



## EXECUTIVE SUMMARY

# Toward a Financial Architecture to Protect Tropical Forests: The Case of Brazil

Rupert Edwards | January 2018



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GLOBAL ENVIRONMENT FACILITY  
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## Foreword

We have outlined in this report an architecture of finance for the protection of tropical forests that brings together an array of approaches into one integrated strategy. Our recommendations link three fundamental pieces of this architecture:

- Enhancing the effectiveness of REDD+;
- Supporting the implementation of forest country policies and legislation for forest protection;
- Harnessing private sector funding for forest protection from commodity buyers, agribusiness, and consumers.

More specifically, we have recommended:

- The use of put options/price floors for public REDD+ payments to support the development of carbon markets, harness private REDD+ funding and thus help capture additional “option value” from forest carbon assets;
- Enhanced bond structures, explicitly linked to REDD+ payments, to align interests between donors and forest countries so that both feel able to commit a greater scale of resources and thus catalyze upfront investment at low cost from the capital markets;
- Linking REDD+ in a concrete way to support implementation of Brazil’s powerful Forest Code legislation and more ambitious outcomes for avoided deforestation;
- Support for jurisdictional REDD+ from not only energy-intensive industries seeking to offset a portion of their potential compliance obligations, but also from commodity buyers/agribusiness needing to meet zero or “zero net” deforestation commitments.

Some good examples of blended finance for sustainable land-use projects demonstrate the benefits of linking increases in agriculture/timber productivity with conservation. However, a financial architecture will need to support the implementation of the broader enabling environment of public policy and regulation to catalyze a much larger scale of pro-forest investments than could be achieved through focusing only on discrete project activities with bespoke blended finance structures.

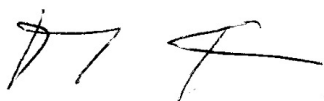
Therefore, the primary intention of these recommendations is to reduce the fiscal burden on forest countries of achieving ambitious Nationally Determined Contributions (NDCs) outcomes, allowing them to implement effective policy, to generate incentives to private investment, and to expand their support for successful blended finance models on the ground that combine forest conservation, sustainable forest management, and improvements in agriculture productivity.

We have focused in this report on Brazil specifically in relation to implementation of its Forest Code legislation. Other forest countries face different conditions. In Peru, for example, the primary driver of deforestation has been from small farmers rather than large-scale agriculture. Also, export markets for agriculture commodities are less developed and the Forest Law is a relatively new piece of legislation. On the other hand, Peru has achieved higher recent economic growth rates and has an investment-grade sovereign credit rating. Still, the approaches we recommend are intended to be adaptable in other forest countries, even if they face different conditions to Brazil. They could support implementation of, for example, the Forest Law in Peru, which is also pursuing an ambitious NDC and jurisdictional REDD+ goals and where regional governments are developing Production-Protection strategies.

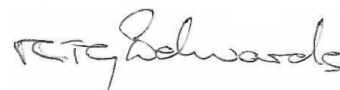
This is an ambitious vision for integration that will require: a) political will and opportunity; b) real leadership from the international donor community to support committed forest countries; c) bold partnership from the private sector; d) creative acumen from the finance sector; and e) opportunities large enough to bring together these different actors. The urgent forest and climate crisis as well as future generations demand nothing less.



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## Acronyms

ABC	Low-Carbon Agriculture ( <i>Programa para Redução da Emissão de Gases de Efeito Estufa na Agricultura</i> )
APP	Areas of Permanent Protection (under the Forest Code)
BNDES	Brazilian Development Bank ( <i>Banco Nacional de Desenvolvimento Econômico e Social</i> )
CAR	Rural Environmental Registry (under Forest Code) ( <i>Cadastro Ambiental Rural</i> )
CRA	Environmental Reserve Quotas (under Forest Code) ( <i>Cotas de Reserva Ambiental</i> )
DFI	Development Finance Institution
GATT	General Agreement on Tariffs and Trade
IBA	Brazilian Tree Industry ( <i>Industria Brasileira da Arvores</i> )
LR	Legal Reserve (under Forest Code)
NDC	Nationally Determined Contribution (under UNFCCC)
PES	Payments for Ecosystem Services
PFP	Payments for Performance (results-based financing under REDD+)
PCA	Priority Conservation Area (officially identified by Ministry of Environment)
PLANAVEG	National Plan for Restoration of Native Vegetation
PRA	Environmental Compliance Program (under the Forest Code) ( <i>Programas de Regularização Ambiental</i> )
PRODES	Brazilian Amazon Forest Monitoring by Satellite ( <i>Monitoramento Da Floresta Amazônica Brasileira Por Satélite</i> )
PRONAF	National Program for Strengthening Family Agriculture ( <i>Programa Nacional de Fortalecimento da Agricultura Familiar</i> )
REDD+	Reducing Emissions from Deforestation and Forest Degradation (under UNFCCC)
SICAR	National System for the Rural Environmental Registry ( <i>Sistema Nacional de Cadastro Ambiental Rural</i> )
SNCR	National Rural Credit System ( <i>Sistema Nacional do Credito Rural</i> )
tCO <sub>2</sub> e	Metric tons of carbon dioxide equivalent
UN FAO	United Nations Food and Agriculture Organization
UNFCCC	United Nations Framework Convention on Climate Change
UN GCF	United Nations Green Climate Fund
WTO	World Trade Organization

## 1. Executive Summary

Ambitious NDC<sup>1</sup> goals for conservation and restoration of forests will require the mobilization of multiple US\$10s of billions in additional investment. The aim of this report is to outline an architecture of finance for protection of tropical forests that might better align and integrate policies and resources (public and private, international and local) for forest conservation and restoration, and more productive agriculture and forestry sectors, and that is better able to finance the requisite transitions at scale.

Discussion of a financial architecture for forests must acknowledge the importance of basic enabling conditions in forest countries without which the financial “tail” cannot wag the real economy “dog.” Market risks, poor legal, and regulatory conditions or lack of institutional commitment can constitute an insurmountable barrier to large-scale financing. Nevertheless, many countries have sufficient capacity, but face challenges from fiscal constraints and insufficiently compelling terms for private sector investment.<sup>2</sup>

This report will focus on Brazil both as a critical forest country and in order to describe an architecture of finance based on a particular framework of law and existing institutional efforts to protect forests. Despite a challenging macroeconomic environment, Brazil has the most developed legislative framework for tropical forest protection in the Forest Code,<sup>3</sup> powerful institutional capacity including in its large public agriculture finance institutions, and high levels of foreign investment and trade in commodities associated with deforestation.

We will address two integrated dimensions of a comprehensive strategy to stabilize the forest frontier. There is currently a major focus on commercial approaches to improving productivity on the agricultural side of the frontier. While this focus is important, there needs to be a parallel investment into the protection of forests, ensuring that the public goods forests provide (climate, water, biodiversity) have real value. Building a successful market and policy strategy to effectively stabilize the forest frontier will necessarily require the building and connecting of three fundamental pieces of the architecture.

## Recommendations: Towards an Integrated Strategy



### 1. Enhancing the Effectiveness of REDD+

The central challenge for forest country governments is that investments related to Nationally Determined Contributions (NDCs) for forest protection have lower economic returns and come at greater fiscal cost than business-as-usual over the short to medium term (even if forest ecosystem services may be crucial to long-term economic resilience). This limits the ability of governments to undertake public NDC activities and create real economy signals that would result in commercial financial returns and greater levels of investment from private actors shifting from “grey” to “green.”<sup>4</sup>

International support in the form of traditional development finance tools (grants, loans, and guarantees) does not by itself mobilize sufficient investment for ambitious NDC goals. REDD+<sup>5</sup> results-based finance is seen as having the most potential for scale, is central to the Paris Agreement,<sup>6</sup> would form the bulk of significantly scaled-up international climate finance and will be critical in reducing fiscal costs for forest countries.

There are two key challenges in relation to the deployment of REDD+ results-based finance in countries that have reached a good stage of “readiness” in terms of their enabling conditions:

- There is a need for very large-scale REDD+ results-based funding commitments. This reflects the fact that NDC forest and “jurisdictional” REDD+ programs require something of a “leap of faith” with a major long-term investment commitment of the kind that limited REDD+ funding may struggle to encourage. Bilateral

<sup>1</sup> NDC: Nationally Determined Contribution under the UN Framework Convention on Climate Change (UNFCCC).

<sup>2</sup> World Bank. 2017. *The Potential Role of Enhanced Bond Structures in Forest Climate Finance*. Washington, DC, World Bank.

<sup>3</sup> The Forest Code or Native Vegetation Protection Law.

<sup>4</sup> World Bank (2016): *Support to the Implementation of the Brazilian INDC: Brazil's INDC restoration and reforestation target*, The World Bank, Brasilia, November 2016.

<sup>5</sup> REDD+: Reducing Emissions from Deforestation and Forest Degradation under the UN Framework Convention on Climate Change (UNFCCC).

<sup>6</sup> Under the UN Framework Convention on Climate Change (UNFCCC).

or multilateral public “Payments for Performance” (PFP) alone appears unlikely to provide the scale of financing required for the achievement of ambitious NDC outcomes in all tropical forest countries.

- There are also challenges in linking future results-dependent REDD+ revenue streams with current financing flows for forest protection. There remains an upfront funding gap with the risk of insufficient investment available to achieve the results for which payments would be made. The challenge is not just that payments occur after results. Capital expenditure financing generally can take a long time to generate revenue in other sectors, such as energy production. But achieving jurisdictional reduced-deforestation outcomes and associated revenues can appear to potential financiers less proven and more uncertain than for other sectors.

Therefore, two developments would address these challenges:

- Firstly, stimulating demand for REDD+ credits from markets and private actors would reduce the burden on public budgets, although significant public funding will be required to underpin the development of the UN architecture of REDD+ carbon markets, and also to catalyze demand from private actors.
- Secondly, complementary private financial flows outside of carbon markets will also be essential, enabled by appropriate financing instruments.

We therefore recommend:

- The use of put options<sup>7</sup>/price floors in place of the fixed-price purchase agreements currently used for verified emissions reductions under REDD+: The use of put options would support the development of carbon markets, supplement public with private REDD+ funding, and thus help capture additional “option value” from forest carbon assets.
- Enhanced bond structures, explicitly linked to REDD+ results-based finance, to attract upfront private capital toward forest-based NDC activities at a much greater scale than might be achieved through currently available financing instruments.



## 2. Supporting the Implementation of Forest Country Policies and Legislation for Forest Protection

A financial architecture will need to work with the grain of local conditions, supporting the implementation of public policy and regulation as a means to catalyze a much larger scale of pro-forest investments than could be achieved through focusing only on discrete project activities with bespoke blended finance structures.

With this in mind, we focus on two approaches that could efficiently improve the linkage between REDD+ and forest protection measures on the ground by supporting implementation of Brazil’s powerful Forest Code legislation and utilizing the capacity of its public banks, as well as supporting more ambitious outcomes for avoided deforestation:

- Expanding the capacity of Brazil’s public banks to provide loans, at significantly lower rates of interest, for farmers to invest in reforestation as part of regularization programs to comply with the Forest Code;
- The opportunity for a range of public and private actors to buy and retire quotas permitted to landowners under the Forest Code, valuing “surplus” forest to compensate farmers for avoided legal deforestation and thus supporting more ambitious targets overall for avoided deforestation in Brazil.



## 3. Harnessing Private Sector Funding for Forest Protection from Commodity Buyers, Agribusiness, and Consumers

There are substantial opportunities for private actors in profitably improving agriculture and timber productivity on already deforested lands, including among smallholders. Doing so is critical for development goals, would reduce the need for forest conversion, and could take pressure off existing forests, provided it is accompanied by implementation of legal frameworks for conservation.

<sup>7</sup> The writer (seller) of a put option has an obligation to buy the underlying security at the strike price if the option is exercised.

Policymakers in forest countries and internationally are focused on integrating investment in “Production” with “Protection,” and we analyze some successful examples of blended public-private finance projects linking improvements in agriculture productivity with conservation outcomes. We also analyze the potential for scaling up private investment in Sustainable Forest Management in order to meet NDC goals for forest restoration. And we discuss the importance of building economic enterprises among forest-based communities. However, we note that, with revenue streams from forest conservation generally weak or absent, scaled-up public funding remains essential to achieving Protection outcomes.

A critical question, therefore, is the extent to which private actors might reduce the fiscal burden on forest countries and international donors of paying for the public goods associated with forest protection.

With the exception of a very limited pool of philanthropic capital, institutional investors are not in a position to subsidize costs if it means accepting sub-economic rates of return, given their fiduciary responsibilities to pension holders and other savers. Such investors will require bonds and private equity or blended public-private finance structures to generate risk-adjusted returns that are competitive. Other financial institutions such as banks have similar obligations to shareholders. The onus thus remains on public policy and public resources to value public goods.

Although producers, agribusiness, and food companies also require commercial returns, the sustainable commodity/zero deforestation supply chain agenda, a response to the role of agriculture as the primary driver of deforestation, could represent an opportunity to reduce costs for forest countries and donors. However, the significant increases in pledges for corporate zero deforestation commitments are very much struggling to stay on track.

The prioritization of purchasing agreements from private agribusiness actors for commodities from sustainable/zero deforestation supply chains would improve the competitive position of producers. But such purchasing agreements largely represent ex post sources of revenue and cannot finance the needed transition to sustainable production.

Moreover, businesses emphasizing the commitments to take deforestation out of supply chains need to be complemented by government, jurisdictional, and policy support to help achieve results. However, there are limitations to which government policy and legal options in commodity consumer countries can level the playing field for private actors and ensure the success of these commitments.

A mechanism needs to be developed by which commodity buyers, agribusiness, and consumers of food or wood products, even in competitive global markets, can help fund payments for public goods associated with forest conservation. A willingness to do so must ultimately be the central test of supply chain commitments to zero deforestation.

We therefore recommend a mechanism for integrating Production, Consumption, and Finance by explicitly linking investment from commodity buyers and agribusiness (representing a very small percentage of the total value of their commodity purchases) to support jurisdictional REDD+ outcomes and implementation of the Forest Code.



### **Conclusion: Piecing the Puzzle Together**

The intention of these recommendations is to combine international public support for forest countries with payments for REDD+ credits from private actors (both energy-intensive industries seeking to offset a portion of their potential compliance obligations and commodity buyers/agribusiness needing to meet zero or “zero net” deforestation commitments).

This would have the effect of reducing the fiscal burden on forest countries as they seek to achieve ambitious NDC outcomes, allowing them to implement effective policy, to generate incentives to private investment, and to expand their support for successful blended finance models on the ground that combine forest conservation, sustainable forest management, and improvements in agricultural productivity.



# Pioneering Finance for Conservation

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Promoting development of sound, science-based, and economically sustainable mitigation and no net loss of biodiversity impacts

## **Coastal and Marine Initiative**

Demonstrating the value of coastal and marine ecosystem services

## **Communities Initiative**

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## **Ecosystem Marketplace**

A global platform for transparent information on environmental finance and markets, and payments for ecosystem services

## **Forest Policy, Trade, and Finance Initiative**

Supporting the transformation toward legal and sustainable markets for timber and agricultural commodities

## **Public-Private Finance Initiative**

Creating mechanisms that increase the amount of public and private capital for practices that reduce emissions from forests, agriculture, and other land uses

## **Supply Change**

Tracking corporate commitments, implementation policies, and progress on reducing deforestation in commodity supply chains

## **Water Initiative**

Promoting the use of incentives and market-based instruments to protect and sustainably manage watershed services

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