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TRANSFORMING LIVES AND LANDSCAPES

ECOTRUST

Trees For Global Benefits (TGB) Project in Uganda

A Plan Vivo Carbon offset Project with Small-Scale Farmers in Bushenyi District

Annual Progress Report 2003/2004

A Collaborative program between

The Environmental Conservation Trust of Uganda (ECOTRUST)

Bio climate Research and development/Edinburgh Centre for Carbon Management (ECCM)

The World Agroforestry Centre (ICRAF)

National Biomass Study (National Forestry Authority)

Uganda Forestry Resources Research Institute

June 2004

Executive Summary

This Annual report provides an overview of what has been achieved in the process of developing a carbon offset project involving small-scale Farmers in Bushenyi district southwestern Uganda. The report traces the origin of the project, the discussions that led to the selection of the institutions involved in project implementation, achievements registered so far and prospects for the future.

During the 18 months in which the Ugandan partners have been involved setting up the project has generated a number of learning points that have helped ECOTRUST move the program planning to establishment phase. Primarily the project has so far enhanced the capacity of project implementation partners in the design and implementation of small carbon offset projects. The step by step, learning-by-doing approach has been very enriching to project implementation partners that include ECOTRUST, ICRAF, National Biomass Study and CARE as well as to the farmers. The pilot phase has demonstrated that carbon payments are a strong fiscal incentive to farmers for engaging in tree planting to meet their tree product requirements while contributing to climate change mitigation. This phase has also demonstrated the importance of setting up appropriate institutional structures for the effective administration and delivery of carbon-offset projects.

In addition, the project has created a reference point and benchmark for other potential carbon trade projects in Uganda. This has resulted into a lot of demands from other farmers within the project area and beyond to join the initiative. The carbon offset project administration tools have therefore been developed in a way that will allow scaling up into other areas.

Through contacts with BR&D, Tetra Pak UK was identified as a carbon buyer. Tetra Pak have agreed to purchase 3055 tonnes of carbon on an annual basis. This gesture brought confidence to the project-implementing partners with respect to the systems developed and the commitment is a springboard for the project to contribute to offsetting of carbon emissions by companies from the North.

The project faced a number of challenges that are at the same time opportunities for learning. initial funding for the first phase is critical. Although these funds came from ECCM and USAID, there are prospects to interest other partners in country and abroad. Indeed some progress has been made in raising funds to assist in establishment of baselines and facilitating farmer mobilization and capacity building from a number of potential sources.

There are of prospects for the success of the pilot Plan Vivo carbon offset project based on the interests that Ugandan farmers have and the need for companies generating carbon dioxide emissions from the North to offset their emissions through projects that demonstrate social and environmental benefits. The national level processes for the establishment of the Designated National Authority (DNA) that have reached an advanced stage in Uganda. This is yet another indicator towards creation of an enabling environment for project success. As the project progresses beyond establishment, then the necessary endorsement can be obtained from the DNA that will open the project to even work with activities that are CDM compliant.

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ACRONYNMS

BR&D	BioClimate Research and Development
BUDIFA	Bushenyi District Farmers Association

CARE	Cooperative Assistance and Relief Everywhere
CDM	Clean Development Mechanism
CoP	Conference of Parties
DNA	Designated National Authority
ECCM	Edinburgh Centre for Carbon Management
ECOTRUST	The Environmental Conservation Trust of Uganda
FID	Forestry Inspection Division
FORRI	Forestry Resources Research Institute
ICRAF	World Agroforestry Center
IGAs	Income Generating Activities
MFIs	Micro Finance Institutions
MoU	Memorandum of Understanding
MUIENR/NBDB	Makerere University Institute of Environment and Natural Resources/National Biomass Data Bank
NBS	National Biomass Study
NFA	National Forestry Authority
NFP	National Forestry Plan
NGO	Non-Governmental Organization
PRIME/West	Productive Resource Investment for Managing the Environment in Western Uganda
QEPA	Queen Elizabeth Protected Area
START	System for Analysis Research and Training
UFSCS	Uganda Forestry Sector Coordination Secretariat
UIA	Uganda Investment Authority
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
VERs	Verifiable Emission Reductions

Appendices

Appendix I	Sample Plan Vivo
Appendix II	Quarterly Work plan
Appendix III	Farmer application forms/expression of interest
Appendix IV	Carbon sale agreements

1.0 Background

The Environmental Conservation Trust of Uganda (ECOTRUST) has been coordinating a number of partners in the implementation of a pilot carbon-trading project that works with small-scale farmers in Bushenyi District to engage in tree planting and access funds from carbon trading. The project not only addresses conservation and climate change objectives but also takes on a poverty angle in its implementation approach. The project originated from the just concluded Uganda forest sector reform process where carbon trading was identified as one of the mechanisms for raising conservation finance to support tree planting in particular and sustainable development objectives for Uganda in general.

At the time of initiating the carbon trade project, ECOTRUST was already working with some of the farmer groups providing them with grants for carrying out conservation activities including tree growing and building their technical and organizational management capacities. The carbon initiative was a value addition intervention as it would further the attainment of farmer goals and supplement ECOTRUST's support to the farming communities.

The Plan Vivo project promotes tree planting activities under different land use systems such as woodlots, fruit orchards, and boundary planting while at the same time promoting income generating activities like beekeeping and livestock rearing. Emphasis has been placed more on indigenous tree species as a way of restoring on-farm tree diversity and supply of quality tree products to the farmers for their own use and for the market.

2.0 Project context

2.1 Project development

According to the Uganda National Forestry Plan (NFP) 2002, the government will develop a favorable investment climate for private and public investment in the sector. One of the main challenges, however, is to increase investment in order to ensure sustainability and increase future welfare from forest resources. The NFP was designed to create a positive investment climate for the private sector to contribute to forestry activities in the country. One of the proposed strategies to increase investment in the forest sector is implementation of carbon sequestration projects. Small-scale investment in-kind by local communities, in the form of labor, land and capital is also part of the sector's overall investment strategy. Carbon sequestration through forestry activities was provided for in the NFP against a background that although it is possible for Uganda to benefit from carbon-offset projects, there are limited financial and technical guidelines for carbon offset projects; what is available is only informal and not well structured and documented. The forestry plan therefore calls for exploring ways in which Uganda can develop sustainable forestry activities and create a comparative advantage for forest projects in Uganda. The following outputs were identified as required in order to create an enabling environment for carbon-offset projects:

- Baseline data for forestry in the context of carbon sequestration developed and made available to project implementers.
- Criteria and indicators agreed for forestry projects based on international principles and national policies
- An institutional home for approval of CDM projects established
- Land for carbon offset projects available and marketed
- The forestry fund established in line with CDM modalities
- Capacity in national institutions (government institutions, NGOs, private sector) to take advantage of carbon offset funding possibilities established.

In order to address some of the above, the Uganda Forestry Sector Coordination Secretariat (UFSCS) then commissioned a consultancy to explore ways of establishing a functional forestry sector carbon offset project. The Edinburgh Centre for Carbon Management (ECCM) who developed the Scolel Te project in Mexico, using the Plan Vivo system (www.planvivo.org), were contracted to assist in project development and capacity building for national institutions.

2.2 Project aim and Objectives

The project aims to produce long-term Verifiable Emission Reductions (VERs) by combining carbon sequestration with rural livelihood improvements through small-scale forestry/agro forestry activities.

The specific objectives are:

- To build the capacity of farmers and project implementation partners in the administration of carbon projects.
- To increase household incomes through carbon payments that would enable farmers meet costs of tree establishment to meet their tree products requirements while contributing to climate change mitigation.
- To conserve biodiversity by promoting planting of indigenous tree species

2.3 Project implementation approach and partner roles

The project adopted the Plan Vivo operating system to register and monitor carbon sequestration activities implemented by smallholder farmers. The project is implemented in selected communities in Bushenyi district as a pilot. In order to build capacity among project implementation partners and farmers, the project engaged a learning- by- doing approach where training sessions were organized from time to time as project implementation progressed.

2.3.1 Partner roles in project development and implementation

- **ECOTRUST** was identified as the project coordinator and fund administrator acting as a central archive and clearing house for all documentation and data generated by the project. ECOTRUST is also charged with the following responsibilities:
  - Maintain a project-scale database (tracking all farmer registrations, agreements, monitoring carbon accounting, carbon payments and sales, etc.)
  - Administering carbon payments (Certificates will be issued by BR&D)
  - Generate annual project reports
  - Conduct monitoring and evaluations of Plan Vivos
  - Act as a general point of contact and liaison among all partners
  - Explore possible funding sources
  - Enter into sale agreements with farmers through farmers' associations/organizations

- **CARE Uganda** acted as a service provider to farmers until December 2003. They participated in community-level capacity building and training, and planning for and creating Plan Vivos with individual farmers in Bushenyi District. Activities included selecting farmers, conducting a socio-economic assessment, registering farmers, drawing up Plan Vivos with farmers and assisting with mobilization for seed collection and nursery operations. CARE's support at the field level ended at the end of 2003 when its Queen Elizabeth Community Conservation Project (QEPA) ended. CARE's work was subsequently taken over by ECOTRUST.

- **ICRAF/FORRI/NBS** did some work towards the development of technical specifications to the Plan Vivo standard in consultation with CARE Uganda, ECOTRUST and ECCM. Specific roles included:
  - Definitions of selected forestry/agroforestry systems -taking into account farmer requirements and inclusion of native species
  - Specification of management requirements
  - Definition of baseline biomass conditions
  - Compilation of biomass data for specified forestry systems
  - Compilation of indicators for carbon monitoring

- **ECCM/BR&D** provided backstopping to ICRAF/FORRI in carbon modeling and carbon baseline specification, provided ECOTRUST with training in carbon accounting (establishment of database), provided CARE with a set of guidelines for initial pilot phase implementation and also facilitates sales of carbon, including production of marketing materials. BR&D will issue certificates to carbon buyers and conduct an annual review to ensure that the project is meeting Plan Vivo projects. ECCM will also work with IUCN and UNEP to expand the international recognition of the Plan Vivo system.

- **UFSCS/NFA** provided initial financial support to ICFAF to conduct activities related to development of technical specifications and establishment of tree nurseries until the end of June 2003. This was later extended into 2004.

3.0 Achievements

- **The learning by doing approach.** The partners decided to adopt a learning-by-doing approach in project implementation as the best way to enhance the management and technical capacities of project partners. A number of training workshops, planning meetings and discussions were held. As part of the learning curve two ECOTRUST staff have participated in activities outside the country. Byamukama Biryahwaho visited the Scolel Te Plan Vivo project in southern Mexico, while Joy Tukahirwa participated in the first meeting of the Three Convention Partnership that ran alongside the UNFCCC CoP 9 in Milan, December 2003. The two activities have enriched the capacity in project coordination and development.

- **Tools for managing carbon transactions developed.**

One of the outputs of the pilot phase was to develop tools to use in the management of carbon transactions between farmers and ECOTRUST as well as between ECOTRUST, carbon buyers and other partners. The following tools have so far been developed:

- Farmer application forms/Expression of interest (Appendix III), Page 26
- Carbon sale agreements with Farmers (Appendix IV), page 28
- Information requirements on each Plan Vivo/ tree planting plan (Appendix V), Page 31
- Framework for the database and what should be within the database (Appendix VI), Page 33
- MoU between ECOTRUST and BR&D regarding carbon purchase by Tetra PaK. The purpose of this agreement was to establish and maintain a partnership between ECOTRUST and BR&D for technical support for the implementation of a Plan Vivo system for carbon offset management in Uganda initially focusing on Bushenyi District. The agreement was also to enable BR&D request funds on behalf of ECOTRUST for the purchase of Plan Vivo carbon certificates and to clarify terms and conditions under which ECOTRUST and BR&D are to relate in the implementation of a Plan Vivo project.

The tools developed have put ECOTRUST and other project partners in a position where subsequent farmers can be taken on with minimum delays. In addition, the process has involved a lot of consultation with different parties like National level conservation agencies, Conservation NGOs, Local government leadership and technical staff, which has resulted in improved understanding of how the system operates.

3.1.1 Working through Organised Farmers' groups

ECOTRUST is currently working with organized groups like Bitereko Women's Group, Ndangara Twimukye Group. Each group has registered members under one leadership. The groups have contact persons who help in the process of communication and project implementation. This group arrangement serves the purpose of internal monitoring and evaluation of project activities as per the Plan Vivo standards. Each member is self-motivated and result- oriented as they envisage the success of the group as a whole. The group approach is gender sensitive as reflected by the number of men and women in each group. Out of the thirty (30) farmers registered, there are five (5) women.

3.1.2 Planning and Coordination.

- In order to improve planning and coordination of the project, a number of meetings have been held to develop plans that guide project implementation. The very first plan was the implementation plan that was developed during a training session facilitated by ECCM. Subsequently additional plans focusing looking at detailed activity implementation have been developed.
- A detailed annual work plan for the calendar year 2003 was developed based on meeting outcomes of a partners meeting and a joint farmer/ partner's workshop held in January 2004 and December 2003 respectively. It is planned that such workshops continue being organized as a way of coming up with joint decisions and project implementation scheduled for the following year.

- In addition to the annual work plan, quarterly partner planning meetings were held to review progress with actions agreed upon in the stakeholders' workshop and also develop plans for the incoming quarter (for example appendix 11, page 23). This has helped in focusing activity implementation at the operational level.

- Besides the above, monthly planning meetings for ECOTRUST staff are conducted where the regional coordinator provides monthly updates and activities for the coming month reviewed. These meetings also help in internalizing and envisioning the next course of action rather than wait for end of quarter.

3.1.3 Database development and management

- The project database was developed based on the framework provided by ECCM. The database caters for future expansion into new areas and is currently being updated with new information. Information on carbon sequestration potential and payments to each farmer was compiled and has been incorporated in the database.

Farmer details 17/02/04

Farmer ID	Name	Sex	Land ownership	Group name	Date of appn
402/S02/001	Ntambirweki Eva	F	☑	Bitereko Women's	05/09/03
402/S02/002	Ntsigaireho Betty	F	☑	Bitereko Women's	05/09/03
402/S02/003	Kato Elisaph (Mrs)	F	☑	Bitereko Women's	05/09/03
402/S02/004	Kantereine Federasi	F	☑	Bitereko Women's	05/09/03
402/S02/005	Ahimbisibwe Beatrice	F	☑	Bitereko Women's	05/09/03
402/S16/001	Agaba Moses	M	☑	Individual	
402/S16/002	Birakwate	M	☑	Individual	
402/S16/003	Kamugisha	M	☑	Individual	
402/S16/004	Bagambe Francis	M	☑	Individual	05/09/03
402/S16/005	Bikanshobera Patrick	M	☑	Individual	05/09/03
402/S16/006	Kizito Kebirungi	F	☑	Individual	
402/S16/007	Boreka vicent	M	☑	Individual	
402/S16/008	Byarufu Fransis	M	☑	Individual	05/09/03
402/S16/009	Bahigana Violet	F	☑	Individual	05/09/03
402/S16/010	Matuga Joseph	M	☑	Individual	05/09/03
402/S16/011	Ayinake Didas	M	☑	Individual	05/09/03
402/S16/012	Besekya Hilary	M	☑	Tropical Bee Care	05/09/03
402/S16/013	Mugisha Akleo	M	☑	Individual	05/09/03
402/S16/014	Tibatunga Horistus	M	☑	Individual	05/09/03
402/S16/015	Muhoozi Zabron	M	☑	Individual	05/09/03
402/S19/001	Tusasirwe Matiya	M	☑	Individual	05/09/03
402/S19/002	Bushoborozi Benon	F	☑	Individual	05/09/03
402/S19/003	Buherero Milton	M	☑	Individual	05/09/03
402/S19/004	Kapasi Girivaziyo	M	☑	Individual	05/09/03
402/S19/005	Turyasingura M	M	☑	Individual	05/09/03
402/S28/001	Kamusiime group	M &	☑	Kamusiime memo	05/09/03
402/S28/002	Turyahikayo Wilson	M	☑	Individual	05/09/03
402/S28/003	Salongo Batekyereza	M	☑	Individual	
402/S28/004	Tibanyendera Jolly	F	☑	Individual	05/09/03
402/S28/005	Tagaba John	M	☑	Individual	05/09/03
402/S28/006	Kateeba Eric	M	☑	Individual	05/09/03
402/S28/007	Bamwesigire Maxm	M	☑	Individual	05/09/03
402/S28/008	Birungi Evaristo	M	☑	Individual	05/09/03
402/S28/009	Turyomurugyendo M	M	☑	Individual	05/09/03

- A description of the database has also been developed to guide the user on what is contained in each table. The tables capture information to deal with farmer details, farmer location, applications, group information, payments,

systems and purchases**.** The farmer details table provides information about each farmer. It has an assigned code for each farmer, the location of the farmer, group affiliation or individual, sex, land ownership status, date of receipt of application, date of review and approval status. The farmer location table has information about the location of the farmer including Parish, Sub County, County and District while the payments table shows purchase, date of sales and the payment in US $ for each farmer.

- The group information table names the group, the group identification number, contact person, legal status, location and address. The purchase table names the purchaser (to date only Tetra Pak), purchase identification number (e.g. TPK 01 for the first purchase), date of purchase, carbon volume purchased and the price in US dollars.
- The systems table contains information for all forestry systems used within the project. The carbon sequestration potential in tonnes of carbon per hectare (from technical specifications) is stated for every system, each system is given a code and a brief description of the management is included.
- Overall, the database provides a framework for tracking carbon sales, supply from the farmers and purchases by carbon buyers. The database structure is in such a way that carbon supplies from each farmer are tracked right from the farm plot through estimation of the sequestration potential to payments. Like-wise the funds from each carbon buyer are tracked from when a purchase is effected through the farmers that are going to supply the carbon into reports of how much has been supplied resulting into issuing of an emissions reduction certificate.

3.1.4 Finance management

- **Improved budgeting for the carbon offset project activities**. ECOTRUST as a project coordinator felt it was important that detailed budgets are developed to help in fundraising and also tracking how much money is being spent on different project activities. Based on the annual work plan, a conservative budget was developed which has been guiding our expenditure on the project.

- **Partner contributions to funding project activities.** While it was originally anticipated that funds would be secured to enable implementation of project activities, this was not forthcoming. Except for funds that were provided by the then UFSCS to ICRAF for development of technical specifications, the rest of the partners have been contributing their own financial resources towards project implementation.

  - ECOTRUST has so far spent up to US $ 7,133 **(3987.6)** in direct costs on project activities to include per diem, fuel and training. In addition ECOTRUST has continued to house the project and pay staff salaries.

ITEM	UG SHS	US $
Field travel	3,135,945	1742.2
International travel	2,924,576	1624.8
Workshops	1,117,000	620.6
Total	**7,177,521**	**3987.6**

ECOTRUST considers this as a worthwhile investment that will bring returns through growth of it program portfolio translating into increased support to farming communities.

  - CARE has also spent US $ 7927.8 in direct costs during project start up when they undertook field coordination. This includes a support to a socioeconomic study that informed project implementers of the socio-economic issues to consider during the early stages of project development.

ITEM	Ug Shs.	US $
Field coordination	730,000	405.6
Workshops	2,290,000	1,272.2
Socio-economic survey	11,250,000	6250
Total	**14,270,000**	**7927.8**

  - ECCM/BR&D have been providing the required technical guidance on a pro bono basis. In addition, ECCM/BR&D have helped in raising funds from a carbon buyer- Tetra Pak.
  - NBS has continued to pay salaries of John Begumana who is helping with development of technical specifications beyond the ICRAF support.

- Farmers have on their part invested in labor and set aside land for tree planting. Some Farmers have also raised and/or procured their own tree seedlings. Estimates of how much each farmer has spent will be obtained during the baseline study in the component of the socio-economics.

➢ **Funds from a Carbon buyer – Tetra Pak**

- Through BR&D contacts, a carbon buyer Tetra Pak was identified. Under the arrangement, Tetra Pak will purchase eleven thousand two hundred tonnes of carbon dioxide (11200 tCO_2) at a cost of $ 3.83per tone. This translates to $ 36,666 after subtracting 14.3 % that goes to BR&D.
- Of the annual amount ($ 36,666) for carbon purchases ECOTRUST received 10,990 from Tetra Pak through BR&D. A detailed analysis of payments for farmers was done which provided how much money will go to farmers during the payment years (0, 1, 3, 5 & 10) and the associated administrative costs. Details are show in the following table.

Table 1. Analysis of fund utilization for the first Tetra pack purchase

Years		**0**	**1**	**2**	**3**	**5**	**10**	**Total**
Distribution		30%	20%	20%	10%	20%	10%	110%
Payment to Farmers		6,607.56	4,405.04	4,405.04	2,202.52	4,405.04	2,447.24	24,472.45
							Risk Buffer	
Administrative costs		3,658.03	2,438.69	2,438.69	1,219.34	2,438.69	-	12,193.44
Total		10,265.59	6,843.73	6,843.73	3,421.86	6,843.73	2,447.24	**36,665.89**

* The calculation assumes that administrative costs will be incurred in the year when payments are made to farmers.

- Some funds have already been spent on payments to farmers and on some project support activities. The following table shows how these funds have been utilized.

Table 2: Summary expenditure of funds for carbon purchases

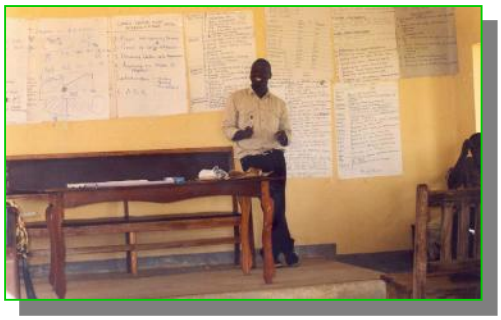
Item	Amount US $	Remarks
Initial payment to Farmers	4255.30	30 % based on conservative carbon estimates
Administrative costs	133.69	Used to facilitate a farmers workshop on carbon estimations and final review of carbon sale agreements and bank charges.
Total	**4388.99**	
Balance not yet spent	**6591.01**	Part of this will be spent on payments for additional farmers who have already applied

- During the coming quarter, additional funds will be spent on initial payments to additional farmers and on project support through training to farmers and tree nursery technical and management support.
- Payments to farmers were conducted through their Micro Finance Institutions (MFIs) located in their villages where each farmer operates an account. Payment through MFIs will help in reducing costs and risks involved with paying cash to the Farmers. Besides this will enable farmers to save some money and also be eligible for accessing credit. We shall in future explore possibilities of participating farmers accessing credit initially using carbon payment as collateral and then subsequently the tree products.

- Receiving funds from the carbon buyer and subsequently conducting payments to farmers enabled us improve the database through establishment of purchase and payment tables. A code was assigned to this carbon purchase as TPK 01 that will help ECOTRUST in tracking the farmers whose payments are supposed to be assigned to this particular purchase. Subsequent purchases will be treated in the same way.

3.2 Field Coordination

- Initially CARE Uganda, as a service provider to farmers, was charged with community–level capacity building and training, planning for and creating Plan Vivos with individual farmers in Bushenyi District. CARE was at the time implementing a community conservation project in and around Queen Elizabeth Protected Area (QEPA), which closed at the end of 2003. ECOTRUST has since taken over CARE's roles.
- ECOTRUST then recruited Mr. Martin Asiimwe as ECOTRUST's Regional Project Coordinator responsible among other roles to oversee the field coordination activities of the carbon project and other ECOTRUST supported projects in the Southwestern region.



- In order to ease coordination farmers are approached through organized groups. Where farmers were not in organized groups, these are now emerging with one group having formed and are working on setting up internal governance structure like a constitution to guide them.

3.2.1 Trees planted

- According to the farmer's tree-planting plans (Plan Vivos) a total of 13,836 trees were expected to be planted by farmers. A review was conducted for each plan and planting spacing adjusted with guidance from ICRAF and NBS staff. The numbers were adjusted to 12,548 after revising their tree spacing and all these have been planted.

- Most farmers seem to prefer fast growing tree species such as *Grevillea robusta, Prunus africana and Maesopsis eminii*. Appendix VII (Page 34) shows the different species that have been planted by the farmers.

3.2.2 Monitoring

- A carbon-monitoring framework has been developed to guide the assessment of carbon stocks. Partners have also been trained in the working of the Plan Vivo system and as a result, there is in-country capacity for management of carbon sales.
- Initial tree monitoring was conducted prior to conducting carbon payments. The target to meet in order to effect first payment was at least half of the plot planted as described in the Plan Vivo. The monitoring exercise establishes the percentage of the plot planted, the number of trees, the different tree species compositions and the area planted.

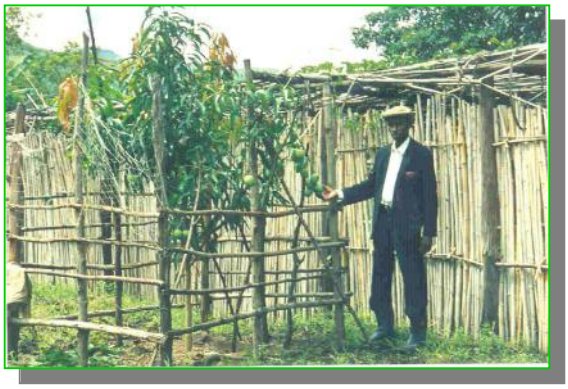
3.3 Development of technical specifications

Technical specifications were developed by ICRAF/FORRI/NBS based on agro forestry/forestry systems and tree species preferences by farmers in Bushenyi District. Others included:

- **Definition of baseline biomass conditions**. As starting point, a survey was conducted where every potential farmer's plot was visited and an assessment of the biomass on the plot carried out.

In addition, site conditions were assessed so that the farmers could be guided on site suitability for the tree species selected. The farmers then pointed out their preferred tree species and forestry/agroforestry system.

- **Compilation of biomass data for specified forestry systems**. Using the available growth data for the different tree species, biomass accumulation was estimated for a given class of trees. These were categorized into fast, medium and slow growers. Growth curves and therefore carbon accumulation data for each group of tree species were constructed that guide estimation of carbon storage for the different categories. Conservative carbon estimates were then made based on the tree species with low carbon so as to enable transaction of the initial carbon payments. These figures will be adjusted based on the specific species combinations that each farmer has planted.
- **Specification of management requirements.** Based on the tree species selected, the technical team guided farmers on the tree spacing and therefore trees densities per hectare. The guidance provided helped in adjusting the tree numbers originally provided in the Plan Vivos.
- Basing on the review of Plan Vivos, it can be concluded that most farmers preferred agro forestry tree species of short rotations and mixed woodlots. Preferred species comprised those that provide short-term benefits like firewood and fruit, while awaiting the long-term benefits of timber. ICRAF/FORRI/NBS also advised on nursery and seed production operations and the results are that farmers have expressed interest in raising their own seedlings and setting up commercial tree nurseries.



3.4 Marketing of carbon and fundraising

As pointed out in section 2.3.1, one of the activities that were supposed to be carried out was development of marketing materials and raising funds for carbon purchases. BR&D facilitated the

identification and eventually secured carbon purchase from Tetra Pak. This is well appreciated by all partners in the project.

ECOTRUST submitted a proposal worth US $ 23,000 to START, (System for Analysis, Research and Training) to carry out an extensive research in Southwestern Uganda for establishment of a regional land use baselines. The study will assess land use/ land cover changes, socio-economic drivers and associated carbon fluxes in the region, which will inform the project of key considerations. START has indicated that the proposal review has advanced. ECOTRUST will collaborate with ICRAF, NBS, Makerere University Institute of Environment and Natural Resources- National Biodiversity Data Bank (MUIENR-NBDB) and ECCM.

In addition, ECOTRUST is exploring other opportunities for linking with carbon buyers. For example at the request of the Uganda Investment Authority – UIA - (UIA is Uganda's clearinghouse for investors coming to invest in the country) through support from the World Bank capacity building project for developing countries in carbon trade, the project was earmarked for marketing at the German Carbon Expo 2004 that took place from June 9 – 11 in Cologne Germany. ECOTRUST prepared posters and fliers that were exhibited at the Expo. Initial feed back from those who participated in the Expo indicates that a number of carbon buyers showed interest in working with the project.

ECOTRUST is also seeking funds from PRIME WEST – a USAID Project to support carbon trade initiatives. The Carbon initiative will provide strong input towards the goal of Productive Resource Investment for Managing the Environment (PRIME/West)) to increase economic opportunities for rural communities and in USAID strategic Objective seven (SO7) of increasing household income, creating off-farm enterprises and generating new jobs.

4.0 Challenges

- Currently, there is no policy in Uganda for setting standards and regulating carbon management activities and projects. This project is the first practical project working with smallholder farmers and contributing to setting up systems and standards. Having a policy and standards in place would enhance the coordination and marketing of such activities and other interested partners (including in-country partners) would participate.

- Working with small subsistence landholder farmers requires substantial resources for technical backstopping and training. Producing enough tonnes of carbon will require many farmers on board. Smallholder farmers have limited skills in tree planting and therefore require rigorous training. The administration fee provided is insufficient to meet this demand. This requires additional funding not yet identified.

- Coordinating all the partners (ICRAF, NBS, CARE etc) has been a challenge especially with regard to meeting deadlines. Each of the partners in the process is contributing and controlling their own budgets. Whereas attempts have been made to develop joint plans, delays have been experienced in the implementation of the plans as the different partners concentrate on other priorities.
- The learning by doing approach requires time, commitment from the partners and patience. It is a process that starts with self-education, education of the partners and then implementation. Often times mistakes, adjustments and re-adjustments are made in the implementation process. It becomes imperative to have all the partners on board to realize expected results. The bottom line is that this takes time and delays the realization of the expected outputs in time.

- Whereas ECOTRUST adopted the Plan Vivo system that has been tested in Mexico, it is important to have room for flexibility to cater for the interests and conditions of the farmers in Uganda. For

example farmers would prefer payments to be made up to only five years instead of ten years and that initial payment should be at least 40 % to facilitate initial investments.

- There is need to focus on addressing the livelihood needs of the farmers as a primary priority. Funding for carbon activities should reflect this focus. For instance, carbon funds paid to a farmer with one hectare of a woodlot should be complemented with additional support for starting an Income Generating Activity (IGA) within the woodlot to boost his incomes e.g. bee keeping. This would motivate the farmers to keep the trees while meeting his/her livelihood needs hence sustainability.

5.0 Future plans

- Besides the above-mentioned challenges, ECOTRUST is committed to finalize development of project management systems and structures, with emphasis on the administrative structure and the database.
- There is also need to develop and implement a comprehensive monitoring plan that involves farmers themselves. As the project grows, ECOTRUST envisions an increasing workload to monitor all the farmers and it would therefore be appropriate and more cost-effective to involve the farmers themselves. In addition, ECOTRUST is interested in developing more marketing tools and establish links with other carbon buyers. It is after establishing a minimum number of carbon tones sold per year that the project will be able to run on its own.
- With availability of funds, ECOTRUST will contribute to on-going activities for development of an institutional and policy framework for domestication of CDM in Uganda in addition to scaling up project activities beyond one district.

6.0 Conclusion

- ECOTRUST and partners have made considerable progress towards the development of a pilot carbon offset project in Bushenyi district. The achievements made are attributed to the partnership and learning by doing approaches adopted.
- During the first year our experience suggests that carbon payments can provide market incentive to farming communities to carry out and maintain tree-planting activities.
- The experience so far shows that NGOs can be a good vehicle for the delivery of carbon-offset projects in the voluntary carbon market. The need to build on existing structures rather than establish a new institution to manage an activity like this one could also also yield results, although most likely not as much would have been achieved so far. The fact that ECOTRUST, CARE, NBS, ECCM -and ICRAF took on this project using existing human and financial resources should be not be underestimated.

- The important role that was played by ECCM/BR&D in introducing the project to Ugandan partners and the continued technical guidance cannot go unmentioned. The experience that they have accumulated over the years has enabled the project to take some short cuts in a number of cases.

- ECOTRUST's experience so far indicates that carbon sequestration projects can significantly contribute towards the farming communities meeting their development objectives while contributing to the mitigation of climate change.
- There is a lot of demand from farming communities and other partners in Uganda to join this exciting initiative. This will require consolidation of achievements made so far and enhancing capacity of people who would provide technical guidance to farmers for scaling up to other areas.

- Establishment of systems and procedures for the management of carbon offset projects like this one requires substantial reliable start up funding for the initial activities which can not come from

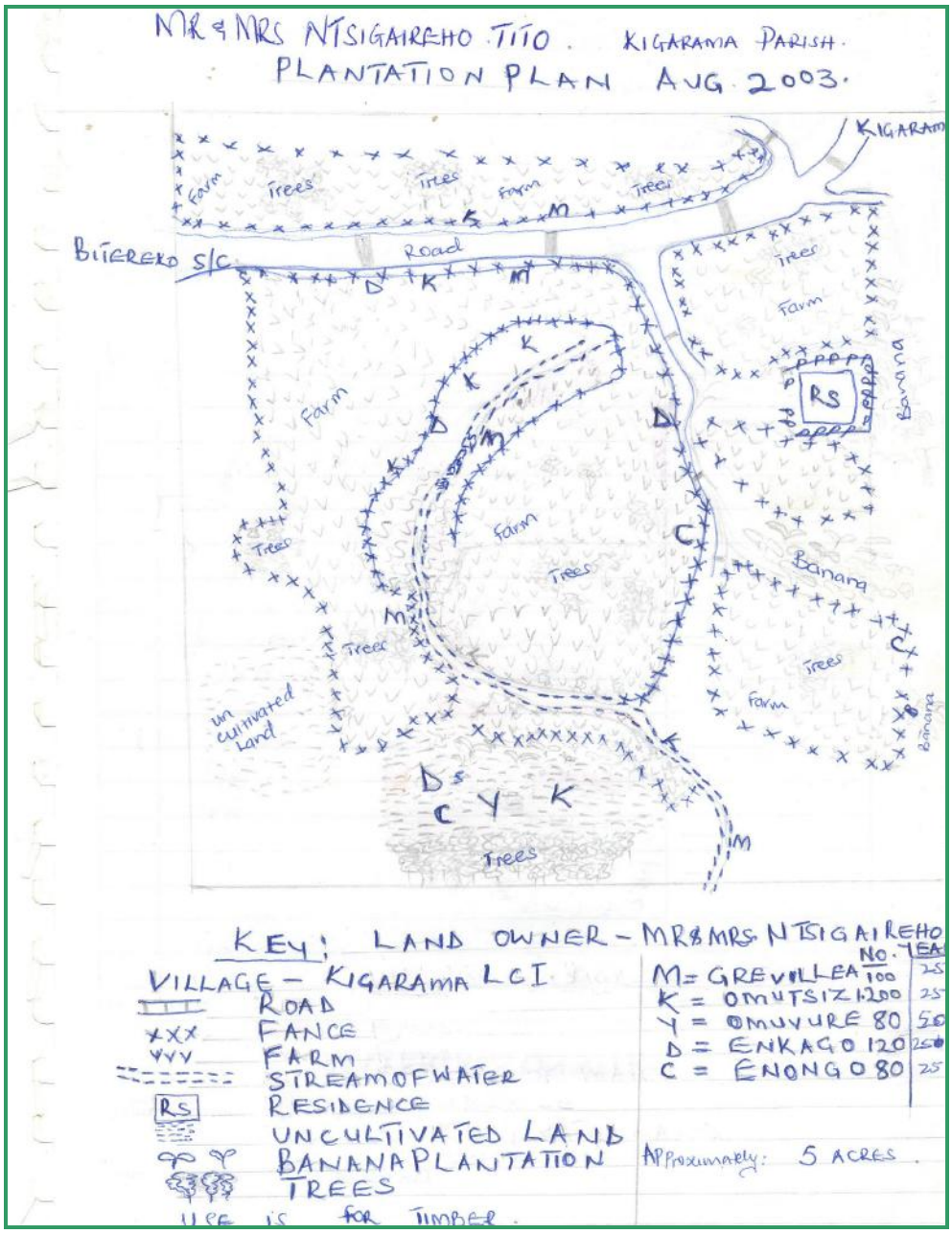
carbon sales but from development assistance programs. It is important therefore that development programs consider supporting the establishment phases of carbon projects.

- The emerging carbon market provides opportunities for scaling up this project. Through contacts with the Ugandan CDM focal point and others, a number of potential carbon buyers have been identified. Working with them will however require consolidating this project so that we use as a showcase and therefore seek arrangements for scaling up.

APPENDICES

Appendix I:

Sample Plan Vivo



Appendix II:

Action plans for Carbon/ Tress for Global Benefits (TGB) Initiative 2004

Activity #	Activity	Time	Responsible party
1.	Seed collection	Jan. – 04	ICRAF / Farmers
2.	Supply of tree seedlings	Nov. – Dec 03	ICRAF/Farmers
3.	Management of already planted seedlings – weeding, fencing off	Nov. – Continuous	Farmers
4.	Establish tree nurseries and undertake their management	Jan. – Aug 04	ICRAF/Farmers
5.	Conduct first Monitoring	Dec. 03	ECOTRUST / Farmers
6.	Signing agreements and receive first payment	Jan 04	Farmers and ECOTRUST
7.	Clearing land for 2nd planting	Jan – Feb 04	Farmers
8.	Conduct 2nd planting	Sept. – Dec 04	Farmers
9.	Formation of tree farmers program Ass.	May 04	All farmers
10.	Implementing association program	June – Aug 04	Farmers
11.	Clearing land for 3rd planting	June – August	Farmers
12.	Conduct 3rd planting	Aug – Dec 04	Farmers
13.	Conduct second Monitoring	Dec. – 04	ECOTRUST / Farmers
14.	Attend activity review meetings	Jan, April, June, September & Dec 04	
15.	Mobilizing more farmers to join the program	Nov. 03 - Continuous	ECOTRUST

Work plan for March – June 2004

Major Activity	Detailed Activity	Respons. Person	Support	Time Frame (Months)			
				March	April	May	June
Develop systems for the management of carbon funds	Develop general breakdown for use of carbon funds	PO-SP	FC	X			
	Develop detailed budget for utilization of administrative funds	PO-SP	FC	X			
	Open a shilling account for movement of funds to Farmers & operations	FC	ED	X			
Undertake all the necessary preparations to facilitate payment to farmers	Ensure that ICRAF/FORRI submit draft technical specifications	PO-SP	ED	X			
	Develop summary information for all the plan Vivos	PO-SP	Intern RC	X	X		
	Make an estimate of carbon sequestration potential based on the draft technical specifications	PO-SP/RC	ICRAF/FORRI	X			
	Fill all the information in the draft carbon sale agreements	PO-SP	RC/intern	X	X		
	Discuss Carbon sale agreements with Farmers	RC	PO -SP		X		
	Sign carbon sale agreements with farmers	PO-SP	RC; ED		X		
Add information to the carbon database	Collect information from each farmer on numbers of trees planted	RC	PO - SP	X	X		
	Make updates on each table based on latest information available	PO-SP	Intern	X	X	X	X
	Establish new tables and design additional data collection sheets	PO-SP	Intern	X	X	X	X
Support the evolution of an administrative/ institutional structure for delivery of the carbon project	Provide training in institutional development/strengthening	Byarugaba			X	X	
	Conduct a biannual farmers workshop for information sharing	RC	PO-SP; GM				X
	Develop a monitoring program with participation of farmers	M &E	PO-SP; RC		X	X	X
	Provide training to 'local technicians' in tree/plan Vivo monitoring	PO-SP	RC		X	X	X
Provide technical and logistical support to farmers in tree raising	Develop a tree nursery management strategy with farmers	RC	PO - SP	X	X		
	Develop a budget for supporting the tree nurseries	PO-SP	RC	X			

Major Activity	Detailed Activity	**Respons. Person**	Support	**Time Frame (Months)**			
				March	**April**	**May**	**June**
and management	Provide technical and logistical support to the farmers	RC	PO - SP	X	X	X	X
Mobilize additional resources for the management of the carbon project	Develop a carbon initiative component under prime west	PO-SP		X			
	Explore possibility of recruiting current grantees into the carbon initiative	RC	PO-SP	X	X	X	X
	Identify possible funding sources and develop concepts/proposals for support	ED; BA	PO-SP; BR & D	X	X	X	X
	Mobilize funds from Carbon buyers	ED; BA	PO-SP	X	X	X	X
	Negotiate sale agreements with carbon buyers/intermediaries	ED	PO-SP: LA				X
Conduct activities for the scaling up of the carbon initiative	Conduct sensitization meetings for new groups/farmers	RC	PO – S P ICRAF			X	X
	Assist farmers to develop Plan Vivos	RC	PO – SP ICRAF			X	X
	Conduct an evaluation of the Plan Vivos	PO - SP	RC; ICRAF				X
	Review the Plan Vivos and provide feedback	PO – SP	RC				X
	Conduct registration of new farmers	PO – SP	Intern			X	X
	Enter carbon sale agreements with new farmers	PO – SP	ED; RC				X
	Conduct a baseline study on all participating groups/farmers	PO – SP	RC, M&E		X	X	X

Appendix III:

Farmer application forms/expression of interest

THE ENVIRONMENTAL CONSERVATION TRUST OF UGANDA
APPLICATION

Farmer details

I.....Age…… of village (LC1)……

Parish (LC11)…….Sub-county (LC 111)……..hereby express my interest to participate in Plan Vivo program for Carbon Management. The tree species I intend to plant include:

1…….. 2…….

3…….. 4……..

5…… 6…….

The plot to be planted is located in (LC1)……Parish (LC11)……..

(LC111)…….and is about……(Hectares/acres) under. …… type of ownership.

I have gone through the Plan Vivo induction training and I am sure of my decision. My family has pledged to work with me (support me) throughout the processes. I promise to cooperate with ECOTRUST and her partners for the success of the program.

Yours sincerely,

Name……Age……..signature……..

Position in family: …….

Family members:

No.	**Name e.g.** **Maria**	**Position e.g.** **Wife**	**Age**	**Sign/place** **thumb**
1				
2				
3				

Proof of land tenure

I confirm that Mr/Mrs……..owns land in

(LC1)……...(LC11)……(LC111)……..as

his/her own land and has no obstacles to using it or transferring it. I stand as affidavit.

…….

Name of Chairman LC 1 where land is located

Signature and stamp

Appendix IV:

Carbon sale agreement

The Environmental Conservation Trust of Uganda

Agreement for provision of Carbon offset services

THIS AGREEMENT is made this ……day of …….. 2004 BETWEEN **THE ENVIRONMENTAL CONSERVATION TRUST OF UGANDA** of P.O.BOX 8986 Kampala (hereinafter referred to as ECOTRUST) on the one part AND …… of …….. Village ……Parish…… Sub-county…… District (hereinafter referred to as "**the Farmer"**) where the context so admit include their respective successors in Title and or Assignees.

WHEREAS ECOTRUST is an Environmental non-governmental Organization set up for conservation purposes in Uganda;

AND WHEREAS the said ECOTRUST has agreed to buy Carbon offset services from the Farmer by way of a Plan Vivo project at the price and conditions herein appearing,

AND WHEREAS the Farmer is the owner of a piece of land described in **TABLE 'A'** in the Schedule ATTACHMENT 1 herein appearing, AND WHEREAS the said Farmer has agreed to produce estimated carbon tonnes described in **TABLE 'B'** to ATTACHMENT 1 by planting, using and maintaining the land herein described under forestry system attached to the plan for the period herein stipulated;

NOW THEREFORE THIS AGREEMENT IS WITNESSED AND IT IS HEREBY AGREED AS FOLLOWS:

1. The purpose of this agreement is to provide terms and conditions agreed upon between the parties for the sale of carbon through the process pursuant to the Plan Vivo Project in Uganda.

2. This agreement shall remain in force for the period described in ATTACHMENT 1 hereof.

3. It is agreed between the parties that this Agreement shall be binding in full force upon the successors in title, nominees and or assignees under whatever circumstances. And that the Farmer or their successor in Title undertakes to inform ECOTRUST of any change in land ownership

4. The agreed purchase price per tonne of carbon shall be paid at the rate described in ATTACHMENT 1 hereof which shall be paid to the purchaser after due verification of monitoring targets specified herein.

5. The Farmer shall maintain the forestry system described in the site registration for a minimum of 25 years of this agreement and undertakes to maintain the same throughout the said period.

6. The Farmer undertakes and agrees to deposit 10% of his/her carbon in a carbon risk buffer maintained by ECOTRUST.

7. The Farmer shall sell only the carbon in his/her account with ECOTRUST. Any carbon produced beyond the agreed amount shall not be the responsibility of ECOTRUST to purchase. However ECOTRUST may where possible facilitate the Farmer to obtain other purchasers for the extra carbon tonnes produced.

This agreement will not be legally binding in the event that ECOTRUST can provide evidence of breach of contract by the farmer.

FOR ECOTRUST	**FOR FARMER**
Signature ……	Signature: ……..…….
Name: ……..	Name: ……
EXECUTIVE DIRECTOR	
Date: …….	Date: ……
WITNESSED BY	**WITNESSED BY:**
Signature:……..	Signature: ……
Name: ……	Signature:…….
Title: ……	Title: …….
Signature:……..	Signature: ……
Name: ……	Signature:…….
Title: ……	Title: …….
Signature:……..	Signature: ……
Name: ……	Signature:…….
Title: ……	Title: …….

ATTACHMENT I AGREEMENT DETAILS

The conditions specified in this contract apply to all sites described in the Plan Vivo and registered by the Farmer with ECOTRUST for the provision of Carbon offset services.

Your Plan Vivo was assessed by ECOTRUST and has been approved for registration with the Carbon Fund with the following details:

TABLE " A" FARMER DETAILS

Name of Farmer	
Organization/Group/Individual	
Parish/Village – LCI	
Sub county	
District	
Farmer Code	
Estimated size to be planted (ha)	
Location of land	
Purchaser	
Total Carbon offset potential (tC):	
Amount of carbon for sale (90% of total)	
Price US$ per tonne	
Total US$ for entire carbon purchase	

Payments will be made upon the verification of monitoring targets according to the following schedule.

TABLE "B" SCHEDULE OF PAYMENT

Date of Monitoring	Monitoring Target	Payment (%)
Year 0	33% Plot planted as described in the plan Vivo	30 %
Year 1	66% Plot planted as described in the plan	20%
Year 3	100% of the Plot planted. Survival not less than 85%	20%
Year 5	Average DBH not less than 10 cm.	10%
Year 10	Average DBH not less than 20 cm.	20%
TOTAL		

TABLE "C" FORESTRY SYSTEMS

Forestry System	Area in Hectares	Tree species	Rotation Length
Woodlot			
Agro forestry			
Boundary Planting			
Other Specify			
TOTAL			

Proposed date of commencement of planting: …….

The under signed understand and agree to abide by the conditions of this contract

FOR ECOTRUST **FOR FARMER**

Signature …… Signature: ……..…….

Name: …….. Name: ……..

EXECUTIVE DIRECTOR

Date: ……. Date: ……

WITNESSED BY **WITNESSED BY:**

Signature:…….. Signature: ……

Name: …… Signature:……

Title: …… Title: …….

APPENDIX V

Tree Species Planted by Farmers in Bushenyi District

Tree species	Number of trees planted
Maesopsis eminii	3870
Chlorophora excelsa	72
Grevillea robusta	48
Albizia spp.	467
Funtumia elastica	3255
Lovoa	700
Prunus africana	253
Ficus natalensis	60
Khaya anthotheca	9
Fagara macrophylla	50
Pinus spp.	100
Terminalia	1239
Newtonia	50
Mangifera indica	2
Persia americana	10
Markhamia leutea	25
Carapa grandiflora	72
Acacia spp	15
Cordia africana	400
Mahogany	360
Engabo	22
Emikungu	8
Obukororo	16
Omuyuvu	2620
Muloyan	30
Emitonganwa	53
Omwima	20
Omukarata	10

Note: The last seven are written in the local language (Runyankole) and had not been identified at the time of writing this report.

APPENDIX VIII

SAMPLE OF CARBON DATABASE

Farmer details 17/02/04

Farmer ID	Name	Sex	Land ownership	Group name	Date of appn
402/S02/001	Ntambirweki Eva	F	☑	Bitereko Women's	05/09/03
402/S02/002	Ntsigaireho Betty	F	☑	Bitereko Women's	05/09/03
402/S02/003	Kato Elisaph (Mrs)	F	☑	Bitereko Women's	05/09/03
402/S02/004	Kantereine Federasi	F	☑	Bitereko Women's	05/09/03
402/S02/005	Ahimbisibwe Beatrice	F	☑	Bitereko Women's	05/09/03
402/S16/001	Agaba Moses	M	☑	Individual	
402/S16/002	Birakwate	M	☑	Individual	
402/S16/003	Kamugisha	M	☑	Individual	
402/S16/004	Bagambe Francis	M	☑	Individual	05/09/03
402/S16/005	Bikanshobera Patrick	M	☑	Individual	05/09/03
402/S16/006	Kiziito Kebirungi	F	☑	Individual	
402/S16/007	Boreka vicent	M	☑	Individual	
402/S16/008	Byarufu Fransis	M	☑	Individual	05/09/03
402/S16/009	Bahigana Violet	F	☑	Individual	05/09/03
402/S16/010	Matuga Joseph	M	☑	Individual	05/09/03
402/S16/011	Ayinake Didas	M	☑	Individual	05/09/03
402/S16/012	Besekya Hilary	M	☑	Tropical Bee Care	05/09/03
402/S16/013	Mugisha Akleo	M	☑	Individual	05/09/03
402/S16/014	Tibatunga Horistus	M	☑	Individual	05/09/03
402/S16/015	Muhoozi Zabron	M	☑	Individual	05/09/03
402/S19/001	Tusasirwe Matiya	M	☑	Individual	05/09/03
402/S19/002	Bushoborozi Benon	F	☑	Individual	05/09/03
402/S19/003	Buherero Milton	M	☑	Individual	05/09/03
402/S19/004	Kapasi Girivaziyo	M	☑	Individual	05/09/03
402/S19/005	Turyasingura M	M	☑	Individual	05/09/03
402/S28/001	Kamusiime group	M &	☑	Kamusiime memo	05/09/03
402/S28/002	Turyahikayo Wilson	M	☑	Individual	05/09/03
402/S28/003	Salongo Batekyereza	M	☑	Individual	
402/S28/004	Tibanyendera Jolly	F	☑	Individual	05/09/03
402/S28/005	Tagaba John	M	☑	Individual	05/09/03
402/S28/006	Kateeba Eric	M	☑	Individual	05/09/03
402/S28/007	Bamwesigire Maxm	M	☑	Individual	05/09/03
402/S28/008	Birungi Evaristo	M	☑	Individual	05/09/03
402/S28/009	Turyomurugyendo M	M	☑	Individual	05/09/03