



**~ Driving Private Capital to Conserve Tropical Forests:  
Current Frameworks & Policy Ideas ~**



John-O Niles  
Director, Tropical Forest Group

Commissioned by WWF-US for the 2009 Forest Carbon Finance Summit  
Hosted by Harvard University's Program on International Financial Systems

March 5, 2009

## Part 1. Introduction

Private financial funds for tropical forest conservation are still a tiny fraction of the \$15-30 billion needed annually. Rates of deforestation remain high and there is widespread appreciation that public finance and charity alone can not fundamentally alter deforestation trajectories. Even with ambitious increases in public sector finance, the financial equation in most countries will remain the same. Without massive private investments to conserve forests, in most countries more money will be made cutting trees down rather than leaving them be.

Since reducing emissions from deforestation in developing countries (REDD) was formally re-introduced to the UNFCCC in 2005, a proliferation of financial products have evolved to conserve tropical forests. In voluntary and pre-compliance carbon credit contracts, new financial tools developed to benefit investors and forest protectors simultaneously. These innovations have been occurred in advance of REDD policy certainty. The value to investors of voluntary REDD credits is derived from companies hoping to buy carbon credits low and sell them high. The pre-compliance value is derived from companies hoping pre-regulatory discount prices can be converted into profits if REDD credits become compliance grade and more valuable. Forestry credits have the added benefit of easy to understand beneficiaries and story lines. REDD contracts have spurred a sub-set of contract tools and language. These tools address REDD concerns about equity, permanence and real emission reductions. They also are a “proof of concept” showing some large banks and investors believe they can make money by helping save forests and trading in associated carbon credits. These early investments have also led to various entities having a vested interest in stopping deforestation in areas and having REDD included in a future climate change accord.

Other novel instruments have been proposed recently, such as new forest bonds, forest pension investment schemes, and licenses to value and market other ecosystem services. These instruments have the following characteristics:

- They are trying to drive private capital to tropical forest conservation without relying solely on carbon values,
- They rely on government actions to provide market assurance, lower investment risk, and somehow value externalities intact tropical forests provide, and
- They are experimental; it is not yet clear where return on investment would come from or if the private sector can make money saving tropical trees with these instruments.

In addition to these concepts, several large new bilateral and multi-lateral REDD funds have been launched, by governments of Norway, the UK, the World Bank and the United Nations. Of these, only the World Bank is explicitly trying to “carve out” space for private investors. These funds will not be discussed in this paper.

This paper addresses private tropical forest conservation finance by exploring two topics:

1. The spectrum of private capital instruments for saving forests, and
2. Policy steps to make these tools more successful at saving tropical forests in the near term.

## Part II. Current Market Tools for Tropical Forest Conservation

Recently private financial strategies have evolved to counter tropical deforestation and maintain standing forests. Most of these are voluntary REDD carbon credits, many which include options to become compliance credits if a REDD market develops. In addition, a growing number of financial tools have been proposed to complement emission reduction values and increase private sector involvement. These include various bond proposals, ecosystem licenses, pension and investment guarantees, and the concept of terrestrial carbon credits (see **Table 1**).

**Table 1. Various Types of Private Tropical Forest Financial Instruments**

<b>Financial Instruments</b>	<b>How They Work</b>	<b>Who</b>	<b>Key Points</b>
<b>Carbon Markets</b>	Private investment in carbon credits predicated on either voluntary (“feel good”) or eventual REDD markets	Investors, carbon credit buyers, aggregators,	Return depends on risks associated with individuals projects & for pre-compliance, on probability of operating REDD carbon market
<b>Terrestrial Carbon Credits</b>	Vulnerable forest carbon permanently conserved can be sold.	Proposed by Terrestrial Carbon Group	Politically more difficult than emission reductions. Largely resolve supply, demand still depends on carbon markets.
<b>Licenses to market ecosystem services</b>	Investment is made to community in return for rights to market & sell future environmental services	1. Canopy Capitol 2. New Forests 3. Other private companies	Separate/additional mechanisms to supplement carbon values. Strong basis for private sector but limited demand.
<b>Pension Plan for the Planet</b>	Bonds guaranteed by future carbon credits or surcharges on emitting industries. Developed nations or multilaterals assume some of the risks.	Proposed by Prince Charles’s Rainforest Project	Seeks to bridge immediate needs with government & pension bonds to allow rainforest nations to being reducing deforestation.

### II a. Voluntary and Pre-Compliance REDD Carbon Markets

Contracts between REDD sellers and buyers have increased as political interest in REDD has grown. Some prominent REDD investments have been announced in the past few years. Even with the economic downturn, coming months will likely see additional investment as voluntary REDD methodologies and registries mature. In early 2009, several large companies that had not previously invested in a REDD project were known to be seriously REDD project shopping.

#### *Carbon Markets: General Characteristics*

There are a few general observation about the voluntary and pre-compliance REDD markets.

1. All Known REDD Contracts (thus far) are Sub-National. All known REDD carbon contracts have been developed at the project, regional, or sub-national level. There has not been a publicly-disclosed deal (voluntary or pre-compliance) between the private sector and a country for national REDD credits. Clearly, some components from sub-national REDD contracts could be

used at a national level. Such a development would not be a surprise given governments' abilities to implement and enforce REDD measures as well as basic economies of scale.

2. Specific Quantities, Prices, Time-Frames, Systems. REDD contracts contain information about how many tons of REDD credits are being contracted for and at what price. Price signals (including variable and fixed prices, call-options, price strikes, etc) have started providing key information to policy makers and markets. The time dimension is important, since it is a critical variable in terms of total projected credits. Most contracts prescribe oversight systems, some of the more popular being the Voluntary Carbon Standard and the Climate, Community & Biodiversity Standards. These provide guidance for determining reference emissions scenarios; measurements, monitoring and verification; and ways to deal with leakage and permanence. Most voluntary oversight systems have varying degrees of independent audits and transparency.

3. Ownership/Legal Right to REDD Carbon Remains A Challenge. Many initial REDD contracts have struggled to define who owns the rights to forest carbon or financial values from REDD credits. Only a few developing countries have clear legal land and forest tenure and none have explicit, tested and trusted forest carbon laws. REDD agreements spend considerable time and money determining to whom a buyer pays in return for projected credits.

4. Most Have Compliance "Upgrade" Terms.

Many REDD contracts state if voluntary REDD credits become compliance grade, investors and other stakeholders (see #3 above) have some stake in the presumably more valuable regulatory offsets. This has allowed investors to "get in" to the voluntary market before clear policy guidance while allowing potentially higher returns if a compliance REDD market develops.

#### ***Carbon Markets: Some Key Innovations***

Many REDD transactions are proprietary and many details of how private REDD dollars are funding conservation are not yet in the public domain. Most known innovations revolve around aligning incentives for accomplishing conservation and measuring it. These include:

1. Collaborative Cost- and Profit-Sharing. Many REDD contracts include notions of how much it will cost to deviate below a REDD reference scenario, who is "putting up" how much money, and some agreed-on distribution of revenues, often based on inputs. This is innovative as these contracts bring coalitions together at a REDD project's inception, establish the value of various players and explicitly state how revenues will be split among government, communities, NGOs and the private sector. They put everyone on the "same page" at the beginning of a project with clear roles and clear rewards if deforestation declines can be achieved, measured and sold.

2. Call-Options based on Validation and Verification Hurdles. Most REDD contracts are signed before any REDD credit has been audited or created within a particular voluntary oversight system. Many payments are subject to successful completion of validation (auditing of proposed REDD activities) or verification (audited actual drops in deforestation and associated emission reductions). This creates strong incentives for all stakeholders (see above #1) to do their part to contain deforestation and get reductions audited, valued and sold.

3. Risk-Management Buffers and Liability for Permanence. Some of the most intriguing REDD contract innovation has evolved to answer the question, “What happens if the forest burns down at some point down the road?” Risk management schemes typically involve placing in escrow significant portions (e.g., 10-40%) of REDD credits in early years of a project to cover any losses. The most novel schemes reinvest proceeds from sales of buffer credits into non-forestry carbon credits (fuel switching, mini-hydro) in the project area. This creates assets with no forestry risks and tangible local co-benefits, increasing the local value of the project. Several companies are also exploring more typical insurance products for REDD credits.

## **II b. Forest Bonds, Ecosystem Licenses, Pension Plans & Terrestrial Carbon Credits**

Other instruments outside of carbon markets have also been evolving. These instruments benefited from forest-carbon “excitement” and also seek to recruit private conservation finance. They are described below.

### *1997 Norwegian/Costa Rican Carbon Bond*

In 1997, Norway invested at least \$1 million in 200,000 tons of carbon bonds from Costa Rica in the pre-CDM phase. This government-to-government purchase of forest-based carbon bonds was part of the Activities Implemented Jointly and no clear financial value ever materialized. While dated and not of the private sector, this precautionary tale shows how without clear policy that values forest-based carbon bonds, private investments may not materialize at scale.

### *Canopy Capital’s Partnership with the Iwokrama Reserve*

In 2008 Canopy Capital, a private firm based in the UK, announced a deal with the Iwokrama forest reserve in Guyana for \$1.2 million. This project, whose terms were not public, stated a dozen investors provided up front conservation finance in return for a five-year license to value ecosystem services in the reserve. The sovereignty of the forest remains in the hands of the local people. The project is looking to market an Ecosystem Service Certificate attached to a 10-year tradable bond. It is unclear how much of the perceived value is centered on carbon or where values for other services emanate from. It is too early to tell if investors will make any money.

Other private companies such as New Forests, Sustainable Forest Management, and others have business models similar to Canopy Capital but there is little public information on these companies or completed deals.

### *Pension Plan for the Planet*

Prince Charles of Wales has been incubating a “Pension Plan for the Planet”, details which are expected in early 2009. The Prince has discussed his proposal with the 8 largest pension funds in the world. His plan relies on a yet-to-be detailed “put option” on future carbon and other ecosystem service markets. The project has noted that investments in sustainable forestry in developing countries have high risks (around 30%, akin to the type of risk venture capitalists are used to) but much lower returns (such as 7%, akin to more established equity markets). The Prince’s Rainforest Project has said it will try to address the divergence between risk and return in financial forest markets. A key goal is to give investors confidence so they can invest in REDD projects before there is final agreement on the next international climate change accord.

The project has alluded to various ways to mitigate risks to investors. The Prince's team has proposed such things as multi-lateral investment guarantees or first losses being taken by the World Bank or developed nations. The project aims to bridge immediate REDD conservation needs with pension investments backed by government assurances. The World Bank or developed nations would underwrite the early private investment to provide market certainty.

The plan wants to see safeguarded private REDD capital accomplish several things:

- Help clarify land tenure,
- Integrate and fund sustainable development plans,
- Increase transparency in supply chains to make commodity and timber costs reflect tropical forest values,
- Establishment of a credible, real time international forest monitoring system.

It is too early to tell if such a plan can take flight in today's economic climate. As noted above, a more detailed plan is expected in early 2009.

### *Terrestrial Carbon Credits*

The Terrestrial Carbon Group recently proposed a new system that would operate in a manner different than today's carbon market. Their concept is based on dividing developing nations' terrestrial carbon into two types. The first type of biotic carbon is protected and unlikely to be emitted. Examples would be national parks and remote forest with no immediate threat. The second category is for all other terrestrial carbon – any carbon in vegetation facing conversion pressures in coming decades. The group calls for developing countries to develop bodies for establishing rules to determine Terrestrial Carbon Budgets. These budgets, based on how much vulnerable carbon there is and appropriate time scales (they suggest 50 years), are nations' right to emit. Any actions that emit less or sequester more carbon would create Terrestrial Carbon Credits (TCC) and be eligible for trading. This proposal allows sub-national credits to be harmonized through national accreditation bodies. The system relies on seller-liability where loss of a TCC would be replaced by the selling country or sub-national participant.

Demand for TCCs would come from developed nations at any level (UN, national or sub-national). The group's proposal is mostly a way to create and manage supply and is different than current emission reductions and sequestration markets. The group states bonds could replace carbon credits and other financial products like derivatives could be allowed by developing countries. It is unclear how much support for the group's expanded concept of terrestrial carbon value there is, but it has attracted significant interest.

## **Part III. Policy Suggestions and Ideas**

Governments must act to stimulate forest-conserving investments. Before a final climate change agreement is reached, interim steps would increase private investment in REDD:

### **1. Creation of New Forest Carbon Credit Units**

The most powerful signal would be international or domestic policy language establishing a new unit of tradable tropical forest emission reduction or stock, and new demand for the unit. These units would need to be governed by institutions with the authority to regulate and issue tropical forest carbon credits. Such bodies would enact the rules for creating, managing and overseeing



tropical forest carbon credits. For instance, to clarify the importance of ownership, governing bodies could require forest carbon credits only be issued when ownership and rights associated with forest carbon are clear and traceable. Such institutions could also require contract terms are public wherever possible. This would provide assurances about carbon rights and create healthy supply, demand and price signals. There will be a balance between broad but early policy guidance on methodologies and delegation of details to a regulatory body<sup>1</sup>.

There is a potential to differentiate between a carbon dioxide credit (a CO<sub>2</sub>e credit) and a carbon credit (explicitly expressed as a C credit, not as CO<sub>2</sub>e) from international forests. Forest C credits could have legally different meanings than ones expressed in CO<sub>2</sub> or CO<sub>2</sub>e. The strategic value of not (at least initially) linking a forest carbon (C) credit to carbon dioxide (CO<sub>2</sub>), is simple. Leaving a potential linkage vague initially could help avoid some diplomatic tough decisions (e.g., funds or markets), allow modalities for the new forest carbon unit to evolve, and there is a strong scientific basis for eventually linking to compliance credits (carbon dioxide).

## **2. Credit for Early Action (preferred) or Baseline Protection (may be easier)**

Credit for early action refers to the concept that interim decisions (before a total agreement is reached) can “grandfather” in forest carbon credits created between now and when future rules are established. Language from Bali (2007) allowed for this possibility but has not advanced this concept since. Early action language signals to the private sector a strong likelihood investments today can yield future fungible forest carbon credits. The most powerful example of early action language is in Article 12 of the Kyoto Protocol, establishing the Clean Development Mechanism (CDM). This Article had a simple final sentence that ignited CDM investments:

*“Certified emission reductions obtained during the period from the year 2000 up to the beginning of the first commitment period can be used to assist in achieving compliance in the first commitment period.”*

Baseline protection is related to credit for early action, but creates weaker market certainty and profit potential. REDD baseline protection is policy language that demands reference emissions scenarios be defined as historical (past) activity. In the UNFCCC, there are strong indications reference emission scenarios will be based on historical deforestation rates. This language should be codified in broad legislation (e.g., the next Kyoto Protocol or any national cap-and-trade programs) to guide subsequent rules and modalities which often take additional time to develop. Without baseline protection language, investors and developing countries could be penalized by moving capital rapidly to contain deforestation. If an emission trajectory declines before the start of reference period, early-moving countries would have fewer emissions to avoid and sell. Baseline protection does not create the power of early action but guarantees that early steps to reduce deforestation won't be penalized. It is also politically easier than credit for early action (since it doesn't prejudge negotiations) and alleviates concerns about perverse outcomes where countries rush to deforest to show higher reference levels of emissions from deforestation.

## **3. Actions by Developing Nations: Creating REDD National Authorities (RNAs)**

A key CDM development was the creation of Designated National Authorities (DNAs). DNAs control the creation, use and sales of CDM credits within countries. There is so much activity in

---

<sup>1</sup> This was the case with the Clean Development Mechanism which had some basic language, including credit for early action, but deferred most key technical and methodological questions to the CDM Board.

the sphere of REDD, developing countries should begin formally aggregating and compiling this information in RNAs and developing national rules and guidelines such as how to ensure rights are respected or how to nest sub-national projects within national accounting. Countries' Readiness Plan Idea Notes (R-PINS) submitted to the World Bank's Forest Carbon Partnership Facility could serve as the precursors to RNAs. RNAs would let investors evaluate how serious and safe countries are in terms of international forest carbon credits. RNAs should have clear national authority to integrate data, meet international obligations (including methodologies, monitoring and liabilities for reversals) and have clear authority to engage REDD investors.

In many carbon credit contracts, there is lingering uncertainty the role national governments will play in regulating or nationalizing voluntary REDD credits. There is an acute "gap" between the voluntary REDD markets already emerging and potential compliance credits. Private investors are worried that developing countries could take over any REDD credits generated in the voluntary pre-compliance phase. RNAs could address the concern over nationalization by establishing national rules on this issue. Resolving this concern would provide critical investor certainty and facilitate early REDD investments. This would be particularly valuable if combined with early action or baseline protection measures taken internationally.

#### **4. Actions by the United States and Other Developed Nations**

Developed nations can do many things unilaterally to increase private investment in REDD. In the United States, the Treasury Department and the Overseas Private Investment Corporation (OPIC) are two agencies that could take specific actions to lower risks and increase investor REDD protections and returns. The Treasury Department is the lead administrator of the Tropical Forest Conservation Act (TFCA). TFCA has authorized around \$130 million in forest conserving agreements since 2000. Treasury should consider using forest carbon-based outcomes for future TFCA investments. This would build capacity in the United States and recipient countries for forest carbon methodologies without the constraints of the UN process. TFCA re-authorization language or new implementing steps should expand co-financiers beyond NGOs to the private sector, as was suggested in a 2007 audit of the TFCA.

The Overseas Private Investment Corporation (OPIC) ability to leverage private sector investments in tropical forest carbon should also be explored. OPIC could offer subsidized insurance products and other guarantees along the lines advocated by the Prince's Planetary Pension Plan. If US cap-and-trade legislation contains a strong international forest carbon dimension, combining OPIC-like private sector assurances and Treasury oversight and facilitation would be a logical framework for generating REDD offsets for the US system.

The overarching goal of any action taken by developed nations should be to manage private sector risks and create profitable investment environments. Agencies, whether in the United States or other developed countries, should signal that other ecosystem services can be bundled with carbon credits. This bundling can either be explicit (where forest carbon credits have a defined suite of other values attached) or associated (sustainably managed forests can yield carbon credits as well as credits for biodiversity, water purification and other values). Such bundling could help integrate the profound progress made in carbon-based financial instruments with other proposals discussed in this paper. This linkage would help drive increased private investments, and fully value the services provided standing tropical forests.