Making REDD+ work for communities and forest conservation in Tanzania

Why Individual Payments are the best option for REDD+

The vision of Tanzania's National Strategy for Reduced Emissions from Deforestation and Degradation is that:

Tanzania implements a National REDD+ Strategy that ensures conservation and / or enhancements of its unique biodiversity values and forest ecosystems and the corresponding benefits, goods and services are equitably shared by all stakeholders for adaptation, mitigation and adoption of a low carbon development pathway under all processes as required by the UNFCCC.

These are goals that almost everyone can agree on. The question is how best to achieve these goals. We believe that REDD+ will only be successful if it increases choices for rural Tanzanians and that the easiest and most efficient means to increase choices for people is to simply pay them.

Why REDD+ needs to reach the people whose lives and whose children's lives depend on clearing forest

The REDD+ system in Tanzania must simultaneously integrate the goal of spreading benefits equitably and reducing deforestation. Fortunately, in Tanzania it is easy to see how these two goals can work together. In Tanzania, the primary deforestation driver involves rural community members clearing forests for small-scale agriculture, timber, or charcoal. Thus, paying rural communities to reduce deforestation could make a substantial contribution to reducing deforestation in Tanzania as a whole and result in cash transfers to some of the poorest people in the country. Whether or not this win-win scenario becomes a reality will depend on whether the national REDD+ policy allows for:

- a cash distribution system to individuals within villages
- payments based on reduced deforestation
- village level carbon accounting
- village rights to carbon revenue
- villages to receive a high price for their emission reductions

Deforestation drivers differ….and so should REDD+

The economic forces that drive decisions relating to land use need to change in order for people to choose forests as the optimal land use. The primary drivers of deforestation in Tanzania are fundamentally different to those in many other countries implementing REDD+. In countries such as Brazil and Indonesia, government development policies awarding forest concessions to agribusiness and logging companies are the major drivers of deforestation. In Tanzania, policy change will be insufficient to prevent deforestation because most of the deforestation involves millions of poor rural farmers, charcoal producers and timber harvesters making a living using the natural resources that are available to them.

For REDD+ to work in Tanzania it needs to change the way that rural farmers make land use decisions

In order for REDD+ to change the behavior of millions of poor women and men in remote rural areas, they need to receive tangible benefits that go beyond more policy-oriented interventions such as land use planning and community based forest management. Likewise, national efforts to increase farm productivity or reduce demand for charcoal, will not be sufficient in the absence of performance based payments. Rural communities will continue to clear forests, even if they receive fertilizers and the price of charcoal declines, because it is the most rationale economic path available to them.

However, when combined with performance-based REDD+ payments, strengthening land tenure, land-use planning, participatory forest management, and increases in agricultural productivity could lead to significant reductions in deforestation. REDD+ payments could be an important source of funds that some community members use to invest in improving their farm productivity while simultaneously allowing other community members to switch or diversify to other economic activities.

Increasing agricultural production can also help to address leakage, which is the primary challenge to project based approaches for REDD+. Leakage occurs where reduced deforestation in one location results in increased deforestation in another location and it can be driven by market forces or by simple displacement of people from one area to another. The most straightforward means of addressing leakage at the project level is to ensure that the supply of the products associated with deforestation does not decrease with REDD+. For agriculture, this means increasing agricultural productivity. For charcoal and timber, this means more sustainable and efficient harvesting combined with enhanced replacement of these resources through tree planting. Individual payments can incentivize communities and community members to do all of these activities.

Giving poor people money helps to make them richer

What good will individual payments do for the rural poor? Recent studies examining systems used in Brazil, Mexico and Namibia demonstrate that giving small amounts of cash to poor households can help people start new livelihoods, dramatically improve child health and school attendance, and even reduce some kinds of crime (especially illegal natural resource harvesting). Additionally, cash payment systems are cheap to implement and relatively easy to police in comparison with large scale development projects. Although given directly to individuals, individual payment systems contribute to both individual and community growth through the following benefits:

- *Removal of Barriers to Entrepreneurship* – Poor households often cannot afford to risk their labor on activities that do not result in immediate income. Individual payments would not only enable people to purchase supplies and equipment required for new livelihoods, but could also help households to meet some of their daily consumption needs before the new livelihood starts to generate income and give them income to fall back on if the new livelihood fails to generate the expected return.

- *Not 'One-Size-Fits-All'* – Rural communities are heterogeneous with regards to capital, land, natural resources, education, and entrepreneurial skill. Therefore, it is impossible to design a livelihood program that will be appropriate for all community members in all communities. Each individual is in the best position to know the kinds of opportunities he or she can capitalize on and individual payments give people the greatest number of choices for how to adapt their livelihoods to a world with REDD+.

- *Ownership of Community Development Projects* – Under individual payment schemes, communities can also develop and invest in community projects. Before dividing up revenue to individuals, the village assembly should have the option of investing a portion of the funds into development projects. By allowing community members to select their own projects, and contribute funds that otherwise would go in their pockets, it creates a sense of ownership and a desire for accountability.

- *Avoiding Corruption* – Revenue distribution systems used by some communities practicing community based wildlife management in Southern

Africa provide examples of benefit sharing mechanisms that continue to function long after external support has been removed. The most important aspect of these systems is to ensure full participation of community members in the design and implementation of the system.

Village Assembly meetings are a useful forum for ensuring participation and transparency in relation to REDD+

Tanzania's existing policies provide a favorable environment for direct payments to communities

By empowering local communities, Tanzania's land, forest and local government laws and policies provide a much more fertile ground for a community-oriented REDD+ model than in many other countries where REDD+ is being piloted. 70% of Tanzania's land area is village land with clearly defined and participatory governance mechanisms in place. In Tanzania, with the right political will, REDD+ can be integrated into the existing Village governance mechanism relatively easily.

Potential revenue flows to rural communities participating in REDD+ are significant. Analysis of one village participating in a REDD+ pilot project in Lindi suggested that the small community could receive as much as $80,000 a year for reducing deforestation on its lands. To create a successful individual payment mechanism will require communities to establish new bylaws regarding the distribution of REDD+ revenue

Steps for Ensuring Clear, Effective and Fair Revenue Distribution Village Bylaws

1. Bylaws must establish the criteria that entitle community members to receive cash payments, e.g. length of residency, age or other factors.

2. The bylaws should limit the control that village councils, village executive officers, or other committees have over the use and distribution of the funds, as none of these groups should have the power to spend REDD+ money without approval from the village assembly.

3. Bylaws should ensure that information regarding REDD+ is widely accessible, and is provided before distribution begins. Village assemblies should be presented with a report regarding deforestation on their lands, the amount of avoided deforestation, and the carbon price that their credits were sold at.

4. Village assemblies should review and approve the

list of those eligible to receive payments before every payment in order to ensure full participation and transparency.

REDD+ is not a payment for maintaining carbon stocks. REDD+ involves payments for reducing deforestation.

For REDD+ to work in Tanzania, payments will need to be performance based since without actual reductions in deforestation, no funds will flow to Tanzania. Some REDD+ observers have proposed paying for forest conservation because they believe it is unfair to only pay communities that have a history of forest clearance or because they are worried about deforestation shifting from communities doing REDD+ to communities that have historically low deforestation levels. However, paying for forest conservation is more expensive than paying for avoided deforestation and fails to create any significant incentive to reduce deforestation. The only workable option is for payments to be based on reductions in deforestation rates compared to a historical baseline in an appropriate reference region combined with leakage mitigation.

Lots of Carbon but is it at risk of deforestation?

The national deforestation rate for Tanzania is estimated to be 1.18% or 412,000 hectares per year. However, deforestation rates vary dramatically across Tanzania depending on population, accessibility, and suitability for agriculture. One study suggests deforestation rates range from nearly 0 to as high as 10% per year in some districts[1]. Under a system of payments for forest conservation, a large portion of the funds would be diverted to communities that have lower than average deforestation rates, which make little additional contribution to avoiding deforestation at the national level. Therefore, a much higher carbon price is required to have enough money to pay communities that are actually reducing deforestation.

However, the more significant problem with paying for forest conservation is that it fails to provide an incentive for communities to stop clearing forests. Under a system that pays for conservation, communities would be paid for how much forest they have instead of how much forest they avoided clearing. While these might appear to be the same thing, they are not. Imagine a

community that has 2,000 hectares of forest remaining and a deforestation rate of 1%. This would mean that the community is expected to clear 20 hectares of forest in the coming year. Let's assume forest clearance in this community results in emissions of 80 t/ha (293 t/ha CO_2 eq) [2], and that the community obtains a modest carbon price of $5.00 per ton of avoided CO_2 emissions. Under a system that pays for avoided deforestation, the community would receive $29,300 if it successfully halted deforestation. Under a system of payments for forest conservation, the same level of compensation would be equivalent to payments of $14.65 per hectare of forest protected. Which system would actually create an incentive to not clear forests? Under the payment for protection system, communities lose $14.65 per hectare of forest they clear, while under the avoided deforestation system communities lose $1465 per hectare of forest they clear. Now consider that the average opportunity cost of not clearing a hectare of land in Tanzania is $1358 per hectare[3]. Clearly, payments for conservation provide little incentive to stop deforesting.

Community level carbon accounting is within reach but needs more accurate maps of village boundaries

Thus, the only workable basis for performance based payments to communities is the same as the basis for national accounting – avoided deforestation emissions. At the project level, developing deforestation reference scenarios and carbon maps used to calculate avoided emissions is highly technical, expensive and time consuming. However, a national accounting system, which is required regardless of the form that REDD+ takes in the country, would generate almost all the data needed for project level accounting. The current Draft National REDD+ Strategy already includes a plan for sub-national accounting, which means that there will be a clear basis for which to credit community efforts to reduce deforestation.

NAFORMA's current work will generate very accurate carbon data for different land-covers across the country. When NAFORMA combines this carbon data with the wall to wall remote sensing that is planned, it will be easy to calculate the carbon content of the forests in specific communities. Overtime, NAFORMA will also generate data on carbon sequestration in different land cover types that could be added to the value of avoided deforestation without having to do any additional measurements on the ground. Finally, the country's deforestation analysis can be broken down by region and forest type to enable the creation of reference scenarios that are appropriate for individual communities.

For detecting deforestation, wall to wall monitoring of the country could be done using simple change detection and radar sensors like ALOS PALSAR, which are low cost, high resolution, cloud penetrating, and capable of giving a consistent forest image regardless of the time of year. Using this kind of data, the national carbon monitoring center would award emissions

1   Tabor, K., et al. 2010. *Forest and Woodland Cover and Change in Coastal Tanzania and Kenya, 1990 to 2000.* Journal of East African Natural History. 99(1): 19–45

2   This is the national average carbon emission from deforesting 1 ha in Fisher, B. et al. 2011. Implementation and opportunity costs of reducing deforestation and forest degradation in Tanzania. Nature Climate Change. 1(3): 161–164

3   This is the national median opportunity cost for avoided deforestation from Fisher et al. 2011.

reductions credits to communities based on how much they managed to reduce deforestation compared to the baseline scenario.

The missing ingredients for a successful sub-national accounting system that could award certified emissions reductions to villages, are accurate, readily available village boundary maps. While most villages in Tanzania have been surveyed by the Ministry of Lands, their surveyed boundaries have not yet been compiled into a publicly available GIS layer and include many errors. A massive effort to clarify village boundaries and facilitate land-use planning is needed in Tanzania. Even without REDD+, this should be a national priority in order to help communities govern their land effectively.

Carbon rights and carbon prices

In order for an individual payment system to work in Tanzania, a new policy will need to be written to guarantee the right of communities to own and sell carbon emission reductions generated on their lands. Emissions reductions from reduced deforestation should be the property of the land owner where the emission reduction occurred. National REDD+ policy should treat REDD+ project implementers, whether private sector, civil society, or government, as service providers rather than owners of the emissions reductions they help communities generate. In order to receive compensation, National REDD+ policy should allow REDD+ project implementers to enter into agreements with communities where the value of the service they provide communities is explicitly stated. These safeguards could be enforced by requiring all REDD+ projects in the country to register with the national carbon accounting center, which will be the only authority empowered to certify carbon emission reductions.

Dangers of a single national buyer

Currently, the Draft National REDD+ Strategy suggests that sub-national projects will be required to sell their certified emission reductions to a single national system. While a national buying scheme does make sense for the purpose of marketing REDD+ credits generated from government forest lands or from projects that don't have the capacity to market their own credits, requiring that all projects sell to the scheme is problematic for several reasons:

- *Uncertain International REDD+ Financing Arrangements* – Since the international financing arrangements for REDD+ are not yet in place, it makes sense to design a system that is compatible with whatever international financing mechanisms become available and that can take advantage of all financing options. In the long run, it is likely that there will be multiple financing mechanisms for REDD+. As long as all REDD+ activities are verified and accounted for by the national carbon monitoring center and tracked in a common registry, a national buying scheme and direct selling can co-exist without conflicts.
- *Not All REDD+ Credits Are the Same* – REDD+ projects in Tanzania will take many different forms and some forms might be able to generate higher carbon prices in the international carbon markets than others. For instance, community forest projects that directly reduce poverty will be more attractive to some carbon buyers than projects

that benefit large private land holders. Additionally, projects that help protect endangered biodiversity might be able to access premium prices. Forcing all projects to sell to one national buyer eliminates these distinctions and reduces the overall value of REDD+ in the country, particularly for rural communities.

- *Unnecessary Risk – A*llowing only one national buyer introduces unnecessary risk associated with that entity (many of which are documented in the strategy). If that entity fails to market the nation's credits properly or collapses due to mismanagement, all REDD+ projects in Tanzania will halt because there will be no legal alternative source of funds. A flexible system that allows a choice between selling to the national scheme and direct sales to buyers will help guard against this risk.

Forests with high conservation value such as populations of this critically endangered primate, the Rondo galago, are likely to attract higher prices.

Conclusion

REDD+ is a specific tool aimed at preventing deforestation in forests that are under immediate threat of deforestation. It is important to be realistic in terms of what can be accomplished with REDD+. Regardless of the form REDD+ takes in Tanzania, it will not halt deforestation in Tanzania, the direct benefits from REDD+ will not reach all communities, and it will not pay for all forest conservation activities in Tanzania. However, evidence suggests that a REDD+ system that allows for significant cash payments to individuals in participating rural communities is most likely to succeed at merging the dual goals of reducing deforestation and promoting rural development. It will allow rural community members to make choices which they are in the best position to make. As the REDD+ approach most likely to succeed, paying communities to reduce deforestation is also the system that is most likely to result in many secondary benefits for all Tanzanians, including improved water quality, improved microclimate for climate change adaptation, and increased economic activity.