iied briefing

MARCH 2009

Financing REDD: meshing markets with government funds

Deforestation accounts for roughly 17 per cent of global greenhouse gas emissions. So it is no surprise that in the runup to the December 2009 climate talks in Copenhagen, REDD – reduced emissions from deforestation and degradation – is emerging as a strategy with big potential for mitigating climate impacts. With REDD, local communities can be rewarded for conserving their forests, so the approach works for poverty alleviation as well as emissions reduction. Evidence is showing that REDD is simple and workable. Funding is an altogether more complex issue, however. Looking at the roles of market and government, is a combined approach to financing REDD feasible?

Policy pointers

- **Government-to-government** funding alone is not at the right scale, or efficient and effective enough, to lower emissions. Market-based finance alone will fall short. A dual mechanism combining both is needed.
- **An agreement to finance** REDD this way could be the key landmark decision of the 2009 climate talks and may also allow for deeper cuts in overall emission targets.
- **REDD may become** the most important mechanism for financing forest conservation and poverty alleviation in the tropics, where most deforestation occurs.
- **To implement REDD** effectively and ensure benefit sharing to local people, certification and independent monitoring are key.

REDD and climate change challenges

Deforestation is a major driver of climate change, releasing billions of tonnes of carbon dioxide (CO_2) and other greenhouse gases into the atmosphere. The Intergovernmental Panel on Climate Change (IPCC) – the 2000-plus scientists who analyse the evidence on climate change – estimates that the forestry sector is responsible for 17.4 per cent of global greenhouse gas emissions, putting it above global emissions from the transport sector of just over 13 per cent.[1] So it is clear that to reduce emissions of CO_2 and other greenhouse gases to safe levels (see 'Two degrees'), action to halt deforestation will be necessary.[2]

The first commitment period of the Kyoto Protocol (2008-2012) did not include any targets or credits for emission reductions from deforestation. Ongoing negotiations for the second commitment period, after 2012, are searching for a consensus on how to include a provision for REDD – reduced emissions from deforestation and degradation. The Bali Roadmap for the new international climate change agreements includes a focus on REDD.

REDD can simultaneously reduce emissions and alleviate poverty by rewarding local communities for conserving their forests. As a relatively new alternative method for reducing emissions, it is now much in the spotlight, and is expected to feature prominently at the Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC) in December 2009 in Copenhagen, where the post-Kyoto regime is due to be designed. As a concept REDD has now gained much acceptance, and the question is not whether, but how, it will be implemented.

Debate has raged round REDD for some time, focusing on issues to do with methodology, local communities and indigenous people, and finance mechanisms.

Two degrees: the safe limits of emissions

The Intergovernmental Panel on Climate Change (IPCC) concludes that Earth's atmosphere needs to be stabilised at 445 to 490 parts per million (ppm) of atmospheric greenhouse gases.[3] They have also stated that the safe level for global temperature increase is 2^0 Celsius. Conservative estimates suggest that to achieve that limit, atmospheric greenhouse gas emissions should be lowered to 350ppm.[4] However, today's atmospheric concentration of these gases is estimated to be 433ppm and current 'business as usual' scenarios suggest that a dangerous level of atmospheric CO_2 will be reached in 2030 rather than in 2040, as was formerly thought.[5] The evidence is more than enough to back calls for urgent action on a massive scale to reduce greenhouse gas emissions.

Financing REDD: meshing markets with government funds

Pilot projects have shown, however, that methodological issues such as baseline, additionality, permanence and leakage (see 'Jargon buster') can all be dealt with satisfactorily.

Among the biggest REDD successes is the Juma Sustainable Development Reserve Project in Amazonas, Brazil's largest state. This is the first REDD project in Brazil to comply with the Climate, Community & Biodiversity Alliance (CCBA) standard. It has also been validated by the international certification body TUV SUD, and gone through the additionality test of the Voluntary Carbon Standard (VCS) Program.[6]

The project at Juma also involves a benefit sharing mechanism for local communities (through the forest conservation grant programme Bolsa Floresta), who receive 100 per cent of the benefits obtained in the voluntary carbon markets.

This is simple and effective: each person is given a widely accepted debit card in exchange for conserving their forests, along with additional benefits through investment in sustainable income generation, support to grassroots organisations and social programmes (education, health, communication and transport).

The key for the ultimate success of REDD is, however, how it will be financed.

The underfunding of reduced deforestation

Tropical deforestation is a consequence of land use dynamics that vary among and within regions. Drivers of deforestation include conversion to agriculture, illegal logging, land grabs, poor public policy and poor governance.[7] Deforestation is largely driven by stakeholders' perception of economic gains, not by ignorance, irrationality or stupidity. So stopping deforestation demands the creation of a different rationale for all stakeholders involved: forests need to be seen as worth more standing than cut.[8]

Initiatives to reduce deforestation in tropical areas have focused on two general approaches: regulations and law enforcement, and incentives for forest management and conservation. Historically, greater emphasis has been given to regulations and law enforcement. Recently, economic incentives for forest management and conservation, especially payment for environmental services, have received increasing attention.[9]

International and national efforts to reduce deforestation have lacked appropriate funding. International organisations such as the UN Forum on Forests and the Global Environmental Facility have either underfunded forest projects, been too bureaucratic, or both. Financing institutions such as the World Bank have viewed investment in the forest sector as too risky.[10] Net flows of foreign aid from rich countries in the Development Assistance Committee of the OECD amounted to US$104 billion in 2006,[11] but only a small fraction of that went to deforestation-related projects.

Future finance: the two basic approaches

The two basic approaches to REDD financing are government funding and market-based instruments. There is considerable debate over which is best. A possible solution is a mechanism incorporating both.

The 2008 Eliasch Review on financing global forests estimates that US$17-33 billion must be invested annually to halve greenhouse gas emissions from deforestation by 2030. One scenario modeled suggests that the global carbon markets could supply around US$7 billion per year to reduce deforestation by 2020. This may vary according to the stringency of the emissions reduction targets, the level of supplementarity allowed and the carbon price.

This scenario would leave a funding gap of around US$11-19 billion per year. The suggestion is that such funding would come from governments of the relatively rich Annex I countries party to the UNFCCC. An example is Norway's Climate Change and Forestry mechanism, which has an initial budget of US$2.5 billion for the next five years.

Raising funds under each approach

Government funding This mechanism would be financed by governments, mainly from funds derived from the auction of emission allowances in the European Union's Emissions Trading Scheme and others, as well as developmental assistance funds and other funds such as Norway's.

Each rainforest nation would monitor deforestation at the national level against a generally agreed baseline. Payments would be made on the basis of deforestation reductions at country level. Each country would set up its own strategy to invest these funds to continue to receive annual transfers.

Market-based This mechanism would be financed by allowing companies in Annex I countries to offset part of their emission reduction obligations through REDD.

Project owners and developers would validate and certify projects under generally agreed guidelines and approved methodologies. Each project would invest the carbon credit revenues according to local and regional conditions. These results would be inspected periodically by independent auditors at project level.

Jargon buster

To be effective as a strategy for reducing emissions, REDD has to satisfy a number of criteria, including the following.

Baseline: An established benchmark against which any reduction in emissions can be calculated.

Additionality: Proof that any reduction in emissions from a REDD project is genuinely additional to reductions that would occur if that project were not in place.

Permanence: The long-term viability of reduced emissions from a REDD project. This is heavily dependent on the forested area's vulnerability to deforestation and/or degradation.

No leakage: Leakage is a reduction in carbon emissions in one area that results in increased emissions in another – for example, where curbing clearfelling in one forest region drives farmers to clearfell in another.

Pros and cons: analysing 'fit'

Linking market and government funding approaches first demands a close look at their advantages and disadvantages.

These can be analysed using three sets of criteria, the so-called 'three Es'. Is the mechanism achieving its greenhouse gas emission targets (effectiveness)? Is this target achieved at the minimum cost (efficiency)? What are the distributional implications and co-benefits (equity and co-benefits)?

Equally key is the 'U' criterion: urgency. This is needed, in the light of the potential role of REDD in providing rapid, large-scale greenhouse gas emissions as a bridge strategy for reducing near-term emissions while buying time to move into a fully fledged global low-carbon economy (see 'Weighing up government and market finance for REDD').

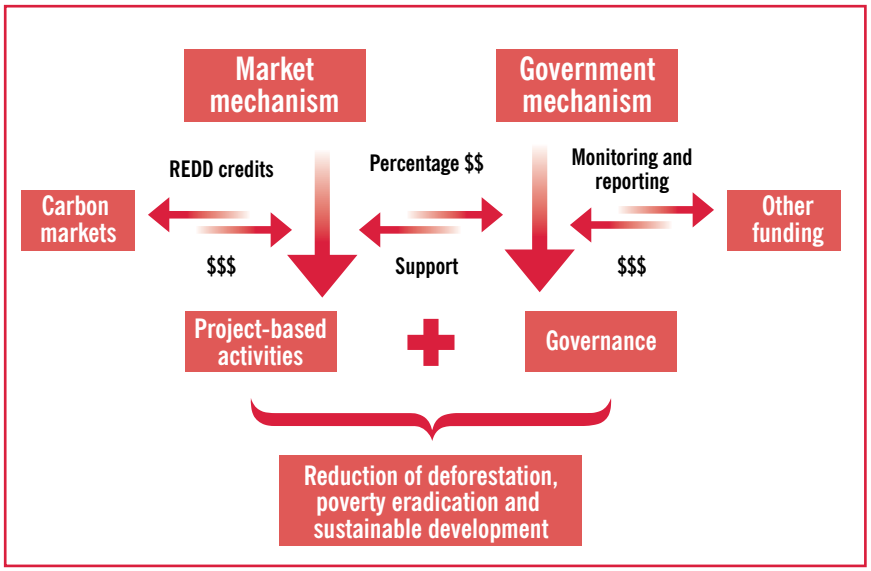
The major difference between government and market approaches is the time they take to set into motion. Government can be slow; the carbon market can respond relatively quickly. But both have distinct pluses that can be harnessed for a dual approach.

How a dual approach would work

Some have argued that a 'nested' approach would be the most appropriate, to allow countries to start activities at both project and national levels.[12] This way of working is seen as the most flexible, but the challenge is how to harmonise the government and market levels.[13]

Four areas of focus are necessary to construct the building blocks of an effective dual mechanism. First, governments should receive financial incentives to implement public policies aimed at reducing

A twinned system for REDD funding



Weighing up government and market finance for REDD

Effectiveness	Efficiency	Equity	Urgency
Government			
+ strong support of rainforest governments encourages sound policies	+ lower international transaction costs	+ facilitates international transfers between rich and poor countries	- slow implementation of intergovernmental funding
- limited effectiveness of government-based policies	- higher domestic costs	- favours middle-income countries	- slow implementation of government programmes
+ captures domestic leakage	+ greater incentives for governmental policies	- risk of domestic distribution inequities	
- does not capture international leakage	- greater risk of policy and governance failure		
- limited attractiveness to private funders	+ lower monitoring costs		
Market-based			
- weak support to encourage sound policies by rainforest governments	- higher international transaction costs for small projects	+ increases funding from market to forest communities in poor countries	+ quicker implementation of project-based activities
+ greater effectiveness of field project-based activities	+ lower bureaucracy and administrative costs	+ does not favour middle-income countries	+ quicker impacts on reduction of deforestation and degradation
- does not capture domestic leakage	- smaller incentives for governmental policies	+ smaller risk of inequitable distribution of benefits to local communities	
+ increases area of forests under protection with positive impacts on international forest leakage	+ smaller risk of policy and governance failure	- potential risk of inequitable distribution of benefits to local communities if project certification schemes are ineffective	
+ greater attractiveness to private funders	- greater monitoring costs		

deforestation. Secondly, project-based funding should be encouraged to deliver on-the-ground incentives. Thirdly, both government and market-based funding should have a social and sustainability focus. And finally, the dual government/market mechanism should allow coexistence, in perpetuity, of finance from both sources.

The government side – a focus on governance

In a dual system, the government-based mechanism should aim at improving governance, policy coherence, efficacy and effectiveness related to forest conservation, poverty eradication and sustainable development. The main focus should be on monitoring, law enforcement, land tenure policies, expansion and implementation of protected areas and indigenous lands, reduction of impacts of infrastructure projects, agricultural and economic policies to increase the value of standing forests to local communities and indigenous populations, and social programmes with a special focus on education and health.

Government funds should be financed primarily by intergovernmental transfers from Annex I countries. Additional funding could also come from multilateral organisations, private foundations and a levy on carbon markets.

The market side – a focus on forests and peoples

A market-based mechanism in the dual system should be directed at local projects, with a focus on investing in activities that improve the sustainability of forest management and reduce deforestation in ways that provide social, environmental and economic benefits to local communities and indigenous peoples, assure monitoring of these benefits at project level, and ensure transparency and accountability for resource use. Market-based financing should be directed to projects, with measurable boundaries, and subject to field verification and certification. Projects should allocate a percentage of the carbon revenues to special-purpose government funds of rainforest nations.

The way forward

In the negotiations for the post-2012 commitment period of the UNFCCC, figures under discussion for reducing greenhouse gas emissions relative to 1990 levels vary by between 20 and 40 per cent.

What is proposed here is that in the carbon market, buyers will have to purchase 10 per cent of their carbon offsets as REDD. Emission reduction targets should be increased to 40 per cent of 1990 levels.

Having a 10 per cent quota for REDD would provide programmes and projects to reduce deforestation and degradation with significant amounts of funding. With the carbon market around US$118 billion a year, REDD credits could total US$11.8 billion a year. This figure is at the scale of investment needs in international forestry estimated by the Stern Review and the Eliasch Review, among others.

A dual financing mechanism for REDD may provide a simple solution to a much-debated issue on the road to Copenhagen. If rainforest governments are supported by governments of Annex I countries, and if forest projects are financed by carbon markets, REDD can become one of the most effective mechanisms to deliver rapid, large-scale reduction of greenhouse gas emissions.

Such mechanism should be implemented with caution so that all concerns about benefit sharing with local communities and indigenous peoples are dealt with appropriately. Experience of field-based certification in the forest sector, such as that offered by the Forest Stewardship Council, could be a useful reference.

Although REDD financing may become a catalyst of change towards tropical forest conversation and sustainable development, it should not be seen as a panacea. There are political, human rights and environmental issues that require a multitude of mechanisms. REDD can be one, but not a substitute for all.

VIRGILIO M. VIANA

Virgilio Viana is director-general of the Amazonas Sustainable Foundation, Manaus, Brazil, and is an IIED Visiting Fellow.

Notes

[1] Mitchell, A. *et al.* 2008. *Forests NOW in the Fight against Climate Change*. Forest Foresight Report 1.v3. Global Canopy Programme, Oxford. [2] Stern, N. 2007. Stern Review on the Economics of Climate Change. HM Treasury, London. [3] IPCC Working Group I. 2007. Couplings between changes in the climate system and biogeochemistry. In *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the IPCC. Cambridge University Press, Cambridge. See www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-chapter7.pdf. [4] Hansen, J. *et al.* 2008. Target atmospheric CO_2: Where should humanity aim? *Open Atmospheric Science Journal*. 2:217-231. See http://arxiv.org/ftp/arxiv/papers/0804/0804.1126.pdf. [5] Eliasch, J. 2008. *Climate Change: Financing global forests.* The Eliasch Review. Earthscan, London. See www.occ.gov.uk/activities/eliasch.htm [6] Viana, V. M. *et al.* 2008. The Juma Sustainable Development Reserve Project: Reducing greenhouse gas emissions from deforestation in the state of Amazonas, Brazil. See www.fas-amazonas.org/arquivos/juma_executive_summary.pdf [7] Chomitz, K. M. *et al.* 2006. *At Loggerheads? Agricultural expansion, poverty reduction, and the environment in the tropics*. The World Bank, Washington DC. [8] Viana, V. M. 2007. *As Florestas e o Des-envolvimento da Amazonia*. Valer, Manaus, Brazil. [9] Rojas, M. and Aylward, B. 2003. *What Are We Learning from Experiences with Markets for Environmental Services in Costa Rica? A review and critique of the literature*. IIED, London. See www.iied.org/pubs/pdfs/9247IIED.pdf [10] Lele, U. *et al.* 2000. *The World Bank Forest Strategy: Striking the right balance.* The World Bank, Washington DC. [11] Aid. 21 February 2009. *The Economist*. See www.economist.com/markets/indicators/displaystory.cfm?story_id=E1_TDSPPDTT. [12] Pedroni, L. *et al.* 2007. *The Nested Approach: A flexible mechanism to reduce emissions from deforestation*. CATIE, Costa Rica. [13] Angelsen, A. (ed.) 2008. *Moving Ahead with REDD: Issues, options and implications*. CIFOR, Bogor, Indonesia.

Download the pdf at www.iied.org/pubs/display.php?o=17053IIED

CONTACT: Virgilio Viana
Virgilio.viana@fas-amazonas.org
3 Endsleigh Street,
London WC1H 0DD, UK
Tel: +44 (0)20 7388 2117
Fax: +44 (0)20 7388 2826
Website: www.iied.org

iied
International Institute for Environment and Development