



Elusive Promises of the Kenya Agricultural Carbon Project

SUMMARY

The World Bank is showcasing the Kenya Agricultural Carbon Project as a “triple win” for mitigation, adaptation and food security—a model for agricultural climate finance—but uncertainties in methodology, costs and actual social and environmental impacts abound.

While the slow pace of the United Nations Framework Convention on Climate Change (UNFCCC) talks and the weak global economy have delayed political and funding commitments, increasing climate variability and its devastating impact march onward. The current drought in Eastern Africa and the consequent threat of famine could be frightening signs of things to come. Agriculture and finance ministers throughout the continent are understandably eager to secure new sources of funding to help them address food security and build resilience to climate change.

The World Bank, carbon emissions traders, and rich country governments are taking advantage of this desperate situation to push carbon markets as the primary vehicle to finance mitigation of greenhouse gases and adaptation to climate change. Last November, the World Bank and the Kenyan government announced a new pilot project to develop an offset market for soil carbon sequestration. The World Bank, through its BioCarbon Fund,² is showcasing the

Kenya Agricultural Carbon Project as an “early action” to demonstrate a “triple win” for mitigation, adaptation and food security for small-scale producers, while delivering carbon finance through the sale of credits in the carbon market. It claims that, “The Kenya Agricultural Carbon Project is not only the first project that sells soil carbon credits in Africa, it is also paving the way for a new approach to carbon accounting methodologies.”³

While the project will support improvements in agricultural practices that could benefit local farmers, the carbon market approach is a very shaky foundation for climate finance. Nearly half of the monetary benefits from the proposed offset credits would be absorbed by project developers as “transaction costs,” with miniscule returns to the farmers who would be implementing the project. While carbon markets are promoted as a way to “leverage” climate funding, to judge by this project, the rules being developed risk oversimplifying evolving

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science on climate mitigation and diverting resources from the urgent task of adaptation.

Pressure is building in the lead up to the next Conference of Parties (CoP) this November in Durban. At the Bonn UNFCCC intersessional negotiations in June 2011, the South African government announced its hope that an agreement to start an agricultural work program at the CoP would be its signal achievement. At a side event during the meeting, the World Bank advocated an agricultural “MRV [Monitoring, Reporting and Verification] consultation” on mandatory greenhouse gas reductions in developing countries⁴ similar to the broader system of MRV consultations the United States had advocated in the CoP in Cancún.⁵ In August, the South African government held a conference to promote consensus about the World Bank and U.N. Food and Agriculture Organization coined “climate smart agriculture.” The Bank will finance and co-organize a September 13–14 conference of African agriculture ministers and other officials to build support for an African consensus to start a UNFCCC agriculture work program. The October 1–7 UNFCCC intersessional meeting in Panama City will offer another opportunity to find consensus.

Everything could fall into place for a Durban decision, perhaps employing the WTO style “Green Room” negotiations process employed in Cancún. Or not—given that the negotiating draft on agriculture is riddled with brackets indicating the lack of consensus on key issues such as trade protectionism.

Before the parties commit themselves to a work program on agriculture that could be used to justify many new projects to produce emissions offset credits for carbon markets, they should consider several key questions, including:

- Will a decision to start an agricultural work program result in reliable, adequate and new funding for agricultural adaptation?

- Does a decision based on mitigation activities in developing countries, before any other sectors are committed, undermine the principle of common but differentiated responsibilities enshrined in the UNFCCC by shifting the burden of emissions reductions to those countries who have the least emission, and stand to suffer the most from climate change?
- Is the proposed MRV methodology adequate to ensure the environmental integrity of the agriculture-based carbon offset credits? If not, should an inadequate methodology nevertheless become the basis for the offset credits and hence a means for parties to fulfill mitigation commitments?
- Will investors be willing to invest in highly unstable and risky “assets” such as soil carbon offset credits, when soil carbon sequestration is in a state of flux with large potential for leakage and impermanence?
- Will carbon market dependent mitigation benefit smallholder farmers or will the pressure to aggregate soil carbon to produce credits for the carbon market favor farmers with large tracts of land, perhaps even leading to conflicts over land tenure?

Uncertainties around measurement of soil carbon

The World Bank is promoting its first agriculture soil carbon sequestration pilot project in Africa, the Kenya Agricultural Carbon Project, as the prototype for a project that successfully helps mitigate climate change, supports adaptation and increases food security. The project is financed by the World Bank’s BioCarbon Fund, one of 14 funds with facilities housed in the Bank’s Carbon Finance Unit (CFU). Sixteen governments and 67 private

firms have contributed \$2.3 billion to the CFU as of 2010.⁶ Since the early 2000s, the World Bank has been trying to establish itself as the carbon broker for Reducing Emissions from Deforestation and Degradation (REDD) programs through the Forest Carbon Partnership Fund and the BioCarbon Fund, and has actively promoted carbon markets. The BioCarbon Fund uses public/private sector support “to demonstrate projects that sequester or conserve carbon in forest and agro-ecosystems.”⁷ The fund’s project pipeline is intended to promote the expansion of carbon trading in land-based economic sectors, primarily forestry and agriculture, though governments have not agreed to this in the UNFCCC.

The BioCarbon Fund finances projects per the terms of the Emissions Reduction Purchase Agreements (ERPAs) between the World Bank and the project proponent. Essentially, the World Bank buys the project credits generated at a price it sets and hopes to sell them at a higher price in the voluntary carbon market, although none of those markets currently accept credits based on soil carbon sequestration. They hope that the European Union’s Emissions Trading Scheme (ETS) or other carbon markets will one day allow land-based offset credits. Close to 97 percent of UNFCCC compliance carbon credits are currently traded on the ETS.

While sustainable agriculture can increase the sequestration of carbon on the soil, sequestration can be difficult and costly to measure. In the Kenyan project, the World Bank is helping to develop a Sustainable Agriculture Land Management (SALM) methodology, in which farmers would report on their own adoption and maintenance of agriculture practices prescribed by the project developers. Because actual soil sampling would be prohibitively expensive, the World Bank has opted for a simple, computer-based model to estimate soil carbon sequestration. The SALM would then be approved by the Verified Carbon Standard (VCS) board,

an independent entity that certifies carbon credits for trading. Because of the high level of uncertainty associated with this method and the impermanence of greenhouse gas (GHG) reductions, the project will discount 60 percent of the carbon sequestration claimed to be sequestered.

Many of these standards are being approved for the voluntary carbon market in anticipation that UNFCCC rules will change and these voluntary credits can be converted into compliance credits accepted by the UNFCCC. The SALM practices in the Kenyan project include “cropland management (e.g., cover crops, crops rotation, mulching, improved fallows, compost management, green manure, agro-forestry, organic fertilizer, residue management) and rehabilitation of degraded land.”⁸ Verification of the SALM is one step in the process for generating the project credits.

The World Bank hopes to use projects such as Kenya’s to promote trading of agriculture soil carbon offset credits in developing countries and maintains that the exclusion of soil carbon emissions offset credits from the Kyoto Protocol compliance market remains a barrier for small holder farmers in Africa “and other regions, for accessing emerging carbon markets and from benefiting from significant payments for emission reductions. This early action project can inform the debate on opportunities and challenges for operationalizing GHG mitigation operations in the agriculture sector.”⁹ It concedes, however, that the compliance market demand for offset credits is uncertain:

Emissions trading and the project based mechanisms under the Kyoto Protocol will continue to be available to Annex I Parties as means to meet their quantified emission limit and reduction objectives but the future of the Kyoto Protocol itself remains unresolved.¹⁰

The World Bank apparently hopes that a strengthening of voluntary market demand for offset credits and changes to the ETS will provide sufficient demand for the offset credits.¹¹ Given the transaction cost analysis that follows, it is very difficult to understand where the “significant payments” are for project participant farmers.

High transaction costs and uncertain benefits for farmers

Though the project had begun in 2009, the project’s ERPA was publicly signed between the Swedish Cooperative Center - Vi Agroforestry Program (SCC-ViA), the Kenyan Government and the World Bank on November 3, 2010 at the much publicized Hague Conference on Agriculture, Food Security and Climate Change.¹²

The anticipated 20-year project has a rollout plan of nine years to increase farmer participation to a total of 60,000 farmers, involving a total of 45,000 hectares in the Nyanza and Western Provinces of Kenya. The project is estimated to generate a total of 1.2 million metric tons of carbon dioxide equivalent reduction (tCo2 mitigation), from which 60 percent will be discounted to account for reduction impermanence and methodological estimating uncertainties. According to ViA, in 2009-10, 18,800 farmers were to have adopted the agriculture practices prescribed by the project methodology, covering 16,000 hectares.¹³ These figures had been modified in a March 2011 presentation to 15,000 farmers and 800 farmer groups covering 7,000 hectares.¹⁴

Kenya Agricultural Carbon Project: estimates of revenues, costs and benefits to farmers

Farmers' Involvement	Assumptions	Revenues and costs
60,000 farmers on 45,000 hectares, rolled out over 9 years.	1.2 million tons of Co2 sequestered over 20 years	\$2.48 million USD in carbon revenue
	618,000 credits to be sold, with 60% discount for leakage and impermanence	Less \$1.05 million for transaction costs
\$23.83 per farmer over 20 years	Assumes \$4/tCo2	Leaves \$1.43 million

According to a World Bank press release¹⁵, the direct benefit to local communities in the project area is over \$350,000 with a first payment of \$80,000 in 2011. However, the SALM methodology, which has gone through at least five revisions, is yet to be approved by the Verified Carbon Standard (VCS), so it is too early to estimate final revenues. The World Bank states that at least 60 percent of the annual payments received by SCC-ViA will be directly transferred to participating farmers groups.¹⁶ However the Project Information Document (PID) cautions against setting high expectations on carbon payments:

With regard to agricultural carbon projects, financial benefits from carbon revenues can be expected to be only a small proportion of the benefits of increased crop yields. Therefore, the **primary focus of this project type should be on increasing agricultural productivity** [emphasis added] and the carbon revenues can be considered as an additional incentive and catalyst for the adoption and maintenance of improved agricultural

practices and technologies.

The level of potential carbon revenues should be clearly communicated at the farm level to avoid false expectations [emphasis added].¹⁷

Indeed, according to our analysis of project cost and benefit estimates, the carbon payments are negligible in the Kenya Project: at most a little over \$1 per farmer per year for 20 years. These payments are bound to be less if the price at which the World Bank guarantees project offset credits is less than \$4/tCO₂ and still less if fewer carbon credits are generated than those representing the estimated 618,000 tCO₂ reduction. The project revenues are estimated to be about \$2.5 million USD. The available project documentation does not reveal what items are included in the estimated transaction costs of \$1.046 million USD. For instance, does this estimate include advisory services and transaction costs by the Swedish intermediary? If these other transaction costs are additional, then the carbon payments are likely to be close to 72 cents per farmer per year.¹⁸

It goes without saying that any farmer, no matter where, would only adopt these practices for the long term if the benefits merit farmers' efforts in implementing the project. In this case, farmers will have to change how they work the land to include several practices that they have had little say in designing. The operating agency, ViA will help provide the documentation necessary for the MRV. It is critical to assess exactly how much government, donor and community resources are being used to get this project off the ground even before the credits are sold to the market and how much of this funding is specifically going towards setting up a carbon credit as opposed to direct investment in and for the community. Clearly, the carbon revenue earned from offset credit sales to the World Bank will not deliver substantial cash benefits for participating farmers. Hence the World Bank is emphasizing co-benefits such as increased maize

yields through improved soil fertility, the use of hybrid seeds and increased livestock fodder.

Unclear social and environmental impacts

The Environmental and Social Assessment (ESA) conducted as part of the World Bank's project requirements is glaringly weak in its treatment of land tenure and ownership and the socio-cultural practices of the communities implicated. It asserts that the farmers involved have clear land title deeds and therefore the "absolute beneficiaries of the carbon revenue." Yet it also points out that in one of the project areas there have been conflicts over land tenure: "In Mount Elgon which borders Sirisia, there has been fighting over land ownership which erupted in December 2006 and led to loss of life and destruction of property, as well as displacement of population until the government and Red Cross intervened. According to Red Cross preliminary appeal reports, there were a total of 966 displaced or affected families in Bungoma district alone."¹⁹

The fact that the use of herbicides is not addressed in the project design is also troubling. The ESA states, "Herbicides for weed control are also heavily used. Efficacy trials are carried out before adoption. The popular herbicides are Glyphosate, sencor 480sc and Velpa. In most cases the herbicides are applied as a combination for improved efficacy without due regard to environmental consequences. Though, these activities are not part of the project under discussion." The ESA includes a chart showing that 16 farmers surveyed in the project design phase used pesticides, while 43 said no (just 60 farmers were included). It is silent on the communities' likelihood of adopting the project's SALM practices and changes in the use of herbicides. Moreover, it is unclear why the World Bank's safeguard on pesticides is not triggered given that the ESA identifies increased pests and diseases as a result of the proposed practices. Though the ESA states that a pest

management screening framework²⁰ will be applied to the project, along with training on integrated pest management, the World Bank will not be held accountable to ensuring its compliance through its Pest Management Operational Policy (OP 4.09).

Based on documents in the public domain, it is difficult to assess how communities' agriculture adaptation and resilience to climate change will be strengthened through the proposed project. The ESA, and other publicly available World Bank documentation do not assess the benefits of relying on carbon markets compared to alternative approaches that meet the project goals: increased food security; increased climate resilience and adaptation; and climate mitigation. A fact-finding mission on the purported co-benefits needs to be conducted with a view to understanding the social dynamics of the project on the ground.

New questions arise

Given the high degree of uncertainty about this model project's mitigation benefits and high transaction costs to achieve mostly co-benefits, could such co-benefits be more efficiently achieved through direct access to finance for agricultural adaptation? In addition to examining the results of this pilot project, decision-makers should consider how these costs and benefits compare to other approaches, such those used by the FAO-advised agricultural mitigation projects, or the International Fund for Agricultural Development's Evergreen Agriculture Initiative.

An Organization for Economic Cooperation and Development (OECD) report has estimated that the price of carbon emissions needs to reach about \$50 USD/tCO₂ to induce major emitters in the United States and European Union to invest in lower carbon emitting technology.²¹ Since the Kenya Project locks in a guaranteed price of \$4 USD/tCO₂ over 20 years of the project contract, under what market and policy conditions

will offset credits bought so cheaply by the World Bank be sold at such a price as to induce the investments that are ultimately the primary purpose of such mitigation projects?

The World Bank's need to demonstrate a successful pilot project should not outweigh the imperative to carefully assess the tradeoffs of diverting scarce resources to creating an asset, the soil carbon offset credit, for which market demand is very weak, even by the World Bank's own account.²² Numerous reports have emerged in recent months about fraud and environmental integrity failures in carbon markets, particularly the European Emissions Trading Scheme that the Kenyan project and other future soil carbon market projects intend to access. How sustainable is a market in which both market integrity and the environmental integrity of the underlying asset are in question? While the promise of vast new carbon revenues is tempting, the desire for such revenue should not preclude a sober assessment of the best way to achieve short-and long-term adaptation and food security needs. Carbon market dependent mitigation has a strong potential to shift the burden of mitigation onto developing countries, and their people—especially those who stand to suffer dramatically from climate change.

Recommendations

- Decision-makers should examine two very distinct sets of lessons from the Kenya Agricultural Carbon market: the environmental and social impacts within Kenya and the usefulness of carbon markets to fund agricultural mitigation and adaptation. Even if the project supports some useful new agricultural practices, decision-makers should consider whether the co-benefits achieved could be financed more efficiently and effectively without reliance on a carbon emissions market funding framework.

- The World Bank should explain the high transaction costs, relative to the total project budget, associated with this approach to mitigation and what the implications would be of extending soil carbon markets to other developing countries.
- Programs for agricultural adaptation must be developed in collaboration with local farmers to ensure that it enhances their rights to land, food and livelihoods.
- Climate negotiators should insist that developed countries honor their commitments to provide adequate, new and reliable climate finance—above all public finance—to enable farmers to make a transition to sustainable agriculture, rather than pinning their hopes on the chimera of carbon markets.²³

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