

# Building local capacity to manage African smallholder carbon projects

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This paper describes an action research process undertaken with four African agricultural carbon projects – CARE’s Sustainable Agriculture and Climate Change Initiative in Western Kenya; World Vision’s Assisted Natural Regeneration Project in Humbo, Ethiopia; Vi Agroforestry’s Western Kenya Agricultural Carbon Project; and ECOTRUST’s Trees for Global Benefits in Uganda – to explore their institutional changes as project managers and communities work to build local capacity for project management. It describes the process by which researchers and project managers collaboratively developed a research methodology for this project, as well as the content of the methodology. Also, based on the first round of data collection it reflects on the successes and challenges of the research methodology and presents the areas of potential action that each of the projects identified through the research process. The methodology was generally successful in gathering the desired data, although modifications could be made in the future to more effectively target questions to interviewees and possibly include additional stakeholder groups, such as government agents and other project service providers. Actions identified varied depending on the projects’ stage of development, which may make cross-project analysis difficult. Due to the project managers’ participation in the development of the methodology, these managers are well-placed to incorporate these survey tools into their normal monitoring and evaluation activities and to continue this iterative process after the research funds end. The four projects identified a variety of actions that they can take to improve local capacity for project management. Some of these include developing new partnerships with locally-based institutions, supporting cooperation among farmer groups, improving sustainable land management trainings, strengthening communication between community group officers and general members, ensuring that benefits can be accessed by poor farmers and women, clarifying roles within the project structure, overcoming resource constraints to implement practices, strengthening collective action for enterprise development and building local capacity for carbon monitoring and management of the carbon bonus.

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## 1. INTRODUCTION

Agricultural carbon mitigation has become a highly debated topic within international climate policy circles. Agricultural emissions account for 31% of global Greenhouse Gas (GHG) emissions (Smith et al. 2007), and land-based sequestration is the only option currently available that takes carbon out of the atmosphere. However, efforts to develop incentive and monitoring systems that support agricultural carbon projects, particularly for smallholders, have faced numerous challenges due to their institutional complexity, and high costs of project development. Some critics reject the very idea of these projects as being unjust for smallholder farmers and unworkable from a financial and technical perspective (e.g. Stabinsky et al. 2011).

Despite the active policy discussions relevant to smallholder agricultural carbon projects, the inner workings of these projects have not been well-documented, understood or communicated. In an effort to bridge this gap, beginning in 2010 EcoAgriculture Partners partnered with CCAFS and six agricultural carbon projects in sub-Saharan Africa to characterize the institutional arrangements of these six projects through case studies and drew cross-project lessons that were applicable to the participating projects, as well as that participants in other projects and policy-makers (Shames et al. 2012).

Following this work, a second phase commenced in partnership with four of the original six projects: CARE's Sustainable Agriculture and Climate Change Initiative in Western Kenya; World Vision's Assisted Natural Regeneration Project in Humbo, Ethiopia; Vi Agroforestry's Western Kenya Agricultural Carbon Project; and ECOTRUST's Trees for Global Benefits in Uganda. The objective of this phase was to further explore the changing dynamics of these projects and to undertake action research that would support the development of institutional capacity that improves their management and the benefits that they provide for farmers and communities. By working with project management staff and locally based institutions, the research process identified project and location specific issues as well actions that can be taken by project staff and communities to manage them. In addition, by comparing and using the same tools across four carbon projects, the research project is designed to generate broad principles that can inform the effective design and development of future agricultural carbon projects.

This project began with a methodology development workshop in September 2011, where participating projects agreed on a common action research topic to deepen the findings from the first phase of institutional analysis. The topic selected was: *Strengthening local institutional capacity to sustainably manage agriculture carbon resources*. In choosing this topic, projects recognized that an important strategy for sustainable institutional development of smallholder carbon projects is to transition project management responsibility to local institutions over time. In the early stages of a project, the founding project management entity must engage closely with farmers, implement an extension system to train on climate-smart practices, and establish carbon monitoring systems. Once these systems are functioning, however, the project managers may be able to step back and leave the control of some of the project's functions in the hands of local institutions. These institutions can include village-level farm groups, larger community based organizations and government agencies, among others.

This paper describes the process by which researchers and project managers collaboratively developed the research methodology for this project, as well as the content of the methodology.

Based on the first round of data collection, the paper also reflects on the successes and challenges of the research methodology and presents the areas of potential action that each of the projects have identified through the research process.

## 2. METHODOLOGY DEVELOPMENT AND IMPLEMENTATION

### METHODOLOGY WORKSHOP

This research process was designed not only to generate knowledge, but to support the institutional development of the four participating carbon projects, as well as to improve benefits for participating farmers. As action research, the project is meant to engage stakeholders through a process that allows them to “explore experiences, gain greater clarity and understanding of events and activities, and use those extended understandings to construct effective solutions to the problems on which the study was focused” (Stringer 2007, 20). The research design has similarities with other action research projects, such as the African Highlands Initiative (AHI; German et al. 2012), which conducted work on individual projects, but also linked multiple initiatives together to generate cross-project learning. For AHI, action research served two purposes: 1) “It encourages systematic reflection at the level where change is taking place (eg. community, district, institution) on how things are being done so that they can undergo continuous improvement and have a higher chance of success” and 2) “to derive general principles from the change process that can be of use to other actors outside the immediate location” (Ibid, 18).

To initiate this project’s version of an action research process, a research methodology workshop was held on September 22-23, 2011 in Kisumu, Kenya, to which two representatives of each of the four participating projects was invited. Due to resource constraints, only four projects of the original six projects from phase 1 were able to participate. These original six projects were selected based on criteria designed to generate a diverse set of African agricultural carbon projects such as intervention type, stage of development, and geography (Shames et al. 2012). The four were chosen from these six largely on logistical grounds.

The purpose of the workshop was threefold: review the lessons of phase 1; select a research topic for phase 2; and based on a training in action research methodology given at the workshop, develop preliminary action research plans for each project. After each project presented their phase 1 case studies and their initial ideas for phase 2 topics, a topic was selected by the group: *Strengthening local institutional capacity to sustainably manage agriculture carbon resources*. The two general research questions developed were:

- How effective are institutional structures (configurations of public, civic and private sector actors) and processes (roles, responsibilities, relationships, rules) at enabling farmers and their communities to sustainably manage agriculture carbon resources and to benefit from the activity?
- How effective is the project at building capacities that enable farmers, farmer organizations and their communities to engage in sustainable agriculture carbon production and marketing?

The interest in this topic among the projects is based on their interest in developing ‘exit strategies’, particularly for the international NGO managed projects. Agricultural carbon projects, by their nature, are long-term initiatives, with contracts that can span decades, and the NGOs do not see themselves as managers over such a long period of time. Increased local responsibility can also support communities by building the strength of local institutions that can yield benefits beyond the carbon project, supporting local technical management and professional capacities, and reducing transaction costs for the project as a whole.

After the research topic and questions were selected, the meeting facilitators from EcoAgriculture Partners presented details on an action research framework upon which individual project research plans would be based. Following this tutorial, project managers worked among themselves in collaboration with the meeting facilitators to develop preliminary action research plans. These plans included the categories of indicators (what to measure to answer the question), means of measure (how to measure, methods/tools), a plan for who will measure (project personnel, other actors), resources needed to measure (staff time, money, capacity, supporting activities), and when to measure (sequence and timeline).

## DEVELOPMENT OF CROSS-PROJECT METHODOLOGY

Over the following months, these preliminary action research plans were fleshed out. In this process, it became clear that they had strong similarities to each other. As a result, a decision was made to develop a single methodology that would be applicable across projects. The advantage of this approach is that cross-project lessons would be easier to synthesize.

The cross-project methodology was based on a theory of change informed by the work from Phase 1 of the project as well as the process of developing the preliminary research plans in collaboration with the project managers. This research methodology is designed to support agricultural carbon projects to achieve success on the research topic. The topic was rephrased into a goal which became the organizing statement for the research tool: *Community institutions have sufficient capacity to manage agricultural carbon projects*. Towards this end, four key institutional capacities were identified that, if achieved, will allow projects to reach this goal. For each of capacities, assumptions were made about the key areas of action that would be required to achieve them. These topics include:

1. *Institutional capacity to support the implementation and management of SALMs*. Achievement of this capacity requires local institutions (small groups, CBOs, local government) to run trainings to communicate knowledge on practice implementation and management; to mobilize resources on their own to implement and manage them; to support the participation of resource constrained households; to integrate these practices into group strategic and implementation plans; to develop collaborations and partnerships with local institutions; and to actively involve women in the practice implementation and related strategic decision-making processes.
2. *Local institutions can monitor the carbon sequestering activities*. Achievement of this capacity requires that local institutions are empowered to (jointly) manage carbon monitoring system; have sufficient resources for these monitoring activities; and have the necessary equipment and skills for collecting and using monitoring information.

3. *Local institutions can manage the carbon bonus.* Achievement of this capacity requires that local institutions have a clear, an equitable plan for distributing the carbon bonus that is clearly communicated to stakeholders; a conflict resolution mechanism for resolving potential disagreements; and the capacity to market carbon credits.
4. *Local institutions can contribute to farmer and community development.* Achievement of this capacity requires that local institutions have a strategic plan; capacity to mobilize resources; hold regular meetings with by-laws; a stable or growing base of membership; the ability to adapt over time; a vision to achieve larger development goals; and include women in leadership positions.

Based on this theory of change, research surveys were developed to track relevant indicators. These surveys were developed for two different audiences: *stakeholders* and *project managers*. The stakeholder questionnaires are targeted towards focus groups that include members of small groups, officers of small groups, officers of CBOs, and others that hold important training, implementation or communication roles within these groups. The project staff includes the project director, managers and field staff. The surveys were revised and field-tested at Vi Agroforestry project sites in May 2012.

## METHODOLOGY IMPLEMENTATION

For the stakeholder interviews, each project selected that areas in which to implement the research tool, with a target of 3 or 4 locations per project. The areas were selected based on criteria that could create significant differences in responses such as the length of time the area has been involved in the project, or sites from different districts. The facilitators of this process included at least one staff member from the carbon project - ideally the Monitoring and Evaluations (M&E) specialist - and one representative from EcoAgriculture Partners. The implementation of this methodology occurred in the form of roughly half-day sessions, split between the implementation of a scoring tool and a group discussion. The project staff interviews were designed for a half-day workshop with all relevant project staff and were administered by the representatives of EcoAgriculture Partners.

The sessions in all cases began with an introduction to the history and objective of the initiative. Each of the members of the interview group was then given a scorecard and a pen or a pencil. As the interviewers read out each of the statements on the scorecard, interviewees circled a number 1-5 indicating their level of agreement with the statement. One meant that the item is not at all true, or the interviewee strongly disagrees with it. Five meant that the statement is very true, or they strongly agree with it. A break was taken at the end of this process.

As it was not possible to fully analyze the results quantitatively during the break period, interviewees used their rough interpretations of the results to direct the group discussions. Areas that showed mixed or low results on the scorecard became areas of emphasis for the discussion. The group discussion questionnaire was too long for each topic to be covered in depth in the allotted time. The interviewees used their discretion in deciding whether the focus group should be split into two. When this did happen, the group was split into one sub-group of stakeholder leaders and people who had a high degree of institutional knowledge and another that included general project participants. These splits were designed to increase the number of voices heard during the interviews.

Following the field work, the project managers and representatives of EcoAgriculture Partners will draft reports that summarize results. The results in this series of four reports will be synthesized into a paper that draws out cross-project lessons. Based on the findings of the field work, each project will also develop a formal action plan that includes specific activities that the project will undertake over the next 9 months in order to meet challenges that have been identified. At the end of the nine months, there will be another round of data collection to track the impact of the actions, as well any other changes to the project that have occurred over that period. This process is anticipated to continue through the middle of 2014.

### **3. KEY LESSONS LEARNED ON THE DESIGN OF THE METHODOLOGY**

While the research methodology was designed primarily to support individual carbon projects in taking stock of their institutional development and identifying areas for improvement, throughout this process attention was also paid to the effectiveness of the research methodology itself and the ways in which it can be improved. This section summarizes key reflections that have been made on success and challenges of the methodology thus far.

#### **BENEFITS OF PARTICIPATION FOR CARBON PROJECTS**

The primary incentive for projects to participate in the action research process is that it provides support for them to identify areas for project improvement. The ability to identify and track advances in projects' institutional development, and the ability to communicate this progress, may be more important in carbon initiatives than it is in more conventional agricultural development and sustainable land management projects. Carbon developers and managers must convince carbon buyers that the institutional structures on which the carbon interventions are based are indeed sustainable and that they will generate benefits for project participants in addition to the carbon bonus, which is often an insufficient incentive for them to continue to implement practices.

A clear indicator of success of this process would be the integration of these research tools by the projects into their internal monitoring and evaluation activities so that they are institutionalized in some form even without external support. Projects' monitoring and evaluation staff have been targeted as field partners in this process so that they can consider how this methodology can complement their other work. The extent to which this integration happens will not be known until the research period ends, but projects expressed enthusiasm about the prospects of incorporating this research methodology into their normal monitoring and evaluation activities. For example, Vi Agroforestry has expressed an interest in using this methodology in other carbon projects that they are now initiating. At the community level, groups saw this project as an opportunity to take stock of their engagement with the carbon project, to report on their successes and identify project improvements that will increase project benefits.

#### **METHODOLOGY STRUCTURE**

The methodology generally succeeded in creating conversations among targeted groups on the topics related to carbon projects institutions and in identifying follow-up action items. Interviewees mostly viewed the process positively, although there were times in which community groups appeared to perceive questions as a criticism of their progress and their efforts. There were also

times in which some participants felt as if they were being asked questions that were inappropriate for their level of knowledge.

The scoring tool fulfilled its role in identifying areas in which to focus the follow-up group discussion. Occasionally, the scoring tool created problems for participants, especially in understanding what the range of scores represents of certain questions. In some cases, this manifested itself in participants giving scores of 1s or 5s, as these scores seemed the easiest to understand.

The *stakeholder* survey was developed with a model in which farmers groups were the actors that held the overwhelming amount of responsibility for project implementation outside of the project managers. However, we discovered that there may be other key actors who require tailored methodologies. For example, in the Humbo project, government agencies played a particularly strong role and interview sessions were organized specifically for them. In this case, we adapted the *stakeholder* group interview tool for the discussion which served the purpose, but a dedicated set of government targeted tools may also be helpful. ECOTRUST's experience suggests that further engagement with outside service providers to the project – such as agricultural input suppliers and carbon validators – may also yield important insights that would not otherwise be gathered.

#### VARIATION IN IDENTIFIED NEEDS BASED ON PROJECTS' STAGE OF DEVELOPMENT

The types of issues that projects identified as areas for future action depended in large part on their stage of development. For example, for CARE the research time period overlapped with the phase in which it was working to establish the institutional roles that will eventually manage the project. As the roles were not entirely agreed upon, it was easier for them to consider project-wide institutional innovations. World Vision, by contrast, is in the process of phasing out much of their direct engagement and is using the research process as an opportunity to reinforce their plans for the transition and to suggest more locally tailored interventions. These differing emphases may make cross-project synthesis more difficult than if all projects were at the same stage of development, but this variation also improves the opportunity for younger projects to learn from more mature ones.

#### CAPACITY FOR RESEARCH PARTNERS TO IMPLEMENT THE METHODOLOGY

The research methodology process was developed in partnership with project managers, and through their participation in workshops received training on action research planning and implementation. The projects have also acted as co-researchers during the first-round of data collection. This collaboration and long-term engagement has deepened the capacity of project staff to implement the research methodology on their own should they choose to do so without the support of outside researchers.

## **4. AREAS FOR ACTION IDENTIFIED IN FIRST ROUND OF DATA COLLECTION**

This section presents insights gleaned during field work which will lay the foundations for action plans that will be developed and implemented by each of the projects. Some of these identified items include issues of which projects were already aware and planning to address, however, the discipline of the research process allows an opportunity for more detailed workplanning and the development of monitoring and evaluation tools to track the success of actions. Each sub-section begins with a brief description of the carbon project and is followed by a discussion of identified areas for action.

## CARE

CARE's Sustainable Agriculture in a Changing Climate (SACC), launched in Western Kenya in 2010, encourages smallholders to integrate agroforestry systems into their farms, sequestering carbon, increasing farm productivity, and building resilience to climate change. Originally framed as a carbon finance project, with an emphasis on the first two elements (with tree planting creating carbon mitigation potential), the project is now transitioning to a *climate-smart agriculture* approach, which focuses more broadly on increasing farm productivity and building resilience to climate change. This project is still relatively new, and CARE is now concentrating on developing the project's institutional architecture. The entry point of the project is through community groups, here called Village Management Committees (VMC), representing roughly 30 farmers each. At a high level of organization, the VMCs are represented by a Sub-Location Management Committee (also known as cluster groups). While payments have not been made yet, it is thought that the VMCs will be the ones responsible for distributing and transferring the payments to the farmers. Extension services are to be provided by Resource Persons, whom have been trained by CARE and each serve roughly 6-10 households. These Resource Persons are meant to be managed by the VMCs. As the project develops, the SLMCs will be aggregated into blocks (CARE currently works in two 'blocks', which correspond to the Middle and Lower Portion of the Nyando Rivershed). CARE envisions a new project entity, called the Project Management Unit (PMU) that will assume long-term control of the project. This PMU will include representatives from farmers groups, CARE, CCAFS, and government agencies. It will also include the technical expertise necessary to one day take over the functions of running the carbon project, selling the credits, providing advisory extension services, and distributing carbon revenues to farmers. The PMU is currently chaired by CARE, but it is anticipated that farmers will take increasing control of the project as it moves forward.

### *Community ownership and project incentives*

Results from the first round of institutional analysis suggest weak community ownership of the project. Currently, the roles of the VMCs and SLMCs have not been fully clarified, which is not unexpected, as CARE has only recently begun project organization and training. However, VMCs in some cases seemed reluctant to take on larger roles, viewing it at times as a burden more than an opportunity. Some of the resource persons and VMC leaders expressed frustration that project staff did not visit the field more often and that there was not as much interaction as they had hoped with the project staff. Even in areas identified by project staff as being highly motivated (and with high rates of participation in meetings and research activities), participants expressed that there was a need for greater motivation for farmers as well as groups leaders to stay engaged with the project. These incentives might take the form of the form of seeds, subsidized or free inputs, or possibly



even sitting allowances. In addition, some community members do not clearly understand the financing plans of the carbon project.

#### *Improve outreach and extension activities*

Potential problems were identified in developing an effective and sustainable extension service. Overall, group members seem satisfied with the technical capacity and training that they have received so far. However, in nearly all the areas, group members reported difficulties engaging farmers in training and ensuring the continued motivation and participation of local Resource Persons (RP), locally-based trainers. Project staff also recognized that the turnout for the RP-organized trainings is much lower than for trainings organized by CARE directly. Many groups reported that farmers were not particularly motivated by these RP trainings to adopt the practices. Project staff noticed this phenomenon and recognized the need to work with RPs to better communicate benefits of the project. However, project staff also believe that, while the RPs are not as effective in reaching community members through formal trainings, they are effectively transferring knowledge through informal methods. The staff would like to better understand the mechanisms and types of knowledge that are being shared informally. Project staff are also working with the line ministries to provide long-term support for the project and building the capacity of other technical service providers.

#### *Resource constraints to practice implementation*

A common message expressed across all sites was that labor, inputs, and finances were all key constraints to the adoption of the agroforestry and other sustainable agricultural practices being introduced by the project. Farmers often cannot easily afford—nor find—certified seeds. Group members face significant resource constraints at the time of planting and land preparation of the fields. In addition, members complained that they only had the resources to cultivate smaller pieces of land, not the larger pieces that would generate significant economic returns. The communities have adopted various strategies to overcome these resource constraints. For example, in Kotiang the VMC identified barriers to participation and pooled the group's resources (mainly labor) to help dig holes, plant trees, and dig water pans. Despite these interventions, communities remain frustrated that these constraints do not allow them to adopt the practices at the scale or scope that they would like. In addition to providing continued training on resource mobilization, project staff proposed to introduce less resource intensive agricultural interventions. These would include local vegetables and other crops that have ready markets but do not require the investment in chemicals and inputs that are needed by others.

#### *Tree management*

In some areas of the project, low-rates of tree survival are common, due to drought and free grazing. Furthermore, affordability and availability of seedlings is a major constraint for participation in the project, as the ideal time for seedling planting overlaps with the period of hunger months, introducing competition for scarce resources. Thus, having a community supply of low-cost, project-approved tree seedlings is necessary to replace those that have died and ensure carbon revenues. The monitoring tools that groups are using enable them to identify successful practices that help to improve tree survival. However, many of the VMCs were not able to realize their plans for developing tree nurseries.

### *Linkages between VSLAs and agricultural interventions*

CARE has introduced village savings and loaning programs to enable farmers to invest in agricultural practices, with a goal of linking these to the carbon project, however the linkages between the carbon projects and the VSLA vary across the project sites. In some areas, nearly all SACC participants are members of a VSLA, while in others, only a few. The spillover benefits from VSLA include more regular meetings, greater ability to mobilize resources and plan for the future, and better visioning and strategic plans. However, despite the value that is placed on VSLAs, project staff and participants note that it is not often used for investment in agricultural production, but rather to pay school fees or purchase additional food. Project staff also note that men are more likely than women to invest in agricultural income generating activities.

### VI AGROFORESTRY

The Western Kenya Smallholder Agricultural Carbon project, managed by the NGO Swedish Cooperative Centre-Vi Agroforestry (also known as Vi Agroforestry), is the test case for the first Voluntary Carbon Standard (VCS) methodology which allows provides credits for on-farm soil carbon. Vi Agroforestry takes a holistic approach to project implementation which includes a focus not only on carbon, but also on improving farm productivity and livelihoods. They combine the implementation of Sustainable Agricultural Land Practices (SALMs), Village Saving and Loaning associations to overcome credit constraints, and the development of farmer enterprises.

Vi Agroforestry offers an intensive extension outreach in the first 3 years of engagement in a particular area, the project, after which it gradually phases out its extension services. The approach is based on the idea that the long-term success of the project depends on the development of strong farmer groups organizations. It trains a cadre of community facilitators, who work with common interest groups (CIGs) to offer training, and these organizations contract with Vi agroforestry to offer carbon credits. The CIGs are also grouped into Community-Based Organizations (CBOs), and the CIGs and CBOs play a major role in the monitoring of farmer activities, collecting the data relevant for carbon monitoring. Vi Agroforestry is in the process of transitioning to an approach of working with even more partners. Instead of being directly engaged in service provisions, it has begun to identify groups (local, regional, and national) that can provide services that it has been providing. It will work with these groups to develop their capacity to deliver the sufficient quality and quantity of these services.

#### *Improve capacity for locally-based technical training*

The views expressed by communities varied in their assessment of the quality of their technical capacity to implement SALMs. In general, the leadership of the Community Based Organizations including the Community Facilitators (CFs) – the primary community-based trainers – believe that they have sufficient and adequate capacity to oversee and manage the elements of the project for which they are currently responsible. However, they also suggest that the CFs have trouble identifying which farmers to target for training and how best to motivate them. CBOs also complain that there are not enough CFs to meet the demand and that there is a need for more demonstration plots and farmers to serve as role models. CFs find that farmers, who are used to getting sitting allowances or transportation costs, do not frequently attend the trainings they organize. Distance and the opportunity costs of travel make it difficult to reach farmers, although

CIGs do usually offer small payments for transportation. One CBO suggested that communities respond better to facilitators who are not from their same ethnic group. Several farmers voiced a lack of faith in the technical capacity of the CFs as a reason for low turnout and participation. Staff identified the need for more demonstration sites, as well as a system to better incentivize the CFs to take on long-term training responsibilities.

#### *Collective action in enterprise development*

Some groups complained that many farmers do not participate in efforts to develop joint marketing groups and that this lack of interest frustrates efforts to improve farmer enterprises that could be stimulated by the introduced SALMs. However, groups are at varying stages of organizational development, and some of the groups are developing effective joint marketing schemes. These marketing issues will require additional if the project is to maintain long-term incentives for farmers to participate in the project.

#### *Access to germplasm and seeds*

Across all sites, accessing seeds and germplasm was identified as a constraint to the implementation and adoption of SALM activities. Some groups emphasized that they needed additional training around the production and harvesting of seeds and seedlings. These costs and accessibility issues make it difficult for farmers to replant when crops are destroyed or lost, and it threatens the long-term sustainability of the project.

#### *Capacity building for monitoring*

While groups across the project sites seemed to be managing the carbon monitoring system well, some of the groups voiced concerns about the time commitments required for monitoring. Given women's participation in the project, in addition to their household roles and responsibilities, this additional burden was thought to fall particularly heavily on them. Groups also identified a need for additional training with farmers, so that they understand the importance of accurate reporting and monitoring. Project staff identified the need for CBOs to improve their capacity to analyze, interpret, and use the data.

#### *Carbon Bonus Plan Development*

Plans and capacity around the management of the carbon bonus were generally considered to be insufficient relative to other topics discussed. Groups expressed a desire for more clarity on the timing and process for the distribution of the carbon bonus. In general, across the sites, communities expressed a desire for a higher level of communication from the project on the topic, and were waiting for Vi Agroforestry to take initiative in communicating how carbon payments should be spent. However, there were some groups that had already developed plans for the carbon bonus distribution.

#### **ECOTRUST**

Environmental Conservation Trust (ECOTRUST) is a non-profit environmental conservation organization that was established in Uganda in 1999 and has found a niche in the field of conservation finance. ECOTRUST's Trees for Global Benefits (TFGB) Program is a community

based initiative linking small-scale farmers to the voluntary carbon market based on the Plan Vivo system. Under the TFGB, ECOTRUST assists small scale farmers to develop carbon credits from on-farm treeplanting. Currently, activities under the program are located in Bushenyi and Kasese Districts in southwest Uganda, and Hoima District in Midwest Uganda. Additionally, a new project has been started in Northern Uganda with Tree Talk, a core implementing partner. ECOTRUST is also exploring the possibility of extending the TFGB program to the Mt. Elgon region of Eastern Uganda. ECOTRUST model is mature, particularly in the areas where it started, and because of the period of time that the project has been operating, the institutional shifts for ECOTRUST based on its engagement with this project may be less radical than the others, but they have still been able to identify significant opportunities for innovation, particularly for the new areas.

### *Partnerships for scaling up*

The ECOTRUST model is somewhat different than the others highlighted in this paper in that the project managers are currently in the process of moving their operations to new areas within Uganda, and their institutional mode of operation can differ from place to place. In ECOTRUST's original sites they provided extension services directly to small groups of farmers (roughly 30 each) with no formal links between the groups. These groups were united only by the fact that there were visited by an ECOTRUST extensionist. When ECOTRUST expanded to Northern Uganda they used a different model in which they worked with a strong local partner, Tree-Talk, which took on much of the training responsibility. In this case Tree-Talk implements ECOTRUST's technical specifications and capacity building methods to help farmers start tree planting activities. As ECOTRUST moves to new areas it can develop new plans of engagement from the ones they originally followed when the project began. In these new areas, the role of ECOTRUST can transform to one of technical service provider to one of an intermediary between a CBO or groups of CBOs and carbon buyer.

### *Cooperation among farmer groups*

A common theme that emerged from the research is that some of the groups saw themselves as small and disparate entities that were unconnected with the experiences of the other groups operating under the TFGB project. Although the experience of the three groups interviewed in this study (Bitereko, Hoima and Kiyanga) differed somewhat, in all cases additional cooperation between groups could help to build the capacity and confidence to recruit new members and take an additional project management responsibilities. In particular, stronger linkages among groups could improve access to trainings. Where ECOTRUST works with groups of more than 80 members, such as in Bitereko, groups are able to mobilize training for its own members. One option raised was that groups could form regional associations or model themselves on the cluster model employed by TIST (Shames et al. 2012).

### *Adapting tree planting practices to changing conditions*

As time has passed in the original TFGB sites and ECOTRUST looks to expand its programs to new areas, the program has encountered changing conditions which have prompted it to consider new models for tree planting and tree species selection. As land becomes scarcer and land values increase, opportunity costs for woodlots and boundary planting – the primary modes of tree planting for ECOTRUST partner farmers – are rising. Farmers have expressed a desire to learn

more about more complex agroforestry systems in which different trees may be selected for different purposes including not only carbon sequestration and timber, but also for soil fertility improvement, crop shade and fruit for commercial purposes and household needs. However, communities often have limited exposure to these best practices outside of their local area. As farmers express this interest, ECOTRUST's training activities will need to evolve to bring this knowledge to communities in a way that it becomes institutionalized locally.

## WORLD VISION

World Vision's project in Humbo, Ethiopia is the first large scale African afforestation/reforestation project to be registered under the Clean Development Mechanism (CDM) of the UN Framework Convention on Climate Change (UNFCCC). The project works with seven farmer controlled cooperative societies to employ the land rehabilitation technique of Farmer Managed Natural Regeneration (FMNR). The period of this research is a key moment for the project as carbon funds have begun to flow to the cooperative societies, they have begun to spend it, and World Vision has begun the process of giving up certain project management responsibilities. The project has been in operation since 2006, and World Vision has now significantly reduced its engagement with the cooperatives and plans to end some activities entirely by the end of 2012. World Vision trainings on FMNR largely stopped last December. World Vision, however, will continue to serve as the intermediary between the carbon buyer (the World Bank Biocarbon Fund) and the cooperative societies and the entity in charge of ensuring that carbon data is collected properly. All carbon payments go to the cooperative societies to pay for community development activities, such as grain mills. It is possible that World Vision will leave the project entirely after 2017 when the current carbon contract expires. This period of time is also notable from an institutional transition perspective because the World Vision Humbo Area Development (ADP) – a broad program of development activities including health, agriculture and education among others – which has been in operation for 28 years, while technically managed separately from the carbon project, has a transition plan to leave all activities in the area by the end of 2013.

### *Communication of the strategic plans from cooperative society leaders to general members and enforcement*

The Humbo project generally is mature, well-managed and -supported, and the cooperative societies are very well organized with an executive committee that meets every two weeks, and a group leader for each village responsible for organizing participants for training, patrols and credit. Each cooperative holds a meeting its General Assembly every three months with an annual meeting held at the end of each year in which the executive committee reports on the accomplishments and finances of the previous year, finalizes the annual workplan for the following year, and evaluates internal roles and responsibilities. While this governance structure provides a strong framework for project management, the research identified important areas in which the decisions and plans of the executive committee were not being fully communicated to members.

These identified issues differed somewhat between the three cooperatives visited, and will likely vary for the other four that we did not visit. Two indicative topics raised were patrols and trainings. Patrols are coordinated by the cooperative, but organized at the village level. Some cooperatives raised questions as to whether these patrols were happening as regularly as they should be. Training of the Trainers (TOTs) is the method used by World Vision and government agents to

disseminate knowledge on FMNR practices. Some wondered whether the trainers were fully meeting their obligations to train others within the cooperative on the practices. Although World Vision will have less direct engagement with the cooperatives as time goes on, these are issues that they plan to support the groups to address.

#### *Increased role for local government agents in project backstopping*

As World Vision transitions out of certain project responsibilities, particularly around FMNR trainings, local government agents will be taking on more this role in backstopping the locally-based training system within the cooperatives. These agents have been partnering with World Vision throughout the life of the project to deliver these trainings to the cooperatives, but this role is set to increase. The transition period will be crucial as World Vision, the government agents, and the cooperative societies will need to clearly lay out the responsibilities of each group and develop mechanisms to ensure that these responsibilities are met.

#### *Development and roles of the cooperative union*

The project has long planned for the development of a cooperative union which would link together the seven cooperative societies into a single unit that could eventually support marketing for both agriculture products and carbon, and possibly increase communication among the cooperative societies. Until 2017, World Vision will maintain control over the Emissions Reduction Purchase Agreement (ERPA), but afterwards the Union could potentially take control of this as well. The leadership of the union will be drawn from the seven cooperatives, and will be supported by a government office specifically dedicated to cooperatives and possibly some outside technical professionals. The union was scheduled to be operational by 2012, but these plans have been delayed. The societies are concerned about this delay and are eager for the union to form. As the union does become operational, and World Vision disengages, it will be very important that all actors clearly understand the roles that the union will fill.

#### *Improving benefits to resource constrained farmers and women*

World Vision has always emphasized the importance of targeting vulnerable communities and resource poor farmers and women in the carbon project, and cooperative society bylaws call for quotas for women in leadership positions. However, women (and youth) are underrepresented in the leadership of the cooperatives. This is an issue that cooperatives say will be addressed in their next round of elections next year. Cooperatives have begun to develop credit facilities for members, as carbon funds have become available. Women and resource poor farmers have been prioritized as beneficiaries of the credit, and cooperatives plan to track the success of this targeting over time.

## **5. CONCLUSION**

The action research process described in this paper has served to identify important areas for African agricultural carbon project managers and participating communities to improve the capacity of local institutions to manage projects over the long term while also providing a unique opportunity for cross-project learning which could yield insights for other project managers and potentially policymakers. A key lesson learned during the development and implementation of the research methodology is that project managers are keenly interested in identifying mechanisms to

improve local institutional capacity to manage projects, and that they are seeking support to track this institutional development. The methodology was generally successful in gathering the desired data, although modifications could be made in the future to more effectively target questions to interviewees and possibly include additional stakeholder groups, including government agents and project service providers. Actions identified varied depending on projects stage of development which may make cross-project analysis difficult. Due to the project managers' participation in the development of the methodology, these managers are well-placed to incorporate these survey tools into their normal monitoring and evaluation activities and to continue this iterative process after the research funds end. Formalized action plans for each project will provide clarity and discipline to support the implementation of actions identified during the research.

The four projects identified a variety of actions that they can take to improve local capacity for project management. Some of these include developing new partnerships with locally-based institutions, supporting cooperation among farmer groups, improving sustainable land management trainings, strengthening communication between community group officers and general members, ensuring that benefits can be accessed by poor farmers and women, clarifying roles within the project structure, overcoming resource constraints to implement practices, strengthening collective action for enterprise development and building local capacity for carbon monitoring and management of the carbon bonus.

The next steps in this process will be the finalization of project action work plans and reports from the first round of data collection. When these are completed, the synthesis of cross-project lessons learned will be conducted. Some of the participating projects have expressed an interest in organizing a workshop during the first quarter of 2013, preferably at one of the project sites, in which projects could share their results from first round of data collection, work together to draw out cross project lessons, draft a jointly authored policy brief, and discuss next steps for this action research initiative. Potentially, representatives of agricultural carbon projects that have not been participants in this round of work may be interested in attending such a workshop.

## REFERENCES

German L, Mowo J, and Opondo C. 2012. Integrated Natural Resource Management: From Theory to Practice in *Integrated Natural Resource Management in the Highlands of Eastern Africa: From Concept to Practice*, eds. German L, Mowo J, Amede T and Masuki K. New York, Earthscan.

Shames S, Wollenberg E, Buck LE, Kristjanson P, Masiga M and Biryahaho B. 2012. Institutional innovations in African smallholder carbon projects. CCAFS Report no. 8. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Available online at: [www.ccafs.cgiar.org](http://www.ccafs.cgiar.org)

Smith P, Martino D, Cai Z, Gwary D, Janzen H, Kumar P, McCarl B, Ogle S, O'Mara F, Rice C, Scholes B, Sirotenko O. 2007. Agriculture. In: *Climate Change 2007: Mitigation*. Contribution to Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate

Change. Edited by Metz B, Davidson OR, Bosch PR, Dave R, Meyer LA. Cambridge and New York: Cambridge University Press.

Stabinsky D, Marcatto C, Solomon I, Singh H and Ambrose S. 2011. Fiddling with carbon markets while Africa burns. 2011. Johannesburg, ActionAid.

Stringer, Ernest T. 2007. Action Research (Third Edition). Sage, Thousand Oaks, CA.

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