CONGO LIVELIHOOD IMPROVEMENT AND FOOD SECURITY PROJECT

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FINAL REPORT

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2421 Pennsylvania Avenue, NW, Washington, DC 20037, USA
Bringing people, ideas and actions together in sustainable ways

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List Of Acronyms

ABC	Africa Business Channel
CARPE	Central Africa Regional Program for the Environment
CBFP	Congo Basin Forest Partnership
CBSM	Community Based Seed Multiplication
CCPs	Corporate Community Partnerships
CIAT	Centro International de Agricultura Tropical
CIFOR	Center for International Forestry Research
CLAT	Comité local anti-tracasserie
CLEP	Comité local d'entretien des pistes
CLER	Comité local d'entretien des routes
CLIFS	Congo Livelihood Improvement and Food Security Project
COAIT	Community Options Analysis and Investment Tool
COP	Chief of Party
CREDP	Congo River Environmental and Development Project
DRC	The Democratic Republic of the Congo
ERGS	Faculté des Sciences, Université de Kinshasa
ESP	Ecole de Santé Publique
FOLECO	Féderation des ONGs Laïques à Vocation Economique du Congo
GACC	Great Apes of Congo Center
GDP	Gross Domestic Product
GDRC	Government of The Democratic Republic of the Congo
ICRAF	International Center for Research in Agroforestry
ICC	ICRAF, CIAT and CIFOR consortium
IDE	International Development Enterprises
INADES	Institut Africain pour le Devéloppement Economique et Social
INERA	Institut National pour l'Etude et la Recherche Agronomique
IR	Intermediate Result
IRM	Innovative Resources Management Inc.
ISP	Integrated Strategic Plan
LOP	Life of project
M&E	Monitoring and Evaluation
NGO(s)	Non-Governmental Organization(s)
NRM	Natural Resources Management
NTFPs	Non Timber Forest Products
PEMARIM	Perimetre des Mamans Maraicheres et Rizicultrices
SEM	Sauver L'Environement par les Médias
SMEs	Small and Medium Enterprises
SOCODEVI	Société de Coopération pour le Développement Internationale
TVN	The Vetiver Network
USAID	United States Agency for International Development
VGT	Vetiver Grass Technology
VH	Visible Hand

Executive Summary

The long-range operational goals of the Congo Livelihood Improvement and Food Security Project (CLIFS) were:

- **a sustainable increase in agricultural productivity brought about by improved production techniques and technologies, more efficient private sector markets, micro-finance activities that encourage productive investments; and**
- **an increase in economic growth in the agricultural sector that enhances livelihood and food security for farming families and communities, creating multiplier effects that drive economic growth**.

Our team of international and Congolese partners worked to achieve three specific project objectives in a two-year period. These objectives were:

- **improve the functioning of private sector agricultural markets;**
- **increase the level and sustainability of agricultural production and freshwater fisheries; and**
- **strengthen rural credit and micro-finance activities to support productive investments in agriculture**.

To achieve these objectives, CLIFS carried out a set of integrated activities that on the one hand promoted horizontal linkages among stakeholders, while strengthening the vertical links between rural production and markets on the other. These occurred within crosscutting programmatic foci that included: improving gender equity; livelihoods; food security; and the nutrition and health of the populace in the provinces of Bandundu and Equateur. CLIFS implemented the following:

- diversified farming and agroforestry systems;
- provided value-added food conservation technologies for farming and fishing;
- enhanced market system functioning in two provinces;
- provided credible micro-credit structures and services;
- developed communication media for extension, including radio and television programming on key issues;
- expanded training and community-level capacity building; and
- demonstrated sustainable rural road rehabilitation in selected areas.

Successful implementation can be measured by looking at the two principal indicators for livelihoods and food security: household income increases over time and agricultural productivity. These indicators are shown below in the following two tables comparing the starting point of the CLIFS project and at the PACD.

Average monthly revenue before the project began and after the project ended in each of two provinces along CLIFS implementation axes

Bandundu		Equateur					
Kikwit-Idiofa		Mbandaka-Bikoro		Mbandaka-Ngombe - Bobangi		Gemena-Akula	
Before	After	Before	After	Before	After	Before	After
$3.00	$9.83	$5.83	$19.16	$23.08	$19.00	$12.50	$4.08

Before and after average yields (t/ha) comparisons for annual crops along two project axes Kikwit-Idiofa and Gemena-Akula versus average yields for the provinces as a whole

Axes	Corn		Rice		Peanut		Cowpea		Sorghum	
	Before	After	Before	After	Before	After	Before	After	Before	After
Bandundu province	0.74	ND	0.81	ND	0.87	ND	0.26	ND	ND	ND
Kikwit-Idiofa	0.71	1.93	0.76	1.33	0.87	0.93	0.23	0.67	ND	0.65
Equateur province	0.74	ND	0.84	ND	0.71	ND	0.50	ND	0.78	ND
Gemena-Akula	0.76	1.50	0.68	1.95	0.70	0.99	0.50	0.52	0.80	0.49
Yield increase margin by axis										
Kikwit-Idiofa		**2.7**		**1.8**		**1.1**		**2.9**		ND
Gemena-Akula		**2.0**		**2.9**		**1.4**		**1.0**		**0.6**

ND: no data available

Incomes for our two main implementation axes (Mbandaka-Bikoro and Kikwit-Idiofa) both more than **tripled** over the life of project. Agricultural productivity greatly increased for corn, rice and cowpeas and represents significant progress towards diversifying food production.

The CLIFS project grant agreement was signed on September 30, 2003 and the original PACD was September 30, 2005. IRM received a no cost extension to the grant extending the PACD until April 30, 2006. The grant provided by USAID to IRM was for $5,000,000. Project sites (communities) were along strategically selected axes in two western provinces of the DRC, Bandundu and Equateur. IRM had regional offices in Mbandaka and in Kikwit that were supported by IRM's national office in Kinshasa and by IRM's mobile office that served riverine communities along the Congo River and its tributaries in the form of a barge converted into a floating office and training center, La Reine d'IRM.

La Reine d'IRM, mobile office and training center for CLIFS project

As a foundation underpinning CLIFS activities, IRM demonstrated an unique approach to community mobilization using its Community Options and Analysis Investment Toolkit

enabling communities to take the lead in assessing the technical, financial and environmental feasibility of sustainable development options. This bottom up approach was applied across themes and a specialized version was developed to serve river fishing communities as a means to increase freshwater biodiversity conservation and increase revenues through value added transformation.

To implement the wide range of activities under each of the three principal objectives listed above, IRM used the services of 14 international and DRC NGOs. These included a consortium of agricultural research institutions (ICRAF-CIFOR and CIAT), SOCODEVI, a Canadian NGO specializing in micro-credit targeted principally towards women entrepreneurs, The Vetiver Network that introduced vetiver grass technology for farm-to-market road stabilization and erosion control for towns and villages, FOLECO a union of DRC NGOs that rehabilitated rural roads and created eight input supply facilities, and a group of specialized DRC NGOs that provided training to fishing communities on sustainable fishing practices and value added fish transformation (salting, drying and smoking). Finally IRM monitored all of the CLIFS activities audio-visually using the services of a DRC NGO, SEM and an international South African-based organization, Summit TV.

The major constraint that IRM faced with the CLIFS project was the short time frame for a project that was essentially agricultural in nature. Changing attitudes and having those changes become sustainable simply requires more time than the 30 months allotted to this project. However, the CLIFS model as demonstrated in two provinces clearly demonstrates that improvements can be made to the quality of life for Congolese rural populations across many themes and in several distinct landscapes.

I. Original CLIFS Project Overall Goals and Objectives

The long-range operational goals of the Congo Livelihood Improvement and Food Security Project (CLIFS) were:

- **a sustainable increase in agricultural productivity brought about by improved production techniques and technologies, more efficient private sector markets, micro-finance activities that encourage productive investments; and**
- **an increase in economic growth in the agricultural sector that enhances livelihood and food security for farming families and communities, creating multiplier effects that drive economic growth**.

The operational goals were accomplished through implementing an operational strategy that prioritized gender equity, was selective in site selection and activities that offered potential for maximum demonstration and multiplier-effect to enhance the nutrition and health status of the populace in the provinces of Bandundu, and Equateur. Our team of international and Congolese partners worked to achieve three specific project objectives in a two year period. These objectives were:

- **improve the functioning of private sector agricultural markets;**
- **increase the level and sustainability of agricultural production and freshwater fisheries; and**
- **strengthen rural credit and micro-finance activities to support productive investments in agriculture**.

To achieve these objectives, CLIFS carried out a set of integrated activities that on the one hand promoted horizontal linkages among stakeholders, while strengthening the vertical links between rural production and markets on the other. CLIFS implemented the following:

- diversified farming and agroforestry systems;
- provided value-added food conservation technologies for farming and fishing;
- enhanced market system functioning in two provinces;
- provided credible micro-credit structures and services;
- built national and international corporate and public sector partnerships with communities;
- developed communication media for extension, including radio and television programming on key issues;
- expanded training and community-level capacity building; and
- demonstrated sustainable rural road rehabilitation in selected areas.

II. Review of CLIFS specific objectives

As stated above, our operational goal was to improve livelihood and food security by promoting the development and use of sustainable agricultural technologies, diversifying agricultural outputs, improving access to markets, and promoting agribusiness and

microfinance activities. These occurred within crosscutting programmatic foci that included:

- improving gender equity,
- livelihoods,
- food security, and
- the nutrition and health of the populace in the provinces of Bandundu and Equateur.

To attain its goals, the CLIFS project carried out strategically integrated activities grouped under three objectives. These are summarized below.

A. Objective 1: Improve the functioning of private sector agricultural markets

The work that CLIFS undertook strategically targeted key elements of the agricultural marketing system in the provinces such that (1) the framework for agricultural marketing was better understood (2) and activities were tested that demonstrate the types of positive impacts attainable from a set of targeted activities to improve market system functions. To accomplish this, IRM under CLIFS focused on the following specific activities under this objective.

2004

- Implemented a project baseline survey in selected project localities;
- Analyzed constraints to the promotion of improved agricultural technologies in select localities;
- Began the creation corporate/community partnerships in the project area;
- Began working with rural road maintenance committees on selected rural road segments to insure these groups' ability to operate in a sustainable fashion; and
- Set up vetiver nurseries to provide communities with planting material that would be used to stabilize and maintain market feeder roads in select project area sites.

2005-06

- Implemented an end of project baseline survey in select project localities;
- Analyzed constraints to the promotion of improved agricultural technologies in select localities;
- Continued working on corporate/community partnerships in the project area;
- Continued to work with rural road maintenance committees created in early 2005 on selected rural road segments to insure their ability to operate in a sustainable fashion;
- Demonstrated how to rehabilitate and maintain market feeder roads in select project area sites; and
- Demonstrated improved village-level agricultural processing and storage technologies.

B. Objective 2: Increase the level and sustainability of production of agricultural lands and freshwater fisheries

2004

- Began training villages on the use of the Community Options Analysis and Investment Tool (COAIT) in selected villages and their hinterlands along the Mbandaka-Bikoro axis

- Began demonstrations and the promotion of agricultural and agro-forestry technologies:
    - micro-irrigation for high value market in Bandundu provinces;
    - improved fallow methods, improved agro-forestry techniques and improved soil fertility practices;
    - introduction of vetiver grass technology for food and livelihood security;
    - fruit tree nursery production in several strategically selected sites;
    - Enhanced marketing of non-timber forest products based on refined understanding of the role of non-timber forest products (NTFP) in food and livelihood security
- Introduced Community–Based Seed Multiplication (CBSM) as an alternative seed-supply mechanism
- Provided radio and TV programming for marketing, information sharing and extension
- Improved fishing community livelihoods by:
    - Strengthened fishing associations' institutional and technical capacity;
    - Enhanced marketing and transport of sustainably harvested fish; and
    - Disseminated improved village fish transformation technology and practices.

2005-06

During the second year and a half of the project we worked more intensively to improve the productivity of agricultural and freshwater fisheries systems in Equateur and Bandundu. We have established the platform upon which long-term sustainable development programming was practiced in the provinces through demonstration and implementation of the Community Options Analysis and Investment Tool (COAIT) in five villages "phares" along the Mbandaka-Bikoro axis in Equateur province. COAIT activities went into the second phase of activities at the community level that addressed the use of tools for cost/benefit analyses and the preparation of natural resource management plans in the form of community level prospectuses.

We continued to refine the community based seed multiplication and dissemination activities begun in 2004. Four cycles of community seed multiplication were implemented over the life of the project that was extended until April 30, 2006.

Demonstrations for agricultural and agro-forestry were put in place in the areas of improved soil fertility, use of improved seed germplasm, fruit tree production, reduced soil erosion, and improved fallow and were monitored and evaluated by both project staff and beneficiaries via the end of project survey.

We built upon the momentum established by, ERGS, PEMARIM, INADES, GACC, and AVOCATS VERTS with respect to sustainable fishing practices at the community level and the introduction of improved fish transformation and processing through the introduction of a COAIT program designed specifically for freshwater fish resources called SIG (Systeme d'Information et Gestion des Ressources Halieutiques). In the first quarter 2006, two regional conferences were held in Mbandaka and in Nioki in Equateur province to permit the over 200 sustainable fishing associations to discuss and debate the future of freshwater fish resources along the Congo River and its tributaries.

We intensified our overarching media program to promote CLIFS activities among a wider audience via radio and TV broadcasts implemented by SEM, our local media partner. In 2005 Summit TV and the their Africa Business Channel created a 38 minute video documentary destined for English and French speaking African countries that highlighted the accomplishments of the CLIFS project from the eyes of our beneficiaries.

Finally by early 2006 we completed our series of subsector studies for wood products, fish products, cassava and non-timber forest products implemented by our partner IDE.

C. Objective 3: Strengthen rural credit and micro-finance activities to support productive investments in agriculture

2004

- a program of savings and loan associations in Mbandaka and Kikwit was started; and
- the support for community organizations in the construction and management of input supply facilities, site selection

2005-06

Rural credit continues to be problematic in the DRC as a whole, but, IRM and its partner SOCODEVI applied a new approach to this issue with the creation of two savings and loan associations in Mbandaka and in Kikwit. Their success using the proven techniques of proper and transparent management, a membership fee system, and on-going training is now a proven model for future duplication. A successful antenna association was created in Idiofa and by the end of the project more than 1200 loans had been given out and repaid.

FOLECO put in place a system of input supply facilities in 8 sites in the two provinces. In many cases, these 'cantines' were a hub for not only input sales but for the sales of other commercial items of primary necessity for isolated communities. During 2005 we provided management training to the community committees managing these 'cantines' and created a revolving stock of materials that otherwise would be absent of the rural economies of these isolated villages.

III. Project sites in CLIFS (see graphic in Annex 1, showing the relative location of sites by activity)

Equateur and Bandundu provinces are huge and logistically challenging. We targeted activities by ***priority zones***. The CLIFS team has focused its activities in two Tier 1 zones, as much as 60% of the overall CLIFS LOE occurred in this priority, tier 1 zone.

Tier 1 zone

- Mbandaka-Bikoro axis
- Kikwit-Idiofa axis to include the Panu-Mangai-Dibaya zone

A lesser number of activities occurred in the following secondary areas.

Tier 2 zone (25% of CLIFS LOE)

- Mbandaka-Ngombe axis
- Lac Tumba
- Bobangi – Lilanga axis
- Lisala or Bumba axis
- Mushie-Kiri

Finally, more limited CLIFS interventions took place in the following tertiary areas.

Tier 3 zone (15% of CLIFS LOE)

- Bokoni-Mushi
- Basankusu
- Gemena-Akula

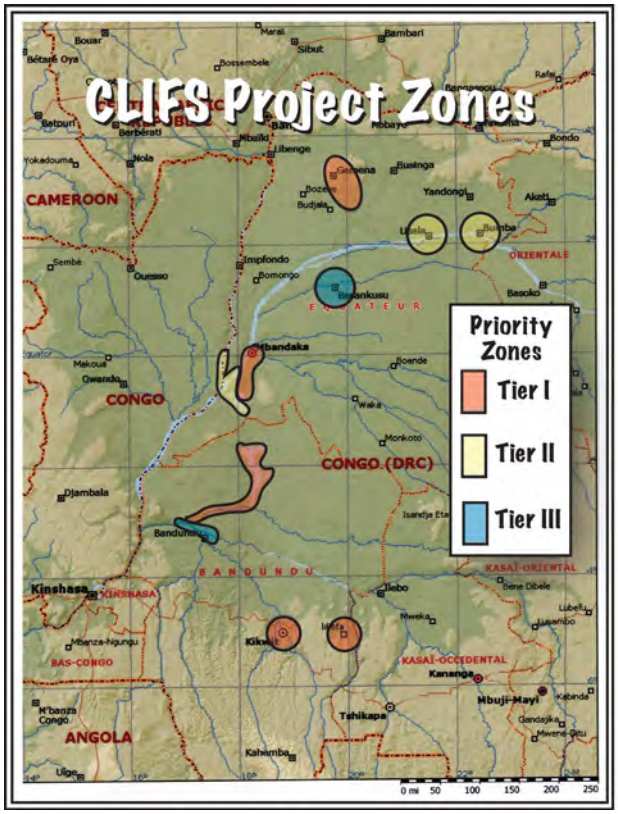


Figure 1: Placement of CLIFS activities in Bandundu and Equateur Provinces

IV. Logical Framework before implementation (October 2003) and at the PACD (April 2006)

Please see Annex 3 for original logical framework at the beginning of the project. In Annex 4, we present end of project indicator values for each of the project activities listed in the original logical framework for the CLIFS project.

V. Baseline Survey by ICC in 2004 compared to the End of Project Survey 2006

Both the initial baseline survey implemented by the ICC consortium in 2004 and the end of project survey implemented at the end of 2005 and in early 2006 just prior to the PACD are separate deliverables.

The results of the end of project survey compared to the baseline survey has permitted us to conclude that the quality of life at the household level in the area where the CLIFS project operated has significantly improved. This improvement was measured by but not limited to the following:

1. Increase in household assets
    a. Tools: At the beginning of the project an average household had only 2 machetes, 2 hoes, 1 ax, no canoes and no rakes. At the end of the project an average household had 3 machetes, 3 hoes, 1 ax, 1 canoe, 1 shovel, and 1 rake.
    b. Other assets: At the beginning of the project, more than 30% of households did not even have beds to sleep on. Almost 45% of these households did not have a table or any chairs. There was not one household with a vehicle (car or motorcycle), 76% did not have even a bicycle, 66% did not have a radio and 99% did not own a TV. At the end of the project, 85% of surveyed households had at least one bed, 72% had tables and chairs, 1% had a car, 2% had motorcycles, 35% had bicycles, 57% had radios and 2% had TVs.
2. Increase in agricultural productivity and adoption of new technologies
    a. The average yield per hectare for all crops we worked with increased, some very significantly such as a tripling of corn yields.
    b. The majority of households adopted one or more new technologies that were used to increase household revenue such as community seed production and crop diversification.
3. The extension multiplier effect
    a. The multiplier effect from direct beneficiaries to secondary beneficiaries was over 13, i.e., for each household that directly participated in CLIFS activities, the information was transmitted to 13 more households not directly participating in CLIFS activities. On the village scale, one village transmitted information to at least two other villages.
4. Increased access to markets along selected axes
    a. There was a great reduction in barriers between farms and the market place allowing a free flow of farm products from producers to buyers in both minor and major markets
    b. There was also a significant reduction in petty corruption that households had to deal with in CLIFS areas of intervention due to the interaction of the CLIFS project with the USAID funded IRM Relance Economique project that created community platforms (CLATS) to reduce the levels of corruption previously known.

5. Improved access to credit
    a. At the beginning of the project there were no functioning savings and loan associations providing financial services in the two project provinces. At the end of the project two substantial saving and loan associations has been established, were functional and were expanding their financial service delivery in the form of loans and the provision of secured savings accounts. The memberships of these associations continue to grow and the rate of repayment remains above 95%. The majority of members are women and both associations are completely managed by women. A total of 1284 loans had been provided and a significant revolving fund to provide capital for loans in the future was securely in place.
6. Increase in household revenue
    a. For the Kikwit-Idiofa axis, monthly household revenue at the beginning of the project was $3.00, and at the end of the project it was $9.83, more than tripled. For the Mbandaka-Bikoro axis, monthly household revenue at the beginning of the project was $5.83, and at the end of the project it was $19.16, more than tripling as well.

More specific data comparing before and after quantitative and qualitative data is found in the specific sections of this report listed by Project Objective and Activity.

VI. Fundamental accomplishments of the CLIFS project by Objective and Activity: Planned vs. Actual

A. Objective 1: Improve the functioning of private sector agricultural markets
A.1 Activity: Implement baseline survey in selected project localities
Partners: ICRAF-CIAT-CIFOR, Ecole Nationale de Santé Publique

Planned
These surveys were to generate baseline data and create indicators of agricultural and natural resource diversity, household revenue estimates, market orientation and nutritional status in the two provinces.

Actual
These planned studies were designed, implemented, and reports submitted providing the baseline for the CLIFS project, i.e., a snapshot of the conditions of households within the CLIFS project axes. In addition to these baseline surveys end of project surveys were also carried out and these were compared to the baseline to permit IRM and USAID to determine if progress could be detected quantitatively and qualitatively. Indeed in all aspects of the project, overall livelihoods of Congolese households improved, nutritional status improved, household assets increased, agricultural productivity improved, access to credit was facilitated, and a new model for rural development was successfully demonstrated. Specific data is found in each of the subject reports. IRM implemented the end of project survey instead of ICC as their sub-contract with IRM ended in September 2005, 7 months prior to the PACD.

However, certain data are striking and bear repeating. Agricultural productivity using yield (tons/hectare) data and household revenue increases over the life of the project are presented in the following tables.

Table 1: Average monthly revenue before and after the project

Bandundu		Equateur					
Kikwit-Idiofa		Mbandaka-Bikoro		Mbandaka-Ngombe - Bobangi		Gemena-Akula	
Before	After	Before	After	Before	After	Before	After
3.00	9.83	5.83	19.16	23.08	19.00	12.50	4.08

Table 2: Before and after average yields (t/ha) comparisons for annual crops along two project axes versus average yields for the provinces as a whole

Axes	Corn		Rice		Peanut		Cowpea		Sorghum	
	Before	After	Before	After	Before	After	Before	After	Before	After
Bandundu prov.	0.74	ND	0.81	ND	0.87	ND	0.26	ND	ND	ND
Kikwit-Idiofa	0.71	1.93	0.76	1.33	0.87	0.93	0.23	0.67	ND	0.65
Equateur prov.	0.74	ND	0.84	ND	0.71	ND	0.50	ND	0.78	ND
Gemena-Akula	0.76	1.50	0.68	1.95	0.70	0.99	0.50	0.52	0.80	0.49
Yield increase margin by axis										
Kikwit-Idiofa		**2.7**		**1.8**		**1.1**		**2.9**		ND
Gemena-Akula		**2.0**		**2.9**		**1.4**		**1.0**		**0.6**

ND: no data available

A.2 Activity: Analysis of constraints to the promotion of improved agricultural technologies

Partners: IDE

Planned

IRM defined four sub-sectors to be analyzed with respect to marketing opportunities: cassava, high value NTFPs, wood products and fresh water fish. IDE was requested to design and implement these four studies over the life of the project. It was planned that these studies would be used to design further project interventions if the CLIFS project went into a Phase II. IDE was also asked to demonstrate micro drip irrigation technology developed in India by IDE over the past 20 years as a means of increasing agricultural productivity for vegetables between rainy seasons and as a way to reduce the risk of having the rainy season end prematurely for community seed multiplication efforts

Actual

IDE brought in two consultants to implement two surveys for each consultant. These documents were all completed, however only the survey on fresh water fish markets was

actually used to modify our program to take advantage of findings presented by the author. IRM used findings from this report to create the Sustainable Fishing Information and Management System (called in French SIG, **S**ysteme d'**I**nformation et **G**estion des Ressources Haleutiques) that became the corner stone of our work with fishing communities along the Congo River and its tributaries.

The micro drip irrigation program was delayed until the spring of 2005 and did not live up to our expectations as originally planned. It was difficult to get the equipment from India and Zambia on time, and in rural areas proved to be unsuited for the Congolese context. It was however viewed by vegetable producers in urban areas as something to pursue due to the high demand for vegetables especially in Kinshasa. The treadle pumps (foot driven piston pumps for lifting water 3-5 meters) from Zambia were appreciated but not exploited commercially during the LOP due to time constraints and due to the fact that demand for this technology did not materialize in rural areas along project axes in Bandundu province. IRM reduced the level of effort under this subcontract with IDE as a result of this decision not to pursue micro drip irrigation as originally planned.

A.3 Activity: Create corporate/community partnerships
Partners: Visible Hand

Planned
Visible Hand, a US based NGO, was asked by IRM to create a website for the CLIFS project to serve as a platform to collect information regarding the project and to alert potential corporate investors/partners to CLIFS activities. The planned activities were to maintain the website, promote CLIFS partners and their activities with information and access data, and distribute printed materials and guides. Visible Hand was asked to identify 3 corporate investors interested in the DRC and more specifically in the areas of the DRC where IRM was working.

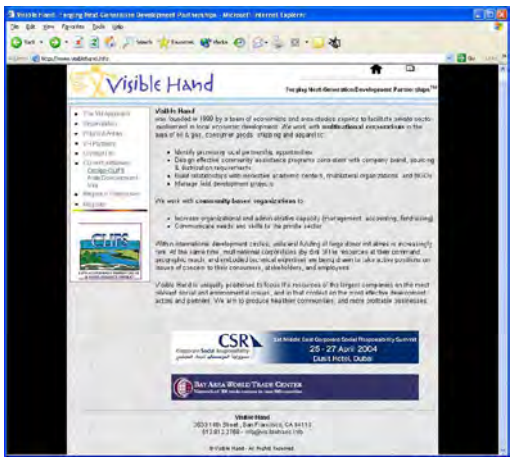


Figure 3: Opening page on CLIFS website used for information transfer to potential corporate sponsors

Actual
The actual activities implemented by VH over the life of the project concentrated on maintaining the website they created, using their collaborative vetting application present

on the website. It compiled a database of corporations and international organizations that visited the site and requested information. It sent representatives to interview officers at such companies such as Chevron-Texaco, Lucent Technologies, Royal Dutch Shell, Apple Computer, Bougoyes, Schlumberger, IBM, and Coudert Brothers. VH also canvassed most all of the major US-based Africa-oriented foundations regarding potential contributions to CLIFS. It with its partner, Stanford Research Institute, also went to the Stanford Business School and posted information on CLIFS and the how investments could be made.

The results are that the website was visited by many, over 50,000 hits, however, VH was unable to persuade a single US based company to go beyond information gathering and move to look at contributing private sector capital to the CLIFS project. Therefore the principal objective of this partner was not met. Many reasons were cited by those companies contacted, however the principal issues revolved around the insecurity of the DRC, the lack of infrastructure in Western DRC, the lack of an operational financial sector, and the potential for continued conflict. The VH contract was scaled down and ended in September 2005 due to the inability to attract US based investors.

A.4 Activity: Create functioning road and river users associations
Partners: INADES, GACC, PEMARIM, Avocats Verts, the Vetiver Network, FOLECO

Planned

The demonstration of a rural Road User Association system would allow CLIFS to help break the unproductive dependence on the national government to repair vital rural roads. If successful, a possible low cost model for road rehabilitation was to be established. The absence of passable rural farm-to-market roads is a major constraint to rural development in DRC and has been for over 30 years. While some road rehabilitation programs have been implemented, the lack of viable transport is still a primary factor underpinning deepening rural poverty.

The INADES team, together with Avocats Verts (AV), were to provide support during the creation and initial operation of these associations, helping draft their official constitutions, providing training in organizational skills, planning, budgeting, and management of funds, and guiding them in their relations with local authorities. The associations were to use a participatory approach to decision-making modeled on precedents from INADES, AV, and IRM experiences in the DRC.

INADES was to provide support to field staff, institutional strengthening, and technical training. The INADES staff was to develop an illustrated and easy to follow maintenance manual to serve as a guide for road crews and associations for ongoing and periodic maintenance in collaboration with the Vetiver Network and FOLECO. Five rural road associations and five river use associations were to be created in the two provinces. The five river use associations were to be facilitated in collaboration with GACC and PEMARIM.

Actual

Over the LOP, CLIFS created 4 principal road users associations, 2 in Equateur and 2 in Bandundu province. Training was provided not only with respect to technical operations

but also with respect to organization, management, accounting and authorization and recognition by the government. In Equateur, the Office des Routes was the principal GDRC intermediary and in Bandundu province it was OVDA within the Ministry of Public Works. In Equateur these organizations were called Comité d'entretien des pistes (CLEP) and in Bandundu they were called Comité d'entretien des routes (CLER). The makeup was the same, the semantics different due to GDRC insistence.

The two CLEPs were located in Ntomba and Bofindgi along the Mbandaka-Bikoro axis and the two CLERs were located in Ika and Cetika along the Kikwit-Idiofa axis. The Ntomba CLEP had 8 sub-CLEPs attached to it while at Bofindgi, there were 13 sub-CLEPs attached to it. A total of 224 people were trained in road maintenance, the use of Vetiver Grass Technology (VGT) to protect rural road embankments, drains and bridge foundations as well as in organizational and managerial tools needed to keep these groups functional.

Associated with these organizations, The Vetiver Network, a US-based NGO and CLIFS partner, installed 94 small vetiver grass nurseries and 8 larger nurseries along these two road axes in the two provinces. Technical training was also provided concerning VGT, its applications, it income generating capacity, how to insure that rehabilitated rural roads would remain usable over much longer periods of time when roads were protected with vetiver.

IRM also obtained one additional grant from the SOROS Open Society Foundation for $40,000 to enlarge the capabilities of the 8 larger nurseries and turn them into small business operations. Special emphasis was placed on increased technical capacity, increased production capacity of their nurseries, and provision of basic business operations training to nursery association members. Simply knowing about VGT is not sufficient. Marketing VGT is equally important that is the ability to sell vetiver to other potential users. These activities associated with this small grant were implemented from February 2005-February 2006.

Special work was also demonstrated with respect to urban erosion mitigation that was the subject of a unique activity in Kikwit on 20,000 square meters of massive gully erosion. As a result of this community-led effort, the city of Kikwit now has a functioning model of how to stabilize all the 197 massive gullies in that city that threaten many thousands of households each year as these gullies continue to grow.

Original ravine in Kikwit, note house in top center in both photos as a reference for scale

This panorama of the completely stabilized ravine shows the solution to urban erosion using Vetiver technology, implemented by local Congolese with no prior experience. The scale of the work can be seen by the people standing to the right and the left of the top of the ravine. This model can be used anywhere in the DRC and will permanently stop all erosion at this site forever. This photo was taken in October 2005

Left side of ravine Dec 31, 2005

Right side of ravine shown here with EU representative

River use associations will be treated in the B section concerning sustainable fishing.

A.5 Activity: Rehabilitate selected market feeder roads
Partners: FOLECO, the Vetiver Network

Planned

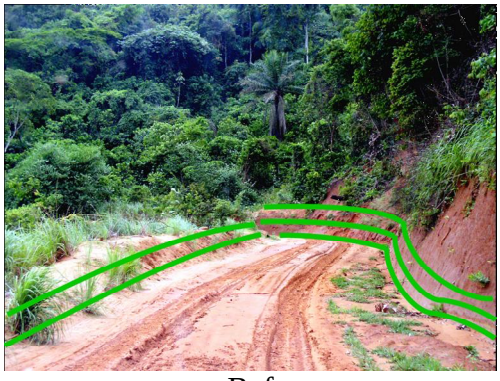
In selected areas, FOLECO was to improve critical roads by introducing appropriate road stabilization technology that was cost-effective, and community-based to provide local employment and address market access needs. This work was to mainly involve the use of vetiver technology to protect embankments, drains, bridges and culverts. Emphasis was to be placed on roads that were about to be rehabilitated by other donors, or had recently been rehabilitated. The project did not have the funds to rehabilitate market roads where heavy equipment was needed. This activity was to be directly linked with the road users associations that would provide much of the labor and maintenance. The objective was to demonstrate a mechanism by which market roads could be made to be sustainable in the absence of the state in maintaining public infrastructure. If successful these demonstrations would serve as a model for future interventions across the zone if additional funding was found.

Actual

We initially thought we could deal with 75 km of rural roads. This level of output was overestimated given the actual costs of rehabilitating rural roads. Much of the road stabilization effort was not implemented until 2005 due to the lack of vetiver primary material (growing in nurseries set up in 2003-04). However FOLECO did identity a series of sites that could be rehabilitated on several roads within the project zones in Bandundu and Equateur.

Instead of totally rehabilitating 75 kms of rural roads, FOLECO worked only on critical points along the axes chosen such as on curves, hilly sections, river crossings and along sections that had been reduced to mere bicycle paths over the past 10 years where there was absolutely no road maintenance implemented by the state. 13 km of roads were improved along the Mbandaka-Bikoro axis between Mbandaka and Buya and just beginning at Km 87 as you approach Bikoro from the north. Along the Kikwit-Idiofa axis, two bridges were replaced between Kanga and Ibongo 8 km of further road rehabilitation work was completed in Bandundu province.

Once road rehabilitation (mainly re-surfacing, re-doing drains, re-cutting embankments) was completed by FOLECO, TVN then planted vetiver hedges along all this rehabilitated infrastructure to insure that the rate of road degradation was greatly slowed and that the need for recurrent maintenance was held to a minimum over at least a projected 5 year time frame.



Before

After

CLIFS vetiver activities came to the attention of the principal roads donor in Bandundu province, Cooperation Technique Belge (CTB) such that TVN-CLIFS provided on demand both planting material for new nurseries and technical training to CTB technical staff such that VGT could be integrated into the very large rural roads system funded by CTB, a system spanning 2,450 km.

Before Bridge foundation stabilization

Installation of hedges

In April of 2006, IRM was approached by the Office of the Vice President for Reconstruction of the GDRC, Mr.Yerodia Ndombasi, to assist his senior cabinet officials to draft a decree to be issued by his office requiring the use of VGT on any new road infrastructure projects implemented (principally funded by the international donor community) in the DRC in the future. As of this report that effort is ongoing and is indicative of the success IRM has had providing a new model for DRC erosion control using a low-cost, sustainable and long term technology put in place by the CLIFS project.

Although out actual goals of 75 km of rural roads to be rehabilitated was not met, we believe that we have set the stage for the eventual use of VGT on literally thousands of kilometers of roads in the DRC over the next five years. We however, exceeded greatly the number of planned nurseries by a factor of 10.

In 2006 new donor efforts were under way along the road segments, Kikwit-Tchapa, Kisangani-Bunia and Kinshasa-Kikwit to use VGT to stabilize road infrastructure. Indeed other institutions over the life of CLIFS have also via their training by CLIFS-TVN, put in place programs to use VGT. One example is SEP, the governmental agency that manages the oil pipeline from Matadi to Kinshasa. They are putting vetiver hedges on both sides of the above ground pipeline to insure that erosion does not damage the pipeline and that maintenance roads leading to the pipeline itself also are protected from eroding embankments. CTB now has vetiver nurseries in Kinshasa and is using vetiver hedges to stabilize gullies in several “quartiers populaires”. BCECO also is incorporating the use of vetiver hedges on the extreme set of ravines in the Mataba region of southern Kinshasa that involves several hundred hectares of land that is highly eroded. The future of vetiver technology is a bright one due to its introduction into the DRC by the CLIFS project.

A.6 Activity: Demonstrate improved village-level agricultural processing and storage technologies
Partners: ICC

Planned
Post-harvest machinery (shelling, threshing, processing, drying, storage) designed to improve labor use efficiency, add value to products, and reduce storage and handling losses was to be demonstrated, initially for their evaluation on a pilot scale, to farmers and private business men in the targeted villages. The specific equipment selected by IRM and ICC include: a cassava grater, a cassava press, and an improved cassava drying rack with a plastic sheet cover. An improved cassava-maize flour mill was to be demonstrated. This activity was to be linked with the micro-credit activity aimed at women. Successful demonstrations leading to adoption of value added technology would have a positive impact on household income. Increased family income should most likely be seen in 2005.

Actual
Six sites were selected by ICC for food processing demonstrations, Lusanga, Aten, Kanga and Mangai in Bandundu province and Wendji and Bikoro in Equateur province. Only 2 processing technologies were demonstrated using improved machinery: cassava flour mills and a rice de-huller (the latter in Mangai only). The cassava flour mills could also grind maize. The mills were managed by community associations who received specialized training on operation, maintenance, and financial management. The two mills in Wendji and in Bikoro broke down quickly and repeatedly due to poor management of the equipment and proved to be problematic. The four mills in Bandundu functioned well over the LOP and remain operational at the PACD. All receipts from their use are kept at the association level.

This project element did not attain its anticipated results mainly due to the inability to purchase mills and the grinder using our micro-credit component. The micro-credit component did not function near the sites where the associations operated and the level of micro-credit loans was not sufficiently large to cover the purchase price of such processing equipment. Without access to credit, rural associations cannot absorb the $1000 price tag for a machine plus the spare parts, therefore, we did not expand this activity.

B. Objective 2: Increase the level and sustainability of production of agricultural lands and freshwater fisheries

B.1 Activity: Implement Community Options Assessment and Investment Tool (COAIT) in selected project sites in landscape #7 (Lac Tumba)
Partners: IRM, ICC

Planned

The Community Options Analysis and Investment Tool (COAIT), pioneered with CARPE funding was designed to systematically enable communities to take the lead in assessing the technical, financial and environmental feasibility of sustainable development options. IRM was to target CLIFS/COAIT activities in CARPE landscape #7 (Lac Tumba) to

demonstrate how COAIT could be applied to empower communities to plan their own development, and to seek partnerships. IRM was to apply COAIT in key villages that had already been participatively mapped (step one of the COAIT process). To maximize the potential for carrying out village development plans, we were to include villages where credit facilities would be established. The activities of COAIT included both training and hands-on practice in community planning.

In the first phase of COAIT, information about local community resources and management systems would be gathered through:

- participatory mapping (already in the process through leveraged CARPE funding;
- natural resource inventories;
- market analysis; and
- the assessment of local resource management systems.

During the second phase of COAIT in 2005, communities would select from available development options through a facilitated process of participatory cost/benefit analysis (PCBRA) and comparison between livelihood options. Based on these results, they were to develop prospectuses including business and resource management plans along with plans to leverage resources by creating partnerships with other agencies, businesses and stakeholders. Selected COAIT villages were also to participate in a BCECO-funded infrastructure rehabilitation program beginning during the first quarter in 2005.

Actual

Seven target villages and 62 satellite villages were selected: Wendji Sécli, Penzele, Mooto, Bikoro, Ngombe, Mobenzeno and Bobangi. Participants from the seven villages along with village facilitators received training in numerous sessions in 2004 and in 2005.

The steps taken under COAIT implementation were:

- resource mapping,
- community participatory mapping,
- options identification,
- cost/benefit analysis, and
- prospectus development and marketing.

In the first phase of COAIT, information about local community resources and management systems was gathered through participatory mapping; natural resource inventories; market analysis and the assessment of local resource management systems. During the second phase communities in 2005 selected from available development options through a facilitated process of participatory cost/benefit analysis and comparison between livelihood options. Based on these results, villages were in the process of developing prospectuses including business and resource management plans along with plans to leverage resources by creating partnerships with other agencies, businesses and stakeholders at the PACD.

In 2004, 78 village facilitators were trained in phase one activities in the seven villages and their respective satellite villages nearby. The CLIFS COAIT activities are directly

intertwined with the USAID-funded CARPE Congo Basin Forestry Partnership (CBFP) project that looks more specifically at community forestry management issues. Two years is not sufficient time to implement a full COAIT process. We have put in place a condensed version of COAIT. In 2005, IRM created a specialized COAIT process for sustainable freshwater resource management (in addition to the efforts in the seven "village phares" along the Mbandaka-Bikoro axis) that is further discussed later on under section B.5. A COAIT training manual in French and in English was also developed over the LOP.

Table 3: Number of villagers by village trained in the use of IRM COAIT methodology

COAIT villages « phares »	Number of satellite villages	Number of villagers implicated under COAIT	Facilitators trained
Wendji Secli	8	64,694	10
Ilanga	8	10,317	8
Mooto	10	30,663, and 325 pygmées	12
Bikoro	13	18,003	17
Ngombe	10	8,844	12
Mobenzeno	6	3069	7
Bobangi	7	17232	10
Total	**62**	**153,417**	**76**

Overall, IRM has shown through CLIFS, its anti-corruption Rélance Economique project, and its CBFP activities, that sustainable results can only be achieved in food security, anti-corruption and conservation if and only if strategies that maximize integration and complementarity between projects is achieved. This is because of the overlap between each so-called sector. For example, farmers have little incentive to produce surpluses if prices are low because of inactive markets due to rampant corruption and low consumer demand for anything save bare essentials. Corruption cannot be combated in the abstract. People will only act when they understand costs and potential economic gains to justify assuming risks to combat corruption. Resource users have limited incentive to conserve forest and water resources when livelihoods are insecure due to high transaction costs from corruption and limited marketing options. This in turn creates long term insecurities as the sustainability of the resource base is endangered due to inappropriate practices that endure. IRM is attacking these issues in an integrated manner to create the basis for potential sustainable development.

At the heart of these programs and their intersection is COAIT, the toolkit used to mobilize communities and empower them to make viable decisions about their own future by increasing their capacity, working over landscape scale geographic regions, expanding participation and community representation, and the incorporation of local knowledge with adapted and applied technologies coming from CLIFS.

B.2 Activity: Demonstrate and promote agricultural and agro-forestry technologies
Partners: ICC, The Vetiver Network

Planned

The best way to leverage rapid economic gains for small farmers and to provide momentum for replication among other farmers is to *introduce and demonstrate* the benefits of improved food, market and tree crops, and to provide extension and training in appropriate best technologies and practices. ICC would in 2004:

1. identify established and solid farmer groups in target villages tied to church, NGO, or other networks;
2. undertake priority setting exercises using farmer knowledge and market information;
3. obtain appropriate high quality germplasm for seed and tree nurseries;
4. create on-farm demonstration and farmer-based research plots to test and disseminate agro-forestry options;
5. prioritize sustainable use of wild products and non-timber forest products for market improvement and nutrition;
6. train groups in nursery management and vegetative propagation; and
7. use existing networks to disseminate technologies through farmer-to-farmer training

In 2005 ICC would concentrate on expanding fruit tree nurseries to satellite villages, work on soil fertility demonstrations and improved fallow methodology, implement NTFP market studies in Bandundu and Equateur, and implement agro-forestry trials

Actual
For poor farmers with low margins for error and high levels of risk aversion, pilot projects and demonstrations of new crops and technologies by neighbors in their own agro-ecological and market situations represents the most promising means of encouraging innovation.

In 2004, ICC began installing village level fruit tree and seed multiplication for improved varieties as well as NTFP promotion.

In 2005, ICC implemented the following activities.

- Seed multiplication for improved germplasm was carried out along the Kikwit-Idiofa axis and the Mbandaka-Bikoro axis
- Demonstration plots on intercropping of cereals and legumes have been established along the Kikwit-Idiofa axis
- Germplasm evaluation for bean, soybean, peanut and maize along the Kikwit-Idiofa and the Mbandaka-Bikoro axes was done
- 10 village fruit tree nurseries along the Kikwit-Idiofa axis and 13 along the Mbandaka-Bikoro axis have been put in place. The village fruit tree nurseries are presented in the below tables.
- 9 multistrata (multistory agroforestry) demonstration fields with tree fruits and palm oil trees have been put in place along the Mbandaka-Bikoro axis in partnership with churches, farmers and local associations. While along The Kikwit-Idiofa axis, 8

multistrata demonstration fields have been planted in partnership with churches, farmers and local associations.

- The NTFP data collected in Bandundu and Equateur provinces was analyzed in Cameroon by CIFOR Researchers and a final report issued in January 2006.

More specifically, working in areas of extreme poverty, the ICC team concentrated their efforts to establish two fruit tree nursery schools in Mbandaka and in Kikwit near IRMs regional offices. Each school provided training to trainers and to members of local agricultural associations on how to create a fruit tree nursery, manage it and how to train others on fruit tree multiplication techniques. The techniques include seed germination, grafting, air layering and maintenance of propagation materials. From the two nursery schools, 15 satellite nurseries were created, managed by village associations and continue to function at the PACD.

Table 4: Nursery production along the Mbandaka-Bikoro axis and the Kikwit-Idiofa axis based on propagation techniques at the end of the ICC intervention

Axes	Villages with Nursery	Association implicated	Number of plants based on propagation technique				Total plants by nursery
			Generative Seed germ.	Air layering	Air grafting	Cutting	
Kikwit Idiofa	Aten	1	11633	41	23	00	1227
	Kanga	1	1412	94	37	00	1543
	Imbongo	1	543	45	00	00	588
	Idiofa	1	821	25	10	00	856
	Intswem	1	469	34	18	00	521
	Lusanga	1	1328	167	48	00	1543
	Panu	1	95	00	00	00	95
	Kakoy	1	1236	157	22	00	1415
	Mangai	1	160	25	00	00	185
	Dibaya	1	902	80	00	00	982
	Sub Total	**10**	**8129**	**668**	**158**	**00**	**8955**
Mbandaka Bikoro	Bikoro	1	252	128	00	00	380
	Mpah	1	359	91	00	00	450
	Iyembe Monene	1	325	114	00	00	439
	Mooto Village	1	450	137	00	00	587
	Mooto Ecole	1	201	88	00	00	289
	Mooto BDD	1	236	88	00	00	324
	Nkalamba	1	1727	127	00	00	1854
	Penzele	1	192	20	00	00	212
	Buya 1	1	755	175	00	00	930
	Bobala	1	1202	151	00	00	1353
	Inganda	1	131	00	00	00	131
	Mbandaka CBFC	1	742	225	00	00	967
	Mbandaka BDD	1	290	00	00	00	290
	Sub Total	**13**	**6862**	**1344**	**00**	**00**	**8206**
Total		**26**	**14991**	**2012**	**158**	**00**	**17161**

* BDD = Bureau diocésain pour le développement ** CBFC = Communauté Baptiste du Fleuve Congo

Note: In addition to the fruit tree multiplication effort, a total of 6,840 oil palm trees of the dwarf variety Tenera were also distributed to cooperating villages as part of our desire to begin looking at the long term rehabilitation of the oil palm industry in Equateur and Bandundu provinces long ago abandoned when palm oil factories shut down in the post colonial period. Oil palms bear fruit in about 5-7 years from transplanting. However the income generation potential is high beginning with $10 per tree in year six to $50 per tree in year ten. This would mean income generation over a four year period for oil palm owners of $150 per tree or little over $1,000,000 in revenue due to oil palm kernel sales alone for the 6,840 trees distributed.

Other specific results are listed here.

- 57 villagers received training on domesticating fruit trees and medicinal plants, improved fallow fields, crop rotation and intercropping practices.

- Multi-strata (multistory agro forestry) systems established in 17 villages by 17 associations along the Mbandaka-Bikoro and Kikwit-Idiofa axes.

- 14,501 fruit tree seedlings from the 17,161 produced in the nurseries along Mbandaka-Bikoro and Kikwit-Idiofa axes were distributed in 1063 households and 13 organizations (schools, hospital and NGOS) in 13 villages. Each seedling kit was made of seedlings propagated from seed, air grafting and cuttings so that in planting the seedling kit the beneficiary households and organizations could see the advantages and the disadvantages of different propagation techniques in terms of the earliness (time from plantation to production), yield, and other characteristics of interest.

- From the participatory germplasm evaluation carried out along Kikwit Idiofa and Mbandaka Bikoro axes, for example, 2 soybean varieties, 2 cowpea and 2 bean varieties were selected by farmers along the Kikwit-Idiofa axis. Seeds of these selected crop varieties have been multiplied by farmers for their own repeated use over time.

- Participatory demonstration plots on intercropping and on the rotation of legume crops with cereal crops, legume crops with cassava and cereals intercropped with cassava were carried out in 4 villages along the Mbandaka-Bikoro axis, 7 villages along the Kikwit-Idiofa axis and 4 villages along the Gemena-Akula axis. In addition, improved short fallow with using mucuna bean and alley cropping were also demonstrated. These demonstrations aimed to improve agricultural practices such as, soil fertility, crop spacing, proper density, proper planting period and weeding.

- Three cocoa groups were trained on cocoa plantation management and post-harvest technology. They were provided with sacks and drying sheets. Cocoa, marketed under this program, was sold at 80 KC/kg compared to the previous years farm gate price of 10 KC/kg. More than 25 metric tons of cocoa beans were purchased from cocoa growers along the Mbandaka-Bikoro axis and around Lake Tumba.

ICC also tested improved varieties for peanuts, soybeans, climbing bean and corn. These were all implemented as yield trials at the village level. Specific results of these trials are reported in

detail in the CLIFS quarterly report for June – September 2005. Due to the short duration of the CLIFS project, only two growing seasons for ICC trials, the data obtained cannot be confirmed to be definitive as the number of replications over time are not significantly robust, i.e., at least three or more growing seasons are needed so as to eliminate variability due to rainfall. However it can be said that the Samaru variety of corn and JL 24 for peanuts performed well and are being multiplied by community seed multiplication associations. Multi-strata agroforestry trials also were too short to be of significant use to the project. Long-term by nature, these kinds of trials were only started under CLIFS and could be evaluated at some point in the future when the various tree species have entered into their mature stages of development. It is one of the constraints to the CLIFS project, a 30 month time frame that does not permit IRM to fully draw conclusions that are based upon truly factually tested results.

One of the most important issues for IRM concerns the participation of farmers in the planning and implementation of the nurseries, germplasm evaluations and demonstration plots so that they can select the best technology based on their own selection criteria apart from those set up by researchers. IRM has only been able to provide a short-term look at various options that could be selected and adopted in the future.

Despite their interest in the fruit tree demonstration plots, air grafting, air layering and cutting techniques are less practiced than the seed germination propagation technology. More time is needed to appraise the adoption of these propagation techniques since farmers would like to see tangible benefits from these propagation techniques before making long-term decisions. However, it should be noted that income generating benefits from future fruit tree sales were not yet available as nurseries were not yet at that stage of development when the project ended in April 2006. None the less, the associations that owned the fruit tree nurseries will reap benefits in future years from sales while investments to maintain these nurseries remain modest.

Vetiver intercropping trials with pineapple and bananas were put in place as well in 2005. The project ended prior to obtaining quantifiable results for these trials.

The NTFPs studied by ICC were:

- charcoal, mushrooms, caterpillars, fougère, *Gnetum* species and *Garcinia cola* in Bandundu province; and
- cola nut, palm wine, charcoal, thatching leaves, marantacea leaves, mushrooms, caterpillars, *Gnetum* species in Equateur province.

In both Equateur and Bandundu provinces, lack of capital is the most important constraint for traders of the NTFPs. The lack of adequate financial resources does not allow traders to guaranty secured market outlets to farmers collecting NTFPs. In addition, the lack of capital does not permit traders to store NTFPs to take advantage of seasonal price variations.

The second most important constraint is limited market outlets. This meant there is a lack of customers to buy NTFPs. It is due to the poverty that prevails in DRC which does not allow many people to have enough purchasing power to buy forest products.

Perishability is another problem highlighted by traders. Perishable NTFPs can not be stored for a long period due to the lack of storage infrastructure. Research has a very important role to play

by bringing cost effective technologies that would increase the profitability of storing NTFPs to take advantage of seasonal price variations. High transport cost is another constraint mentioned as bad conditions of the road create very high transaction costs for traders and farmers.

Illegal taxes (tracasserie) increase the transaction cost of traders. These additional costs affect profit margins and the consequence is that traders transfer them to rural producers in terms of lower purchase prices and to consumers in terms of higher sales prices.

The NTFPs have a potential to reduce poverty in DRC. In Equateur province, if households get involved simultaneously in the gathering and marketing of marantacea leaves, caterpillars, mushrooms, charcoal, *Gnetum* species and palm oil, they could obtain monthly revenues of $84. In Bandundu province, if households get involved in the gathering and marketing of caterpillars, mushrooms, ferns, kola nut, *Gnetum* species and palm wine, they could obtain revenue of $40.

The policy implications and actions needed to improve the role of NTFPs in livelihood and poverty reduction would be to reduce or eliminate of the constraints to the market of the NTFPs; domestication of the key NTFPs (such as *Gnetum* species); and empowering the rural communities in the NTFP organization and marketing.

B.3 Activity: Introduce Community–Based Seed Multiplication (CBSM) as an alternative seed-supply mechanism
Partners: INERA

Planned

This activity was to demonstrate low-cost community-based seed multiplication as an alternative seed-supply mechanism for small-holder farmers. The specific seed selection for each locality would depend on local needs for diversification, nutrition and market potential. Crops would include rice, maize, soybeans peanuts, cowpeas and vegetables. INERA was also to coordinate with ICC to insure that seed multiplication efforts by each group were implemented correctly. INERA was to provide training for community groups in seed production, quality control, seed selection and storage. This would increase the availability of seeds of self-pollinating and open pollinated crops.

Actual
37 seed multiplication village facilitators were trained on seed technology:

Kikwit-Idiofa: 13 facilitators
Mushi-Kikri: 1 facilitator
Mbandaka-Bikoro: 18 facilitator (1 woman)
Gemena-Akula: 7 facilitators

Table 5: Total amount of community multiplied seed in Kg over the LOP of CLIFS (4 cycles)

Axes	Maize	Rice	Peanut	Cowpea	Soybean	Cassava
Kikwit Idiofa	36131	38259	5014	3105	6608	**
Mbandaka Bikoro	118356	52080	31599	1252	120	**
Ngombe Bobangi	16016		615			66500 m
Gemena Akula	88128	25916	31702	18625	9708	**
Total	**258631**	**116255**	**68930**	**22982**	**16436**	

** Sites with cassava multiplication fields: 8 villages along the Kikwit-Idiofa axis, 11 sites along the Gemena-Akula axis, 3 along the Mbandaka-Bikoro axis and 3 along the Ngombe-Bobangi axis.

The varieties of seed multiplied at the community level are:

Maize: Samaru and Kasai 1
Rice: IRAT 112 and Nerica
Peanut: Jl 24 and Local variety
Cowpea: Vita 5, Vita 7ansd H4
Soybean: Afya and Vuangi
Improved Cassava: Mvuama, RAV, Butamu, Nsansi, Disanka, Mvuazi

Table 6: Number of village and seed multiplication associations including membership levels

Axes	Villages with effective seed producer associations	Seed producer associations' membership level			
		Number of seed producer associations	Male	Female	Total members
Kikwit Idiofa	30	40	487	353	840
Gemena Akula	18	41	375	318	693
Mbandaka Bikoro	13	65	1179	1469	2648
Ngombe Bobangi	1	3	50	50	100
Total	**62**	**149**	**2091**	**2190**	**4281**

Table 7: Independent seed multipliers that are not member of associations

Axes	Villages with independent seed producers	Number of independent seed producers
Kikwit Idiofa	25	97
Gemena Akula	23	263
Mbandaka Bikoro	13	66
Ngombe Bobangi	2	21
Total	**63**	**447**

Table 8: Vegetable seed (kg) produced under the CLIFS project

Axes	Amaranth	Celery	Onion	Morel	Spinach	Sorrel	Cucumber	Okra	Egg-plant	Tomato
Kikwit Idiofa	0.76		0.12	0.74	0.76	0.73	0.33	0.31	0.32	
Mbandaka Bikoro	0.90			0.90	0.90	0.90	0.10	0.70	0.65	0.70
Gemena Akula	5.30	1.30	0.10	5.30	5.30	0.10	0.10	0.97		5.20
Ngombe Bobangi	0.82		0.10	0.52	0.90	0.82		0.17	0.17	0.32
Total	**7.78**	**1.30**	**0.32**	**7.46**	**7.86**	**2.55**	**0.53**	**2.15**	**1.14**	**6.22**

Community seed multiplication as an alternative (to the non-functional national seed multiplication program) has proven to be highly successful in demonstrating that community seed multiplication associations and independent producers can produce quality seed that in turn helps to reduce this critical constraint to agricultural productivity in the DRC. As shown in the tables above not only is a significant amount of seed being produced, but women are an essential element of this program. More than 480,000 kilograms of seed were produced along with more than 66,000 meter of cassava multiplied. This translates to a $0.15/kg investment on the part of IRM to implement this program. Simple technologies were promoted such planting in lines with proper spacing, on-time weeding, use of fences and good post-harvest drying and storage.

B.4 Activity: Provide radio and TV programming for marketing and extension
Partners: African Business Channel, SEM

Planned

This activity was to create TV and radio programming that will extend technical information about CLIFS project strategy and methods, and to develop awareness raising and public relations tools that could be used to build corporate/community partnerships. As most rural families rely on radio, using this format would permit the broad dispersion of agricultural and other information advice that would otherwise not reach rural communities due to poor infrastructure.

The broadcast of CLIFS information to a broader audience outside of the DRC was to make use of a TV program created by ABC with the assistance from a SEM film crew. We planned to document our progress over the life of the project and were to have local radio and TV program emissions going out over the same period of time. SEM will produce 5 video programs for local TV and 10 radio programs. SEM was also to shoot sufficient “MiniDV” footage to allow ABC in Johannesburg, to create a 30-minute TV documentary that could be aired internationally. ABC was to send a film crew to the DRC and produce another 30 minute TV documentary later on in the project. This would specifically target international audiences interested in DRC investment.

Actual

1. ABC produced a 38 minute TV documentary on CLIFS from the beneficiary view point
2. SEM provided radio coverage for the on-going micro-credit activities for MUCREMBA and MUCREFI over the CLIFS LOP
3. SEM provided radio broadcasts on improved fishing practices, fish conservation and freshwater information and management systems (SIG) that were implemented by AGIR (formerly PEMARIM), GACC and the IRM COAIT team leader Zephirin Mogba.
4. SEM produced a video of GACC and PEMARIM activities in Mushi for sustainable fishing and improved fish conservation
5. A SEM produced 45 minute TV program on vetiver technology that was broadcasted on three TV channels in Kinshasa
6. A SEM produced video entitled: "Securité alimentaire: A la decouverte de CLIFS" that was broadcasted on three TV channels in Kinshasa
7. SEM compiled a library of photographs that have been used to promote CLIFS activities in brochures, documents, training sessions, and office displays.

SEM proved to be an invaluable partner to IRM and the CLIFS program overall. With a small staff of 3 specialists, SEM was present at most of CLIFS sites, training programs and meetings. At the end of project meeting held in Kinshasa in April 2006, SEM provided a 20 minute video recap of CLIFS activities.

B.5 Activity: Improve fishing livelihoods
Partners: IRM, PEMARIM (AGIR), GACC, ERGS and Avocats Verts

Planned

IRM initiated sustainable fisheries management with fishing associations in Bandundu and Equateur under its CREDP project. In CLIFS, IRM would continue to reduce pressure on key commercial fish species to assure sustainable livelihoods for artisinal fisher people living in the two provinces.

<u>Strengthen fishing associations' institutional and technical capacity</u>

IRM and INADES would be working together to assist fishing associations develop and manage their resources in a sustainable fashion. IRM was to include selected associations in the COAIT process and train them in decision making tools to insure sustainable fishery management. INADES would be assisting associations from an organizational point of view insuring that their structure was appropriate, met legal requirements and had sufficient training to be functional. Because of the enormous impacts of illegal taxes being collected in river transport, IRM's Relance Economique project was to play a key support role. ERGS was to be building capacity of fishing associations to monitor and evaluate their practices and to include indicator species trends.

<u>Enhance marketing and transport of sustainably harvested fish and disseminate improved village fish preservation technology and practices</u>

We were to demonstrate how improved conservation and storage facilities for fishing associations, buyers and downstream venders would directly impact the livelihood security of riverine Congolese. GACC would be identifying unsustainable practices and exchanging illegal fishing equipment for legal materials. It would also help communities to define harvest targets for sustainable management and negotiate targets with fishing associations as well as modifying seasonal fishing practices to allow juveniles to mature. PEMARIM would be training fishing associations in fish conservation technology that would permit associations to better take advantage of marketing opportunities. These improved fish conservation technologies would increase local incomes and reduce pressures on local forests where wood is harvested for smoking fish.

In 2005 IRM would put in place a new fishing information and management system (SIG) for the freshwater ecosystem of a portion of the Congo River and its tributaries. This system was to use the COAIT platform as the foundation upon which CLIFS partners were to construct this activity. It would serve as one of the bridges between the CLIFS project and the CBFP project and generate the data needed by communities to create management plans and monitor their activities. More importantly it would put in place a sustainable system of tools and information transfer that was unavailable. This new SIG approach would permit IRM to continue to reduce pressure on key commercial fish species to assure sustainable livelihoods for artisinal fisher people living in the two provinces, specifically along the Mushi-Bokoni axis, and the areas along the juncture of the Congo, Ubangi and Mpoka rivers. It would also operate in Lake Ntomba and Lake Mai Ndombe. ERGS was to take a lead role in the design and management of this new structure along with the IRM COAIT team.

SIG would be used to strengthen the ongoing effort by IRM with respect to fishing associations' institutional and technical capacity on the one hand, and enhance marketing and transport of sustainably harvested fish and disseminate improved village fish preservation technology and practices on the other that were begun in 2004 by GACC and PEMARIM (now called AGIR) and ERGS. In 2005, Avocats Verts would be more active with fishing communities and their associations looking at legal issues across the landscape.

COAIT training was to be extended to new sites of Ngombe, Mobenzeno, and Bobangi in Equateur and Bokoni, Bokala, Mushi, and Inongo in Bandundu. This new program would be divided into three phases: information and data collection; training; and implementation of the system.

Actual

1. Extensive training of fishing associations on improved fish conservation techniques: salting, drying and smoking and for sustainable fishing practices. The specific data on this training is presented in the table below.
2. Five regional workshops have been held in Equateur province as well as in the Bandundu on fishing management.
3. We organized and created local fishing management committees (water user associations) in Equateur and in Bandundu. Eight platforms composed of 109

local fishing management committees (Cellule de gestion des pêcheries locales) were created in Equateur. While in Bandundu, seven platforms composed of 94 local fishing committees have been organized.

4. The Equateur fishing management committee is in charge of managing fishing practices and freshwater biodiversity conservation in Lake Ntomba, along the Congo River and along 2 other rivers, the Ubangi and the Mpoka. In Bandundu, the fishing management committee is in charge of managing fishing practices and freshwater biodiversity conservation in Lake Mai Ndombe and along 9 other Congo River tributaries: Lokoro, Lotoy, Nsongo, Lukenie, Mfimi, Lolabo, Boruampe, Kasai and Kwa.
5. IRM was able to provide revised administrative regulations on fishing to the Freshwater Resource Steering Committee composed of the Ministry of Agriculture, Pêche et Elevage, Ministry of the Environnement et Conservation de la Nature, IRM, FAO, FIDA, UNOPS, TRIAS, FOLECO. These regulations were then translated into local rules and regulations established by local fishing committees with IRM facilitation and have been incorporated in the administrative regulations on fishing in the document named "Convention sur les regles et normes de pêche responsible au Congo" adopted during the 2006 regional sustainable fishing meetings held in Mbandaka, Nioki and in Kinshasa.
6. IRM facilitated the production of participatory maps of the various fishing basins.
7. Qualitative inventory and identification of freshwater species in each fishing basin.
8. IRM was able to obtain official sanctioned classification of the various fishing basins based on their freshwater biodiversity composition
9. Two provincial workshops were held one in Mbandaka and the other one in Nioki in order to discuss established rules and regulations for the management of the fishing basins. In addition, the administrative rule "Cogestion" was presented to representatives of local fishing management committees and of the fishing platform by the representatives of the Ministry of Agriculture, Fishing and Forests.

Table 9: Number of villages, associations, and people trained in fish transformation

Training sites	Number of trainees			Number of associations trained	Number of villages trained
	Males	Females	Total		
Bikoro	17	4	18	18	6
Ngombe	12	7	15	15	5
Bobangi	9	6	11	11	9
Mushi	20	3	23	20	3
Total	58	20	67	64	23

Table 10: Inventory of unsustainable fishing practices among village fishing associations

Training sites	Number of trainees	Associations trained	Villages and fishing camps trained	Fishing practices identified by the trainees	Fishing practices described by the trainees as sustainable practices	Fishing practices said by trainees to be unsustainable and must be prohibited
Bikoro	26	24	11	30	9	13
Ngombe	17	15	6	44	14	26
Bobangi	15	12	12	38	11	12
Total	58	51	29			

Table 11: SIG training programs 2005, number of people trained per workshop in Equateur province

Training sites	Number of local fishing committees trained per workshop	Trainees per workshop
Bobangi	6	30
Lilanga	5	35
Mobenzeno	16	80
Ngombe	16	80
Maïta	14	70
Wendji Secli	14	70
Bikoro	22	110
Malange	5	34
Total	98	509

Table 12: SIG training programs 2005, number of people trained per workshop in Bandundu province

Training sites	Trainees per workshop
Nkolobete	54
Ndongose	52
Lokanga	56
Boongo	58
Kutu	61
Nioki	65
Mushie	20
Bokala	20
Bokonie	24
Inongo	49
Total	439

C. Objective 3: Strengthen rural credit and micro-finance activities to support productive investments in agriculture

C.1 Activity: Implement a village-level agricultural micro-credit program
Partners: SOCODEVI

Planned

We would develop viable rural credit institutions and services in Bandundu and Equateur based on SOCODEVI's savings and loan model "mutuelles de credit et d'epargne" that had proven successful in Kinshasa. This program was to provide micro-credit for approximately 4000 clients principally to women to facilitate their impact on marketing, agricultural food production for family consumption, food transformation and children's health status. During year one, 1000 clients were to be trained and have access to micro-credit. Capacity building for all credit recipients would be crucial to establish the ground rules for sustainable micro-credit fund functioning. Interest rates would be set to encourage prompt repayment. Before the end of the project, interest income should be sufficient to cover local administrative costs which provide the basis for sustainability. These Savings and Loan facilities were to be able to provide credit to participants in the other CLIFS activity areas to help them maximize the benefit of the demonstration, dissemination and training provided. There was to be one principal Savings and Loan facility in each province located in Mbandaka and in Kikwit. Each would have a subsidiary antenna attached to it located in Bikoro and Idiofa.

In 2005, IRM would ask the two provincial associations to create a direct link to the villages where input supply facilities have been constructed (8 sites) to promote the idea of savings and loan activities at the cantine sites with the object to incite rural individuals to obtain more information on the micro-credit process as a means of preparing these communities for potential creation of new antenna groups. In Equateur we were to be looking at expanding the Mbandaka association to include members from three COAIT "villages phares" – Wendji, Secele and Penzele to attempt to attract more members to the Mbandaka association.

Actual

In 2004, SOCODEVI created two savings and loans associations based in Mbandaka and in Kikwit that were approved by the Central Bank, had a functioning general assembly and are making micro loans to members. There were a total of 496 members as of the end of November 2004. The number of female association members out weighed male members by 4 to 1. The Kikwit association also created an antenna office in Idiofa which began its operations in late 2004. Our goals and objectives remained the same with respect to the level of effort and the quantity of loans to be given out, i.e., 4000 loans given out over the life of the project. In 2004, however, we only reached 400 loans instead of our original goal of 1000. Their M&E system was functioning and monthly reports are came in right on time. It is important to note that the loan activity is accompanied by a saving program which in turn dictates the actual level of loan activity.

Since micro-credit is such a difficult intervention to create, IRM took a very methodical and slow approach to creating new S&L associations to insure that proper planning occurred, that extensive training was provided to association members and leaders who selected their own staff, and that loans disbursed had a high probability of being reimbursed. In 2005, paying membership increased to 903 from 496 in 2004. By the end of the project in April 2006, the total membership was 1,323, of which 916 were women and 374 were men. The total number of loans dispersed was 1,284 for a total of $144,190. Loans (420) that were in the pipeline remaining to be processed at the end of the project were worth $58,179. There are 66 members who are late on loan repayments (5%).

The following graphic shows the process taken by SOCODEVI to create the system in place.

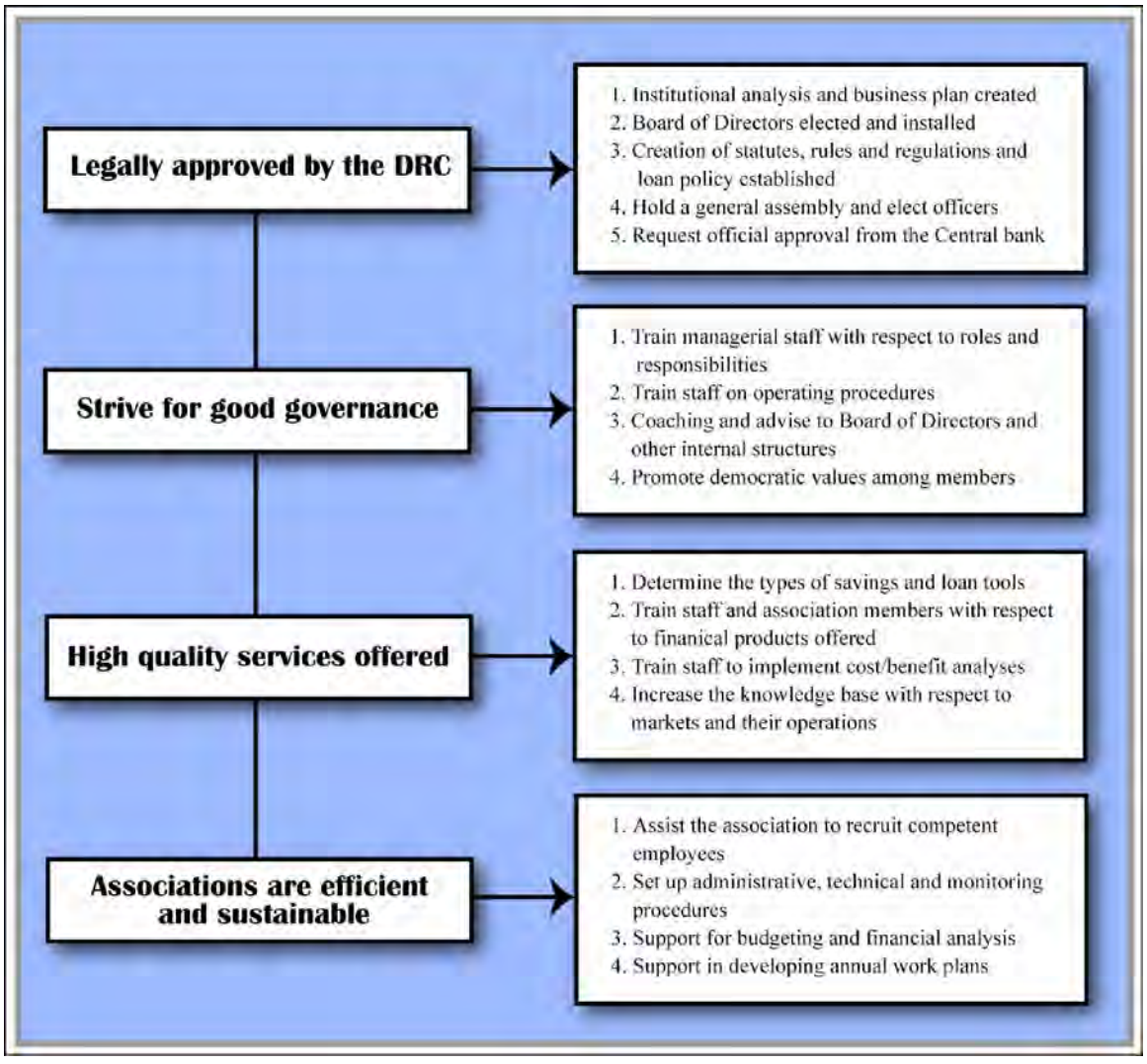


Table 13: Micro-credit actual performance versus planned for 2005 with respect to selected criteria

MUCREFEKI	**Actual 2005**	**Objectives 2005**
Number of members	685	1200
Number of loans awaiting dispersement	262	717
Number of female members	488	900
Number of women managers	32	5
% of members with loans	38%	60%
% of members with savings	155%	100%
Operational sustainability	29.5%	59%
MUCREMBA		
Number of members	218	1100
Number of loans awaiting dispersement	64	600
Number of female members	144	800
Number of women managers	14	14
% of members with loans	29%	55%
% of members with savings	129%	100%
Operational sustainability	14%	76%

Table 14: Pertinent data for saving and loan associations MUCREFEKI (Kikwit) and MUCREMBA (Mbandaka) over the LOP

	MUCREFEKI				MUCREMBA				Overall			
	Men	**Wom.**	**Total**	**Amt.**	**Men**	**Wom.**	**Total**	**Amt.**	**Men**	**Wom.**	**Total**	**Amt.**
Total members	245	648	905	2 744	129	268	418	1 321	374	916	1 323	4 065
Total savings by members	381	1 020	1 413	40 314	178	341	540	27 274	559	1 361	1 953	67 588
Total number of loans and amounts requested	255	874	1 129	13 566	155	302	457	57 104	410	1 176	1 586	188 670
Total number of loans and amounts given out	232	785	1 017	112 495	65	202	267	31 695	297	987	1 284	144 190
Total number of loans and amount in the pipeline	71	231	302	39 759	48	70	118	18 420	119	301	420	58 179
Total loans that are overdue in payments	10	30	40	1 060	4	22	26	913	14	52	66	1 973
Total number of new loans submitted	26	61	87	14 688	4	11	15	4 157	30	72	102	18 845
Total number of loans approved but not dispersed	3	3	6	1 547	0	14	14	5 196	3	17	20	6 744
Total number of loans ready for approval decision	21	67	88	15 300	0	0	0	3 060	21	67	88	18 360

Note: Amounts (amt.) are listed in $.

It should be noted that although our overall goals were not met with respect to membership, the total amount of loans dispersed was very close to the level expected. As previously stated, the environment for financial services in Bandundu and Equateur provinces at the beginning of the project was such that no financial services were available at all. It is remarkable that such a program even exists and is expanding and is operational and sustainable after the PACD. A revolving fund using money paid back to the associations insures that there is sufficient capital to permit these groups to function, grow and prosper.

C.2 Activity: Support community based organizations in the construction and management of input supply facilities
Partners: FOLECO

Planned

The CLIFS project was to provide technical assistance to create the capacity of selected farmer groups to manage new agricultural supply centers. These agricultural supply centers would provide farmers in the region with access to agricultural inputs such as seeds, fertilizers, environmentally friendly pesticides, bags, small tools, and other supplies. Ten centers were planned for.

Actual

In 2004, eight centers were constructed or mostly constructed (see list below). None are operational in 2004. These agricultural supply centers were designed to provide farmers in the region with access to agricultural inputs such as seeds, fertilizers, bags, small tools, and other supplies such as basic necessities such as soap, salt, mosquito nets, and school supplies. In the last quarter 2005, an additional set of materials was given to each center to increase its fundamental inventory. The actual centers were constructed in the following villages.

Mbandaka-Bikoro axis
- Wendji
- Penzele
- Bikoro

Kikwit-Idiofa-Kasai axis
- Kanga
- Panu
- Mangai
- Dibya

Gemena-Akula axis
- Gbatikombo

The fate of these eight facilities rests in the hands of the management committees that each village has put in place and the capacity of these committees to manage inventory, sales, stock replenishment and the accounting that is needed to monitor all actions in a transparent fashion. Each has received training, but, it is too soon to be able to judge their performance. As of the end of the project all were functioning.

VII. Inherent program problems and how to overcome them in future

1. The principal problem encountered under the CLIFS project was the short time frame of 30 months. To truly change the agricultural dynamics in the Congo, a longer period of time is needed. This is particularly true for agro-forestry programs that must be started basically from the beginning due to the dysfunctional nature of the Congolese economic sector. By nature combining cropping systems within forested landscapes takes a much more time than allotted to this project
2. Community seed multiplication for example was able to progress through 4 cycles. For the seed multiplication associations, this was sufficient time to produce enough seed for their own use and that of their immediate neighbors, but not enough time to produce sufficient seed for the region. With more time comes the ability to expand and the ability to develop a marketing aspect to this that would transform a community based program into one that could be scaled up across wider zones.
3. Indeed most elements of the project would have benefited from a longer time frame. Micro-credit saving and loans associations had time to become functional but not enough time to attain economies of scale. Our vetiver program had effectively only one year to implement demonstrations as the first year was needed to establish nurseries. The fruit tree nursery program also only set up the actual nurseries, however by the end of the project most seedlings were still to small to commercially sell. Our community mobilization program, COAIT, also needed more time to allow communities to fully develop the prospectuses that are the last step in the process with respect to sustainable resource management.
4. Another programmatic problem revolved around the management of such a large number of subcontractors. We had 14 NGOs working on this project, mostly local ones with little experience, for example, managing large sub-grants, or meeting reporting requirements on time. We underestimated the managerial burden this placed on our technical assistance team, but in the end we were able to attain the vast majority of our goals and objectives. In hindsight, we should have had fewer partners.
5. More time needed to be spent with partners with respect to financial management and reporting. More effort should have been placed on training and an insistence on following a straightforward set of common guidelines. Having all the final financial management done in the US also caused delays in getting the large number of justifying financial documentation (receipts principally) to the IRM home office. Our system was a solid one but could have been faster.
6. IRM encountered another problem over the life of the project and that was the fact that there were four CTOs for the CLIFS project. This meant that we had to be constantly building new relationships over time and we were never able to anticipate the needs for each new CTO or understand their work styles to insure a solid bond between USAID and IRM. This is a small issue and well beyond our control, however, we were faced with having to often reorient our management to maintain a sense of consistency on our part, while at the same time satisfying new needs and ways of doing business on the part of the USAID CTOs.

VIII. What could have been done in hindsight?

Corporate community investment

Given the zone of intervention, i.e., Equateur and Bandundu province, the ability to generate external investment was non-existent. There is no basis for agricultural investments as there is no infrastructure, there is a complete lack of roads and power (electricity). This is in contrast to Katanga province that has sufficient mineral wealth to be attractive to outside investment. This element of the project should have been dropped.

Community seed multiplication

Due to the unforeseen success of this program, we should have invested more in this project element. Community associations proved to more than capable of adopting this technology such that the absence of a national seed multiplication program is no longer a major constraint to agricultural productivity in those zones where such actions are occurring.

Vetiver grass technology

Given the huge need and the speed with which the demand for vetiver increased over the life of the project, we should have had a larger component (i.e. more funding) to increase the scale of the supply to meet that demand. Also, demonstrations of infrastructure protection should have been done in more visible sites, such as urban centers especially Kinshasa where decision makers could view the demonstrations more easily. There is no question about the need for farm-to-market road rehabilitation. The effort simply was not sufficiently robust to cover the vast landscapes in the two provinces.

Agricultural research

The ability to implement applied agricultural research over a very short period of time is impractical. This component should have been reduced in scale as well with more emphasis placed on extension activities that is getting communities to adopt technology that is within their ability to understand and pay for it. Introducing new varieties that have never been seen in rural NW Congo takes many more seasons than was available. Intercropping trials or soil fertility trials in farmer fields need many more replications than we were able to do to obtain conclusive results with respect to adoption of these technologies.

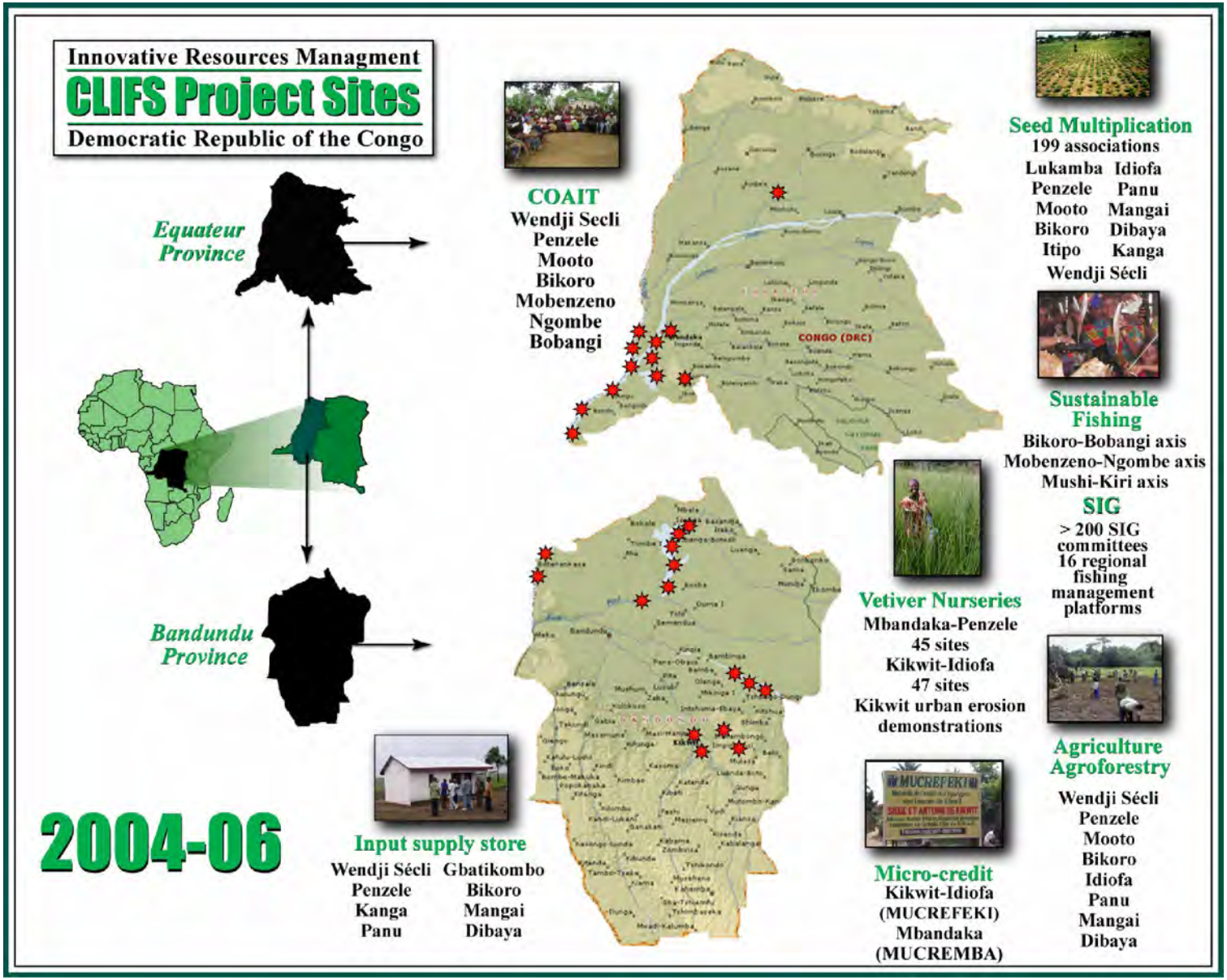
Also the consortium of ICRAF, CIAT and CIFOR was managerially difficult due to administrative slowness with each of these large international research organizations. In the future, this kind of consortium should be discouraged despite the fact that each brings unique expertise. It took this group too much time to organize themselves in the field, create common programs and indeed implement them. Unfortunately, the alternative, relying on the national agricultural research institution, INERA, was not an option due to its lack of resources to respond to needs in the NW portion of the Congo.

Micro-credit

SOCODEVI was a very capable and viable partner to IRM under the CLIFS program. With a starting point of putting saving and loan headquarters in urban centers, SOCODEVI was not able to reach out to most of our project beneficiaries because they lived far from these urban centers and could not travel to them easily enough to participate in being a member of the saving and loan associations (a requirement to receive a loan). We assumed that micro-credit could be made available to rural populations and indeed many elements of the project were designed to take advantage of supposed access to credit at the rural level. In hindsight, this assumption was a false one. You must establish a solid base in urban areas first before you can venture out to rural areas and offer financial services. Insecurity in the Congo is simply too great to allow the safe transfer of funds (cash) into rural areas. In hindsight we should have reduced our expectations of getting credit access to rural areas given the time allotted. The antenna in Idiofa did prove that once a savings and loan association is solidly established in a large urban center, a much smaller town could be next in line for the establishment of subsidiary branches.

Annexes

Annex 1: CLIFS project sites and activities 2004-2006



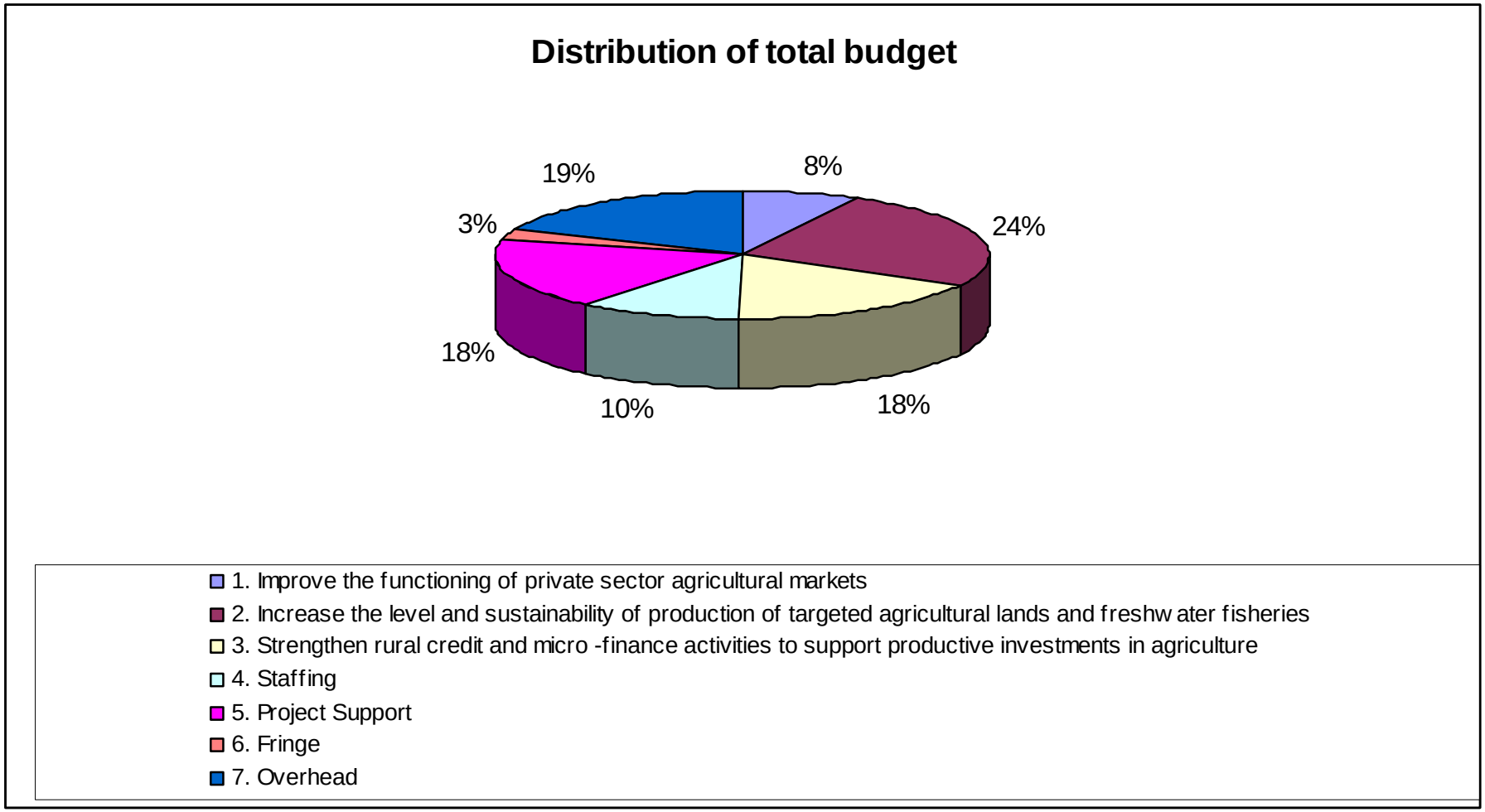
Annex 2: Financial Situation at the PACD, April 30, 2006

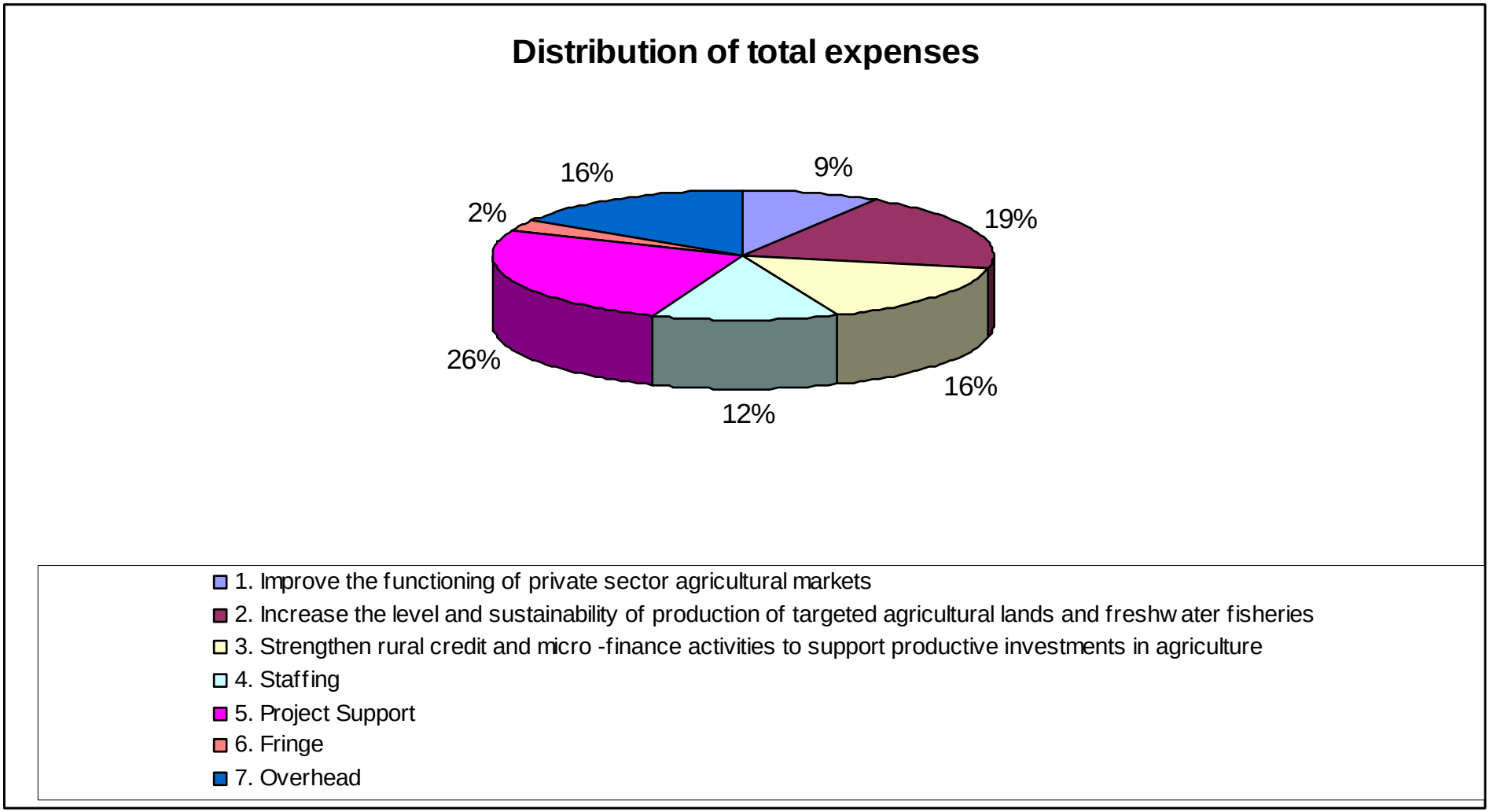
Congo Livelihoods & Food Security Project (CLIFS)

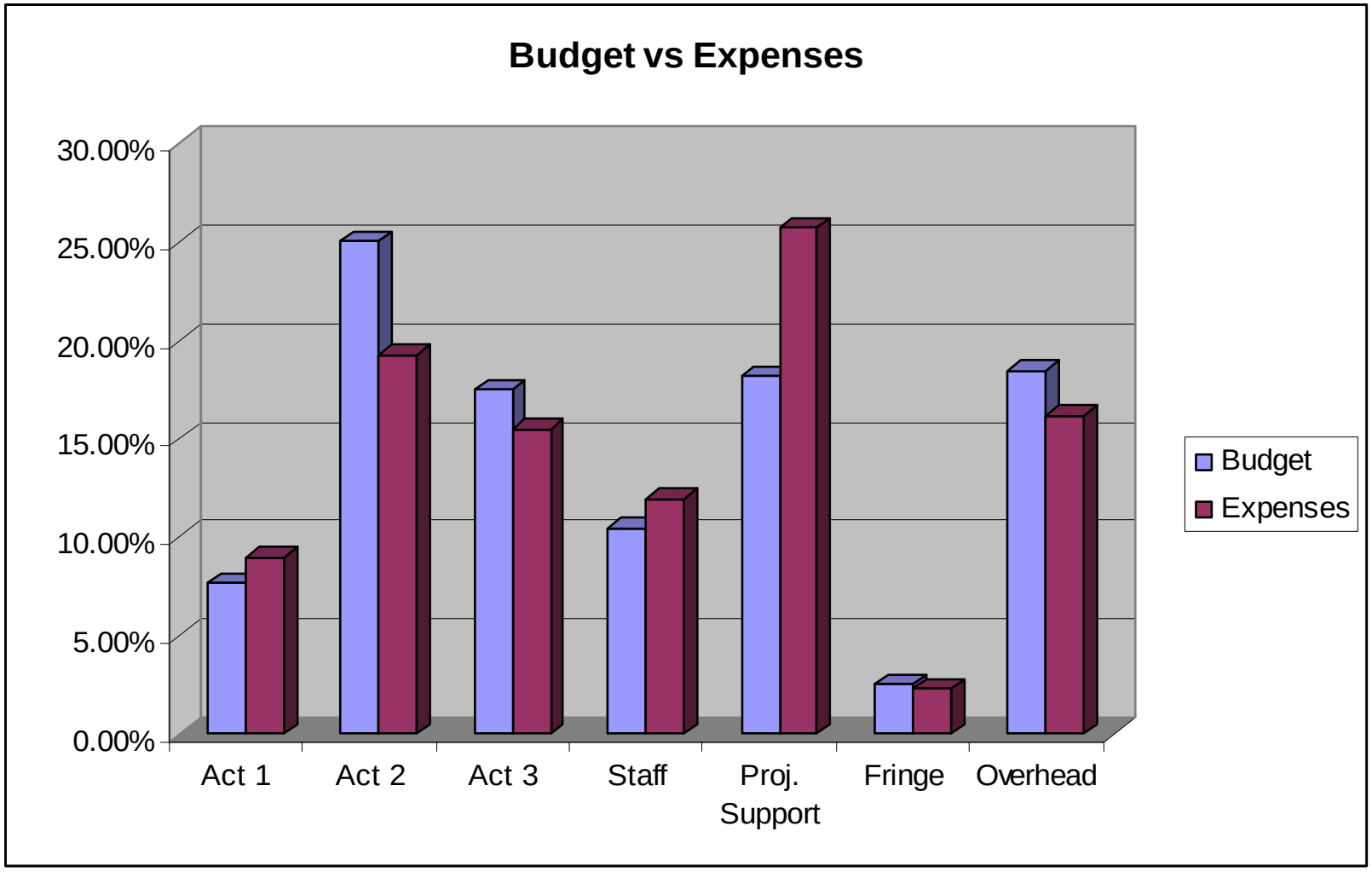
Final Financial Report

October 1st, 2003 to April 30th, 2006

Cost Elements	APPROVED BUDGET	Expenses					BALANCE
		Oct - Dec 03	Jan - Dec 04	Jan - Dec 05	Jan - Apr 06	TOTAL	
1. Improve the functioning of private sector agricultural markets	$ 383,345.00	$ -	$ 265,250.00	$ 90,350.00	$ 93,975.33	$ 449,575.33	$ (66,230.33)
2. Increase the level and sustainability of production of targeted agricultural lands and freshwater fisheries	$1,254,348.00	$ -	$ 357,281.32	$ 283,159.52	$ 324,532.44	$ 964,973.28	$ 289,374.72
3. Strengthen rural credit and micro -finance activities to support productive investments in agriculture	$ 876,000.00	$ -	$ 390,000.00	$ 385,000.00		$ 775,000.00	$ 101,000.00
4. Staffing	$ 523,848.00	$ 37,167.10	$ 232,831.62	$ 251,133.24	$ 77,262.11	$ 598,394.07	$ (74,546.07)
5. Project Support	$ 911,254.00	$ 134,152.47	$ 741,942.20	$ 235,914.51	$ 176,248.57	$1,288,257.75	$(377,003.75)
6. Fringe	$ 126,184.00	$ 11,821.81	$ 44,083.72	$ 43,546.05	$ 13,935.93	$ 113,387.51	$ 12,796.49
7. Overhead	$ 925,020.00	$ 41,573.09	$ 392,222.27	$ 244,980.18	$ 131,634.65	$ 810,410.19	$ 114,609.81
TOTAL	**$5,000,000.00**	**$224,714.47**	**$ 2,423,611.13**	**$ 1,534,083.50**	**$ 817,589.03**	**$4,999,998.13**	**$ 1.87**


Distribution of total budget
8%
24%
18%
10%
18%
3%
19%
1. Improve the functioning of private sector agricultural markets
2. Increase the level and sustainability of production of targeted agricultural lands and freshw ater fisheries
3. Strengthen rural credit and micro -finance activities to support productive investments in agriculture
4. Staffing
5. Project Support
6. Fringe
7. Overhead


Distribution of total expenses
16%
9%
2%
19%
26%
16%
12%
1. Improve the functioning of private sector agricultural markets
2. Increase the level and sustainability of production of targeted agricultural lands and freshw ater fisheries
3. Strengthen rural credit and micro -finance activities to support productive investments in agriculture
4. Staffing
5. Project Support
6. Fringe
7. Overhead


Budget vs Expenses
30.00%
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
Act 1
Act 2
Act 3
Staff
Proj. Support
Fringe
Overhead
Budget
Expenses

Annex 3: CONGO LIVELIHOOD IMPROVEMENT AND FOOD SECURITY PROJECT LOGICAL FRAMEWORK (original from 2003)

Goal #1: A sustainable increase in agricultural productivity supported by better production techniques and technologies, more efficient private sector markets, and micro-finance activities that encourage productive investments.
Goal #2: To generate a sustainable increase in agricultural productivity supported by better production techniques and technologies, more efficient private sector markets, sustainable fisheries, and micro-finance activities that encourage productive investments.

OBJECTIVE #1: Improve the functioning of private sector agricultural markets.

Objective Level Indicators:

- Increase in traffic volume in markets where feeder roads have been rehabilitated by the project.
- Increase in knowledge of price information among consumers, transporters and producers in project areas.
- Number of kilometers of roads rehabilitated
- Change in volume of agricultural produce in targeted markets

ACTIVITIES	INTERMEDIATE OBJECTIVE	INDICATOR	MEANS OF VERIFICATION
Reduce corruption that constrains development	Mobilize multi-stakeholder coalitions to assess and then implement a strategy to tackle the issue of corruption	Level of stakeholder satisfaction with process and results of anti-corruption work.	Minutes from stakeholders meetings Quarterly reports
Create corporate community partnerships (CCP)	Create a framework that identifies CCP opportunities and a strategy that fosters CC engagement opportunities	Creation of CCP web site; Level of use of website and multilingual directories; # CC partnerships created	Web site hit counter Quarterly reports
Analysis of constraints to the promotion of improved agricultural technologies	Improved understanding of links between small holder producers and key commodities markets	10 villages surveyed; Raw data report	Final report on survey
Create functioning road & river user associations	Road users' associations organized and actively maintaining rehabilitated roads	10 road users associations created	Reports on Roads Users Associations (RUAs) activity
Rehabilitate selected market feeder roads	Rehabilitate farm to market roads using low cost technology with maintenance by RUAs	75 km of rural roads rehabilitated	Report on road rehabilitation activities Quarterly reports
Demonstrate village-level agricultural processing storage technologies	Identify and train farm families in the use of improved food processing technologies	At least 1 small scale food processing activity in every village	Project documentation Quarterly reports

OBJECTIVE #2: Increase the level and sustainability of production of agricultural lands and freshwater fisheries

Objective Level Indicators:

- Reduced harvesting of juvenile fish due to enhanced intra-fishing association enforcement of legislation enhances livelihood security.
- Number of beneficiaries (direct & indirect) adopting production-enhancing agricultural technologies
- Increase of fresh and conserved fish products leaving provinces for Kinshasa or Congo/Brazzaville.
- Increased revenues for fishing association members

ACTIVITIES	INTERMEDIATE OBJECTIVE	INDICATOR	MEANS OF VERIFICATION
Implement COAIT in selected villages	Systematically build Congolese community- level capacity to plan and undertake economic development activities	COAIT processes implemented in 10 project villages	COAIT implementation reports
Demonstrate & promote agricultural and agroforestry technologies.	Disseminate productivity-enhancing sustainable agro-forestry technologies	At least 1 demonstration in each project village	Report on agro-forestry activities

* Provide community-based farmer-led extension training and support	Build the knowledge base and technical capabilities of Congolese farmers	Community led extension in at least 10 villages	Reports on outcomes of CBFLE
* Introduce Micro-irrigation for high value and subsistence crops	Low cost drip systems for small farmers increase yields and reliability of production system	Number of farmers families in target villages adopting micro irrigation (10 per village)	Micro irrigation activity reports
* Demonstrate and disseminate vetiver grass to enhance food and livelihood security (village and private)	Village level vetiver nurseries provide plant stock used to demonstrate VGT for enhanced food & livelihood security	10 vetiver nurseries operational	Activity reports and financial statements/nursery
* Create fruit tree nurseries	Improved and diversified fruit trees disseminated at village level	10 fruit tree nurseries established	Fruit tree nursery documentation Sales report
* Establish village level oil palm nurseries for provision to plantations	Village level palm nurseries provide plant stock to rehabilitate selected oil palm plantations	5 village nurseries established	Nursery activity reports
* Enhance marketing of non-timber forest products	Sustainable use of NTFPs contributes to village level livelihood and food security	3 NTFP sectors analyzed 5 training programs implemented	Survey documents Training reports
Introduce CBSM as an alternative seed-supply mechanism	Develop sustainable community-based seed systems	All villages have seed multiplication activities	Seed multiplication activity reports
Provide radio and TV programming for marketing and extension	To create TV and radio programming extending technical information, raising awareness and enhancing public relations	1 TV program broadcasted, 5 radio shows per years aired	TV/radio activity report
Improve fishing livelihoods			
* Strengthen fishing associations institutional and technical capacity	Fishing associations gain capability to sustainably manage and monitor status of fisheries resources.	Fishing associations adopt and enforce sustainable use regulations; FAs monitor status of fisheries resources	Evaluation report Participatory survey reports Meetings minutes, site visit reports
* Enhanced marketing and transport of sustainably harvested fish	Growing volume of fish products regularly shipped to provincial and national capitals.	Price & volumes of fresh, smoked, salted fish	Radio, TV and print reports Site visit, association and market reports
* Disseminate improved village fish preservation technology and practices	Access to and use of fish preservation technology expands	Decreased use of unsustainable artisinal fishing technologies. Expanded use of fish conservation technologies; credit volumes for fish conservation	Association reports Credit fund reports

OBJECTIVE #3: Strengthen rural credit and micro-finance activities to support productive investments in agriculture.			
Objective Level Indicators: • Volume and number of approved loans • Repayment / default rates			
ACTIVITIES	**INTERMEDIATE OBJECTIVE**	**INDICATOR**	**MEANS OF VERIFICATION**
Implement village-level agricultural savings and loan "mutuelles"	Village level credit institutions provide savings and loan opportunities in 5 provinces	5 saving & loan provincial programs operational, 5000 clients/province	Saving & loan institution reports Training reports
Support CBOs in the construction and management of input supply facilities	Revenue generating ag. input supply centers managed by CBOs serve communities	10 village agricultural input supply stores operational	Construction documents, financial reports Village management report

Annex 4: Logical framework indicator comparison before and after CLIFS project implementation

OBJECTIVE #1: Improve the functioning of private sector agricultural markets.			
Objective Level Indicators: • Increase in traffic volume in markets where feeder roads have been rehabilitated by the project. • Increase in knowledge of price information among consumers, transporters and producers in project areas. • Number of kilometers of roads rehabilitated • Change in volume of agricultural produce in targeted markets			
ACTIVITIES	**INTERMEDIATE OBJECTIVE**	**INDICATOR 2003**	**ACTUAL at PACD, 2006**
Reduce corruption that constrains development	Mobilize multi-stakeholder coalitions to assess and then implement a strategy to tackle the issue of corruption	Level of stakeholder satisfaction with process and results of anti-corruption work.	Reduced corruption along all CLIFS axes, road barriers completely disappear, IRM creates more than 75 CLATS under Relance Economique Project
Create corporate community partnerships (CCP)	Create a framework that identifies CCP opportunities and a strategy that fosters CC engagement opportunities	Creation of CCP web site; Level of use of website and multilingual directories; # CC partnerships created	Website created, maintained and operational, tens of thousands of hits, 0 formal CC created by website
Analysis of constraints to the promotion of improved agricultural technologies	Improved understanding of links between small holder producers and key commodities markets	10 villages surveyed; raw data report	Initial baseline survey implemented by ICC in 670 households across more than 60 villages,
Create functioning road & river user associations	Road users' associations organized and actively maintaining rehabilitated roads	10 road users associations created	4 road user (maintenance) associations, 2 CLEP and 2 CLER, 13 sub CLEPs; 203 river user associations grouped into 16 river user unions
Rehabilitate selected market feeder roads	Rehabilitate farm to market roads using low cost technology with maintenance by RUAs	75 km of rural roads rehabilitated	Hot spots along 25 km of rural roads rehabilitated including 2 bridges
Demonstrate village-level agricultural processing storage technologies	Identify and train farm families in the use of improved food processing technologies	At least 1 small scale food processing activity in every village	6 food processing sites selected, equipped and trained and community managed

OBJECTIVE #2: Increase the level and sustainability of production of agricultural lands and freshwater fisheries			
Objective Level Indicators: • Reduced harvesting of juvenile fish due to enhanced intra-fishing association enforcement of legislation enhances livelihood security. • Number of beneficiaries (direct & indirect) adopting production-enhancing agricultural technologies • Increase of fresh and conserved fish products leaving provinces for Kinshasa or Congo/Brazzaville. • Increased revenues for fishing association members			
ACTIVITIES	**INTERMEDIATE OBJECTIVE**	**INDICATOR**	**Actual at PACD, 2006**
Implement COAIT in selected villages	Systematically build Congolese community- level capacity to plan and undertake economic development activities	COAIT processes implemented in 10 project villages	COAIT processes implemented formally in 8 main villages and 8 satellite villages
Demonstrate & promote agricultural and agroforestry technologies.	Disseminate productivity-enhancing sustainable agro-forestry technologies	At least 1 demonstration in each project village	All principal tier 1 villages had at least one demonstration

* Provide community-based farmer-led extension training and support	Build the knowledge base and technical capabilities of Congolese farmers	Community led extension in at least 10 villages	Farmer led extension: each CLIFS household extended information to an additional 13 other households 14 villages with germplasm evaluation 10 villages with intercropping trials 17 villages with multi-strata trials
* Introduce Micro-irrigation for high value and subsistence crops	Low cost drip systems for small farmers increase yields and reliability of production system	Number of farmers families in target villages adopting micro irrigation (10 per village)	Micro-irrigation only adopted in 8 sites in Bandundu province and in Kinshasa
* Demonstrate and disseminate vetiver grass to enhance food and livelihood security (village and private)	Village level vetiver nurseries provide plant stock used to demonstrate VGT for enhanced food & livelihood security	10 vetiver nurseries operational	8 large nurseries established 95 smaller nurseries established
* Create fruit tree nurseries	Improved and diversified fruit trees disseminated at village level	10 fruit tree nurseries established	2 fruit tree nursery schools 33 fruit tree nurseries established, 264 households + 13 organizations received a total of 11483 seedlings in 2005
* Establish village level oil palm nurseries for provision to plantations	Village level palm nurseries provide plant stock to rehabilitate selected oil palm plantations	5 village nurseries established	10,000 oil palm seedlings distributed along tier 1 axes
* Enhance marketing of non-timber forest products	Sustainable use of NTFPs contributes to village level livelihood and food security	3 NTFP sectors analyzed 5 training programs implemented	NTFP subsector study implemented by ICC 201 cacao producers trained, 30 tons of cacao marketed by CLIFS
Introduce CBSM as an alternative seed-supply mechanism	Develop sustainable community-based seed systems	All villages have seed multiplication activities	73 villages begin in 2004 CBSM 28 villages with 48 CBSM associations harvest 3d cycle seed in 2006, more than 100 tons of seed multiplied over LOP
Provide radio and TV programming for marketing and extension	To create TV and radio programming extending technical information, raising awareness and enhancing public relations	1 TV program broadcasted, 5 radio shows per years aired	1 internationally shown 38 min. video in French/English produced by ABC 8 30 minute videos (French) by SEM 15 monthly radio broadcasts in the DRC All CLIFS training sessions filmed Thousands of color photographs on file
Improve fishing livelihoods			
* Strengthen fishing associations institutional and technical capacity	Fishing associations gain capability to sustainably manage and monitor status of fisheries resources.	Fishing associations adopt and enforce sustainable use regulations; FAs monitor status of fisheries resources	203 sustainable fishing associations trained 16 unions of fishing associations created Revision of MinAgri, Peche and Elevage administrative regulations on fishing implemented in 2006
* Enhanced marketing and transport of sustainably harvested fish	Growing volume of fish products regularly shipped to provincial and national capitals.	Price & volumes of fresh, smoked, salted fish.	
* Disseminate improved village fish preservation technology and practices	Access to and use of fish preservation technology expands	Decreased use of unsustainable artisinal fishing technologies. Expanded use of fish conservation technologies; credit volumes for fish conservation	All fishing village associations receive training in improved fish conservation technology: salting, drying and smoking

OBJECTIVE #3: Strengthen rural credit and micro-finance activities to support productive investments in agriculture.			
Objective Level Indicators: • Volume and number of approved loans • Repayment / default rates			
ACTIVITIES	**INTERMEDIATE OBJECTIVE**	**INDICATOR**	**Actual at PACD, 2006**
Implement village-level agricultural savings and loan "mutuelles"	Village level credit institutions provide savings and loan opportunities in 5 provinces	5 saving & loan provincial programs operational, 5000 clients/province	2 savings and loan associations MUCREMBA and MUCREFI active, with 1323 members: 1953 savings accounts worth $64,844, 1284 loans given out, 420 more in the pipeline, 95% repayment rate, $217,000 of loans disbursed plus in pipeline
Support CBOs in the construction and management of input supply facilities	Revenue generating ag. input supply centers managed by CBOs serve communities	10 village agricultural input supply stores operational	8 operational input supply stores, 161 management associations trained