UNLOCKING FOREST BONDS

A HIGH-LEVEL WORKSHOP ON INNOVATIVE FINANCE FOR TROPICAL FORESTS

Workshop Report

Hosts

WWF

GCP GLOBAL CANOPY PROGRAMME

Climate Bonds INITIATIVE

Financial Partners

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Disclaimer

This document reports on the discussion that took place during the workshop and does not necessarily represent the views of the workshop hosts or financial partners. It reports on the broad variety of presentations, experience and views put forward by workshop participants. Some additional background research was carried out to fill gaps in information and provide a coherent synthesis of the workshop. The workshop took place under the Chatham House Rule.

Note on terminology

The term "forest preservation" is used throughout this document to collectively refer to the five types of activity to sustain forests: forest enhancement, avoided deforestation, avoided forest degradation, sustainable management of forests and conservation of forest stocks.

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SCALING UP FOREST FINANCE
STATEMENT FROM THE WORKSHOP HOSTS

Tropical forests contain more than half of all terrestrial life on Earth. [1] The biodiversity and ecosystem services these forests support are economically valued in the order of *trillions of dollars annually* [2] and underpin climate, food, energy, water, health and livelihood security for millions of people across the globe. Yet the rate of forest loss "is still alarmingly high". [3]

The importance of forests has received increased attention in recent years, particularly through international climate change negotiations and efforts to develop a mechanism for reducing emissions from deforestation and forest degradation and conserving, sustainably managing and enhancing forest carbon stocks (collectively referred to as REDD+). One recent estimate suggests that the scale of financing required to halve deforestation will increase over the current decade, reaching US$30 billion annually by 2020. [4] Forest finance therefore must increase dramatically to achieve the goals of the UN Framework Convention on Climate Change (UNFCCC) as well as those of the UN Convention on Biological Diversity (CBD), Millennium Development Goals (MDGs), and other national and international agreements. Donor countries are unlikely to have the resources or political will to act alone and provide the full level of finance required. Because of this, new strategies are urgently needed to use the limited public funds available to the greatest effect possible.

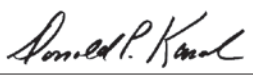
One such strategy could be the use of bonds to help finance forest preservation. With large-scale investments in critical services, such as energy or transport infrastructure, a public-private partnership is often established to balance the risks and rewards between the public and private sector and finance the investment at least in part with a bond. There are many common characteristics between these types of built infrastructure investments and investments in ecological infrastructure such as tropical forests. In particular, both require large upfront capital expenditures.

Recognising these similarities, for half a decade the forest finance community has been developing the concept of forest bonds as a tool for financing forest preservation. Lessons have been drawn from precedents set in other sectors that face similar funding challenges, such as healthcare, where bonds have been successfully used to raise billions of dollars. [5] Although the idea has faced many hurdles, the first rainforest bond is poised to be issued soon. [6] If forest bonds prove successful, an urgent focus on further developing this financing strategy will be required to increase the scale of financing for REDD+.

Unlocking Forest Bonds was a high-level workshop held to discuss the necessary conditions for bonds to become a useful large-scale financing mechanism in the effort to save tropical forests. Hosted by WWF's Forest & Climate Initiative, the Global Canopy Programme and the Climate Bonds Initiative, the workshop brought together international experts in forest finance and related areas including government representatives, NGOs, forest project developers, forest financiers and consultants.

Unlocking Forest Bonds set out to identify the issues, obstacles and critical steps to making forest bonds work for all stakeholders. This report synthesises the discussion that took place at the workshop. Although bonds were the core topic, a wide range of issues related to scaling up forest finance was discussed. Accordingly, the workshop outcomes are not limited to forest bonds alone but are broadly relevant to efforts to leverage private-sector finance for forests.

The need to scale up forest finance is unequivocally urgent, not only to combat climate change and provide a host of ecosystem services the world depends on, but also to secure a prosperous future for the world's forested countries. We hope that this report helps communicate some of the remaining obstacles and how to deal with them. Though the challenges are great, they can be overcome, and it is in all our interests to do so.



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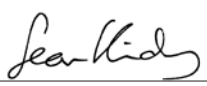

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EXECUTIVE SUMMARY

To reach the scale of finance needed to combat climate change, protect and manage forests, and maintain the world's natural capital, increasing engagement with the private sector is necessary. That engagement can come in many forms, and bonds are one option. By using public funds to support private-sector investment in forests, bonds could leverage additional finance from global capital markets. Although forest bonds alone are not the solution to saving the world's tropical forests, they could play an important role in catalysing the scale of financing needed to tackle global forest loss.

Time is fleeting, scale is essential

Two fundamental issues for financing forest preservation are time and scale. Time is a concern because the longer we wait, the more forest we lose. This increases greenhouse gas emissions and biodiversity loss while degrading the livelihoods of forest-dependent communities and reducing the provision of other ecosystem services, vital on local to global scales. All of these effects reduce the resilience of forests and the broader economic-ecological systems that depend on them, increasing the risk of irreversible forest loss and long-term damage to the global economy.

The scale of financing is important for three reasons. First, the challenge itself is large and requires significant levels of finance to overcome. Second, investing at scale can reduce the risk of investing in one place and simply displacing forest degradation across a given forest landscape. Investing at scale can also target multiple types of investment: multiple sectors that directly and indirectly impact forests must be improved to protect forests from within and reduce the external drivers of deforestation. Third, the investment proposition needs to be large and liquid in order to attract the largest investors.

Why bonds?

Forest bonds can play a powerful role in financing forest preservation as the policy landscape, globally and within countries, takes shape. The issuance of bonds directly addresses the concerns of time and scale, enabling issuers to raise large-scale finance now that will be repaid by existing and anticipated future income. Importantly, bonds are also a familiar and proven mechanism for leveraging private-sector finance; they have been used to finance public-private partnerships around the world that have invested in infrastructure, development and health.

Carbon finance is a key opportunity, but demand is weak

Prospective issuers of forest bonds will need to convince investors that the cash flows they plan to pay the bond back with are sufficiently secure and predictable. Carbon markets are an important source of cash flows that could be used to back a bond, but they are not yet reliable enough. Lack of regulatory certainty within the UNFCCC and the absence of demand from large compliance markets such as the European Union's Emissions Trading Scheme (EU ETS) cast doubt on future income from regional or global compliance carbon markets. Demand for forest carbon through smaller markets, such as the California cap-and-trade programme or the voluntary carbon market, offers some potential for return on forest investments now and is useful in the context of a broader range of income streams.

A range of income streams could support a forest bond

Forest bonds should not rely solely on forest carbon revenue and could potentially be linked to income from other ecosystem service markets (e.g. water, biodiversity), sustainable timber and agricultural markets, regulation (e.g. taxes, liability regulation), and forest-friendly lending (e.g. to ecosystem-dependent small- and medium-sized enterprises). Although some of these cash flows could come through voluntary markets and actions, support from the public sector through regulation or other commitments will be needed to ensure that these cash flows materialise, making forest preservation an attractive investment.

The investment proposition must be attractive to investors…

Impact investors and other socially responsible financiers target clear social and/or environmental returns alongside financial returns. They may be willing to sacrifice financial returns for social and environmental returns and potentially compromise in other areas, like secondary market liquidity. This could make these investors the ideal pioneers in a new asset class like forest bonds. Larger insti-

tutional investors such as pension funds will generally not be able to sacrifice financial returns for other forms of return due to their fiduciary duty. Yet, under the right conditions, larger institutional investors could be interested in forest bonds. Forest bonds should target impact and socially responsible investors initially, while the market develops, then begin to target institutional investors as the forest bond market deepens. A tranche structure with different risk/return profiles could also be used to simultaneously appeal to both groups.

...and equitable for all stakeholders

Forest preservation involves multiple stakeholders, including private investors, public-sector funders, regulated businesses and, importantly, the people whose livelihoods and well-being depend on forests. To be successful, a forest-financing strategy that leverages private-sector finance must ensure that benefits are equitably shared amongst all stakeholders, rather than accruing as profits to the private sector alone. Private investors that provide capital deserve an appropriate return for the risk to which they are exposed, but if they receive a disproportionate return, the entire approach to forest finance could be undermined, particularly in the eyes of forest countries and communities.

Balancing risks and rewards among different actors is only feasible with political will and a strong policy framework in place. Examples of these conditions are beginning to emerge, particularly at the sub-national level. Amazonian states, such as the State of Acre, have developed or are developing strong statewide frameworks to recognise the multiple values of their forests and to establish the policies, institutions and public-private partnerships to secure that value by investing in both forest protection and reducing the drivers of deforestation.

Improved access to finance for eco-entrepreneurs may be needed

In some cases, the first issue to resolve will be how to make it possible for enterprises, communities and households to access the finance they need to shift towards more forest-friendly livelihoods and land uses. Such activities often require greater upfront expenditures than non-sustainable activities. So actors in forest countries that want to adopt more sustainable land uses and access the associated cash flows will not be able to if they do not have access to affordable financing first. Forest bonds provide one avenue through which the public sector could support the provision of affordable financing to forest-friendly activities.

Risk mitigation is paramount

Potential investors are concerned about a number of risks, including security of future cash flows and failure of enterprises, but they are particularly concerned about political risk. Public-sector funds could ease such risk through a variety of actions, including paying for or providing political risk guarantees. However it is achieved, mitigating risk will be a crucial factor in attracting potential investors to a forest bond.

Assurance of environmental and social benefits is essential

As with any form of forest finance, safeguards will be required to ensure the environmental and social integrity of forest bonds. All potential stakeholders in a forest bond require this, even potential bond investors, since they are motivated to invest (and potentially take lower returns) because they want to make an investment that has environmental and social returns. Standards that are currently under development for forest and other green bonds will provide assurance of these sustainability benefits.

International donor finance has a catalytic role to play

A primary role of the public sector is to find the appropriate leverage point to make large-scale forest finance attractive to both the investors that will provide finance and to the enterprises and communities that will carry out activities to preserve forests. To do this, international donors and multilateral institutions can support a bond by acting to:

1 Ensure cash flows arise to reward investment in forest preservation;
2 Make finance or capital expenditure more affordable for forest-friendly enterprises; and
3 Become directly involved in structuring the bond by, for example, providing credit enhancement.

The relative effectiveness of these strategies will depend upon the context of the forest landscape or country where the finance is to be delivered, but in all cases a combination of approaches is likely to be needed. Multilateral institutions could play an additional catalytic role by issuing a forest bond themselves and helping to pump-prime the forest bond market.

Demonstrations and dialogue will improve understanding

A disconnect remains between the international investor community, from which finance would be leveraged, and the projects on the ground that would use that finance. The greatest catalyst to stimulating continued work in this area would be the issuance of a forest bond to demonstrate how capital from international markets can be funnelled down to forest-level actions. Lessons from that experience would highlight how to continue improving on the mechanism and how to scale up forest finance in the future.

At the same time, dialogue between private- and public-sector actors must also be increased. There is currently a lack of understanding of each sector's expectations and needs for working together to leverage finance. Communication between the private and public sectors must be increased if public funding is ever going to catalyse a much larger scale of forest preservation than it can achieve on its own.

INTRODUCTION

The State of REDD+

The UNFCCC's 15th Conference of the Parties (COP-15) held in Copenhagen in 2009 was largely seen as a political and diplomatic failure, which raised serious questions about the appropriateness of this forum for dealing with climate change negotiations. As a result, many observers and participants entered COP-16 in Cancún the following year with low expectations and the perception that Cancún was the last chance for the UNFCCC negotiating process to prove its worth. Heading into the negotiations, agreement on mitigating climate change through forest protection (i.e. REDD+) was believed to be the issue on which there was greatest consensus. Agreement on REDD+ was thus seen as a litmus test for climate change diplomacy; it was the last great hope of the last great hope. And with strong leadership in Cancún, some agreement was achieved.

For forests, the Cancún agreement was generally considered successful, although there is much left to be decided. [7] Cancún did not specify what exactly is being paid for under a REDD+ mechanism, how to pay for it or how to measure results. The metric of forest preservation under the UNFCCC has been established as carbon emissions (or their absence), but while this commodification of forests has benefits for scaling up efforts to combat climate change, there is concern that negative effects may arise if forests are valued only for their carbon. Debate continues on the safeguards that must be put in place to prevent negative impacts on biodiversity and people, respectively the foci of the CBD, and MDGs and UN Declaration on the Rights of Indigenous Peoples. Some progress was made, however, on safeguards, reference levels, and monitoring, reporting, and verification (MRV) protocol during the Climate Change Conference in Bonn in June 2011.[8]

Carbon Markets and Forest Carbon

The existing market for forest carbon is largely driven by demand from voluntary buyers of carbon offsets and is small, opaque and illiquid compared to compliance markets for carbon. As a result, compliance markets attract much more capital. Although compliance markets have the potential to generate large demand for forest carbon, significant growth in trading volumes of forest carbon in these markets appears unlikely in the near term.

The EU ETS, the world's largest compliance market, is not planning to accept international forest carbon credits for compliance in Phase III (2013-2020). Current rhetoric in Brussels implies it is unlikely that forest carbon credits will be accepted in Phase IV either. That implication is supported by increasing requirements for the quality of all international carbon offsets and a tightening of the limits on their use for compliance in the EU ETS. In contrast, the State of California looks set to become the first compliance market in the world to accept international forest carbon credits. Based on current proposals, however, California's entire annual demand could be satisfied by the supply from just one of the states with which it is partnered (e.g. the State of Acre in Brazil).

There is still potential for the US to establish a compliance carbon market. If the US were to establish a compliance trading-scheme that includes international forest carbon credits, it is likely that significant demand would be created and that other major economies, such as the EU and Japan, would be pushed to include international forest carbon credits as well. There is no expectation, however, of any movement by the US until after the next presidential term begins (in January 2013) at the earliest.

So, in the short to medium term, REDD+ faces a sizeable finance gap [9] with no imminent market or other mechanism that could generate large-scale demand for forest carbon and provide a meaningful price signal for investors to fill that gap. Even if such a proposal were to emerge, uncertainties exist as to how long it might take for a REDD+ mechanism to become fully operational. [10] If progress is to be made at the scale required and within the time required, alternative, complementary approaches to forest finance are needed.

Securing Forest Friendly Development

While demand for forest carbon is slow to grow, donor countries are looking for ways to stimulate forest preservation now, particularly by reducing the drivers of deforestation. In addition to payments for forest carbon, other payments for reductions in deforestation and unsustainable land use are emerging. Achieving sustainable land uses, however, requires transitioning of livelihoods to more sustainable activities, which in turn requires significant upfront investment to make that shift. In many tropical forest countries, the cost of capital and difficulty accessing it is a significant barrier to that transition.

In these circumstances, catalysing successful preser-

vation of tropical forests will first require support for developing and financing alternatives to forest-degrading activities. Once a strong platform for a forest-friendly, low-carbon development is in place, a pay-for-performance mechanism can then be used to enhance and sustain a country's trajectory along that path. To do this on the scale of a country requires large-scale upfront investments. Similar investments are familiar to those involved in infrastructure and economic development finance, which use financing mechanisms such as bonds and public-private partnerships. Under the right enabling conditions, these mechanisms could also be used for financing forest-friendly development, offering a significant opportunity for donor countries—looking for new ways to deliver official development assistance (ODA) in a catalytic approach—to leverage private-sector financing and ensure the large-scale investment that is needed is delivered.

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TOPIC 1
BUY-SIDE PERSPECTIVE

Key Points

To access the deepest pools of capital managed by institutional investors, forest bonds will need to be simple, transparent, comparable and liquid, and must hold an investment-grade credit rating.

The first forest bonds should target investors with a socially responsible investment mandate that may be willing to compromise on some financial aspects of the investment in return for assured environmental and social returns.

Adopting a tranche (i.e. segmented) structure would enable forest bonds to attract multiple types of investors at the same time, each with different requirements for risk, financial returns, and social and environmental returns.

Governments of donor countries can incentivise investors by providing tax breaks on forest-friendly investments such as forest bonds.

Looking to Capital Markets

The bond markets are a large pool of finance that forest bond issuers could potentially tap into: outstanding global bond issuance totals around US$100 trillion. Some multilateral institutions investing in sustainable development have already begun to target that source of finance, with US$3.5 billion of green bonds issued in 2010.[11] The green bonds issued so far help finance climate change mitigation and adaptation, including renewable energy and water infrastructure. Whilst they can include forest investments in the portfolio of projects they finance, to date, forests represent only a small portion of such a portfolio and are included only for their value in mitigating and adapting to climate change. A forest bond would focus specifically on forests and recognise the multiple benefits of forests in securing climate, food, water, energy, health and livelihoods.

Core considerations for prospective investors in forest bonds will mirror those for any other bond: returns, risk and liquidity. Different types of investors, however, will have different requirements in relation to those considerations, and some will include requirements for social and environmental returns on their investment in forest bonds. Ultimately, forest bonds should be mainstream and attractive to institutional investors. The early forest bonds, however, will need to target more niche investors.

Impact Investing

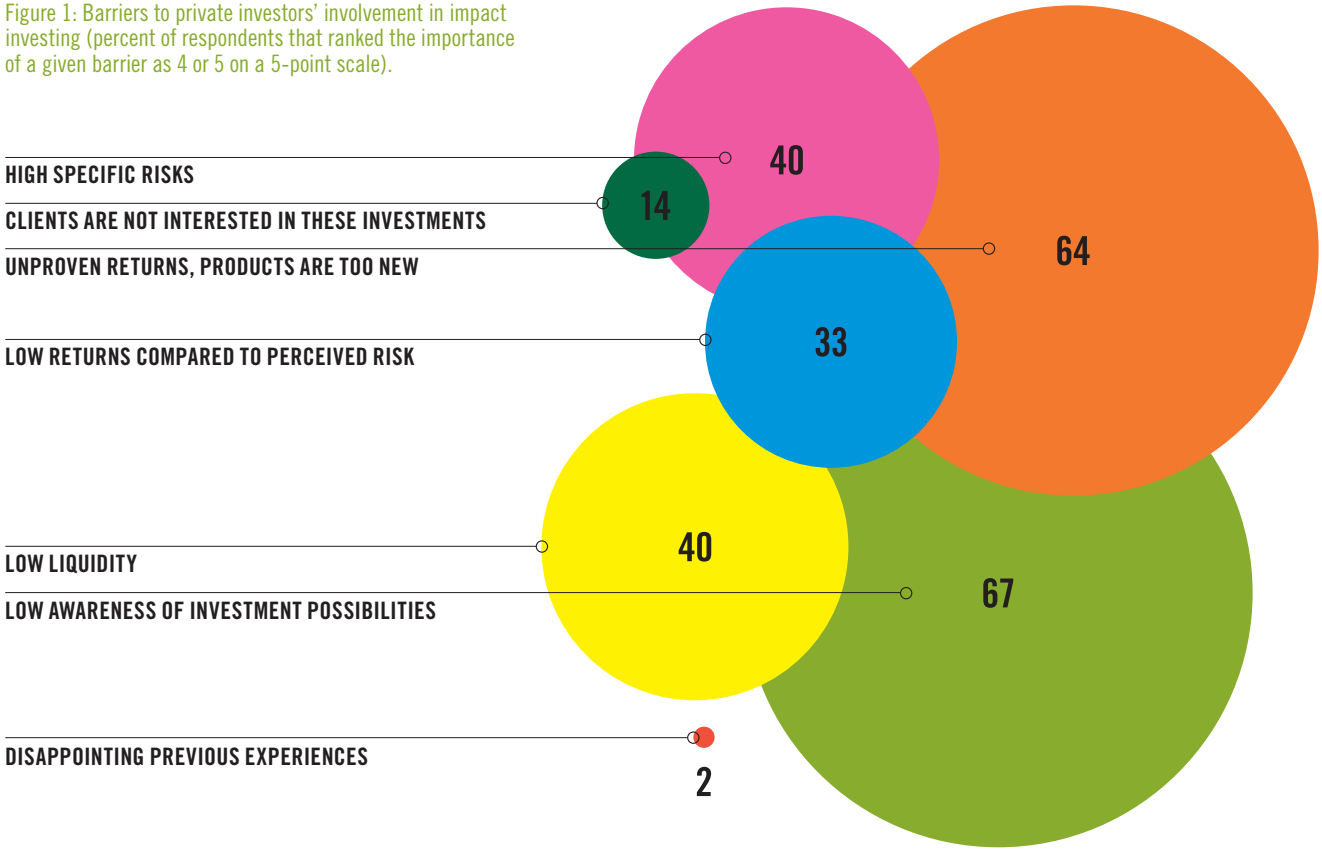
Impact investing is an emerging asset class that describes investors seeking to create positive social and/or environmental impact beyond financial returns.[12] There are around 100 active impact investment funds,[13] catalysing a market that could grow to US$500 billion or more of assets under management (AuM) in the current decade,[14] which would provide a significant pool of finance that forest bonds could attract. As opposed to other investors, impact investors are often willing to compromise on the financial attributes of an investment in return for the social or environmental return they seek to create.

A brief survey[15] of private investors' perceptions of green bonds indicated that when considering investing in such bonds, they might be willing to compromise on the return, risk and liquidity of that investment compared to a benchmark (Table 1). They are not willing to compromise on their preferred maturity or the assurance of environmental benefits. Reaching this type of investor will require overcoming some barriers (Figure 1). The two most important barriers for private investors' involvement in impact investing are low awareness of the investment opportunities and the short track-record of such products,

Table 1: Private investors' desired features of a green bond and willingness to compromise on those features.

FEATURE	PREFERENCE	COMPROMISE?
Maturity	≤ 10 years	No
Credit Rating	≥ A–	Yes
Interest Rate	Comparable to benchmark	Yes
Liquidity	Narrow daily spreads	Yes
Environmental Benefits	Assured	No

Figure 1: Barriers to private investors' involvement in impact investing (percent of respondents that ranked the importance of a given barrier as 4 or 5 on a 5-point scale).



meaning the asset class is unproven in their eyes. The third most important barrier is high specific risks, such as emerging market risk.

Socially Responsible Investment

Not far removed from impact investing, the socially responsible investment (SRI) market is composed of a heterogeneous collection of investors that have all agreed to uphold certain principles for responsible investing, and they are another class of investor to which forest bonds could cater. If the SRI market is defined by asset managers that are signatories to the UN Principles of Responsible Investment (UN PRI), globally there are approximately US$20 trillion of SRI AuM, [16] of which nearly US$10 trillion is allocated to fixed income. Although some SRI asset managers may act like impact investors by being willing to compromise on the financial aspects of their investment, 73% of SRI AuM are held by pension funds, which are strict institutional investors that cannot make that compromise.

Institutional Investors

Institutional investors hold roughly US$70 trillion in assets under management. [17] As opposed to impact and some socially responsible investors, institutional investors generally operate under a strict fiduciary duty to maximise risk-adjusted financial returns and are not typically in a position to sacrifice financial performance for social or environmental returns. Institutional investors are similarly unlikely to compromise

on other characteristics of a product—such as credit rating or liquidity—even if the risk-adjusted returns are comparable to other investments in their portfolio. [18]

Institutional investors with long-term liabilities could, however, be attracted to long-dated forest bonds, provided they are relatively easy for investors to understand, compare, trade and book into their risk management systems. The more standardised and commoditised a forest bond is, the more attractive it will be to institutional investors.

A forest bond must also be transparent in its environmental integrity to attract institutional investors that rarely have the time or sector-specific expertise to carry out due diligence on the environmental benefits associated with an investment product. To address this need, the Climate Bonds Initiative launched the International Standards and Certification Scheme for Climate Bonds in December 2010. By adhering to a known and agreed set of standards, the process of certification outsources the responsibility of environmental due diligence to a third party, which gives investors greater certainty of the environmental integrity of green bonds.

Conclusion: Targeting Multiple Types of Investors

To reach institutional investors and the deep pools of capital they manage, forest bonds must be simple, transparent, comparable and liquid and hold an investment-grade credit rating. As with most new environmental markets, however, forest bond markets will need something to pump-prime the market and help reach a critical mass before it can become mainstream and easily accessible to those investors. The first forest bond issuances should target impact and socially responsible investors that have a specific interest in environmental returns and may be willing to compromise on the financial aspects of an investment in return for tangible and assured environmental returns. Multilateral development banks could also become more active in stimulating the market, not only through their capacity to guarantee or issue [19] green bonds, but also in their own role as investors through their own treasury.

Early forest bonds could offer a lower-than-benchmark guaranteed return, but with a carbon or ecosystem service upside should the proper policy framework be put into place. [20] Such products could possibly raise a few hundred million dollars and, importantly, get the market started. To continue pushing the market to scale, other strategies could also be implemented. Policymakers could incentivise investors through, for example, tax breaks on forest-friendly investments. [21] Forest bonds could initially be designed in partnership with the governments of donor countries that have relatively high tax rates but are motivated to undertake environmentally friendly actions.

Although it is likely that impact and socially responsible investors would be the pioneers in a new market for forest bonds, as the market developed, the use of a tranche (i.e. segmented) structure could be used to appeal to multiple types of investors at one time. Impact investors, for example, could invest in a riskier tranche of the bond in order to support the overall funding structure. An institutional investor could in turn invest in a different tranche offering lower returns but increased security. Through tranching, the pool of investors for any given bond issuance can be spread across multiple investor classes (the tranche structure is revisited below in Table 3).

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TOPIC 2
SELL-SIDE PERSPECTIVE

Key Points

Policymakers and financiers should avoid relying solely on future carbon market revenues and consider a mix of cash flows to back a forest bond. A broader range of cash flows potentially makes a forest bond more feasible to structure and more attractive to potential investors.

Funding multiple initiatives inside and outside the forest enhances a forest protection strategy by both increasing forest resilience and reducing the pressures on them.

Public policy can create a price signal to stimulate early investment in forest preservation through demand-pull mechanisms such as advanced market commitments or through supply-push mechanisms such as subsidising the cost of capital for forest-friendly enterprises. The choice of the proper mechanism will be context specific, but either type of support should be reduced as forest preservation becomes familiar to investors and the economy.

A first forest bond is urgently needed to demonstrate how to link on-the-ground activities in forest preservation with international capital markets and also to demonstrate what types of policies are needed in the given context.

Structuring and Issuing a Forest Bond

Forest bonds allow an issuer to borrow from the international markets to fund forest preservation and a transition to sustainable livelihoods. There are a number of organisations that could do this, including private-sector financial institutions; supranational institutions and multilateral development banks; and state-, regional- or national-level governments. The challenge for any potential issuer of a forest bond is to generate cash flows that will repay the bond's principal and interest, manage associated risk (see Topic 3), and ensure social and environmental integrity (see Topic 1).

The first component of structuring a forest bond will be to determine how to pay it back. A bond could be issued on the basis of future cash flows from a suitable forest preservation project or programme. Alternatively, a forest bond could be issued to refinance loans made by local institutions to forest-friendly projects or activities carried out by individuals, communities or businesses. In this case, the cash flow required to pay back the bond would come from future repayment of these loans. Finally, if the issuer were a public-sector entity, a forest bond could be structured on the basis of cash flows generated through policy-based mechanisms such as natural capital taxes, user fees or environmental liability legislation. [22] Although these formats are presented as separate, a bond could be developed that integrates these models (depending on who the issuer is).

In addition to generating cash flows, the issuer will have to decide how best to manage forest bonds. That could be done through an earmarking procedure, in which revenues flow back into the issuing entity and are kept on the issuer's balance sheet before being used to pay back the bond. If for any reason those earmarked cash flows did not arise, the issuer would draw on other financial resources to meet its obligations. In this case, potential investors would primarily consider the balance sheet and risk level of the issuing institution before deciding to invest in the bond.

Alternatively, cash flows could be ring-fenced by having them flow into a separate legal entity [23] that would be responsible for paying back the bond using those cash flows. In this case, if the cash flows failed, there would be limited recourse on the sponsoring institution, so potential investors would primarily be concerned with the risk inherent in the cash flows before deciding whether to buy a forest bond.

A key issue in attempting to structure and issue a forest bond is that whatever structure is used, cash flows that would pay it back are often variable and/or difficult to access. In many cases, forest preservation is competing with destructive land uses, such as palm oil, cocoa, soya, biofuels and cattle ranching, all of which have less variable and/or more easily accessible cash flows and so are often considered less risky and attract more investment. Public-sector support is needed to reduce the risks related to cash flows for forest preservation, making the investment proposition more attractive. How exactly to do that, however, is still under discussion.

Demand-Side Policies for REDD+

The clearest way to secure investment in forests is to implement regulation that ensures significant demand for the outputs of forest preservation, such as forest carbon services or sustainable timber. The REDD+ mechanism

under the UNFCCC is the largest attempt to do this, and although progress has been made to pay for forest preservation on a global scale, the mechanism is not yet established. In the interim, lack of demand for forest preservation, such as seen with compliance carbon markets, means that crucial near-term investment in forest preservation is not occurring. To scale up forest finance earlier, potential suppliers of REDD+ credits (or other outputs of forest preservation) need to be encouraged to invest now, whilst regulation is still being designed and implemented.

One way for public-sector entities to do this is via advanced market commitments (AMCs) that would provide sales or price support for REDD+ credits whilst the UNFCCC mechanism takes shape. AMCs have been successfully used in other sectors such as health and energy and come in four basic forms, namely those that increase sales, increase price, improve certainty of sales or improve certainty of price. [24] In the context of tropical forests, such an approach should focus on states or nations that are further along in their development of REDD+ supply. In these places, a relatively small amount of public-sector funding could support a carefully designed AMC, which should be scaled back as the REDD+ mechanism develops.

Three types of AMC are receiving particular attention for use with REDD+ credits:

1 *Performance Agreement*: The public sector agrees to purchase a predetermined volume of verified REDD+ credits. At its core, a performance agreement is intended to increase quantity of sales. The price can, however, be fixed, indexed (against e.g. a carbon price or other economic variable) or indexed with a combination of a price floor and ceiling, and each option would provide a different level of price certainty. A REDD+ performance agreement would be a variation of an Emissions Reduction Purchase Agreement (ERPA) commonly used in the broader carbon markets.
2 *REDD-Credit Option*: The public sector sells (or allocates) the right, but not the obligation, to sell credits at a minimum price to the public sector (i.e. a forest carbon put option), thus improving price certainty. The option would be exercised when the market price was below the price designated by the option. As with a performance agreement, the price promised by the public sector could be fixed, indexed or indexed with a floor, each providing a different level of price certainty.
3 *Subsidy*: The public sector would pay a guaranteed price subsidy for every REDD+ credit generated, not necessarily improving price certainty, but aimed at increasing the price.

Advocates of forest carbon markets and the interim use of AMCs argue that providing direct payments and public-sector demand-pull mechanisms are the most effective ways to stimulate private-sector investment in preserving tropical forests. It is also the approach that most easily aligns with the concept of payments based on performance.

Supply-Side Policies for Forest-Friendly Development

A direct approach that pays for delivery of forest preservation *ex post* is clearly a useful policy tool. Yet questions remain around how to bring that approach to scale and how to make forest preservation sustained in the long term, such as:

– What policy support can be provided in the absence of forest carbon or other ecosystem-service compliance markets?
– How can the high transition costs to establish forest-friendly development and deliver forest preservation be overcome?
– How does the public sector ensure that the next generation does not convert forest that a previous generation has invested in preserving?

One possible answer to these questions is the use of supply-push policies. These interventions make it easier and/or cheaper to start a forest-friendly enterprise. For example, the public sector could lower the cost of financing forest projects. Shifting to more sustainable livelihoods and activities, generally involves high upfront capital expenditure (capex), [25] and there may be a significant time lag before positive returns are generated. In contrast, unsustainable uses of land often require less capex and generate short-term cash flow more rapidly, [26] meaning they are easier to finance. Access to a relatively cheap source of long-term funding is therefore important for sustainable development.

Generally speaking, supply-push policies may be preferred over demand push-policies (e.g. AMCs) when there are constraints that do not allow firms or households to access the start-up resources they require. [27] That scenario often exists in tropical forest countries where demand for affordable capital from individuals, communities and businesses in those countries that want to act sustainably is not satisfied. The projects are often too small to be attractive to investors, and a lack of access to financial and business expertise can also be a

hindrance. There are three primary strategies to dealing with this mismatch:

1 Provide cheaper capital directly at ground level.
2 Help aggregate projects so that combined they reach a scale that is of interest to larger investors that provide cheaper capital.
3 Reduce capex costs through subsidy or technology/ services transfer.

The barriers to cheap capital for forest-preservation capex in forest countries have significant implications. In the extreme, activities that could potentially help preserve forests either do not take place or are financed by institutions or individuals in industrialised countries that do have access to financial expertise and cheaper funding from capital markets. Thus, even with robust demand for forest preservation in place, the combination of high capex costs and high cost of capital could keep actors in tropical forest countries from being able to capitalise on the full benefits of a forest carbon (or other ecosystem service) market or interim guarantee mechanism. Therefore, reducing the initial financing barrier should be considered alongside any pay-for-performance mechanism.

Advocates of supply-side interventions also point out that forests will come under increasing pressure as the populations of forest countries grow and increasingly demand higher standards of living. The approach of supporting the finance of forest-friendly enterprises could not only support enterprises that are directly forest related (e.g. sustainable forest management, ecotourism, non-timber forest products, etc.), but could also reach outside of the forest. It could help ensure that as forest countries develop, people have opportunities for work that do not depend on unsustainable forest extraction and that outdated enterprises transform and new enterprises emerge that are based on sustainable use of forest resources, reducing the external pressures that forests face. Although forests can be preserved in this generation, without the concurrent improvement in people's livelihoods and opportunities for work that do not depend on unsustainable forest extraction, there will always be pressure in the future to return to short-term thinking that leads to conversion of natural capital (i.e. tropical forests) into financial capital.

Conclusion: Diverse Policies and Diverse Cash Flows

Since interest in forest bonds began, it has been argued that they can and should draw on a mix of forest-friendly cash flows. [28] Although carbon markets can provide a source of revenue for forest preservation, the scale of the opportunity remains uncertain. Given the current policy landscape, it is clear that more forest needs preserving than carbon markets appear willing to pay for.

Forest bonds could in theory be structured around cash flows from a wide range of forest-friendly activities and policies including mechanisms for ecosystem service and biodiversity provision, sustainable forest management, sustainable agricultural commodities and in some cases revenues from fiscal policies. Creating forest bonds in this way enables prospective issuers to develop larger deals and to reduce reliance on future carbon revenues alone to pay the bond back. The ability to evaluate and potentially blend different forest-friendly cash flows enables institutions structuring forest bonds to manage overall risk more effectively, making the bond increasingly attractive to potential investors. It also inherently means that the bond is used to finance a broad forest protection strategy, both increasing forest resilience and reducing the pressures on them.

Work to understand how cash flows related to ecosystem services might link to forest bonds is nascent. A demonstration is urgently needed to show how capital from international markets could be funnelled down to forest-level actions. Similarly, more thinking and demonstration activities are needed to understand how other cash flows that do not depend on carbon credits could be used to incentivise forest preservation and even back a forest bond. With water scarcity poised as the next great global environmental challenge, there is particular interest in developing models where long-term support for forest preservation is connected to the water, food and energy sectors that are currently benefiting from water services provided by large areas of intact forests.

Finally, it is clear that some form of public support is needed to stimulate investment in forest preservation. Whilst regulation that values the ecosystem services provided by forests is still being negotiated, public funding can be used to foster the foundation for the private sector to finance forest projects and forest-friendly development. Whether that support is best provided through demand-side mechanisms, such as securing a minimum price for REDD+ credits, or through supply-side mechanisms, such as reducing the costs of capital, is a context-specific question. In some cases, the answer may be that both are needed.

TOPIC 3
RISK MITIGATION

Key Points

Forest preservation in the tropics entails high market and commercial risk, but political risk is the dominant concern for potential investors; forest bonds will require some degree of political risk insurance (PRI).

The Multilateral Investment Guarantee Agency (MIGA) is a logical provider of PRI and, with recent changes to its convention, is in a strong position to take on that role. Even if MIGA does not provide PRI for forest bonds, evaluating its case provides lessons on what characteristics a PRI provider for forest bonds needs to have.

Insurance and other external risk mitigation measures, for all types of risk, will not make a bad deal good; it will only make a good deal better. Existence of external enabling conditions and a strong underlying bond structure that is designed to mitigate risk are equally important to the success of a forest bond.

Risk Mitigation Tools

The first step in mitigating risks inherent in a forest bond should be to fully understand risks associated with the underlying assets and/or relevant cash flows. That will determine the best risk mitigation strategy. There are three primary categories of risk in forest investment that need to be addressed: commercial risk (e.g. natural hazard or theft), market risk (e.g. currency exchange risk or interest rate risk) and political risk (e.g. expropriation risk). [29]

Two key approaches that can be used to mitigate risk, or at least to apportion it appropriately, have been discussed earlier in this report. First, diversifying cash flows by type (e.g. carbon or other ecosystem service credits, forest-friendly loan repayments, natural capital taxes, etc.) and geography is the best way to lower overall risk. Second, a tranche structure can be used to allocate more or less risk to different target investors.

There are a number of other mechanisms, however, for reducing various risks associated with a forest bond (Table 2). Unfortunately, awareness of some of the mechanisms is low, and the total cost of mitigating relevant risks can often be prohibitive. Innovative ways of the public sector raising awareness, subsidising the costs or otherwise supporting

Table 2. Overview of risk mitigation mechanisms that could be used for tropical forest investment, and the risks they mitigate. Mechanisms are qualitatively ranked first by their level of effectiveness, then breadth of usefulness. C = Commercial Risk, M = Market Risk, P = Political Risk (adapted from Gaines & Grayson, 2010).

MECHANISM	DESCRIPTION	C	M	P
Diversification	Invest in a portfolio that includes diverse cash flows and projects	+++	+++	+++
Credit Guarantees	Guarantors insure against default of a bond (or other debt payback) for any reason	+++	+++	+++
Commercial Insurance	Insure against losses due to specific risk events, such as natural hazard	+++	–	–
Political Insurance	Insure against losses due to specific risk events, such as expropriation	–	–	+++
Securitisation and Tranching	Revenues are isolated from the original entity, so less risk of mismanagement, and tranching allows different investors to take different levels of risk.	++	++	++
Technical Assistance	Provide business or financial management expertise to actively manage risks that arise	++	++	–
Due Diligence	In-depth research to ensure project risk is known	++	–	–
Derivatives	Financial products used to minimise volatility of cash flows	–	++	–
Fund Enhancement	An 'enhancing' institution takes the first loss on any business failure	+	+	+

the use of risk mitigation should be explored.

Political Risk and Tropical Forest Investment

Even with all of these risk mitigation tools, in the context of forest bonds, country risk—specifically political risk—remains the dominant concern for potential investors. Under the Clean Development Mechanism, country risk was reduced because a letter of approval from the host country was required and the UNFCCC was intimately involved. For now, it does not appear that a REDD+ mechanism would follow the same path, so other avenues must be explored.

It is no surprise that potential investors in tropical forests are concerned about political risk; investors perceive such risk as the greatest constraint to foreign direct investment generally. [30] What is surprising is that one of the simplest means of addressing that risk, political risk insurance (PRI), is only used by 21% of investors that invest in developing countries (Figure 2). Although PRI will clearly not hedge every risk and other methods of reducing political risk are more popular, PRI is broadly considered a necessary feature of a successful forest bond. The Multilateral Investment Guarantee Agency (MIGA, a member of the World Bank Group) is often recommended as the most logical provider of PRI when investing in tropical forest countries, [31] due to its remit to support sustainable development.

PRI and Forest Bonds: The Case of MIGA

MIGA provides insurance for investors investing across borders into developing countries. The Agency's coverage insures against currency transfer restrictions and inconvertibility, expropriation, war and civil disturbance, breach of contract, and non-honouring of sovereign obligations. Breach of contract is particularly important when considering REDD+: one envisioned structure of REDD+ is a nested approach that would involve project developers or states/regions generating forest carbon credits for which the national government would reward them. Failure of the national government to pay could be considered a breach of contract, the resolution of which would require involvement by a PRI provider such as MIGA. Similarly, if a national government offered an AMC (see Topic 2), but was unable or unwilling to honour it, that would also constitute a breach of contract that PRI could insure against.

MIGA has a strong record of success in resolving issues of political risk. [32] Based on this history, MIGA's political leverage with host countries and a strong capital position, the Agency has an implied triple-A credit rating and is named in the Basel II framework as a highly rated multilateral. Thus, PRI from MIGA enhances the credit rating of the investments insured against, often from just below investment grade to potentially as high as MIGA's triple-A rating. Further, PRI through MIGA is affordable, equivalent on average to approximately a 1% annual premium on investments, depending on the risk of the host country.

MIGA has experience with forestry as an insurer of equity investments and loans for timber and some re- and afforestation investments, but the opportunity for MIGA to become involved in forest bonds has only just opened up. Changes to MIGA's convention in late 2010 now allow it to insure 1) stand-alone debt and 2) existing assets. MIGA's insurance of capital market bond issuance or asset securitisation is done on a case-by-case basis. The changes in the Agency's convention, however, mean that MIGA is now technically allowed to insure a stand-alone forest bond that would invest, at least in part, in already existing forests.

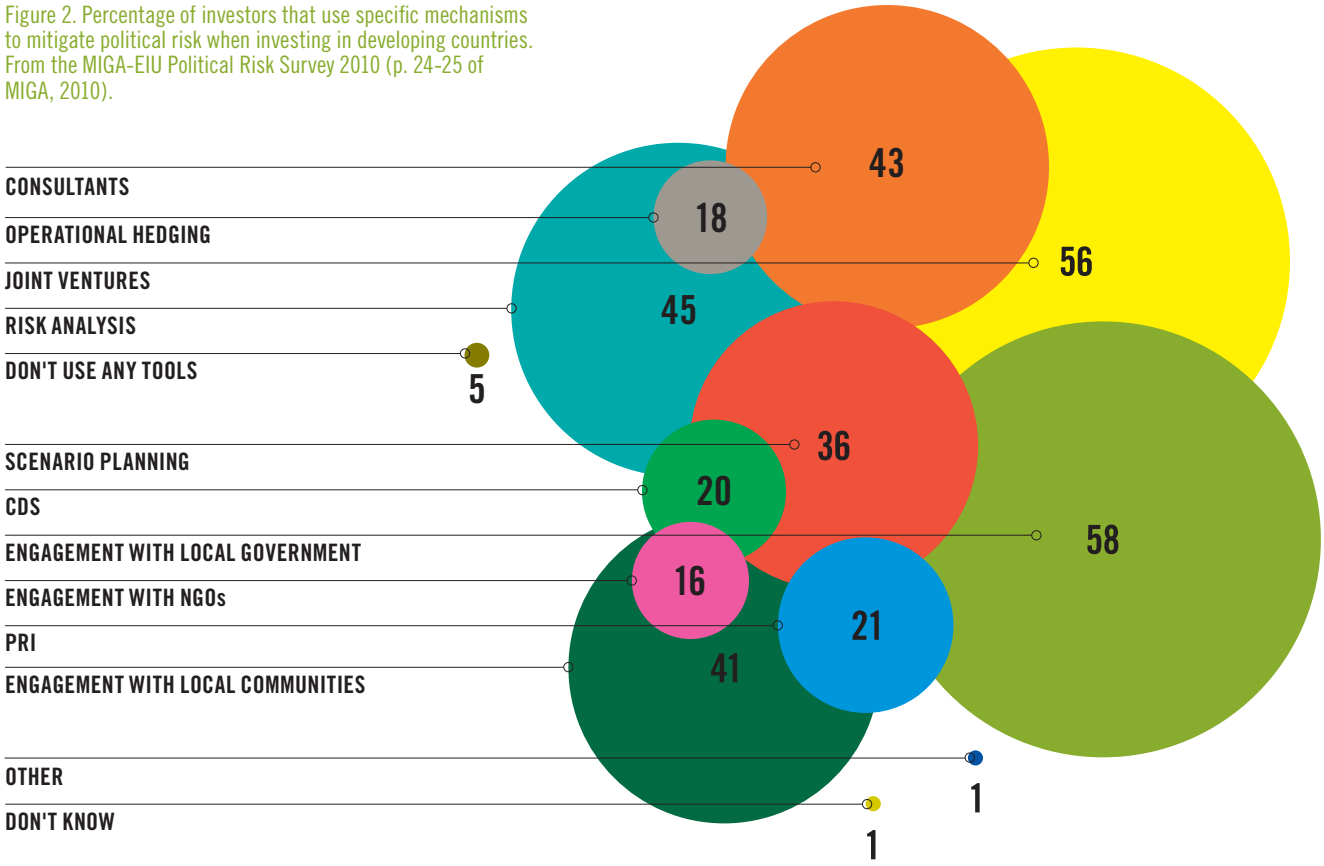
Importantly, beyond these technical necessities, MIGA is suited to insure forest bonds. The Agency has the financial scope to insure large amounts of forest investment [33] and can offer insurance up to 15-20 years maturity, matching the long-term nature of forest investment. The Agency also applies a comprehensive set of social and environmental performance standards to all projects, which at minimum provides a baseline from which to build in safeguards and assurance of the environmental integrity of a bond. Perhaps most importantly, there is good alignment between tropical forest countries and MIGA's focus countries.

Conclusion: PRI and More

As often suggested, MIGA could be a strong project partner in structuring and issuing a forest bond. MIGA's global diversification and strong record of resolving issues to avoid the need for claims permit the Agency to offer strong leverage. MIGA also has good partnerships and can work with other public- and private-sector entities to jointly insure and bring attention to an investment. Together, these points mean MIGA could insure investment on the scale of forest bonds.

MIGA is also now in a good position to engage with all types of forest intervention, not only new forest assets

Figure 2. Percentage of investors that use specific mechanisms to mitigate political risk when investing in developing countries. From the MIGA-EIU Political Risk Survey 2010 (p. 24-25 of MIGA, 2010).



generated under reforastion and afforestation projects, since its new convention permits the Agency to insure pre-existing assets. The Agency is also well placed to insure the mechanism of a bond, particularly a forest bond, since it is now able to insure stand-alone debt and has always offered long-term insurance. Further, the Agency's social and environmental performance standards could help in the implementation of safeguards and assurance of the environmental integrity of a forest bond. Finally, and perhaps most importantly, there is good alignment between tropical forest countries and MIGA's focus countries.

Exploring the case of MIGA does not mean that it should be the sole provider of PRI for forest bonds, but understanding the potential of the organisation helps clarify the qualities that a forest bond issuer should look for in a PRI provider. The costs of PRI and any other external risk mitigation mechanisms will vary, and subsidising these costs could be a role the public sector can play in encouraging investment. Although external risk mitigation is an important component, it alone is not sufficient to ensure the success of forest bonds. Insurance will not make a bad investment good; it can only make a commercially viable proposition better. Portfolio diversification, a tranche structure, proper *ex ante* risk analysis, and engagement with government and local communities are all internal risk mitigation measures that will be necessary to help make forest bonds work.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TOPIC 4
FOREST COUNTRY PERSPECTIVE

Key Points

The burdens and benefits of forest preservation must be appropriately balanced among all stakeholders, from international investors to rural communities.

Only if that balance is achieved can forest bonds, or any effort to leverage private-sector finance for forest preservation, be deemed legitimate.

Sub-national experiences are demonstrating how to establish effective policy frameworks and public-private institutions that strike this balance.

These experiences demonstrate that a key strength of sub-national action is strong ground-level engagement and governance, whilst a key weakness is lack of expertise.

With appropriate technical support, sub-national governments could be early issuers of forest bonds.

Engaging the Private Sector

Donor countries are seeking ways to engage the private sector in forest preservation, and the private sector is willing to invest, provided returns on those investments are commensurate with the associated risk. How to catalyse such investment, however, is still under debate.

Tropical forest countries have a mixed view of the way forward for financing forest preservation: some forest-country governments are wary of linking it to international carbon markets. The concern is that finance will be highly uncertain and risky if it is primarily dependent on the single commodity value of carbon, which some worry could be volatile. Additionally, some forest-country governments do not like the idea of depending on the private sector to save their forests, which could result in the associated benefits of that investment (i.e. profitability, rents) flowing out of the country to wealthy outside investors. Understandably, forest countries want to maintain sovereign control over how forest finance is used within their borders and want to ensure that a good portion of the potential profitability goes to support their economic development. In short, if the onus of saving forests falls on forest countries, they should receive an equitable share of the bonus too.

The solution is to ensure that the burdens and benefits of forest preservation are distributed appropriately between the forest countries and forest-dependent peoples attempting to balance development and forest preservation and the donor countries and private-sector providing finance. Public-private partnerships can be established to deal with such investments and ensure that burdens and benefits are appropriately allocated between different entities.

A Sub-National Case: The State of Acre, Brazil

While national governments are still working out the details of international agreements on climate change and forest finance, sub-national governments are developing their own policies for maintaining their natural capital. These state-level initiatives provide lessons and models upon which national and international policymakers can build.

The State of Acre in Brazil is a forested state in the Amazon basin that has already developed a policy framework for recognising the value of ecosystem services provided by the forest and incentivising land practices to maintain those services. Acre's framework is increasingly recognised as an example to be followed and expanded upon. The state's efforts to foster its carbon programme include establishing the necessary institutions, particularly an ecosystem service regulatory agency and a public-private partnership agency. The role of the latter is to attract direct investments in forest-friendly activities and facilitate the purchase of ecosystem service credits issued by the regulatory agency.

An important aspect of the Acre policy, as well as other similar policies in the Brazilian Amazon States, [34] is that they recognise the multiple ecosystem services provided by forests. The carbon value is the starting point because it is the most readily monetisable value, but these policies also explicitly recognise the forest's contribution to the regulation of water resources, conservation of biodiversity and regulation of local climate, and importance to traditional and local livelihoods. Acre's policy is thus designed to foster the development of multiple funding sources related to those different values, including state and federal government resources, philanthropy (e.g. through Sky Rainforest Rescue), private investment, and carbon credit trades (for which they have already secured some

demand through an agreement with the State of California). That is the first step to aggregating diverse cash flows that the state could then use to back a forest bond.

Acre has also been hailed as a strong model because of its broad engagement with all relevant government, community and private-sector organisations and representatives throughout the development of the policy framework. That engagement led to these groups having a real stake in the success of the policy and indicates one of the potentially large benefits of sub-national programmes: better ground-level engagement and governance. With years of engagement and structural policy development to support their ecosystem services policy, Acre is in a strong position to effectively implement a sustainable development path.

The Acre experience also highlights one major difficulty at the sub-national level: the need for more expertise. Compliance markets and increased demand for certification of voluntary ecosystem service credits or sustainable products mean that environmental and social standards are increasingly strict and more expertise is needed to meet those requirements. Financial and private-sector expertise is also needed to ensure that the strong policy framework, which includes economic incentives and a public-private investment agency, is used most effectively to stimulate investments in forest-friendly development in the state.

Conclusion: Balancing Burdens and Benefits

In one sense, the discussion on tropical forest preservation is primarily about who should pay. But whether investors, businesses, national governments or any other parties pay, it is important to make sure that those that take on the burden of forest preservation — financial, economic, social or political — also reap their fair share of the benefits. The problem of forest finance is not so much about choosing which policy is best (e.g. REDD+ credit price subsidy vs. lowering the cost of capital), but about implementing a framework that permits a mix of policies to support different groups contributing to sustainable development. For example, this could include domestic governments implementing a tax on forest-degrading activities to raise finance for co-investment in forest-friendly enterprises, which profit in part from ecosystem service credits for which donor countries have provided a price floor.

For any policy mix, a bond could provide a method to raise large-scale financing up front. Domestic governments could potentially use it to overcome the transitional costs of establishing governance structures and investing in forest-friendly enterprises and pay it back from cash flows based on forest-extraction tax revenues, sales of forest carbon credits, or any number of other regulatory or normal market cash flows.

The experience in the State of Acre is one of a small but growing number of sub-national models that are leading the way in establishing a policy framework on which forest-friendly development can be built. In addition to demonstrating how to design the policy framework, these experiences are also illustrating that sub-national governments are generally willing to engage with the private sector. Action by sub-national governments is likely only to strengthen under initiatives such as the Governor's Climate and Forests Taskforce. [35] Considering their potential strength in ground-level governance and the movement to develop multiple revenue streams for multiple forest values, state governments could be prime candidates for issuing forest bonds.

TOPIC 5
DONOR COUNTRY PERSPECTIVE

Key Points

Donor countries are increasingly exploring bilateral arrangements to use climate, biodiversity and development aid as catalytic finance, leveraging private-sector investment in forest preservation.

There are three basic approaches to doing this for a forest bond: 1) Use demand-side mechanisms to secure the cash flows that pay back investment in forest preservation; 2) Use supply-side mechanisms to reduce the costs of that investment; and 3) Provide direct risk mitigation in the structuring of a forest bond.

To understand how best to leverage private-sector finance, more dialogue between the public and private sectors is required to understand what each expects from and is willing to do to support such a public-private partnership.

Dialogue needs to expand to other public-sector actors as well, specifically to treasury departments and finance ministries that are familiar with private-sector engagement. This dialogue will be essential to the success of forest bonds, particularly if issued by the public sector.

Catalysing Forest Preservation

Approximately US$7.2 billion in forest finance has been or is imminently expected to be pledged from donor countries. [36] As donor countries increase their pledges, they have growing concerns about how to use that finance effectively. Although dominant in the history of ODA, the project-based approach appears to have failed in many cases. That has led donor countries to look for more careful uses of aid that can catalyse systemic changes needed for development.

Although there is a role for funnelling ODA through multilateral institutions, those institutions are not the only means of managing and delivering international finance for tropical forest preservation. Countries trying to move fast on forest preservation and climate change are starting to look at bilateral deals whereby public funds can catalyse a sustainable development path and leverage private-sector finance to support it. Forest bonds offer a mechanism for doing just that: using donor country funds to leverage private finance and reach a large scale of funds that can be used to invest in a forest country's economic transition.

Many Potential Roles

There are three basic roles that donor countries can take to leverage private-sector finance:

1. *Demand-side*: Secure the cash flows that pay back investments in forest preservation.
2. *Supply-side:* Reduce the costs of investing in forest preservation.
3. *Structuring:* Become directly involved in forest investment through, for example, providing third-party risk mitigation.

An argument could be made that the second option, supply-side interventions, should be slightly prioritised above the other options. The goods and services that donors expect forest-friendly activities and development to produce will simply not be produced on a large scale if there are constraints on financing the upfront transition costs [37] which may occur in some contexts in tropical forest countries. Further, providing finance can play some role towards that transition in the absence of certain regulatory changes to boost demand for forest preservation (e.g. through compliance carbon markets). Cash flows for forest-friendly activities can come from a number of sources without regulatory intervention, such as cash flows arising from increasing global demand for green commodities such as sustainable timber or cash flows from activities that locally make economic sense, such as paying for watershed services or intensifying beef production, both of which are seeing increased implementation globally. Policy support for these types of activities is needed to stimulate broader and larger economic shifts, but at least there is a starting point to profit from forest preservation without much policy intervention.

Assuming no constraints to investment exist, donor countries should focus on implementing policies to promote demand for forest preservation and secure cash flows that would pay back a forest bond. Although AMCs for REDD+ have received a lot of attention, other demand-side interventions to help secure other cash flows are already in effect and should not be forgotten, specifically interventions promoting sustainable products (e.g. laws combating illegal timber, such as the US Lacey Act or EU's FLEGT). A range of demand-side policies could be linked to forest bonds or

Table 3: Stylised comparison of a normal tranche structure (top)to a potential forest bond tranche structure (bottom) where public sector finance is used to leverage private sector investment.

INVESTOR	INVESTMENT	RETURN	RISK
Investor 1	Debt: Senior Tranche	$	+
Investor 2	Debt: Junior Tranche	$$	++
Investor 3	Equity Investment	$$$	+++

INVESTOR	INVESTMENT	FINANCIAL RETURN	SUSTAINABILITY RETURN	RISK
Institutional	Debt: Senior Tranche	$$		+
Impact	Debt: Junior Tranche	$$		++
Public Sector	Equity / Concessional Debt	Maybe $		+++

countries from which a forest bond is issued, reducing risk associated with the cash flows that would pay back the bond and improving investor demand for it.

Donor countries can also become more directly involved in the structuring and issuing of a bond. One way is to reduce the risk associated with the bond by underwriting the bond directly, paying insurance premiums (e.g. for PRI) or providing some other mechanism that directly improves the bond's credit rating.

A similar role would be to design the bond with donor countries taking a stake in the bond and providing a first-loss facility. [38] In some ways, this is like the donor taking an equity stake in the forest investment but with a return in the form of public goods rather than a financial return, although some financial return may be realised (Table 3). That structure deploys public funds to provide public goods, the primary purpose of those funds, but in a manner that leverages much larger amounts of finance.

Conclusion: Dialogue and Engagement

A great challenge left for donor countries and the private sector is that they do not yet speak the same language and do not understand one another's needs and motivations. Policymakers that support carbon markets have usually done so on the basis that providing a price signal for the output of an environmental externality would change the economic landscape and force the private sector to change its behaviour. That logic works in some cases, specifically when the externality is one-dimensional, there is an easy technological fix and financing that fix is relatively cheap. The case of forests is different. A price signal from carbon markets, or other markets such as biodiversity and watershed markets, can be a strong policy tool. The loss of tropical forests, however, is a multidimensional issue in which some fixes may be simple, but in many cases donors are asking households to transition to alternative livelihoods and that transition can be costly, or even unaffordable for many poor people living in forests and rural areas in tropical countries. The process is more complex and requires much greater engagement with those that will finance this process.

Engagement with the private sector is also different for the global issues of forests, biodiversity and climate change. It is not simply a matter of making the polluters pay, as was the case with many environmental issues in the past. Instead, it is also about engaging the private sector to help finance the large shift to sustainability that economies need to undertake.

If donor countries expect to leverage private-sector finance, the two sides need to speak the same language to begin better understanding one another. That engagement can be difficult in international forums where ideological opposition to markets has disproportionate power. As a result, that engagement is starting to emerge at the level of national governments between like-minded countries and private-sector organisations. Moving forward, it would also be useful to engage treasury departments and finance ministries. These government groups are not only familiar with private-sector engagement, but are essential to the success of any large-scale financing strategy, including forest bonds and the role they may play in stimulating forest-friendly development.

END NOTES

1 The Royal Society, 2003
2 TEEB, 2009
3 FRA, 2010, pp. 3
4 The Commission on Climate and Tropical Forests, 2010
5 The IFFIm has raised more than US$ 3 billion for the GAVI Alliance's immunisation programmes. Read more online at: www.iff-immunisation.org
6 A multilateral finance institution seems poised to issue the first 'rainforest bond', which is being structured by Bank of America Merrill Lynch. Reported in Carbon Finance (4 May, 2011) and Environmental Finance (6 May, 2011) with the article '"Rainforest bond" aiming to monetise REDD+ credits' (subscription required).
7 To read more on REDD+ under the Cancun Agreement, go to The REDD Desk and follow links to many major NGOs' analyses: www.theredddesk.org/conference/cop16/news/blogcop_16_and_the_cancun_agreements_agreements_what_did_it_all_mean_for_forests
8 For more on progress in Bonn see Parker and Almassy, 2011.
9 It was recently estimated that financing needed to reduce deforestation will increase over the current decade, reaching US$30 billion annually by 2020, averaging US$16 billion during that period (The Commission on Climate and Forests, 2010). Current and imminent pledges of REDD+ financing total about US$7.2 billion (Simula, 2010), but these are *multi-year* amounts; forest finance remains far short of the *annual* sums required.
10 Under the Kyoto Protocol, it took seven years from agreement of the Protocol before the first issuance of carbon credits under the Clean Development Mechanism—the portion of the carbon market that developing countries could participate in.
11 Wood & Grace, 2011
12 O'Donohoe et al., 2010
13 GIIN, 2011
14 Monitor Institute, 2009
15 Lombard Odier surveyed 47 private banking clients about their views on green bonds.
16 PRI, 2010
17 The City UK, 2010
18 E.g. the need for a liquid secondary market in any product included in their portfolio. Ensuring enough liquidity to attract institutional investors would probably require a forest bond issuance of at least several hundreds of millions of US$.
19 International financial institutions have issued over US$5 billion in green bonds as of early 2011. For more information on green bond issuance see www.climatebonds.net/resources/bonds-issued
20 This structure is similar to the "Green Sectoral Bond" proposal of the International Emissions Trading Association (IETA), whereby if emissions reductions were achieved, part of the payback to investors would be in the form of carbon credits, which the bondholders could likely sell on.
21 A popular example is the Dutch Groenregeling, a set of tax incentives designed to stimulate investments that are important for the environment, including nature and forests.
22 See Parker & Cranford, 2010.
23 i.e. a special purpose vehicle
24 Vivid Economics, 2009
25 E.g. securing land tenure, legal fees, etc.
26 In some cases this may be due to environmentally harmful subsidies.
27 Vivid Economics, 2009
28 Forum for the Future & EnviroMarket, 2007
29 Gaines & Grayson, 2010
30 MIGA, 2010
31 Forum for the Future & EnviroMarket, 2007; Gaines & Grayson, 2009; O'Sullivan et al., 2010
32 Of over 600 projects insured, more than 80 cases of possible claims have arisen with only five resulting in actual claim payments.
33 MIGA is currently only directly exposed to US$4.8 billion, but its capacity is in excess of US$9 billion before reinsurance. There is a current limit of US$180 million of exposure MIGA can take on its own books for any one investment project, and US$600 million in any one country, but those amounts can be leveraged by as much as 10 times with the help of reinsurance and coinsurance. The limits are reviewed annually.
34 E.g. the recently approved Ecosystem Service law in the State of Amazonas.
35 A collaboration between 15 states and provinces in Brazil, Indonesia, Mexico, Nigeria, and the US, on implementing REDD. See www.gcftaskforce.org
36 Building on Simula, 2010
37 Demand-pull interventions are ineffective if the market is restricted and cannot supply what the intervention is demanding (Vivid Economics, 2009)
38 For further discussion on a first-loss facility see Forum for the Future & EnviroMarket, 2007

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- Bloomberg New Energy Finance
- BNP Paribas
- Canopy Capital
- Clifford Chance
- Climate Bonds Initiative
- Colombian Embassy to the UK
- DeRisk
- Nicholas Institute for Environmental Policy Solutions, Duke University
- E2 Group
- Earth Capital Partners
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