


Financial Innovation: How to Mobilize Private Sector Funds to REDD+
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FINANCIAL INNOVATION: HOW TO MOBILIZE PRIVATE SECTOR FUNDS TO REDD+

IFC Forests Bond & Climate Bonds for Forests



International
Finance Corporation
WORLD BANK GROUP

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Creating Markets, Creating Opportunities

IFC & CLIMATE BUSINESS

IFC HAS BEEN A CRITICAL PLAYER IN CLIMATE BUSINESS FOR YEARS

IFC:


- A sister organization of the World Bank and member of the World Bank Group
- Largest global development institution focused exclusively on the private sector in developing countries

IFC Climate Business:

- IFC's involvement in climate business started in 1980s, with its initial foray into clean energy projects.
- In FY17, IFC invested \$4.8 billion (own account and mobilization), which was 25% of IFC's total investment that year.
- IFC is committed to meeting its climate goals of 28% of its total own account commitments and leveraging \$13 billion in external private sector capital by 2020.

Climate Finance of IFC Climate Business Department:

- Climate Finance aims to use financial innovation and develop new financial products to leverage private sector funds to climate projects and scale up investments.



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Here is a brief introduction about my organization IFC.



IFC Forest Bonds

2.

WHY FORESTS? WHY REDD+?

PROTECTING FORESTS IS CENTRAL TO ADDRESSING CLIMATE CHANGE

- Each year, the world loses an area the size of Costa Rica in forests. Deforestation and forest degradation account for up to 20% of the world's greenhouse gas emissions—more than all cars, trucks, ships, planes and trains combined.
- Halting deforestation is essential to meet the global community's climate goals and keep global warming to 2 degrees Celsius. Just halving deforestation will require \$75 billion to \$300 billion in investment in the next decade.
- Climate finance focuses mostly on energy efficiency and renewable energy investments. Capital market mechanisms can offer efficient ways to channel funds into protecting forests.
- The multi award-winning inaugural IFC Forests Bond issued in October 2016 was a first-of-its-kind mechanism to channel private funds toward forest protection.




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INAUGURAL FORESTS BOND

CONSERVATION THROUGH FINANCIAL INNOVATION

- Private sector solution to a global challenge: US\$152 million 5-year bond issues in October 2016 was first-of-its kind replicable, scalable solution to catalyze funding into forest protection.
- First attempt to build capital markets infrastructure to channel funding for an area that has otherwise received little commercial financial support, but is key to meeting climate goals.
- Principal-protected fixed income instrument issued under IFC's AAA-rated program pays the total \$12 million coupon optionally in the form of carbon credits or cash.
- IFC partnered with BHP Billiton, a leading global resources company, to offer an innovative price support mechanism equivalent to the value of the coupon over five years.
- Coupon supports forest conservation in Kenya and offers an option to deliver voluntary REDD (forestry carbon) credits to bondholders.
- The Project supported by the coupon is expected to reduce deforestation, protect endangered plant and animal species, and develop sustainable economic opportunities for communities in Kenya
- HSBC named this "green coupon" bond as an innovative extension of the green bond market.



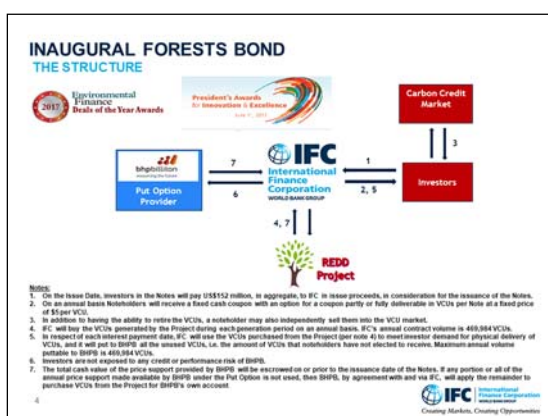
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I would like to explain why we are focusing on forests and REDD+. The supply of investment is clearly lacking compared to the demand for finance for REDD+. Regarding IFC Forest Bond, we made use of the capital markets to get private sector funding for forest protection. It is one of the first such schemes in the world.

The IFC Forest Bond is a US \$152 million 5-year bond issued by IFC in October 2016. It is the first attempt to use capital markets infrastructure to channel private sector funding for forest protection, an area that has otherwise received little commercial financial support so far. Specifically, it is a principal-protected bond issued under IFC's AAA rated program that pays a total of 12 million coupons over 5 years either in the form of carbon credits or cash.

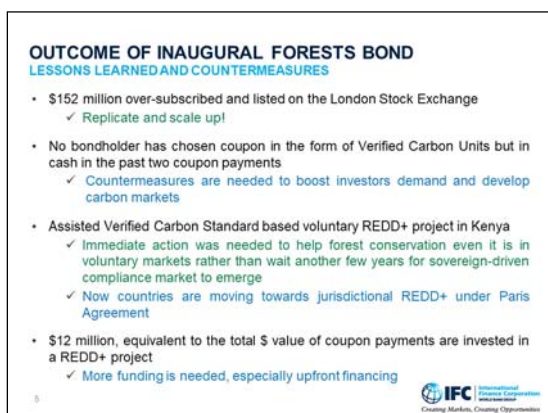
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To achieve such a structure, IFC partnered with a global resources company BHP Billiton¹ which provided a price-support mechanism equivalent to the value of the coupon over the 5-year bond redemption period. \$12 million, an amount equal to the total coupon was used to support the Kasigau REDD+ project in Kenya through a purchase of voluntary REDD carbon credits for 5 years. The investment bank HSBC² called this 'green coupon bond' as an innovated extension of the green bond market.



A structural diagram for this bond, the investors will buy IFC's bond, and during the time for payment of coupon each year, the investors can choose either carbon credits or cash payments. To make that possible, a 5-year fixed price contract is entered into between IFC and the Kashigau project for purchase of emission reductions. If the investors want to receive the coupon as carbon credits, then IFC will transfer these credits to the investors, but if they choose not to receive carbon credits, then the IFC will transfer the credits to BHP Billiton. BHP will ensure the same price to IFC which will use the money to pay the cash coupon to the investors.

Lessons Learned and Countermeasures Sought

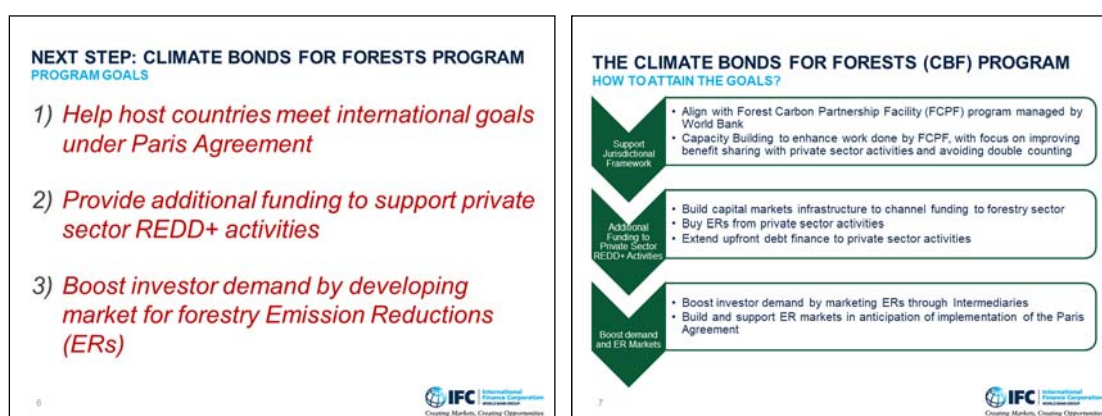


¹ <https://www.bhp.com/>

² <https://www.hsbc.co.jp/en-gb>

In terms of lessons learnt from IFC Forest Bond, in October 2016, firstly, the \$152 million IFC Forest Bond was oversubscribed and sold out immediately. So we are now trying to replicate and scale up such a mechanism. Secondly, there were coupon payments made over the 2 years, but no bond holders chose to get their coupon as verified carbon units. As a countermeasure, there is a need to boost investor demand for carbon credit and to develop the carbon markets. Thirdly, the Forest Bonds supported projects in the voluntary market. As of October 2016, the sovereign-driven compliance market had not emerged yet. It was felt that rather than waiting several years for that emerge, immediate forest conservation actions were required. That is why we made this a voluntary market-based project. However, at present, under the Paris Agreement, host countries are working towards establishing jurisdictional REDD+. Fourthly, the \$12 million equivalent to the coupon payment was invested in the REDD+ project. However, naturally that funding is not enough. There is a need for upfront financing for such projects.

Goals of Climate Bonds for Forests Program



What actions are required next? The IFC is considering a program called the Climate Bonds for Forests. Based on the learnings as I mentioned earlier, we have set three goals: Firstly, the program should help host countries meet international goals under the Paris Agreement. Secondly, it should provide additional funding to support private sector REDD+ activities. Thirdly, it should boost investor demand by developing the market for forestry emissions reductions.

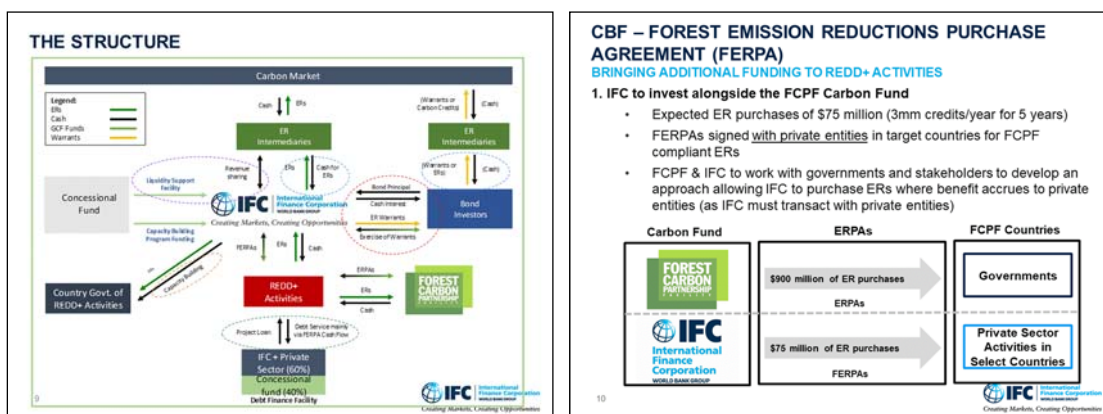
How are we going to achieve these three goals? Regarding the first goal, the IFC will be working with World Bank's Forest Carbon Partnership Facility (FCPF), and our activities will complement the activities of FCPF and carry out capacity building in the host countries. We will promote improved benefit sharing with the private sector activities and avoiding double counting. For the second goal, we will use the Forest Bond scheme of the previous bond to purchase emission reductions from REDD+ projects by private sectors every year, and we will also provide upfront financing. For the third goal, we will establish intermediaries who will sell the emission reductions in the market. That is a new innovation this time.

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Five Elements of the Climate Bond for Forest Program

CBF PROGRAM COMPONENTS FIVE COMPONENTS	
Components	Objectives
Climate Bonds for Forests (\$450 million)	<ul style="list-style-type: none"> Use AAA-rated capital markets instrument to channel private sector investment to forest conservation \$75 million (equivalent to the total value of annual interest payments) will be invested in forest conservation \$450 million Bond proceeds will be invested in IFC climate projects
Debt Finance Facility (\$30 million)	<ul style="list-style-type: none"> Provide upfront debt finance to forest carbon positive activities implemented by private sector entities
Carbon Market Commitment (\$11.25 million)	<ul style="list-style-type: none"> Intermediary commits to pay a floor price and sells a portion of ERs to international investors taking the role of boosting ER markets. Intermediary helps bond investors monetize ERs.
Liquidity Support Facility (\$63.75 million)	<ul style="list-style-type: none"> Provide some price support to reduce the downside risk for intermediary that sells a portion of ERs
Capacity Building (\$7.5 million)	<ul style="list-style-type: none"> Assist host countries to incorporate private sector REDD+ activities in jurisdictional REDD+ and share benefits in a manner that includes private sector Assist host countries to meet international climate goals by technically supporting integration activities (e.g. nesting)

Specifically, the Climate Bond for Forest program will incorporate the following five elements. Firstly, a bond will be issued that will be an AAA-rated 5-year bond with a multiple coupon payment options. One improvement is that the bond proceeds will be used by the IFC for investments in climate projects as a green bond. Secondly, upfront loans will be provided from a debt-finance facility to support private sector REDD+ projects. Thirdly, intermediaries will be introduced. The intermediaries are expected to be traders in environment-related commodities. Upon receipt of the emission reductions from the IFC, the intermediaries will pay a floor price which is less than IFC purchase price. The intermediaries will sell these emission reductions on the market. Fourthly, liquidity support facility will be introduced. This facility will help to reduce the price risk when intermediaries selling emission reductions on the market. Lastly, capacity building will be carried out to assist host countries to incorporate private sector REDD+ activities and to promote benefit sharing and nesting in a manner that includes the private sector.



This slide explains the structure of this bond incorporated five components I mentioned about. It is quite complex, so I will not go into the details. Each of the components has been color coded, so comparing with previous slide may be easier to understand.

Let us look at each of these five components in more detail. First is the emission-reduction purchase

agreement associated with the bond. The program will be carried out by the IFC in collaboration with the FCPF. When the FCPF Carbon Fund enters into an emission-reduction purchase agreement with a host country, the IFC will enter into a forest emission reduction purchase agreement (FERPA) with private entities in that country. The FCPF and IFC will work with host countries to develop an approach to allow such transactions. Specifically, they will enable private entities to gain the rights to purchase and sell emission reductions, or at least to benefit from payments from the IFC.

LIQUIDITY SUPPORT FACILITY
BOOSTING DEMAND FOR FOREST RELATED ERs

2. Intermediary to boost investor demand

- Private sector global climate commodity trader(s) (Intermediary) will be engaged to sell a portion of ERs sourced under FERPA
- \$63.75 million Liquidity Support Facility (LSF) supported by Concessional Fund will provide some price support to reduce the downside risk for Intermediary
- At least half of the total 15 million ERs (7.5 million ERs) will be delivered to Intermediary and will be sold to international investors
- By exercising warrants, Bond investors can choose annual coupon payment in the form of ER
- Intermediary(ies) will also help Bond investors to monetize ERs or options on ERs. Mechanism TBD but may include providing a "bid" for ERs. No financial commitment will be required.

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With respect to the liquidity support facility, a portion of the emission reduction purchased by IFC under the FERPA will be transferred to the traders and the environment-related intermediaries. At least, half of the emission reductions will be transferred to intermediaries. The intermediaries will buy the emission reductions from IFC and sell them on the market bearing the market price risk. The liquidity support facility plays the role of mitigating the price risk for the intermediaries. With support of the facility, the intermediaries can acquire the emission reductions from the IFC at a floor price which is less than the IFC's purchase price.

DEBT FINANCE FACILITY
BRINGING ADDITIONAL FUNDING TO REDD+ ACTIVITIES

3. IFC to provide upfront lending

- \$30 million debt funding to private sector entities to accelerate implementation and bolster capacity to deliver ERs

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CAPACITY BUILDING
HELP HOST COUNTRIES MEET INTERNATIONAL GOALS

4. Capacity Building

- \$7.5 million funding to complement FCPF in helping governments incorporate private sector activities
- Specific needs by each country will be analysed on a case by case basis. Examples are outlined in the next slide.

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I will explain about the debt finance facility. The IFC will enter into private sector players to purchase credits called FERPA. The future cash flow to be paid up on receipt of the emission reductions will be used as the basis to provide upfront loans to private sector REDD+ projects proponents. This will be

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carried out by the debt finance facility. Consequently, private sector REDD+ project proponents with limited access to credits will be able to benefit from loans and conduct REDD+ activities in an uninhibited manner.

The Climate Bonds for the Forest program will provide capacity building that complements the technical assistance provided by the FCPF Readiness Fund to host countries. In particular, it will help host countries to incorporate private sector activities in the jurisdictional activities.

CAPACITY BUILDING - CONTINUED
HELP HOST COUNTRIES CROWD IN PRIVATE FUNDING

Examples:

- Enhancing benefit-sharing agreements to ensure that private sector entities within FCPF jurisdictions can receive ER titles and sell them
- Facilitating distribution of ERs from governments to implementation activities
- Establishment and refinement of national carbon accounting systems to enable coherence with FCPF jurisdictions
- Strengthening of stakeholder engagement platforms and processes to ensure full free prior and informed consent of all stakeholders, and gender sensitivity of program

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First, it will provide support for establishing benefit-sharing agreements to ensure that private sector entities can receive emission reduction titles and sell them.

Other examples are facilitating distribution of emission reductions from the host governments to the private sector REDD+ proponents. It will also support the establishment of national carbon accounting and help strengthen stakeholder engagement platforms we think.

Benefits of Climate Bonds for Forests Program

PROGRAM BENEFITS

✓	Program will further efforts to help countries ensure private sector engagement in jurisdictional REDD+
✓	Provides pathway and mechanisms to channel private sector investment in forest conservation
✓	Up-front debt financing fills funding gap for implementation of activities
✓	IFC capital market solutions will boost demand, liquidity and price transparency for REDD+ ERs
✓	Provides Capacity Building to integrate private sector actions into jurisdictional accounting system, and enhance benefit sharing mechanisms to ensure inclusion of private sector activities

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THANK YOU!



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In summary, let me explain the benefits of this program. Firstly, the program will help countries to ensure private sector engagement in jurisdictional REDD+. Secondly, it will channel private sector investment in REDD+. Thirdly, upfront debt-financing will provide new financial support for activities of

private sector REDD+ proponents. Fourthly, IFC capital market and emission trading solutions will boost demand, liquidity, and price transparency for REDD+ emission reductions. Lastly, capacity building will promote integration of private sector actions into jurisdictional REDD+ systems.