

The Environment for Development initiative is a capacity building program in environmental economics focused on international research collaboration, policy advice, and academic training. It consists of centers in Central America, Chile, China, Ethiopia, Kenya, South Africa, Sweden (Environmental Economics Unit, University of Gothenburg), Tanzania, and the US (Resources for the Future). Financial support is provided by the Swedish International Development Cooperation Agency (Sida). www.efdinitiative.org.

Implementing REDD+ Through Village-Level Forest Management Institutions

Lessons from Tanzania's Experiences

By Elizabeth J.Z. Robinson, H.J. Albers, Charles Meshack, and Razack Lokina, EFD Tanzania, RB 13-06, October 2015

REDD+ (Reduced Emissions from Deforestation and Forest Degradation) is a form of payment for ecosystem services (a voluntary transaction in which a buyer makes a payment to a seller conditional on the ecosystem providing some service, such as carbon storage) aimed at decreasing carbon emissions from conversion of forest to farm land and unsustainable harvesting of forest resources in lower-income countries. Community-based forest management (CBFM) can create the appropriate incentives and behavioural change required by REDD+ when the recipients of the REDD+ funds are also the key causes of that forest change. However, when forest loss is caused predominantly by 'outsiders' to the community, who illegally cut timber or make charcoal, this community-based approach to REDD+ risks becoming primarily an enforcement programme, with communities enforcing against outsiders, and with the attendant conflict. In addition, when people are prevented from using their local forests, they may displace their harvesting activities into other, more distant forests, with such 'leakage' reducing the effectiveness of the REDD+ initiative.

Forests throughout sub-Saharan Africa (SSA) are important for nearby rural households for fuel, food, and income, and for providing ecosystem services such as biodiversity and carbon

sequestration. There have been numerous efforts to protect forests from deforestation and degradation whilst also addressing rural people's dependence on forest resources. A key problem for conservation initiatives, including forest protection, is how to create the appropriate incentives for all forest users, including forest-dependent households, to conserve forest resources. Much of the research has found a lack of connection between conservation objectives and economic development objectives, with the latter rarely creating the direct incentives that are required for conservation by villagers. REDD+attempts to make that connection by having payments conditional on forest area and quality.

REDD+ is seen by many as an appealing way of bringing low and middle-income countries into global efforts to reduce the negative impacts of climate change by reducing emissions at a

Key Points

- Community forest management, combined with payments for conservation, can promote conservation when payments are made to the villagers who were causing forest loss.
- When forest loss is caused by outsiders, the local community has to focus on enforcing rules against the outsiders.
- The same amount of forest loss may result if resource extraction is simply displaced to unprotected forests, reducing the effectiveness of the payments.

Implementing REDD+ through village-level forest management institutions

relatively low cost. Yet, the implementation of REDD+ is particularly tricky where people rely directly on the forests and where degradation (a reduction in the density of forest biomass rather than a reduction in the area of forest) is a significant part of forest loss. Challenges include monitoring forest degradation; finding alternatives to charcoal for urban and rural households to use as cooking fuel; enforcing forest property rights against non-REDD+ beneficiaries; and creating long-term incentives that reduce forest degradation and deforestation in an equitable manner.

Tanzania's CBFM has two key objectives that link very closely to REDD+ objectives: to reduce loss of forests and forest degradation, thereby increasing the ability of the ecosystem to provide services such as carbon storage; and to improve the livelihoods of local forest-dependent villagers. Under CBFM in Tanzania, villagers take full management responsibility, setting and enforcing rules and regulations over the management and use of the forest, including the collection of forest products. Due to high initial levels of degradation in forests designated for CBFM, many village forest management committees impose moratoria on collecting from the forests for five to ten years to allow the forests to regenerate, after which villagers can again extract through a sustainable community management scheme. These moratoria place burdens on local people because CBFM rarely provides sufficient, if any, compensation rewards in the short to medium term while the forest regenerates. Further, they may have little impact on overall forest quality and ecosystem services if villagers respond by using more distant but less protected non-CBFM forests as a source of forest products.

In Tanzania, the NGO Tanzania Forest Conservation Group (TFCG) and the Tanzanian Community Forest Conservation Network (MJUMITA) are using CBFM as a model for implementing a REDD+ pilot program. We use Tanzania's REDD+ pilot scheme as a lens to consider whether this approach is likely to succeed in terms of reducing forest emissions and improving livelihoods. Our study makes a number of important observations with respect to the practicalities of REDD+ implementation.

First, payments for emission reductions are calculated on a village by village basis and are based on measurable reductions in emissions at the village landscape level, relative to a historical baseline. Implementing REDD+ in this way can provide sufficient funds to more than compensate villagers for the costs that are imposed in the short term by the moratoria imposed to allow the forests to regenerate. Thus, REDD+ payments can induce stronger incentives to manage the forests than CBFM alone can generate.

Second, the REDD+ payments are made at the village level conditional on community forest use. Villages then determine what proportion of this payment should be spent on community projects, what proportion is for enforcement, and what proportion is shared equally among villagers as individual payments. By giving all villagers the same payment, regardless of the cost REDD+ imposes on the individual, all stakeholders are focused on a shared future, rather than an imperfect past, in which the government owned the forest but tolerated illegal forest use by villagers, leaving no one with an incentive to conserve - the so-called 'Tragedy of the Commons'. This sharing mechanism earns plaudits for fairness and village self-management. Economic theory suggests that, with this community-level incentive system, individual villagers may not have the appropriate incentives to reduce their individual forest use, particularly those who stand to lose income due to the resource restrictions. TFCG's data suggest that in smaller villages, where villagers tend to be economically similar to one another, this approach has had positive results with respect to reduced forest loss, suggesting that the incentives are working, whereas in more economically diverse, larger villages it has been less effective. Working at the community forest reserve and sub-village level might allow better targeting of incentives in larger villages.

Third, when forest change is caused by people who do not live in the REDD+ village – 'outsiders' - REDD+ implementation could become dominated by enforcement, which can result in conflict with these outsiders. In these cases, CBFM-based REDD+ puts villages in the position of becoming enforcers of forest rules against non-locals attracted to charcoal production, timber, or a new source of agricultural land. To protect the REDD+ forests and thus capture the REDD+ rents, the only option for the villages maybe 'fence and fine' deforestation prevention programs, with local communities rather than government agencies responsible for the enforcement. Data generated by TFCG's pilot program reveal that villages currently allocate relatively little of the REDD+ payment for the enforcement of forest access rules, even in villages that describe outsider activities as quite damaging to the local forests. However, TFCG found villagers to be

Implementing REDD+ through village-level forest management institutions

highly attuned to illegal deforestation, wanting to know who was undertaking illegal activities and how action could be taken against the perpetrators. Moreover, evidence from other countries' experiences suggests that communities typically become less resistant to using their REDD+ payment for funding community-level activities, such as enforcement, as they become more confident that the REDD+ programme will endure and that these activities will be implemented. In Lindi, one of the project areas, the REDD+ model appears to be working well, with less deforestation and thus fewer emissions than would have been experienced without the initiative. In Kilosa, where outsiders are more of a threat, the communities are struggling more to reduce their forest loss.

Finally, one of the biggest threats to Tanzania's forests remains conversion to agriculture and thus any interventions to reduce forest loss need to address this. Though CBFM can protect forest from conversion, direct interventions in the agricultural sector should make it easier to enforce CBFM regulations and reduce leakage. Charcoal is another driver of both degradation and deforestation, often accompanied by conversion of land to agriculture. Thus, interventions particularly with respect to urban fuel demand and supply, where charcoal is currently the dominant cooking fuel, are also likely to improve the success of forest-oriented REDD+ initiatives.

Conclusions

Overall, studies of the early stages of implementation of a specific REDD+ pilot in Tanzania raise questions of what is a fair or equitable REDD+ scheme; demonstrate how tricky it is to provide incentives villagers at an individual level when payments are to the village as a group; and highlight the need to address directly the key drivers of forest loss.

ABOUT THIS BRIEF

This brief is based on Robinson, E.J.Z., Albers, H.J., Meshack, C., Lokina, R. (2013) 'Implementing REDD+ through Community-Based Forest Management: Lessons from Tanzania'. EfD Discussion Paper Series. Environment for Development (EfD) DP 13-06. University of Gothenburg, Göteborg, Sweden and Resources for the Future, Washington, DC, USA.

FURTHER READING

Albers, H.J., and Robinson E.J.Z. (2013) 'Reducing Emissions from Deforestation and Forest Degradation'. In *Encyclopedia of Energy, Natural Resource, and Environmental Economics*, edited by J.F. Shogren, Vol. 2, pp. 78-85. Amsterdam: Elsevier.

Vyamana, V.G. (2009) Participatory Forest Management in the Eastern Arc Mountains of Tanzania: Who Benefits? *International Forestry Review* 11(2): 239-253.

CONTACT

Professor Elizabeth J.Z. Robinson, e.j.robinson@reading.ac.uk



EfD Tanzania, www.efdinitiative.org/centers/tanzania
doe@economics.udsm.ac.tz, Phone +255-22-2410252, Fax +255-22-2410252
Environment for Development in Tanzania (EfDT), Department of Economics, University of Dar Es Salaam, P.O. Box 35045, Dar Es Salaam, Tanzania



EfD, Environment for Development initiative, www.environmentfordevelopment.org EfD Secretariat: info@efdinitiative.org, Phone: +46-31-786 2595, Fax +46-31-786 10 43, www.efdinitiative.org./efd-initiative/organisation/secretariat, Department of Economics, University of Gothenburg, PO Box 640, SE 405 30 Gothenburg, Sweden