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Reducing emissions from deforestation and forest degradation: national implementation of REDD schemes

An Editorial Comment

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Since 2005 the international negotiations to define an incentive system to reduce emissions from deforestation and forest degradation (REDD)[1] under the auspices of the UN Framework Convention on Climate Change (UNFCCC) have made significant process. With the overall progress to define a future international climate agreement being slow and the trenches between developing and developed countries continuing to be deep, an agreement on REDD may well be one of the most concrete and feasible achievements of the international climate change negotiations under the UNFCCC. The background article by Corbera et al. (2009) in this issue is therefore a timely contribution to the current debate on enhanced climate change mitigation in developing countries. Informed by literature but also by first-hand experience in international negotiations and the implementation of policies in a developing country context, the article describes both the opportunities and challenges of an emerging REDD mechanism.

Flexibility will be of essence for an effective REDD scheme. Different national circumstances, various levels of resources and capacities, and sensitivity towards an overly prescriptive international mechanism make the design of a modular and phased mechanism a condition for success. International REDD arrangements will face the challenging task of interacting with national governments relative to the performance of their national REDD strategies, while not encroaching on the sovereign discretion of nations to design adequate and acceptable policies and measures nationally (Meridian Institute 2009a). Policies to implement REDD will have to be

[1]The full reference to REDD includes also enhancement of forest carbon stocks, sustainable forest management and conservation, in total referred to REDD-plus. The scope of REDD is not subject of this commentary, but it is understood that references to REDD refer to the full set of agreed incentive mechanisms and eligible activities.

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based on a broad consensus between the government and all relevant stakeholders and originate from a process characterized by high political legitimacy. National implementation of REDD will thus depend on the national circumstances, policy priorities, costs and political feasibility.

The international mechanism that creates incentives for REDD will have to define environmental and financial modalities that allow a cooperative interaction between the international mechanism and national institutions. Such interaction has to ensure high environmental credibility and transactional efficiency without infringing into national sovereignty. It will have to ensure that developing countries can access resources in return for successful implementation of REDD policies and the generation of climate benefits that are measurable, real and sustainable (MRV). The establishment of MRV systems, as well as the definition of international finance and support mechanisms, stand therefore at the center of international REDD negotiations.

1 Funds and markets

Flexibility in the implementation of REDD also demands a variety of national and international financing mechanism. While Corbera et al. still describe a mechanism that mobilizes finance predominately via carbon markets, it has become clear over the last year that carbon markets cannot be the only choice of REDD financing. REDD has to build on a process that involves the design of low carbon development strategies and the adoption of a new land-use paradigm (Meridian Institute 2009a, b). Before moving to full scale implementation, countries need to go through a process of policy design, consultation and consensus building, testing and evaluation. Most developing countries require assistance in this process and such assistance needs to be supported by stable and predictable resources. They do not have the ability to engage in carbon markets at the early stages of REDD implementation, neither can they be expected to speculate in expectation of future tradable REDD units – whose availability and value remains uncertain.

Taking into account the different capabilities of countries to accurately account for forest emission reductions on a national basis, the majority of UNFCCC Parties supports a three phase REDD mechanism that is flexible and dynamic enough to allow countries to participate in an international REDD mechanism regardless of the state of their institutions, policies, or inventories (UNFCCC 2009). Country participation in the different REDD phases demands increased financial incentives that are commensurate with demonstrated commitment and achievement of measurable and lasting emission reductions. Without prejudice to the outcomes of the UNFCCC process, most of the discussion refers to three phases in REDD implementation (Meridian Institute 2009b):

- national REDD strategy development and core capacity building (Phase 1);
- the implementation of national REDD policies and measures in combination with compensation for proxy-based results for emission reductions and removals from selected forest activities, land-use and land-use change categories (Phase 2); and

- a results-based compensation mechanism for fully measured, reported and verified greenhouse gas (GHG) emission reductions and removals from the whole forestry sector and other selected land-use and land-use change sectors (Phase 3).

In accordance with the Bali Action Plan (UNFCCC 2007), REDD is likely to be performance based. Regardless of the source of the funding, funding will be linked to the achievement of agreed results. While Phase 1 and 2 does not allow the linking of funding to carbon markets, Phase 3 links payments to the achievement of quantifiable tons of CO2e emission reductions and could therefore be linked to the creation of tradable REDD units.

Markets can serve as a funding mechanism where emissions reductions can be monitored, reported and verified. Verified emission reductions can be translated into tradable REDD units. Markets are highly relevant where private level crediting is allowed, since the generation tradable REDD units can serve as project finance mechanism. Where REDD units are being allocated to governments, they can help to finance public sector programs. REDD units acquire value if they can be used for compliance by developed country governments to meet their quantified emission limitation and reduction objectives (QELROs). In addition, REDD units can be used by private sector entities to meet entity-level emission reduction targets, provided that the relevant government authorizes such use. Under these scenarios, REDD units serve as offsets for developed country GHG emissions.

Emphasising the need for flexibility in REDD implementation Corbera et al. make the convincing case for the implementation of sub-national REDD activities before countries have assumed national reference scenarios that allow the national accounting for GHG emissions from REDD. Sub-national activities that account for local emission reductions could generate REDD credits in advance of national schemes that could be sold on international carbon markets. Informed by the desire to access REDD emission reductions as quickly as possible, the US climate bill currently under consideration by the Senate allows the use of GHG reductions from sub-national activities for compliance under a future US cap-and-trade scheme for a transition period before the adoption of national reference levels (Waxman-Markey Bill 2009; Kerry-Boxer Bill 2009). After the adoption of national reference levels project activities could continue to generate verified emission reductions that can be converted into tradable REDD units. To avoid double counting units allocated for entity level trading would have to be deducted from national accounts (Pedroni et al. 2009). Such schemes could be defined internationally (like Joint Implementation) or defined by individual Parties (by REDD countries or in developed country emission trading legislation); in any event such activities would require host country approval.

Market based funding will however hardly be sufficient to catalyze the broader policy change that supports REDD. Governments need predictable and stable resources when engaging in REDD. They are unlikely to engage in substantial governance and land-use reforms on the basis of a future promise of REDD units that may or may not carry value. A REDD market mechanism faces the dilemma that participant REDD countries will have to sell REDD units to cover their costs, while potential buying countries have a wide array of choices how they meet their QELROs. While demand is therefore hard to gauge, the supply of REDD units is also uncertain and difficult to assess precisely. Estimates of mitigation potential from REDD range from 2.6 $GtCO_2e$ per year by 2030 to 3.3 $GtCO_2e$ per year by 2030, to 3.5 $GtCO_2e$ by 2050 (Eliasch 2008; Vattenfall 2007; Stern 2007). However,

mitigation potential is not synonymous with the generation of verified GHG emission reductions. A number of factors will affect the generation of REDD units including how reference levels are set and how easy (or difficult) it is to implement activities that will generate emission reductions and removals in each country.[2] If demand is set too low or is uncertain, this may negatively affect supply but also opens up the risk of market flooding. If demand is set too high, any problems with supply will drive carbon prices to unacceptably high levels. These uncertainties surrounding supply and demand of REDD units produces a number of potential risks including market flooding, price volatility, and timing of unit issuance.

Non market funding should enable the implementation of early policies and measures and make available upfront finance. Support through bilateral or multilateral channels will also reduce the national cost of REDD. Linking a REDD mechanism to international carbon markets would expose REDD countries and project developers to the international price of tradable carbon units. As long as the prices for carbon remain under the costs of REDD, they would make a loss on their investment, if the prices exceed the costs, they would accrue profit. Because of the comparatively low abatement costs for REDD (Corbera et al. 2009) efforts to limit the overall costs for REDD implementation would favour fund based schemes that would limit international funding to the compensation of REDD costs. It is however the expectation of profits that mobilize private funds and harness economic forces for fast and effective action that make part of the attraction of market based REDD schemes. A hybrid system which includes fund as well as market based funding is therefore a preferred choice for REDD.

2 Institutional models

If an international REDD mechanism indeed has to rely on different funding sources and financing instruments, it is likely that a variety of institutional models would have be set up to accommodate different funding sources and the essential functions of a REDD mechanism. The funding mechanisms could be aligned with the three phases, but allow for overlapping access to funding within the phases. Institutional models supporting an international REDD mechanism could include (Meridian Institute 2009a):

- A *REDD Register* that considers the institutional requirements for the international recognition of bilateral or unilateral REDD actions and financial support in an internationally managed register. Such a register could facilitate the tracking and coordination of funding sources, as well as the MRV of actions and support. It would provide transparency and help ensure the integrity of REDD

[2]The former will affect the theoretic potential to generate REDD units if, for example, part of the mitigation potential is accounted for under a business as usual scenario of reductions. The latter will affect the actual supply of REDD units. Actual supply may be depressed if, for example, the international rules surrounding the generation of REDD units are so complex they create a barrier to enter the market, or a country's REDD policy or governance do not engender the development of REDD activities that generate REDD units.

actions and financial support. The REDD register could initially be operated by an institution outside of the UNFCCC and later become part of a more permanent REDD institutional architecture.

- A *REDD Fund* that sets out the institutional requirements for the establishment of a fund to support REDD actions under the authority of the COP. Such a COP-mandated fund could be dedicated to REDD or embrace broader climate change mitigation finance. It could be administered by decentralized arrangements, the COP, or one or several operating entities. The flow of finance would go from the trustee of the fund directly or via a REDD agency to the national institutions of the REDD country. The arrangements that support the fund should be flexible enough to (a) allow different starting points for national institutions, and (b) to devolve responsibilities to national institutions as they grow.
- Under a *REDD Market*, principles, standards, and institutional capacity would be agreed to allow the quantification of GHG emission reductions and enhancement in forest carbon stocks that could be converted into tradable carbon units. At a minimum, a market-compatible model would require a forest emissions inventory, a reference level endorsed by the COP, and a functional national or international GHG registry. The COP could define criteria based on which standards for GHG performance metrics, social and environmental impacts, and participation requirements could be developed. REDD countries could propose country and action-specific performance indicators or monitor performance against a reference level of deforestation.

3 National implementation

Regardless of fund-based versus carbon market based compensation schemes, the success of REDD will ultimately depend on the existence of national arrangements that are able to deliver emission reductions at scale. To ensure transparency and inclusiveness, the decision-making process should include a system that engages representatives of forest-dependent people, civil society organizations, and the private sector. The reduction of forest emissions and protection of forest resources will have to be supported by a diverse set of policies that address the drivers of deforestation. REDD policies will have to be developed in a coordinated policy process that takes into account the economic, social and political costs of each intervention. A comprehensive and participatory assessment of the available policy options should lead to legislative proposals that (1) address governance failures, modify budgetary laws, reassign responsibilities, remove perverse or conflicting incentives; (2) review and amend land planning, zoning, agricultural extension, property laws; and (3) create indirect or direct fiscal incentives (payment for ecosystem service and other subsidy schemes). The implementation of these measures will have to be based on a sound and legitimate policy making process and rely on robust cost/benefit analysis. Moving towards a regulatory system that supports the sustainable and long-term protection of forest is particularly challenging for developing countries, where land-use and forest sector policies, some of which still dating from colonial times, are often designed to allow fast extraction and export of natural resources, as well as to promote land occupation in remote areas.

4 Conclusions

From a national perspective REDD requires the definition of a new national consensus on protecting forest natural resources, rather than exploiting them. REDD policies require the establishment of integrated land-planning schemes, building of enforcement capacities, reforms in the agricultural sector and a review of infrastructure planning. REDD finance will have to compensate loss of rights and income while creating incentives for shifting activities from invading to protecting forest resources. Adequate international support would have to respond to the various needs of REDD countries and devise mechanisms that mobilize action at various levels of society. A mechanism that responds to the various capabilities of REDD countries and relies on a mix of market and fund based financing mechanisms and that allows sub-national activities in anticipation and as part of national REDD schemes seem to be the most appropriate set of mechanisms.

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