Out on a limb

The Kyoto Protocol took effect last February. What sort of opportunity does it present for tropical forestry?

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THE KYOTO PROTOCOL, a treaty negotiated within the United Nations Framework Convention on Climate Change (UNFCCC), finally took effect on 16 February 2005. Under the Protocol, certain afforestation and reforestation (AR) project activities are qualified to be included in the Clean Development Mechanism (CDM).

The CDM is an instrument under the Kyoto Protocol; it allows industrialised countries (Annex-I countries in the UNFCCC) to meet a portion of their binding emission reduction targets through greenhouse-gas (GHG) reduction projects within developing countries (non-Annex-I countries to the UNFCCC). In addition, the CDM allows project proponents in developing countries to earn certified emission reduction (CER) units that would be traded through market mechanisms established by the Protocol.

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During the Protocol's first commitment period (2008–2012), the use of the CDM for carbon-sink activities will be limited to afforestation and reforestation, while the purchase of CERs from the carbon-sink CDM is limited to 1% of participating Annex-I Parties' base-year emissions times five; globally this amounts to a maximum of 121 million tonnes of carbon dioxide (CO_2) equivalents (Mt CO_2e) per year. In the first commitment period (2008–1012), AR-CDM markets will be most influenced by demand, since the potential supply of CERs in tropical and subtropical developing countries far exceeds the total yearly amount of tradable CO_2. If a tonne of CO_2e is worth US$3–5, the AR-CDM could raise US$360–600 million per year during the first commitment period.

In need of a CDM project? Degraded forest land in Papua New Guinea. *Photo: A. Sarre*

Main issues relating to AR-CDM

Although the AR-CDM will not develop into a particularly large market during the first commitment period, government agencies and other concerned stakeholders in developing countries may still wish to build capacity in order to take full advantage of the CDM—and any potential expansion of it in the next commitment period. To promote AR-CDM project activities in tropical countries, the following major issues need to be addressed.

Enabling policy framework in support of the AR-CDM: under the Protocol, AR-CDM projects should contribute to the sustainable development of host countries; a country wishing to undertake such a project therefore needs a clear forest policy statement and associated criteria and indicators in support of the goals of national sustainable development in the forest sector. The socioeconomic impacts of AR-CDM project activities should be demonstrated clearly in project design documents; such documents should also show how local communities will be engaged in the project (this is not a requirement for energy CDM projects). Particular attention may be given to small-scale AR-CDM projects, defined as "those that are expected to result in net GHG removals by sinks of less than eight kilotonnes of CO_2 per year and are developed or implemented by low-income communities and individuals as determined by the host Party". Community-based, small-scale AR-CDM projects stand a good chance of receiving favourable attention from the CDM Executive Board—which will decide the registration of AR-CDM projects—although the economic viability of these types of projects seems to be low (because of the high overheads they would incur for a relatively low benefit). Early adoption of the definition of 'forest' at the national level, in line with the criteria provided by the Marrakech Accords, is also recommended.

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Institutional arrangements to facilitate the AR-CDM: according to the CDM project cycle, parties participating in the CDM need to set up a designated national authority (DNA) for the CDM. To date, most countries have set up their DNAs within their ministries responsible for the environment, but questions remain about how the forest sector will be engaged in the process. Clear terms of reference will be necessary for project assessment and approval at the national level, together with clear mandates and the allocation of responsibilities among stakeholders. The effective participation of the forest sector in the work of DNAs is vital for the provision of initial and final approval of AR-CDM projects at the national level.

Technical capacity to design and implement AR-CDM: the CDM project cycle is very challenging for project developers: it includes project design and development, validation, registration, monitoring, verification and certification, and the issuance of carbon credits *(see Table 1)*. In particular, there is difficulty in the use/development of methodologies to define baselines, monitoring and additionality. Many potential host countries have limited capacity to implement projects and to interact in the validation, verification and certification processes. Potential project developers will need full access to relevant information and capacity-building programs for the design of project activities. One of the biggest challenges is the development of community-level AR-CDM projects with the participation of small-scale farmers; the support of local governments, NGOs, civil society and the international community will be essential for this.

Financing and investment: In addition to institutional and technical barriers, one of the major problems in promoting AR-CDM projects is the lack of financing for their implementation. There is no established seed capital with which to develop project-design documents and high transaction costs must be met to validate, monitor and certify projects. Another difficult challenge for project developers will be the identification of investors or project participants at an early stage of project development. In many countries, official development assistance (ODA) could play a vital role in CDM development, but participating parties of the Kyoto Protocol agreed that ODA could not be diverted to finance CDM projects. The role of ODA in promoting CDM projects needs to be clarified: in particular, it should be used to enhance capacities in developing countries.

Conclusion

Although the scale of the carbon market for the AR-CDM will be quite small in the first commitment period and will apply only to reforestation and afforestation (and not to natural forest management), it still represents an exciting development in tropical forestry. For the first time, a significant amount of carbon sequestrated by tropical forests will be traded in the marketplace as an environmental commodity—constituting a substantial payment for an ecosystem service. Extending the CDM to include natural forests in the next commitment period could make an important contribution to tropical forest conservation; it is hoped that Kyoto Protocol negotiators will work towards such an extension in future commitment periods. In the meantime, plantation and forest-restoration projects in the tropics should investigate the opportunities presented by the CDM in the first commitment period.

Sources

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Timetable

Table 1: CDM project cycle

PROCESS	ESTIMATED TIME REQUIREMENT	RESPONSIBLE PARTY
PROJECT IDENTIFICATION		Project developer
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DEVELOPMENT OF PROJECT DESIGN DOCUMENT	12–24 months	Project developer
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APPROVAL	6 weeks	Host government (designated national authority)
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VALIDATION	1 month	Operational entity
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REGISTRATION	2 months	CDM Executive Board
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IMPLEMENTATION & MONITORING	During project lifetime	Project developer
↓		
VERIFICATION & CERTIFICATION	2 weeks	Operational entity
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CER ISSUANCE		CDM Executive Board