the group executive a feeling of responsibility to the community.

3. It will also give the project a good idea about the process going on in a group and offer an opportunity to design tailor made support for future capacity building activities.  It can be especially useful where a project provides a more or less fixed package of orientation and training.  These results of the monitoring process would result in specific and needs-based training more appropriate to a particular group.

The model can be used in evaluations to assess the status of the group.  In this case the evaluation team can use the same model and use group members to describe the situation in their organization.

**Field experiences in the use of the assessment tool**
- the idea of participation can cause some uneasiness among the staff who may consider the monitoring of "their" groups by the groups themselves as an evaluation of their own promotional performance.
- The group leaders or executive may be reluctant to accept "their"members point of view. These fears should however decrease with monitoring.
- There is a tendency to focus on those aspects where people or the CBO feels strongest.
- The whole monitoring process is dependent on the facilitation skills of the facilitator.  Low capacity in terms of facilitation of the group discussion will not produce reliable data.
- Weaker and less developed dimensions will be relatively neglected by the group.

The last two aspects need special attention during facilitation. Application of the instrument should have some flexibility to allow for discussion of the issues that the community considers more important at a particular monitoring session.

## Appendix IV - A Self-Evaluation Tool for Monitoring

One of the challenges of discussing monitoring is that it can be easy to fall into the trap of comparing apples and oranges. What may seem to be perfectly coherent and functioning monitoring strategy to one person may be very inadequate from another perspective or when applied to a different objective. The architects of monitoring systems clearly have specific goals in mind and resource limitations to contend with. Unless we can be very articulate about the different objectives of our monitoring and the constraints which place limits on data quality, expectations can become frustrated and efforts to 'monitor the monitoring' can become mired in confusion.

Below is a proposed conceptual framework and self-evaluation tool that can hopefully help tease apart and assess the different elements of a monitoring system. This type of analytical framework could be helpful when describing a monitoring program to outsiders, measuring changes in the process of monitoring over time, developing confidence limits, and prioritizing resource allocation for monitoring.

This type of assessment tool is an adaptation of the Spider Model which was developed by CARE/Nepal to assist community based organizations in evaluating how their group functions. Essentially the idea is to come up with a reasonably small set of variables which reflect desirable elements of a monitoring program, and then give a rating to each one. However any assessment of monitoring is complicated by the fact that monitoring data frequently serves different objectives with different levels of adequacy. For example collecting information for setting harvest levels, measuring household impact, or assessing changes in biodiversity are all perfectly legitimate and important objectives of many rural development projects. However data collected for one purpose may or may not be very useful for other purposes. Hence when we evaluate the adequacy of a monitoring system, we must divide our analysis on the basis of each intended use of the information.

Ideally the organization or community themselves should develop their own indicators of a good monitoring system, as well as a methodology for rating each indicator. However in the case of monitoring, there are certain universal elements which are desirable, such as representative sampling and objective measurement. Below is an outline of some of the possible criteria one could use to assess a monitoring program, and some suggestions on possible indices for rating.

**Monitoring the Monitoring: Self-Evaluation Worksheet**

| Information Use | Performance Rating (1-5) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Conceptual Framework[d] | Sampling[d] | Indicator Selection[d] | Measurement[o] | Analysis[o] | Dissemin-ation[o] | Sustainabil-ity[d] |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

[d]design element
[o]operational element

*Information Use*

Because any evaluation of the performance of a monitoring system is linked to a specific application or information need, we need to dis-aggregate our assessment of monitoring according to each type of intended use of the information. This is simply because a monitoring system might be perfectly fine for one purpose, but when someone tries to use the same data collection system for another purpose it might be quite inadequate. Below are examples of some classes and specific examples of information use.

| Type of Information Use | Examples |
|---|---|
| Management | setting harvest levels<br>identifying training needs<br>allocating staff and resources<br>foreseeing barriers<br>problem solving |
| Planning | budgeting<br>identifying long term trends<br>determining when to phase out or expand<br>public education<br>marketing<br>selecting crop varieties<br>collaboration with other programs |
| Impact | measuring progress towards project goals<br>meeting donor information needs<br>maintaining public support |
| Accountability | highlighting inefficiency<br>deterring mismanagement<br>supporting promotion or demotion<br>limiting damage from corruption or mismanagement |
| Theoretical | testing the validity of conceptual frameworks<br>understanding cause and effect<br>identifying best practices<br>preparing peer-reviewed publications |

*Conceptual Framework*

Description

Often times, an intended use of information from a monitoring system is complex enough that useful information can be collected only if there is a conceptual model linking indicators with the question at hand. For example, if one of the information uses of a monitoring system is setting sustainable harvest levels of wild orchids, there should be a conceptual model which explains how orchids reproduce, how people use them, what kind of habitat they require, how harvesting affects them, and the confidence limits of the monitoring data. If this kind of framework does not exist, then all the data on numbers of wild orchids wouldn't be of much help in setting sustainable use levels. A conceptual framework may also integrate a hypothesis that is being tested.

If on the other hand the question of interest is quite straightforward, a conceptual model might be self-evident or unnecessary. For example, if one of the goals of a monitoring system is to measure impact of a family planning program, the conceptual framework might simply be a

single sentence that says 'family planning services will result in fewer births, so the way to measure the impact of the family planning program is to count the number of babies born each year in a given area.'

Sample Rating System
1 – the conceptual framework is poorly defined or non-existent
5 – a conceptual framework linking the indicator and the ultimate use of the information is well formulated, articulated, and widely known

*Sampling*
Description
Sampling refers to how we select people/objects for measurement, and when and where to measure them. The two main desirable characteristics of sampling are *representativeness* and *scale*.

Representativeness refers to whether or not the people/objects selected for measurement will really give a good picture of the whole population of interest. Although there is no simple formula to determine whether a sample reflects the entire population, it is in general of course better to select subject randomly as opposed to opportunistically. Depending on the intended use of the information, it may also be desirable to stratify the sample so that you get an even mix of subjects based on a certain important characteristic, such as gender. Depending on the design of the monitoring program, it may also be important to measure the same subjects over and over. Finally, size of the sample is an important factor. Depending on the amount of heterogeneity in the population, a sufficient number of observations must be made to ensure that inferences from the data are valid. There are oodles of books on sampling and research which may be consulted when selecting sample size.

Scale can refer both to time and space. Temporal scale refers to whether measurements are made frequently enough and over a sufficiently long enough period of time to capture the information needed. For example, if one of the purposes of a NRM monitoring system is to understand seasonal fluctuations in the water table, making daily measurements of water levels in a well would probably not be necessary, however taking measurements only every 6 months would be probably not yield enough information to answer the question. Spatial scale is also important an important consideration for some applications, and refers to whether the geographic area sampled is sufficient. For example measuring water levels in just one village might not yield enough information to really understand the hydrology of an area, a larger area might need to be sampled.

Of course, sampling must also be practical and feasible given the available resources for monitoring. Sampling must concur with the limitations on both data collection and data processing. An easy trap to fall into for monitoring enthusiasts is to collect more data or in more detail than can be effectively processed, analyzed, disseminated, and archived.

Sample Rating System
Give one point for each the following:
❑ the population of interest is well defined and/or there exists a list of members of the population from which samples can be selected
❑ the sample was chosen in a way so as to reflect the whole population (random and/or stratified, and/or entire population measured)

❑ the sample is of sufficient size to provide enough data to make generalizations about the general population
❑ measurements are made with sufficient frequency, and over an appropriate period of time and geographic area
❑ the sampling scheme is practical with the available resources

*Indicator Selection*
Description
Indicators are the specific variables which are actually measured.  Number of hectares planted, cost of transportation, and hunting success are all examples of indicators. There are  several desirable qualities we should seek when selecting indicators, including directness, objectivity, practicality, and triangulation.

Directness and objectivity are both elements of validity, which is the notion of whether the thing that is measure really captures what we want to know. For example, if we want to know the weight of a horse, measuring how much food it eats would be a less valid indicator than using a scale to weigh the horse. A good indicator is direct, in that it is very closely related to the phenomenon in question. A good indicator is also objective, meaning that it can measured by different people or at different times and the results will be comparable. For example community defined wealth ranking categories, which can differ from area to area, are a less objective measure of household wealth than a comprehensive list of all household assets. Quantitative indicators are usually more objective than qualitative indicators, but even qualitative indicators can be made reasonably objective with clear operational definitions.

Practicality is another factor in indicator selection. If our monitoring system calls for us to measure the volume of project donated seed exchanged in informal trade, but we don't have the means to monitor every informal transaction, then our data won't be very useful because we know we'll be missing a lot. Indicators which are difficult to measure because of time, money, or safety are less desirable than easily accessible indicators. Indicators which yield too much data or detail than can be effectively managed can also be counter-productive.

Triangulation means using more than one indicator or information source for a given need. For example, if one of the uses of the information system is to set harvest levels of wildlife, it would certainly be helpful if more than one indicator was being used to measure wildlife populations. Likewise, we can say with more confidence that our project is having positive impact on rural income if we have data on both household assets as well as value of marketed produce.

Sample Rating System
Give one point for each of the following if appropriate:
❑ the indicator(s) for the given need are directly related to the phenomena we wish to learn about
❑ the indicators are objective and can be measured consistently across space, time, and different people
❑ the indicators are practical to measure
❑ there is more than one indicator or information source for the objective
❑ the indicators can be measured with a sufficient level of precision to yield useful information for the needed purpose

*Measurement*

Description

Even the best possible selection of indicators won't result in useful information if the measurement of data is not held to equally high standards. Measurement can be as simple as counting the number of livestock using water from a rehabilitated dam, or as complicated as facilitating a focus group. Good measurement of course stems from a good selection of indicators, but requires other elements as well. To begin with, the data collectors must be properly trained and equipped. The prescribed sampling scheme must be adhered to, and non-responses recorded and if possible investigated to explore possible effects of bias in the sampling. Data must be recorded with sufficient precision for the intended use, and procedures for recording measurements must be in place. All of the logistics of measurement hinges on proper supervision and management, including spot-checks for verification. While many of these logistics aspect may seem mundane, they are critical elements of a monitoring program upon which all other outputs are linked.

Sample Rating System

Give one point for each of the following if the condition is met:
- the prescribed sampling scheme is followed in practice
- data collectors are knowledgeable and adequately equipped
- measurements are made with sufficient precision to meet the specified need
- non-responses (i.e., holes in the data) and other potential biases are explored and noted
- there is adequate supervision and spot checking of the measurement process

*Analysis*

Description

Analysis is the process of converting raw data into meaningful information. It involves aggregating data and making interpretation of the results for the intended purposes. While analysis certain depends on a sound conceptual framework, good selection of indicators, and good measurement, it also requires several other elements.

A critical element of analysis is a smooth and timely system for recording data, summarizing it, and archiving it in some sort of information system. While the logistics of recording and storing information may seem straightforward, they are often the bottleneck that limits the usefulness of a monitoring program. We must also be careful not to base analyses on inappropriate data. For example, we can not make valid conclusions about household level impact if all we have is summary data from an entire village. Using more than one indicator can also increase the validity of an analysis. Finally, analysis should integrate not only interpretation of the observations, but also include discussion of sources of error in the data collection process, such as non-response, intervening factors and confounds, bias in the measurement process, sampling problems, etc. All of these factors help develop a quantitative or qualitative description of the confidence limits of the findings.

Sample Rating System

Give one point for each of the following if the condition is met:
- there is a effective system for consistently recording measurements in a timely and accurate manner
- there is means to document meta-data (data about data), such as frequency of non-response, measurement problems, scaling, etc.

❑  information is archived in such a way as it is easy to query and summarize for all stakeholders involved in analysis
❑  analyses addresses confidence bounds, sources of error, inherent biases, etc.
❑  analyses are based on appropriate data, and proper statistical techniques are followed when quantitative data is used

*Dissemination*
Description
The people who are heavily involved with the collection and analysis of data are rarely the ultimate users of the information, and the most penetrating and insightful analysis won't be of any use unless the results are disseminated to the people who need them. Dissemination of monitoring results can be challenging because it requires selecting both appropriate content (e.g., data summaries and analytical findings) as well as packaging (e.g., selection of presentation media, clear narrative, well designed charts and graphs). Like other aspects of a monitoring system, dissemination will go smoother if based on a clear articulation of monitoring objectives and the overall conceptual framework.

Sample Rating System
Give one point for each of the following if the condition is met:
❑  The content of analyses is presented in an unbiased fashion, including 'positive', 'negative', and ambiguous results
❑  Monitoring information reaches all stakeholders
❑  Dissemination is completed in a timely manner relative to the needs of the stakeholders
❑  Reports based on monitoring data present sufficient background information, such as metadata issues, non-response error, measurement problems, sampling method, underlying assumptions, overall conceptual framework, etc.
❑  Monitoring reports are understandable by the target audience, and don't assume an unrealistic level of expertise or familiarity with monitoring techniques used

*Sustainability*
Description
One of the most valuable contributions of many monitoring systems is the ability to measure trends over time. This of course assumes that monitoring activities continue to function effectively over time. Sustainability of any program which operates on the basis of information is inextricably linked to the sustainability of its monitoring arm. In the case of community-based monitoring, sustainability depends also on maintaining community interest and support.

Sample Rating System
Give one point for each of the following if the condition is met:
❑  primary stakeholders are involved in the design of the monitoring system, data collection, and analysis
❑  data collection and analysis doesn't require external assistance
❑  primary stakeholders appreciate the value of information and are willing to pay for it
❑  information storage is well organized and can survive changes in staff
❑  the monitoring program is well documented, including design and management

## Appendix V - Impact Monitoring Data for USAID/Zambia Strategic Objective One

This appendix outlines the type of information which is/could be monitored by ADMADE, CARE, and CLUSA in order to measure progress towards USAID/Zambia's strategic objectives.

The three projects profiled in this report all receive assistance from USAID/Zambia Agricultural Development Office under the strategic objective of *increasing rural incomes of selected groups*. USAID/Zambia has developed six quantifiable performance indicators to measure progress in achieving this objective. These performance indicators are used internally by USAID/Zambia to help guide program planning and management, and are also an important part of the annual Results Report and Resource Request (R4) report to USAID/Washington.

The performance indicators that USAID/Zambia's ADO has developed fall into two categories. The strategic objective, which is the overall goal of the ADO, has its own performance indicator which is a direct measure of the objective. In addition, there are performance indicators for each of the intermediate results (IR). Intermediate results are sub-goals which if achieved should result in progress towards the strategic objective (see Figure 19). Finally, each intermediate result has its own set of sub-intermediate results (sub-IRs), which help the ADO and project partners define the steps to take to achieve the intermediate result. Measuring progress of each sub-IR is conducted internally by the ADO, but there is no systematic calculation of performance indicators at the sub-intermediate result level.
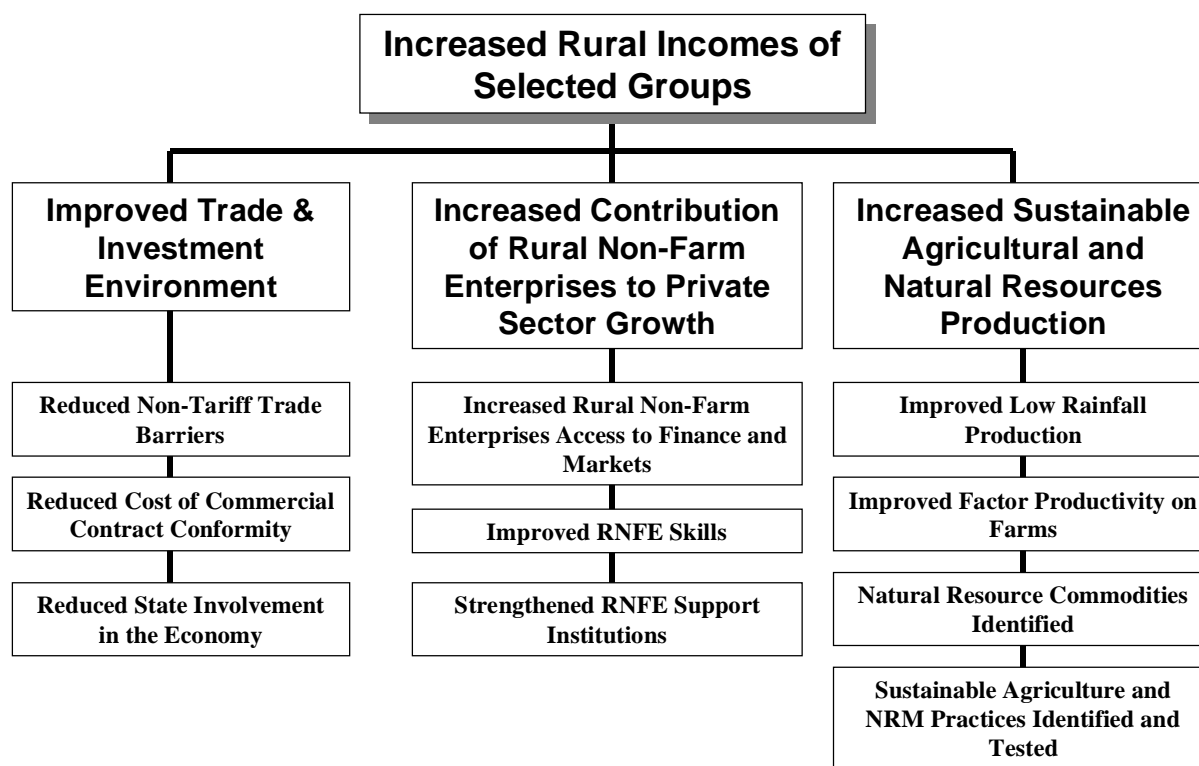


Figure 19 - USAID/Zambia Agriculture Development Office Results Framework:
Strategic Objective, Intermediate Results, and Sub-Intermediate Results

## *Suggested Indicator Data for USAID Zambia Strategic Objective One*

**PERFORMANCE INDICATOR: Increased Rural Incomes of Selected Groups**

**INDICATOR OF:** SO1: Raised rural incomes of selected groups

**COMMENTS:** There are three components that must be considered when making a measurement of rural income. These include:

- Income from marketing current & new products
- Income from processing
- Value of increased home consumption

**DATA SOURCES:**

**ADMADE**

- Wages and salaries (village scouts, teachers working in ADMADE schools, NPWS scouts living in area, labors and construction workers, hammer mill operators, safari camp employees)
- Income from community development projects which provide income (e.g., bee-keeping, leather craft)
- Economic savings for community projects which provide services (e.g., number of people who use an ADMADE clinic or hammer mill x cost of travel to nearest equivalent facility, cost of sending child to nearest school)

**LFSP**

- Income from sale of produce of households participating in seed scheme
- Value of produced traded
- Economic value of food consumed at home
- Income from other development projects organized by LFSP CBOs
- Economic value of water rehabilitation projects (e.g., salaries for labor, locally purchased materials), number of days of water supply gained x distance to nearest alternate water supply x cost of going to alternate water supply)

**RGBP**

- Profits from RGBP assisted business ventures
- Net income generated from outgrower scheme
- Salaries (depot managers, facilitators x percentage of salary spent in area)

**PERFORMANCE INDICATOR: Value of commodities marketed by assisted groups**

**INDICATOR OF:** IR1.1: Increased Contribution of Rural Non-Farm Enterprises to Private Sector Growth

**COMMENTS:**

**DATA SOURCES:**

**ADMADE**

- Value of safari licenses x percentage returning to Units (37.5%)
- Value of honey, leather crafts, etc. sold

**LFSP**

- Value of produce sold or traded

**RGBP**

- Value of produce sold or traded

**PERFORMANCE INDICATOR: Increased RNFE access to finance**

**INDICATOR OF:** IR1.1: Increased Contribution of Rural Non-Farm Enterprises to Private Sector Growth

**COMMENTS:**

**DATA SOURCES:**

**ADMADE**

- n/a

**LFSP**

- value of credit received from lending institutions

**RGBP**

- value of credit received from lending institutions

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**PERFORMANCE INDICATOR: Number of clients of RNFE support institutions**

**INDICATOR OF:** IR1.1: Increased Contribution of Rural Non-Farm Enterprises to Private Sector Growth

**COMMENTS:** Should be broken down by gender

**DATA SOURCES:**

**ADMADE**

- number of people who attend ADMADE sponsored trainings and workshops (e.g., workshops at Nyamaluma, family planning services, attendance at education oriented meetings)

**LFSP**

- number of people participating in seed scheme

**RGBP**

- number of members of RGBs

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**PERFORMANCE INDICATOR: Improved factor productivity on farms**

**INDICATOR OF:** IR1.2: Increased Sustainable Agriculture and Natural Resource Production

**COMMENTS:**

**DATA SOURCES:**

**ADMADE**

- n/a

**LFSP**

- economic value of produce / total hectares planted (broken down by crop)

**RGBP**

- economic value of produce / total hectares planted (broken down by crop)

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**PERFORMANCE INDICATOR: Number of farmers adopting improved agriculture and NRM technologies**

**INDICATOR OF:** IR1.2: Increased Sustainable Agriculture and Natural Resource Production

**COMMENTS:** Should be broken down by gender

**DATA SOURCES:**

**ADMADE**

- n/a

**LFSP**

- number of farmers using new seed varieties
- number of farmers using improved farming practices

**RGBP**

- number of farmers practicing conservation farming

**PERFORMANCE INDICATOR: Improved Trade and Investment Environment**

**INDICATOR OF:** IR1.3: Increase in value of non-traditional agricultural and natural resource exports

**COMMENTS:** This performance indicator will be measured using data from the Export Board of Zambia.