



EASTERN AFRICA – FOREST CARBON PROJECTS STUDY

REPORT BRIEF

INTRODUCTION

The objective of this study was to analyze four forest carbon projects in three eastern Africa countries to better understand their challenges and successes in terms of climate change mitigation, biodiversity conservation and community development. The study was commissioned by United States Agency for International Development (USAID) under its Forest Carbon, Markets and Communities program (FCMC).

The four projects comprise:

- Trees for Global Benefits project (TFGB) implemented by Environmental Conservation Trust of Uganda (ECOTRUST), a Ugandan non-governmental organization (NGO);
- Humbo Assisted Natural Regeneration Project (HANRP) in Ethiopia, implemented by World Vision, an international NGO, through its Australian and Ethiopian affiliates;
- The International Small Group and Tree Planting Program (TIST) in Kenya implemented by Clean Air Action Corporation (CAAC) and Institute for Environmental Innovation (I4EI) – a US for-profit and non-profit respectively; and
- East Aberdare/Mount Kenya Forest Rehabilitation Project (EAMK-FRP) implemented by Green Belt Movement (GBM), a Kenyan NGO.



The study was conducted throughout 2013. This brief summarizes the key points and findings of the full study report. To access the main document, please visit www.fcmcglobal.org.

BACKGROUND

These four forest carbon projects differ ecologically, and in governance structures, social circumstances, carbon standards, and natural resources management frameworks. All are pioneers in forest carbon credits for afforestation/reforestation (A/R), starting before international mechanisms for reducing emissions from deforestation and forest degradation (REDD+) were formulated. As such, this study aims to provide lessons learned applicable to future forest carbon programs and projects that share similar objectives. The study team based its analysis on public documentation of each project, extensive field visits, observations, interviews and focus groups. All four implementing organizations were highly supportive in providing information and feedback to the study team.

Trees for Global Benefits (Uganda)

Implemented by ECOTRUST, this project utilizes mainly indigenous species planted by smallholder farmers in small, fragmented plots. TFGB employs the Plan Vivo carbon standard, and relies on community-based organizations to implement project activities. The project began in 2003, and a total of 423,000 credits had been sold by the end of 2012. Planting sites are selected based on their potential for biodiversity enhancement in proximity to nearby National Parks or Central Forest Reserves. 2,750 total hectares were planted by TFGB, although this number is growing as the project expands.

Humbo Assisted Natural Regeneration Project (Ethiopia)

In contrast to the other three projects, which focus on tree planting, HANRP is an indigenous natural regeneration project on one contiguous plot of degraded land in southwest Ethiopia. World Vision has worked in this area on famine relief and rural development since the 1980s, and has a strong working relationship with the cooperatives and community groups involved. The World Bank accepted HANRP, which uses Clean Development Mechanism (CDM) carbon standards, for the BioCarbon fund in 2006, and the area was then closed to all non-HANRP use later the same year. The first carbon credit payments accrued in 2009.

The International Small Group and Tree Planting Program (Kenya)

While the other three projects are implemented by local or international NGOs, TIST is operated by CAAC, a US company. It is by far the largest of these projects in terms of land area, with small plots accumulating to over 14,000 total hectares and increasing. TIST has grown rapidly, with more than 50,000 farmer participants and six million trees planted as of 2013. While CAAC implements the carbon credit and tree planting activities of TIST using the Verified Carbon Standard (VCS), an affiliated non-profit, I4EI, is responsible for enhancing biodiversity and community co-benefits through funding from USAID.

East Aberdare/Mount Kenya Forest Regeneration Project (Kenya)

The implementing organization for EAMK-FRP is the Greenbelt Movement (GBM), a tree-planting NGO founded in 1977 by Nobel Laureate Wangari Maathai. Since its inception, GBM has planted over 51 million trees. EAMK-FRP was GBM's first foray into forest carbon, employs CDM standards, and focuses on community tree planting in degraded sections of protected areas (PAs) under Kenyan Forest Service jurisdiction. Tree planting for the project began in 2008, but due to slow tree growth and poor survival the project has not met its carbon sequestration targets, and is the only project of the four that has not yet validated any carbon credits.

Plan Vivo has in-built requirements for social and environmental co-benefits, while the other three projects have registered with the Carbon, Community and Biodiversity Alliance (CCBA) to verify similar benefits. Table 1 compares key characteristic of the study projects.

Table 1: Comparison of key forest carbon characteristics of the four study projects

Country	UGANDA	ETHIOPIA	KENYA	KENYA
Project	TFGB	HANRP	TIST*	EAMK-FRP
Implementer	Ugandan NGO	International NGO	US for-profit	Kenyan NGO
Predominant A/R method	Indigenous on-farm (some exotic)	Indigenous regeneration on communal land	Exotic on-farm (some indigenous)	Indigenous in Forest Reserves
Carbon standard	Plan Vivo	CDM (+CCBA)	VCS (+CCBA)	CDM/VCS (CCBA)
Biodiversity/Habitat	Small fragmented farm plots close to PAs	Large contiguous plot distant from PAs	Small fragmented farm plots close to PAs	9 medium-size (10 - 200 ha) degraded plots in PAs
Total Area (ha)	2750 (expanding)	2728	14,000 (expanding)	720 (1763 originally planned)
Number of farmers	2,100 (expanding)	5,100 (expanding through joining coop)	53,000 (expanding)	1,500
Land Tenure	Customary, individual, verified by local government	Government/formal community usufruct	Formal, individual mostly titled, not verified by project	Government, limited formal community usufruct
Government Role	Legal compliance (largely "hands-off")	Legal compliance/ advisory, land rights allocation	Legal compliance (largely "hands-off")	Formal management agreements
Carbon rights**	Individual farmers	Cooperatives	CAAC	GBM
Community institutions	CBOs	Cooperatives	Informal groups	CBOs/Community Forest Associations
Investment Funding	USAID, UK	World Vision; World Bank and associated bilateral donors	CAAC/(USAID for non-carbon aspects)	World Bank and associated bilateral donors
* TIST has recently begun working with indigenous trees in degraded plots in Forest Reserves, but these are not yet VCS registered				
** The three countries have yet to determine national approaches to ownership of forest carbon per se				

KEY FINDINGS

Measurement, Reporting and Verification Elements

- Conservative carbon sequestration estimates as required by carbon registries, because of lack of accurate local growth equations, may favor carbon credit buyers over farmer-producers. As more applicable and accurate data become available, farmers should obtain higher payments for the environmental services they provide based upon more accurate carbon estimates.
- Although validated by competent organizations, some projects have debatable assumptions regarding additionality vis-à-vis pre-existing vegetation and leakage, especially with respect to displacement of customary livestock use especially during drought periods.
- Compliance methods require technical expertise, consistency and quality control for monitoring, and proponents use technically trained staff to make routine tree measurements.

Financial Elements

- Initial investment and cost of carbon compliance is high (often upward of \$1 million for CDM and VCS), and typically requires international consultant expertise.
- Operating costs are kept relatively low as all projects lean heavily on voluntary community labor, with a few low-cost local employees and part time positions.
- At current carbon prices, carbon revenues seem insufficient incentive for tree-planting. Social and environmental co-benefits alone seem to provide sufficient rewards to compensate costs for many, but carbon revenue is a behavioral incentive to each tree-grower.
- Understanding details of carbon contracts signed by farmers/groups is typically low despite concerted awareness efforts by project proponents.

Biodiversity Elements

- The four projects attempt to monitor biodiversity but did not yet have fully operational systems in place.
- Most farmers prefer exotic species because of rapid growth for timber or carbon credits, but planting exotics on farm or degraded land is unlikely to have more than marginal value in enhancing biodiversity.
- Natural regeneration in Humbo is effective, often applicable elsewhere, and likely promotes higher biodiversity.
- There are few compelling project data in regards to connectivity and wildlife corridors, but a generally agreed upon sense that wildlife has increased since project inception.

Institutional and Community Elements

- Except for TIST, project implementers had lengthy history and experience with the communities and institutional arrangements present in the country's natural resource management structures. TIST has nevertheless established and expanded more rapidly than other projects.
- There is a potential issue related to the longevity and permanence of carbon payments (i.e., inheritance issues of carbon rights as contracts may last beyond current recipient lifetimes and uncertainty about the commitment of other family members or others who inherit to maintaining trees).
- Similarly, the length of commitment for these projects is unprecedented, and longer than current existing national governance structures in each country.
- All projects encourage gender equity. Except for HANRP, where female participation is low but increasing, women comprise close to 50 percent of members and leaders.
- High expectations and some misconceptions about benefits are sustainability risks. For example, participants assert that trees lead to more rainfall, though scientific evidence indicates no direct correlation.



Box 1: Aspects of REDD+ development and implementation that can learn from the study projects

- Baseline and monitoring requirements (forest, environmental, social);
- Leakage and permanence issues;
- Cost-benefit arrangements;
- Benefit-sharing arrangements;
- For-profit/non profit proponent models;
- Risk mitigation;
- Social and environmental standards;
- Stakeholder engagement;
- Natural regeneration versus planting for A/R.;
- Smallholder contribution to carbon sequestration;
- Facilitation of co-benefits;
- Community management of forest carbon and capacity for MRV; and
- Awareness, extension and co-benefit facilitation.

CONCLUSIONS

The four study projects have pioneered verified A/R for carbon sequestration and concomitant credits in their respective countries. Many challenges confronted design and implementation phases but each project proponent found solutions, and along the way discovered and addressed new challenges. This experiential learning provides a unique wealth of information for carbon sequestration, natural resource management, biodiversity conservation and community engagement. Details as well as broader lessons from these projects help to inform REDD+ deliberations and strategy in each country.

Each project has distinguishing successes worthy of consideration for future projects. However, each has a different conceptual and business model and lessons cannot automatically transfer between projects, nor automatically fit in design of new projects without determining how they relate to other project objectives, resources, geography and institutional arrangements.

- Projects need long-term investor funding commitment – with donor support in many cases; the typical five year lapse between inception and validation, and a decade or more for net operating profit (if carbon sales are ex post), is not attractive to many commercial investors.
- Current forest carbon prices are low (\$4 – 7 per tonne) and oversupply of credits is likely, as larger REDD+ projects get underway. These prices are at least an order of magnitude below most estimates of social cost of carbon emissions.
- Scaling-up is challenging, but there are potential economies of scale in terms of carbon compliance in uniform environments, though costs of many community aspects may increase in proportion to project size.
- National governments must maintain or create a harmonized enabling environment and support technical and administrative capacity across relevant sectors in developing REDD+ strategies including land and resource tenure, forestry, agriculture and natural resource management at local and national levels.
- Most farmers seem committed to “permanence” of their trees in the contractual forest carbon sense, but it is unclear whether they will maintain or replant trees (especially indigenous species) after the contract period.
- Aggregate benefits are the incentives motivating tree husbandry. At current carbon prices, revenues seem insufficient to provide adequate incentive to farmers. In contrast, multiple perceived social and environmental co-benefits alone seem to provide sufficient rewards to farmers, but carbon revenue is an important organizing principle and behavioral motivation.



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