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Research Brief

IMPLEMENTING SMALLHOLDER CARBON PROJECTS

BUILDING LOCAL INSTITUTIONAL CAPACITY THROUGH PARTICIPATORY ACTION RESEARCH

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Two smallholder agricultural carbon projects in East Africa engaged in a participatory action research process to identify ways local actors could take on larger management roles within the projects. Key lessons from this process were:

- 🌿 **Community-based intermediaries can play a leading role in land-management trainings and supportive roles in carbon measurement and marketing.**
- 🌿 **Local government participation is critical to project success.**
- 🌿 **Local NGOs and private-sector actors can play central roles in training, providing agricultural inputs and linking farmers to markets.**
- 🌿 **Standardized training and curricula are important for scaling up.**
- 🌿 **Women's roles in projects can grow if project benefits are aligned with their needs and trainings are made more accessible.**
- 🌿 **Agricultural benefits are more important than carbon payments for participating farmers.**
- 🌿 **Strengthened local and national policies in support of sustainable agricultural land management are needed to scale up project benefits.**

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Climate-smart agriculture has emerged in recent years as a framework to design and implement agricultural systems that can simultaneously provide climate change resilience and mitigation (Lipper et al. 2014; Bryan et al. 2012; Branca et al. 2011; Harvey et al. 2014). Within the context of the global voluntary carbon markets, agricultural carbon projects with smallholder farmers in developing countries have begun to emerge in order to take advantage of carbon-finance to support the broader benefits of climate-smart agriculture (Goldstein and Gonzalez 2014; Deshmukh, Sosis, and Pinjuv 2014). Carbon projects with smallholder farmers face numerous challenges in their inherent complexity, high costs and difficulty securing benefits for farmers (Shames, Buck, and Scherr 2011). Strengthening local institutional capacity in four key areas – (1) implementing and managing sustainable agricultural land management activities (SALMs); (2) monitoring the carbon sequestering activities; (3) managing the carbon payment; and (4) contributing to farmer and community development – could increase long-term development benefits, reduce project costs, and help scale up initiatives (Shames, Bernier, & Masiga, 2013). However, more needs to be learned regarding the methods for efficiently and sustainably scaling up these initiatives (Siedenburg, Martin, & McGuire, 2012), and specifically how to strengthen local institutional capacity in those key areas.

PARTICIPATORY ACTION RESEARCH (PAR) PROCESS

Two smallholder agriculture carbon projects in East Africa, run by Vi Agroforestry in Kenya and ECOTRUST in Uganda, engaged in a Participatory Action Research (PAR) process to better understand mechanisms to strengthen the local institutional capacity to sustainably manage these projects. Vi Agroforestry is a Swedish non-governmental organization that has been implementing the Western Kenya Agriculture Carbon Project (KACP) in the Kisumu and Kitale regions of Kenya since 2008. KACP promotes the adoption of sustainable agricultural land management (SALM) practices among 60,000 smallholder farmers, over 45,000 ha in western Kenya using the Verified Carbon Standard (VCS). Environmental Conservation Trust (ECOTRUST) is a nonprofit environmental organization that was established in Uganda that has been managing the carbon project in the Mbale Region of Uganda through the Trees for Global Benefits (TFGB) program since 2011. Under the TFGB program, ECOTRUST assists small-scale farmers to develop carbon credits from on-farm tree planting using the Plan Vivo system, and the

carbon credits are certified under the Plan Vivo Standard (Shames et al., 2012).

PAR methods were used to provide a platform for project managers to share experiences, develop a clearer understanding of the challenges they face, jointly develop research questions, collaboratively develop solutions, and track the impact of these efforts. The research team collaboratively identified three areas of action that they hypothesized would help to develop local institutional capacities in the four key areas. These included: (1) building the capacities of community-based intermediaries (CBIs) to train on SALM practices, recruit farmers, and mobilize resources; (2) building local partnerships to support carbon project management by engaging with local government and partnering with non-governmental actors; and (3) supporting a more active role played by women in the project and increasing their benefits. Each project then implemented customized actions over the period of 2012-2014 guided by these three themes. For example, to build the capacity of CBIs, both Vi Agroforestry and ECOTRUST developed training manuals and tools and organized and conducted trainings for the CBIs; to enhance collaboration with the local government, Vi Agroforestry and ECOTRUST trained government extension officers and drafted policy memos; and to improve the participation of women, Vi Agroforestry and ECOTRUST focused their outreach on the benefits of the carbon project that are important to women, among other activities. The impact of these activities were then assessed using a combination of self-reporting guides that the project managers and farmers used continuously throughout the project and comprehensive independent assessments for community members, CBIs, and project staff, which were administered by the research team at the end of the project.

OUTCOMES

Table 1 highlights the major outcomes associated with the implementation of these activities. Both Vi Agroforestry and ECOTRUST's interventions proved effective in building the capacity of CBIs to train and recruit new farmers to the programs. Additionally, both projects were also able to make inroads in their efforts to influence government actors through training and advocacy, and improve the participation of women in the project activities. The CBIs also played an important role in connecting community groups to potential partners and strengthening the organization of the community groups, and as a result of project activities, farmers in both sites have developed informal partnerships with a variety of organiza-

Table 1. Major outcomes from PAR process for Vi Agroforestry and ECOTRUST

OUTCOMES	VI AGROFORESTRY	ECOTRUST
Building the training and recruitment capacities of CBIs	30 CBIs trained 4,178 farmers on SALM and recruited 1,833 new farmers to the project	26 CBIs followed up with 299 farmers and helped 59 farmers to register in the program
Influencing government through training and advocacy	Government officials used training tools developed for the project in their work	Built the capacity of 9 government extension officers
Enhancing women’s participation in the project	2,686 women trained and 1,058 women recruited to the project	71 women trained and 10 women registered in the program
Strengthening community groups	CBIs able to connect community groups to external partners and strengthen their organization	
Building partnerships	Farmers developed informal partnerships with NGOs and government agencies to provide farm inputs and seedlings	
Strengthening community-based monitoring system	Training materials improved monitoring capacities of farmers and CBIs	
Distributing the carbon payment	112 new groups were paid an average of USD 40 per group over a 2-year period	70 farmers received USD 75-100 (first and second payments) and 150 are anticipating USD 40-60 (first payment)
Increased capacity for project staff	Staff improved their own skills in giving trainings and demonstrations, developing training materials, interacting with government officials, and influencing policy	

tions who are also working to promote SALMs and plant trees in the project area. While the project activities did not attempt to fundamentally change the role of the CBI, or any other actor, as it relates to carbon monitoring, the use of the training materials did improve the capacities of farmers and CBIs, which allowed them to perform their designated roles more effectively. Vi Agroforestry and ECOTRUST were also both successful in distributing the carbon bonus to farmers, even though they undertook these activities in different ways. Vi Agroforestry makes the payments at the group level and de-emphasizes the importance of the payments, while ECOTRUST emphasizes the payment and payment schedule in its trainings and distributes money to individuals. Finally, for both the Vi Agroforestry and ECOTRUST staff, their experience with the project increased their skills in giving trainings and demonstrations, developing training materials, and understanding how to interact with government officials and influence policy.

However, both project also encountered several challenges in building the capacities of local actors to manage carbon project activities. First, in neither site were the CBIs compensated monetarily for their service as trainers and recruiters, and all actors acknowledged that if this model were to become sustainable over the long-term, there would need to be a source of funds to compensate the CBIs. Additionally, while the interventions were able to increase the participation of local govern-

ment actors in the carbon project activities, sustained engagement by the County Government in Kenya and the District Governments in Uganda will likely require stronger policy signals and additional budgetary support. Similarly, while both projects were able to increase the participation of women to some degree, in the case of the ECOTRUST project, women were restricted in their ability to participate, because land ownership is required to register in the project and the land tenure system in this region of Uganda does not permit women to own land. Furthermore, while farmers and CBIs expressed a desire to play a more active role in carbon monitoring (i.e. record keeping and data quality assurance), actors agreed that the carbon data analysis is too complicated for CBIs or community-based organizations to take over in absence of a significant technological advance. Finally, both projects faced challenges initially with meeting the farmers’ high expectations for the value of the carbon payment, which due to a decrease in the price of carbon ended up being very small.

LESSONS LEARNED AND RECOMMENDATIONS

Based on the experience of designing, implementing, evaluating and reflecting on the PAR process described, key insights emerged to guide the expansion of the Vi Agroforestry and ECOTRUST carbon projects. Theses insights could also impact the design and implementation

of future projects, programs or policies which intend to link climate mitigation finance to smallholder farmers.

CBIs can play a leading role in land-management and a supportive role in carbon management

The CBIs played a leading role in recruiting farmers and training them on land-management techniques. CBIs could continue to increase their role in the land-management elements of training, and, in some cases, they could take on larger roles in group financial management, agricultural marketing and partnership development. However, CBIs currently act in more of a support role in carbon-specific elements of the project, including managing funds and participating in the monitoring system. Managing carbon marketing and sales and monitoring carbon sequestration are highly technical roles in which farmers have very little experience. Even if the control of these project elements were further ceded to the communities, they would likely still need to hire outside technical expertise to help manage them.

Involvement of local government is essential for project success and growth

Carbon projects are designed to last up to 30 years, and in these sites government institutions can provide the stability required to maintain the carbon project activities over that period of time. The roles that government can play in a carbon project are limited only by the capacities of its agencies in a particular context. In the case of Vi Agroforestry and ECOTRUST, so far the role of the local government has been in support of training efforts and providing access to inputs such as seedlings. Local government could take on additional technical responsibilities, such as carbon marketing and monitoring, that the community groups are not well positioned to manage. However, for this to happen, local governments would need to build their capacity in these areas with intensive training programs and new hiring.

NGOs and private sector could play larger role in providing training, inputs and market connections

NGOs and private sector partners currently play a small role in supporting project activities and their role could be significantly expanded, particularly in providing training on land management practices and access to appropriate agricultural inputs or tree seedlings. Furthermore, long-term sustainability of land management activities promoted within these projects will be strongly correlated with the livelihood benefits they provide. Some of these benefits will come in the form of increased

yield from subsistence crops, but others will be based on improved production for market. In order to develop and maintain the incentives for these practices, stronger market linkages with private sector actors will need to be developed to help ensure the sustainability of these activities.

Standardized training curricula used by project staff, CBIs and government are critical for scaling up

With sufficient resources, CBIs have enormous potential to drive the scaling up of SALM practices in the Vi Agroforestry and ECOTRUST projects. As the Vi Agroforestry case clearly demonstrated, provided with proper training and support, these community recruiters and trainers can be highly effective. Training manuals proved to be valuable tools to reduce transaction costs of training and increase the effectiveness of all trainers, including project staff, CBIs and government workers.

Women's roles and benefits can grow if projects are better aligned with their needs and trainings are made more accessible

The most important way to attract women to the projects is to ensure that they are represented in project design, including the selection of the types of SALM activities that will be emphasized in the training components of the project. One way to accomplish this is to include women's groups as early participants in project development, and to advocate for leadership positions for women among all partner organizations. Assuming the project activities are of interest to women, the most effective ways to increase their participation are to ensure that they are well-represented among the ranks of the CBIs and to schedule training activities during the times of day in which women can participate.

Carbon payments alone do not provide sufficient incentives, but can be helpful to farmers if effectively targeted

In these two cases, the incentive of the carbon payment to farmers does not function as it was originally designed. For Vi Agroforestry, the role of the carbon payment has shifted over time to the point where it is not even mentioned in the training manual developed by the project, and ECOTRUST is confronting challenges because the carbon finance is not arriving at the level and frequency that had been anticipated. An important lesson from these experiences is that efforts to recruit farmers to implement SALMs at a large scale cannot be based primarily on promise of the carbon payment. Ultimately, the expansion of these activities will require farmers to

see the short-term and long-term benefits in terms of production, access to markets and resilience to climate change.

If the payments are not used to incentivize farmers to participate, new models need to be considered for how the carbon funds will be spent by the project. One option would be to set up a training fund for CBIs. Given that materials and models have already been developed to support these trainers, expanding these groups of trainers could be more cost effective than continuing to pay a project management staff to perform these functions. Compensating these trainers for elements of their work and paying for their transportation would also help to retain them for longer periods of time and to further institutionalize their role within the project.

Policy changes are needed to scale up project benefits

For these projects to have significant climate mitigation, adaptation, livelihood and ecosystem benefits they will need to operate at a larger scale. To achieve this, government will need to take on a larger role in promoting SALM activities. Based on the experience of these projects, it is unlikely that the current project designs can work on a sufficiently large scale without them being integrated into or substantially supported by a government program which operates at a jurisdictional scale. It would be less efficient for government to take on the management of discrete carbon projects as they are currently designed if their ultimate goal is jurisdiction-wide impact. Therefore, scaling up these activities would likely be in the context of a jurisdictional program or policy mandate framed more broadly as climate smart agriculture or green growth.

CONCLUSION

In the face of climate change, agricultural systems will need to provide resilience for communities, improved livelihood opportunities, support to agroecosystem functions as well as opportunities for carbon mitigation. Carbon projects can act as a vehicle for achieving these multiple benefits, but carbon project finance in its current form may not be enough to support them and significant constraints to scaling up these projects persist. Throughout this PAR process, project actors developed ideas and methods that can continue to strengthen the role of local institutions in the management of smallholder carbon projects while scaling up and improving the efficiency of project activities. They found success in the development of training materials, deepening the roles of CBIs, building relationships with government, NGO and private sec-

tor partners and engaging women. The process has also helped to clarify the ideal roles for various actors within project management and implementation, as well as the importance of transitioning from these project models to larger programmatic and policy approaches if climate smart agriculture activities are to be sustainably scaled up in the future.

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