



State of the forest carbon market: A critical perspective

Introduction

Significant human and capital resources have been invested in a new mechanism to address deforestation called REDD (Reducing Emissions from Deforestation and Degradation) since the Bali United Nations Framework Convention on Climate Change (UNFCCC) conference in 2007. Developing countries around the world continue to invest considerably in preparing national strategies to reduce emissions and enhance sequestration in their forest sector and donor countries continue to support these efforts through bilateral and multilateral channels. At the climate negotiations in Cancun in 2010, governments also agreed to explore financing options for results-based payments for REDD. It therefore merits reflection on what lessons can be learned from the current state of carbon markets and from recent research to better understand the implications, challenges and barriers to carbon market finance for REDD.

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The phased approach to REDD

Due to the unique challenges associated with implementing forest mitigation actions, a flexible, phased approach to REDD implementation has been broadly supported by many countries. The influential “Options Assessment Report” written by the Meridian Report for the Government of Norway suggested that the phases consist of: (1) national REDD strategy development, including national dialogue, institutional strengthening, and demonstration activities; (2) implementation of policies and measures proposed in those national REDD strategies; and finally (3) payment for performance on the basis of quantified forest emissions and removals against agreed reference levels.¹ The report noted that eligibility for phase three activities should be contingent upon compliance-grade monitoring, reporting and verification and accounting of emissions and removals as well as a national sectoral commitment.

The Cancun decisions also recognized the importance of a phased approach and decided that REDD activities: “should be implemented in phases, beginning with the development of national strategies or action plans, policies and measures, and capacity-building, followed by the implementation of national policies and measures and national strategies or action plans that could involve further capacity-building, technology development and transfer and results-based demonstration activities, and evolving into results-based actions that should be fully measured, reported and verified.”²

Beyond requiring national monitoring systems for the third phase of payments for results-based actions, the requirements and financing options have yet to be decided by the UNFCCC.

¹ Zarin, Daniel et. al. *Reducing Emissions from Deforestation and Forest Degradation (REDD): An Options Assessment Report*. Meridian Institute, prepared for the Government of Norway. March 2009. Available at: <http://www.redd-oar.org>.

² *United Nations Framework Convention on Climate Change. “Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010.” Decision FCCC/CP/2010/7/Add.1*

Much of the ongoing REDD policy development is oriented towards preparing developing countries to participate in a carbon market for REDD offset credits, including significant investment in emissions baselines and sophisticated measurement and verification programs for carbon. However, there is currently no carbon market that accepts REDD credits for compliance purposes, and the likelihood of this occurring is growing slimmer by the month. Carbon markets in Europe are in crisis, and the prospects for California quickly and easily accepting REDD credits are overstated by its proponents. In the absence of a compliance market, carbon offset finance will not deliver the scale of financing anticipated. The continued emphasis therefore on pre-

paring countries for a carbon market risks wasting billions of dollars on unnecessary technical considerations.

There are simpler solutions that could actually deliver emissions reductions at scale in the near-term, and innovative sources of finance that could be mobilized at the scale needed. Alternate performance metrics and financing options would broaden participation by REDD countries and enable significant near term emissions reductions in the context of sustainable development. Governments should focus their efforts on developing more efficient and implementable policy frameworks and incentives to halt global deforestation.

No compliance market, no money

The growth of the carbon market has stalled and declined in the past 12 months,¹ with carbon recently declared the world's worst performing commodity.² The European Union Emissions Trading Scheme (EU ETS) was forced to close the carbon spot market for several weeks this year following a carbon theft scandal. This was the EU ETS's second major scandal, and it came on the heels of a VAT tax fraud scheme that Europol estimated to be worth €5 billion. These scandals shook confidence in cap and trade systems as a viable tool for address rising greenhouse gas emissions. As more gaming and fraud is exposed in the carbon markets, political support for these markets will diminish even more.

Even as political interest in cap and trade is waning, the REDD policymaking community appears delightfully unaware. Even the World Bank, while promoting market-based REDD, carbon trading and carbon finance schemes, has admitted the declining political interest in cap and trade in a recent evaluation of the global carbon market.³ Countries that once were considering cap and trade programs have failed to implement them or are delaying them significantly, including Canada, Australia, Japan and South Korea. In the U.S., the prospects of creating a national cap and trade program in the near future are nil. The Regional Greenhouse Gas Initiative is scheduled to continue through 2018, though consultants hired by RGGI operators warn that reforms must be made to revive that market, where weak allowance prices have pulled trading activity in RGGI allowances to almost nothing in the United States.⁴

1 World Bank Environment Department. "State and Trends of the Carbon Market, 2011." Washington, D.C., June 2011.

2 Wynn, Gerard. "Carbon Offsets Near Record Low, Worst Performing Commodity" Reuters, August 8 2011.

3 World Bank Environment Department. "State and Trends of the Carbon Market, 2011." Washington, D.C., June 2011.

4 Gronewald, Nathaniel. "After Explosive Growth, Global Carbon Markets Stall and Begin to Shrink." New York Times. June 2, 2011. Accessed November 4, 2011: <http://www.nytimes.com/cwire/2011/06/02/02climatewire-after-explosive-growth-global-carbon-markets-64850.html?pagewanted=all>.

California is often cited as the first compliance market that could accept REDD credits. After delaying the start of its carbon trading system by one year, California will indeed begin its program in 2013, but the likelihood of the state accepting international REDD credits is far from certain. There is "placeholder" language in California's enabling regulation that could allow for REDD credits, but for this to occur the state must conduct a full rulemaking process. At the agency level, California is very wary about the ability to regulate and ensure offset quality outside its borders. At the political level, the concept of accepting international offsets is very unpopular; in 2009 the California legislature passed a bill banning international offsets. It was vetoed at the time by Governor Schwarzenegger, who was a champion of REDD credits and is no longer in office.

Thus, the European Union remains the only significant cap and trade system in existence accounting for 97 percent of the compliance market.⁵ As REDD offsets from are currently excluded from the EU-ETS, there is currently no large-scale market for forest carbon credits. In addition, the European Union continues to express long standing concerns about REDD, particularly with respect to about the need for national level accounting to help ensure environmental integrity and the need for effective governance structures at all levels, including the need for equitable land tenure reform.⁶

Several recent studies have lauded the increased value of voluntary forest carbon market.⁷ While there was some growth in the voluntary market associated the approval of the REDD Voluntary Carbon Standard (VCS) standard, these volumes remain very small and prices are weak. The characteristics of this market are entirely project driven, and thus prone to leakage and impermanence. Voluntary markets themselves are an

5 World Bank Environment Department. "State and Trends of the Carbon Market, 2011." Washington, D.C., June 2011.

6 Council of the European Union. "Council Conclusions on addressing the challenges of deforestation and forest degradation to tackle climate change and biodiversity loss." 2912th Environment Council meeting. Brussels, 4 December 2008.

7 David Diaz, Katherine Hamilton, and Evan Johnson. State of the Forest Carbon Market 2011. Ecosystems Marketplace. September 2011

The voluntary carbon market

The voluntary carbon market is substantially different than the global compliance or regulated carbon market. Regulated carbon markets are created by the establishment of a mandatory cap-and-trade scheme covering greenhouse gas emissions. Under such a scheme, the government sets an overall limit, or a cap, on emissions for a portion of the economy and either sells or issues a quantity of carbon allowances to emitters equal to the cap in any given year. For a given compliance period, individual emitters are required to surrender carbon allowances equal to their emissions.

Most cap-and-trade proposals provide for a second type of tradable carbon instrument, known as carbon (offset) credits. These credits are not created by government fiat, as is the case with allowances, but rather are earned for not emitting greenhouse gases (compared to a business-as-usual scenario). They are generated outside the capped economy by projects designed to reduce, avoid or sequester greenhouse gases, and can be sold to emitters within the capped economy to help them comply with their greenhouse gas limits.

The voluntary carbon market however allows for the purchase of offset credits outside emissions regulations schemes. Cities and corporations who have made a voluntary commitment to offset their emissions can purchase credits outside regulated offset markets like the Kyoto Protocol's Clean Development Mechanism. The voluntary market generally is not subject to regulatory oversight by governments and as such have been criticized for their lack of integrity.

infinitesimal fraction of global carbon market. In 2011, the global carbon market was valued at \$1.42 billion with the voluntary market valued at \$424 million. While the market share of REDD credits on the voluntary market increased, it is still only worth \$124 million, accounting for just 0.02 percent by volume and 0.01 percent by value of the global carbon market.⁸

The average price for offsets across the primary forest carbon markets rose from \$3.8/tCO₂e in 2008, to \$4.5/tCO₂e in 2009, and up to \$5.5/tCO₂e in 2010.⁹ Prices continue to vary widely, as each market transacts very different credits with unique characteristics.¹⁰ However,

on the whole, the prices remain insufficient to cover the cost of implementing policies on the ground. Moreover, these transactions remain project driven, rather than conducted within national level emissions reductions programs, so are less likely to address impermanence, emissions leakage and governance weaknesses.

In sum, voluntary forest carbon markets will be insufficient to deliver significant flows of REDD capital, and the prospects of creating compliance grade REDD credits are slim. The continued investment in infrastructure and technical capacity for carbon market schemes risks wasting significant resources for a program that will ultimately lack social and environmental integrity.

⁸ *Ibid.*

⁹ *Ibid.*

¹⁰ Molly Peters-Stanley, Katherine Hamilton, Thomas Marcello, and Milo Sjardin. *State of the Voluntary Forest Carbon Market 2011. Ecosystems Marketplace. June 2011.*

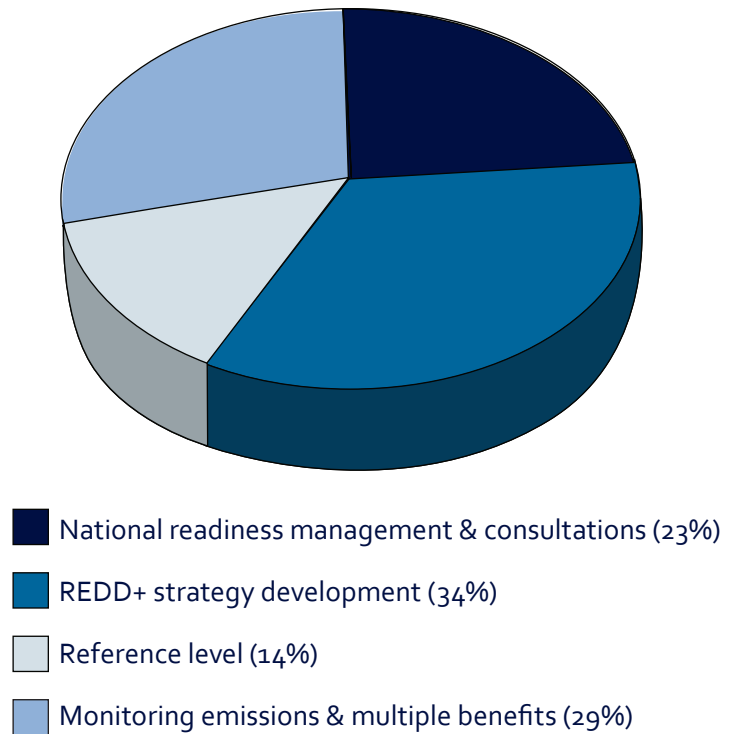
Misallocation of resources

The current focus on measuring carbon to create forest offset credits is a particularly expensive exercise. The majority of REDD readiness money is being spent on establishing reference levels and measuring carbon instead of addressing the underlying drivers of deforestation. Of 26 countries that have submitted budget information on their REDD readiness plans to the World Bank,¹¹ five are spending more than 40 percent on reference levels and carbon measurement systems, five are spending more than 50 percent and two are spending more than 60 percent.¹² Of the countries that are spending less 40 percent of their budgets on technical carbon measurement programs, many have only budgeted for the costs associated with designing such systems. This suggests that many, if not all countries will be over-investing in capacity building for carbon measurement systems — at the expense of other programs that could deliver positive impacts. Notably, the budget for assessing social and environmental impacts often represents a tiny fraction of overall readiness spending.

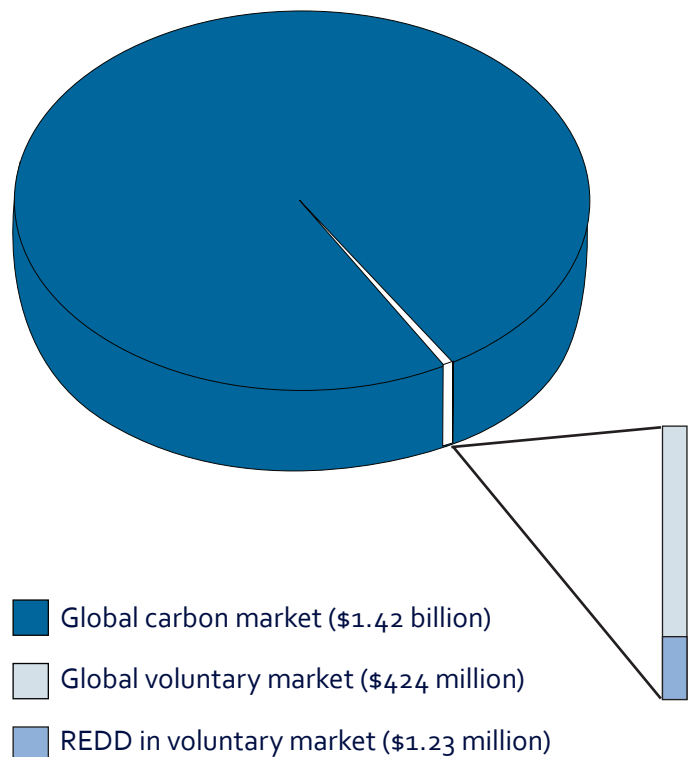
Regardless of how much money is spent trying to quantify forest carbon, the scientific data currently available on measuring carbon stocks and fluxes from land-based emissions are anything but rigorous and verifiable, and certainly do not match the level of accuracy needed for carbon to be traded on a compliance market. One recent study noted that, “from a trading point of view, the process which forest creates carbon is ill defined to the point of being unacceptably risky. It contains a vague, poorly defined and scientifically unreliable process for creating forest carbon.”¹³ In response to this uncertainty, the report noted that either the price

11 This information is based on budget information included R-Plans submitted to the World Bank’s Forest Carbon Partnership Facility. R-Plans can be accessed at: <http://www.forestcarbonpartnership.org/fcp/node/203>.
 12 See Annex for detailed information.
 13 The Munden Project. “Redd And Forest Carbon: Market-Based Critique and Recommendations” March, 2011. Accessed August 5, 2011: <http://www.mundenproject.com/forestcarbonreport2.pdf>.

Readiness budgets



REDD in the global carbon market



of carbon will be significantly discounted, market participants will rig the methodology to create the most credits, or the simplest and least rigorous methodology will be adopted in order to reduce costs.¹⁴ Certainly, increased capacity to measure forest loss is needed in many countries, however forest monitoring systems are can implemented robustly at far less cost than forest carbon accounting systems.

If carbon accounting activities consume the lion's share of REDD readiness budgets, then intermediaries — rather than governments or local communities — are the primary financial beneficiary. Consultants are well-poised to capitalize on requirements for highly technical carbon monitoring programs. In existing payment for ecosystem services programs, intermediaries emerge as dominant agents in the offset value chain, and a substantial part of total flows of funds can be captured by the intermediaries (validators, verifiers, registrars, commercialization agents and consultants) rather than by the governments or local communities engaged in the carbon reducing activity.

One analysis of Clean Development Mechanism offset projects (the largest offset market in the world) found that only about 31 percent of total funds received for CDM credits capitalize mitigation projects, with the rest going to carbon traders and middlemen.¹⁵ In REDD offset projects, intermediaries often capture more than 50 percent of REDD financing.¹⁶ A recent study found that not only were REDD intermediary costs high, with project documents sometimes taking over a year to complete, but that “it is sometimes in a consultant's interest to make things as complicated as possible.”¹⁷ Finally, experience with other commodi-

ties, such as agricultural products, suggests that commodity markets generally are unfavorable to producers and privilege intermediaries. In these other commodity markets — which do not have the high costs associated with verification and accounting — typically less than 3 percent of the commodity value accrues to producers and approximately 5 percent to government; more than 60 percent is captured by intermediaries.¹⁸

Any offset-based REDD program requires tremendous investment in establishing baselines and sophisticated systems for carbon measurement and verification in order to ensure offset quality. In order to create tradable compliance-grade REDD credits, these measures must be even more robust. The amount of resources required to ensure this level of quality is simply much greater than most buyers are willing to pay, and some problems, such as additionality, may be intractable. Ultimately, these methodological constraints make REDD not well suited for carbon trading.

Innovative finance options

While the carbon markets are failing to deliver significant flows of capital and permanent, sustainable emissions reductions, there are several innovative sources of climate finance that can readily deliver the scale finance needed for international climate mitigation and adaptation activities, including forest mitigation actions. Many of these sources have the added benefit of reducing other harmful activities and therefore should be considered a “win-win” for policy makers.

Financial transactions tax

Short-term, speculative trading can destabilize the financial markets and create little social value. The famous “flash crash” of 2010 — in which Dow Jones Industrial Average plunged about 1,000 points, only

¹⁴ *Ibid.*

¹⁵ Carbon Retirement. *The efficiency of carbon offsetting through the Clean Development Mechanism.*, 2009.

¹⁶ Corbera et al., 2009; as quoted in Hajek, F., Ventresca, M.J., Scriven, J.N.H., Castro, A., 2011. *Regime-building for REDD+: Evidence from a cluster of local initiatives in south-eastern Peru. Environmental Science & Policy* 14(2), 201-215

¹⁷ Hajek, F., Ventresca, M.J., Scriven, J.N.H., Castro, A., 2011. *Regime-building for REDD+: Evidence from a cluster of local initiatives in south-eastern Peru. Environmental Science & Policy* 14(2), 201-215.

¹⁸ The Munden Project. “Redd And Forest Carbon: Market-Based Critique and Recommendations” March, 2011. Accessed August 5, 2011: <http://www.mundenproject.com/forestcarbonreport2.pdf>

to bounce back fourteen minutes later — exposed the destabilizing impacts of algorithmic, high frequency traders. Most of the \$1.5 trillion of currency trades that occur each day are driven by short-term arbitrage. A micro-tax on trade in stocks, currency and derivatives could help curb destabilizing financial speculation and even as little as a one hundredth of a percent tax could raise \$650 USD billion per year for the just transition to low-carbon economies. The International Monetary Fund has indicated that such a financial transactions tax is technically feasible.¹⁹ In September 2011, the European Union followed suit with a proposed a 0.1 percent tax on trading of stocks and bonds, with a 0.01 percent rate for derivatives contracts that would take effect in 2014 and raise approximately €57 billion euros (\$78 billion USD) a year.²⁰ EU Tax Commissioner Algirdas Semeta said the measure would constitute, “a fair contribution from the financial sector.”²¹

Special Drawing Rights

In 2009, in response to the global economic crisis, the International Monetary Fund allocated \$250 USD billion worth of a specially created international reserve asset called “Special Drawing Rights (SDRs)” to its member countries. The value of SDRs is derived from a basket of four major currencies (U.S. dollar, euro, Japanese yen, and pound sterling). Countries can then use SDRs to either boost central bank reserves in order to access better credit or convert immediately to hard currency.

Of that \$250 USD billion released in 2009, approximately \$165 billion went to developed countries, the vast majority of which currently sits idles in rich country coffers. These reserve assets created by the IMF are immediately available and can be used now for climate

19 John Brondolo. “Taxing Financial Transactions: An Assessment of Administrative Feasibility.” *International Monetary Fund Working Paper. WP/11/185. August 2011.*

20 Rebecca Christie. “EU Proposes \$78 Billion-a-Year Financial Transaction Tax to Start in 2014.” *Bloomberg News. September 24, 2011. Accessed November 4, 2011: <http://www.bloomberg.com/news/2011-09-28/eu-proposes-78-billion-a-year-financial-transaction-tax-to-start-in-2014.html>.*

21 *Ibid.*

action in developing countries. Developed countries should immediately transfer some or all their 2009 SDRs to finance developing countries climate mitigation and adaptation action. In the future regular, significant releases of SDRs could provide also provide significant funding. Importantly, up to \$250 billion USD worth of SDRs can be released without the need for U.S. congressional approval.

Re-directing fossil fuel subsidies

Further, developed countries currently spend between \$57 and \$100 USD billion each year propping up the fossil fuel industry through government subsidies. These subsidies are defined as any government action that: lowers the cost of fossil fuel energy production, raises the price received by energy producers, or lowers the price paid by energy consumers. World leaders at the Group of 20 summit pledged to phase out subsidies for fossil fuels. President Obama reiterated his commitment to end subsidies to the oil industry in his 2011 State of the Union address. Subsidy shifts should target producer subsidies, which largely benefit wealthy oil corporations in the North and not consumer subsidies which focus on improving energy access in poorer countries. Redirecting fossil fuel subsidies in the North to renewable energy and adaptation in developed and developing countries would contribute significantly to meeting commitments for international climate finance, and would lead directly to greenhouse gas emission cuts in developed countries.

Shipping and aviation taxes

The shipping and aviation industries are currently contributing significantly to greenhouse gas emissions and under-taxed. According to the High Level Advisory Group on Climate Finance, policies to regulate the shipping and aviation sectors could generate significant sums of finance, with a large percentage devoted to climate action.²² A maritime fuel tax could generate \$16

22 *Report of the Secretary-General’s High-level Advisory Group on Climate Change Financing. <http://www.un.org/wcm/content/site/climatechange/pages/financeadvisorygroup/pid/13300>.*

billion annually.²³ An aviation fuel could generate \$6 billion annually for climate action.²⁴ Consistent with the polluter pays principle, regulating and taxing these sectors could both reduce emissions and generate public finance. However, any action to address emissions from these sectors must adhere to the principle of common but differentiated responsibility and ensure developing countries are not adversely affected.

As the world faces multiple and severe crises, during some of the most difficult economic times in our history, it is more important than ever that resources are used effectively and those responsible for contributing to these crises provide solutions. Several sources of finance are readily available and any delay in implementing them is due entirely to political will, not a lack of technical feasibility.

Next steps and recommendations

Despite repeated promises that carbon markets for REDD would deliver significant sums of money, current financing is inadequate and unpredictable, while future financing is also uncertain. Despite these uncertainties, market-based financing for REDD requires countries to make heavy up-front investments in setting up measurement systems for carbon, and requires significant ongoing costs related to verification and accounting. The little value that is left for governments mirrors the situation in the CDM market and other commodities markets, where producers and governments receive an infinitesimal portion of overall value with the vast majority of benefits accruing to intermediaries.

All countries should instead focus their efforts on scaling up innovative sources of finance for climate mitigation and adaptation, including forest mitigation efforts. A REDD mechanism should provide financing for ambitious programs that effectively address the structural

causes of deforestation. Alternate performance metrics that emphasize improvements in overall governance, including enforcement and equitable land tenure, and in halting deforestation. This will require moving away from the current focus on quantifying forest carbon to create tradeable assets. Instead, countries should be rewarded for successfully implementing the broad range of policies and measures needed to effectively reduce emissions and for demonstrating reduction in deforestation.

While alternate performance metrics can provide greater flexibility to implement policies and measures needed to reduce deforestation, it should be noted that many countries will still need up-front financing for implementation. Lastly, all countries should increase their focus on addressing the drivers of deforestation at local, national and global levels, using new investment strategies, rather than exclusively relying on an ever-elusive carbon market that will not deliver the finance or emissions reductions needed.

²³ World Wildlife Fund. "International transport: turning an emissions problem into a finance opportunity" June 2011.

²⁴ *Ibid.*