

Payments for Carbon Sequestration in the Philippines: Lessons and Implications



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Introduction

Under the Kyoto Protocol, the Clean Development Mechanism (CDM) allows carbon credits of forestry projects in developing countries to be sold in carbon markets. It is estimated that up to 13.6 million carbon credits will be available by 2012, based on the total projects in the pipeline for registration. However, only fourteen Afforestation and Reforestation (A/R) projects are currently registered with the United Nations Framework Convention on Climate Change (UNFCCC, December 2009). Among the reasons for this slow take-up are: the strict requirements of CDM projects, complicated rules and methodologies, high transaction costs, lack of support for base financing, and the current price¹ of carbon from forestry projects vis-à-vis the development cost. In spite of these impeding factors, a number of carbon markets for forestry projects are being developed in many tropical countries.

In the last five years, there has been a rising interest in the Philippines for carbon forestry projects. The carbon market is seen as a means to provide farmers with access to technical support to allow the adoption of sustainable land management practices and adaptation to climate variability, meanwhile securing food sources and providing additional income. However, there are many barriers to full participation and implementation. Two CDM carbon forestry projects under development in the Philippines are presented below, along with lessons generated from their implementation.

¹ In a typical reforestation project in the Philippines, the cost for tree plantation establishment and maintenance in three years could reach US\$ 1000 per hectare, making reforestation projects very expensive. Taking the current price of carbon (\$15 per tonne C), this would not be enough to cover the costs of project development.

LLDA-Tanay Rehabilitation Carbon Project

The Tanay Rehabilitation Carbon Project is site 1 of the Laguna de Bay Community Watershed Rehabilitation Project 2, and has already been under development for more than three years. The design and implementation of this project is being supported by the World Bank (WB). The Bank provides technical assistance and funding for data gathering, packaging of the project for the Clean Development Mechanism (CDM), and in selling the carbon credits. Carbon credits will eventually be purchased by another WB unit (the Biocarbon Fund). Both of these budgets were assured from the very start of project development. The target areas for CDM are grasslands with *Imperata cylindrica* as the main plant cover (Project Design Document, PDD, 2007).

The municipality of Tanay lies within the 53 km² Tanay micro-watershed and occupies 97% of its total land area. It is characterised by mostly gently rising hills and mountainous relief, ranging in elevation from 100 to 900m asl. The total population of Tanay is 82,000 (as of 2000) and is the only town within the Laguna de Bay watershed that has an organised indigenous peoples, the Indigenous Cultural Community (ICC) belonging to the Dumagat-Remontado tribe.

The main proponents/sellers of this project are the local government unit (LGU) of Tanay, Rizal and the Laguna Lake Development Authority (LLDA) (Lasco and Pulhin 2006). The LLDA is the prime mover with assistance from the World Bank. The ICC is the implementer and have committed just over half (52 ha) of their LGU-donated land, which will be planted with native tree species (e.g. cashew, *Anacardium occidentale*) in pure forest plantations and agroforestry areas. The Tanay LGU will provide technical inputs in choosing appropriate species, nursery propagation, and planting techniques. The LLDA has already signed an emission reduction purchase agreement with the Biocarbon Fund. For the 20 year project period, it will have a total net carbon benefit of 20,800 tCO₂-e (PDD, 2007) with an estimated value of about US \$140,000 at US \$5 per tCO₂-e. The carbon pools (and credits) within the project site will be shared by the LGUs of Tanay and the ICC of Dumagat and Remontado (PDD 2007).

Interviews with local farmer and community residents show support to the proposed A/R CDM project activity, since they believe that participation will give them the following benefits: (potentially short-term) employment opportunities for ICC members as project labourers; environmental protection, and additional income, especially from agroforestry (PDD 2007).

Kalahan Forestry Carbon Project

The Ikalahan Ancestral Domain, covering 58,000 ha of mountainous forest and farmlands, is found in the provinces of Pangasinan, Nueva Ecija, and Nueva Vizcaya in northern Luzon (Villamor and Lasco 2006). In 2003, it was selected as a pilot site by the World Agroforestry Centre's (ICRAF) Rewarding the Upland Poor for Environmental Services (RUPES) project to develop a carbon sequestration payment mechanism. The ICRAF RUPES project provides technical assistance and a small financial grant to the community for estimation of carbon sequestration rates, and preparation of necessary documents for accessing carbon finance such as the project idea note (PIN). ICRAF also facilitated the initial dialogue between the community and a Japanese buyer, who agreed to shoulder the costs of registration and validation of



Dipterocarp forest in Kalahan Reserve protected for voluntary market.
Photo: Grace Villamor.

the project to the UNFCCC Executive Board. Eventually, they will buy the credits at an agreed price of US \$8 per tCO₂-e.

The Kalahan Educational Foundation (KEF), representing the indigenous people, will organise the community and development process and manage and implement the project. Specifically, they are now identifying suitable lands with clearly established land rights, raising seedlings in the nursery, and planting and maintaining trees. Project participants will in turn provide labour and time. In kind benefits from carbon credits are planned in the form of community services such as medical centres and village doctors, but no direct compensation to farmers is envisioned.

The Kalahan Project is targeting the two types of carbon markets, regulated and voluntary (Villamor and Lasco 2006). Under the CDM, the project aims to convert 900 ha of marginal and abandoned agriculture land to more productive tree-based systems. It is estimated that the area can sequester around 90,000 CO₂-e for 20 years under the medium tree growth scenario, based on Philippine tree growth rates and consistent with Intergovernmental Panel on Climate Change (IPCC) values. Under the voluntary carbon-offset markets, the objective is to maintain 10,000 ha of secondary forests for production and carbon sequestration. Initial estimates show that the forest area can sequester 1.7 million tCO₂-e over 20 years.

Discussion and lessons learned

The selection of eligible sites is based on the Philippines' "forest" definition as an area with at least 10% forest cover, which has not yet been officially submitted to the UNFCCC. This has become problematic. It limits the eligible areas for forestry carbon projects for CDM, since only practically open areas such as grasslands can be included. Land cover maps showing already open forestlands with less than 10% cover and/or that were deforested before 1990 are also not readily available.

Second, financial support at the start of project development from the potential buyer is vital to hasten the process of Project Design Document (PDD) creation and CDM

registration. Further delays in project implementation could unexpectedly increase the transaction costs (e.g. site verification and return visits of the validator) due to the complicated rules and uncertainties about processes. For instance, in the first project the designers and the Designated Operational Entity (DOE) both had different interpretations of the methodologies (even though they had been approved by the CDM Executive Board). In this case, the costs of PDD development were fully shouldered by the World Bank.

The second project experience is unique, because the prime mover is an organisation of indigenous peoples. It is noteworthy that a people's organisation can potentially access global finance through the CDM. With limited resources, however, they have to seek strategic partners to allow them to comply with the various CDM requirements. ICRAF, through its RUPES project, is providing limited technical assistance while the prospective buyer is also assisting in CDM documentation. Given that as much as 80% (about US \$800 per ha) of the total cost is due to labour, involving the local communities directly in activities as the main proponents and implementers could potentially help lower these costs. With only a few intermediary organisations to share the available project funds, most of the benefits will go directly to the local communities.

Conclusion

Crucial lessons can be drawn from these project cases. There is a need: 1) to look into the possibility of identifying the appropriate government institutions spearheading the identification of eligible lands and for policy makers to examine the implications of forest definition; 2) to link local project developers to potential buyers who may be willing to partly or fully shoulder the transaction and even the establishment costs; and 3) to ensure the direct involvement of the local communities including IP, depending on the land areas where the project is implemented. For scientists in developing countries like the Philippines, enormous research gaps still need to be filled in

developing a simplified carbon measurement and monitoring methodology to lessen project costs, country-specific biomass equations to increase the precision of estimates and a cost-effective method of determining land eligibility. These will be key factors in ensuring the acceptability and financial profitability of the proposed projects.

References

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Figure 2. Cordillera mountain ranges are potential areas for carbon sequestration projects in the Philippines. Photo: Grace Villamor.