



Sustainability and Commodities

This edition of WWF's Commodity Update breaks with tradition and focuses on a single opportunity that seems to be of particular interest to many of you – forest carbon markets.

The market for carbon credits and other environmental benefits from forests (often characterized under the acronym REDD+, reducing emissions from deforestation and forest degradation), received a major boost at the Cancun climate meeting last December. We are certainly not yet out of the woods in terms of having a formal global market, but we do see important commitments emerging from some national governments and public agencies. In the same way, important technological advances (including remote sensing technologies) are increasing the credibility of carbon stock assessments while also significantly reducing costs.

In this issue, Iain Henderson and Steve Ruddell, two of WWF's forest carbon advisors, explore REDD+ and emerging opportunities in carbon markets. WWF sees the evolution of this market as important since any serious effort to address climate change will have to integrate forests (up to 20% of GHG emissions are estimated to arise from the destruction of forests), and additionally, creating a value for standing and intact forests will help to protect biodiversity and a range of other ecosystem services.

For the financial sector, there would appear to be potential opportunities as well through roles as originators, project developers, and market intermediaries. Our Forest Carbon Initiative provides further information about the work that WWF and its partners are doing in this area.

REDD+ isn't market ready, yet we are optimistic that it is coming down the pike in the next five years. Cancun commitments, technological advances, and regulatory progress mean that many of the costs and public policy constraints to uptake are being addressed (at least on a country by country level), and it is clear that a range of private sector financial institutions are testing the market through voluntary credit schemes. Certainly judging by the number of REDD+ meetings WWF is currently having with private sector finance, many of you share our views.

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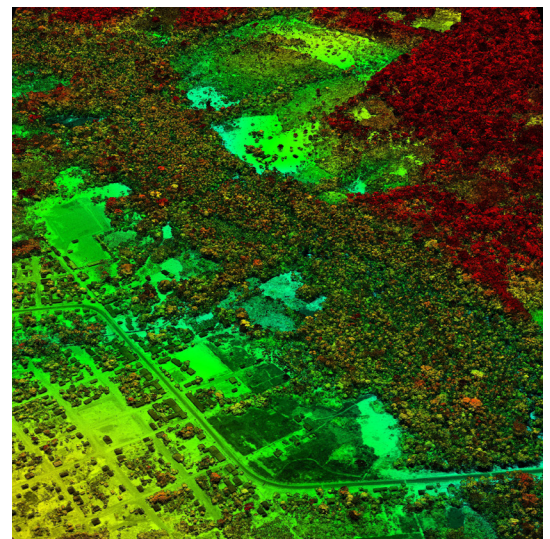
Climate Talks Advance REDD+ by Steve Ruddell, President, CarbonVerde, LLC

While the latest round of [UN climate talks](#) in Cancun did not bring us closer to a binding international agreement to curb climate change, the Cancun Agreements made significant progress towards establishing a framework for protecting forests in developing countries through the adoption of a REDD+ mechanism. This phased approach encourages developing countries, with the financial and technical support of developed countries, to contribute to mitigation actions by undertaking activities to reduce emissions from deforestation and forest degradation, sustainably manage forests, and conserve and enhance forest carbon stocks.

The decision calls for national strategies to monitor, report and verify (MRV) emissions from these REDD+ activities, but also allows for sub-national MRV as an interim measure where relevant. A historic first for the UN climate talks, this REDD+ mechanism recognizes the adoption of sub-national approaches to REDD+ activities, building potential for accelerated investments in MRV and in voluntary forest carbon offset projects, such as the [Voluntary Carbon Standard \(VCS\)](#). The Cancun Agreements did not address whether market-based mechanisms can be used to finance REDD+, but the convention of parties agreed to consider market- and non-market-based approaches in the next round of negotiations being held in Durban, South Africa in December.

As a result of this progress, momentum is building globally in support of REDD+ activities. However, a major issue that needs to be addressed is how to cost-effectively measure and monitor REDD+ activities within acceptable levels of statistical precision and accuracy. In response to this need, WWF has funded LiDAR testing, an aerial remote sensing technology using light lasers for measuring forest carbon stocks in Peru. Preliminary results are promising, demonstrating LiDAR as an unprecedentedly accurate and cost effective approach to addressing the uncertainty in remotely sensed forest carbon measurements.

Additionally, WWF's Forest Carbon Initiative has field programs in Madre de Dios, Peru; Acre, Brazil; Central Kalimantan, Indonesia; and the Democratic Republic of Congo to advance the establishment of sub-national MRV policies and technical approaches. While the foundation is clearly still being built, the momentum for VCS may translate into a primary compliance market.



Where the carbon is - this LiDAR image shows an area of road building and development adjacent to primary forest in red, and secondary forest regrowth in green

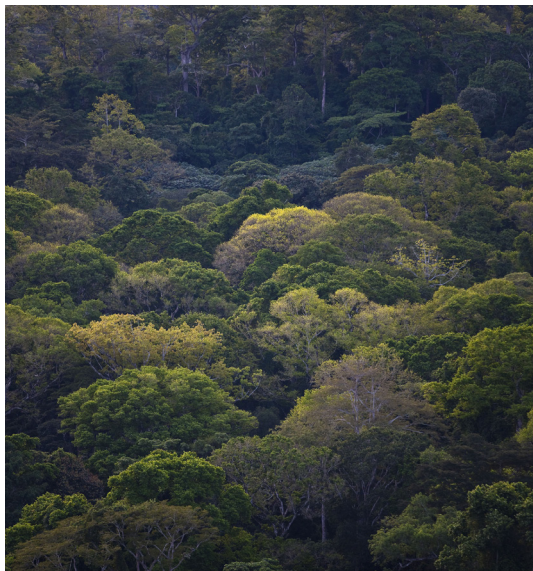
Funding REDD+

by Iain Henderson, Forest Carbon Finance Fellow, WWF

Despite the many compelling reasons to preserve tropical forests, deforestation continues at an alarming rate. Due to what is often a combination of market and policy failure, tropical forests are often perceived as more valuable cut than standing. Addressing this challenge will require significant capital: several comprehensive studies (Eliasch Review, European Commission, etc) conclude that a material (>50%) slowing of global deforestation will cost tens of billions of dollars a year. On a relative basis, however, REDD+ is still perceived to be the most cost-effective means of abatement compared to other alternatives in other sectors (e.g. energy or transportation), while also offering a range of vital social and environmental benefits.

A [2010 Ecosystems report on Forest Carbon](#) found that the average cost of REDD+ was in the \$5-10/ton CO₂e range. This compares favorably with a current price of around \$15/ton CO₂e for CERs in the EU ETS and costs of over \$50/ton CO₂e in the case of some industrial emissions.

The debate over how REDD+ will be funded continues. European sovereign credit spreads highlight the stretched state of many national coffers, yet current REDD+ financial flows are almost entirely dominated by the public sector. There is roughly \$5 billion of public, fast-start funding that has been pledged for REDD+, whereas private sector investment in terms of both supply and demand is currently negligible.



So why the disparity? Despite being heralded as a Cancun success story, REDD+ is still in the process of evolution. There remain many unresolved issues in a number of key areas that will determine what the future REDD+ mechanism looks like. The cost and complexity of preparing countries for REDD+ is vast, and the foundations in terms of finance, standards, policy, safeguards, law, science, and community engagement all have to be laid before the scheme can function effectively. This capacity-building and REDD+ readiness phase is almost entirely funded by the public sector, and there is little incentive for the private sector to engage in these activities.

Notwithstanding the uncertainties surrounding REDD+, there have been a few [REDD+ projects](#) initiated which involve the private sector. However, when assessed from a commercial rather than philanthropic perspective, these uncertainties give rise to a risk/return profile that is often at odds with commercial risk-adjusted return expectations. For example, trying to establish project feasibility at the onset of a project involves many 'soft costs' (legal fees, consultant costs, management time, and other non-physical assets). These early-stage development costs typically have little or no value if the project does not proceed and hence carry significant risk until certainty can be achieved that the project is feasible and will reach financial close.

Managing these risks has been approached in a number of ways. One method of hedging the early-stage risk has involved the development of a 'multi-stakeholder' model, where many of the initial costs are shared by the public sector or NGO community (e.g. [Wildlife Works and BNP Paribas](#)). Private sector engagement increases once various project milestones or conditions are met and the risk/return profile looks more attractive. Developing

integrated business models, which include multiple revenue streams alongside REDD+ from other uses of the land (such as certified agriculture or forestry), have also been suggested as a means of diversifying some of the current REDD+ policy risk.

A catalyst for scaling up REDD+ will be the creation of a meaningful source of market- or fund-based demand. As yet, there is no compliance market for REDD+ credits, and in comparison, voluntary carbon markets are small and illiquid. The failure of the US Climate Bill last year was a disappointment and the EU ETS appears unlikely to include REDD+ credits before 2020. However, although skeletal, plans for a UN Green Climate Fund were advanced at Cancun. Furthermore, there are a number of regional or national schemes that might give rise to REDD+ developing along a 'bottom-up', rather than a UNFCCC-led 'top-down' approach. In this context, there is considerable interest in the development of the California cap-and-trade scheme which might include international REDD+ credits. This could potentially set a precedent for other REDD+ schemes globally.

It would appear that we are still a few years away at the earliest from [material private sector engagement in REDD+](#), yet there are clear signs of progress in terms of both supply and demand. As REDD+ evolves, opportunities for the financial community might emerge in areas such as origination, brokering, market making, project finance and the creation of REDD+ linked investment products. These financial services will be vital to the development of an equitable and efficient REDD+ mechanism, which could play a key role in containing climate change and reap benefits for society and the environment. To help move these discussions forward, WWF, the Global Canopy Program and the Climate Bonds Initiative are hosting a high level meeting in London in late February to assess the potential for a "forest bond mechanism" to underpin the scale up and acceleration of private sector activity in forest carbon markets. The event is heavily oversubscribed but we would be happy to provide a summary report to interested parties. Please contact [Mark](#) for copies.

Next Edition

Our next edition of the Commodity Update will be available in May 2011 and will focus on the implications of the International Finance Corporation's revisions to [Performance Standard Six \(PS6\): Biodiversity Conservation and Sustainable Management of Living Natural Resources](#).

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